



Journal of Knowledge Management

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Article information:

To cite this document: Claus Otto Scharmer, (2001), "Self-transcending knowledge: sensing and organizing around emerging opportunities", Journal of Knowledge Management, Vol. 5 Iss: 2 pp. 137 - 151

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Self-transcending knowledge: sensing and organizing around emerging opportunities

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Keywords

Knowledge management, Knowledge discovery, Learning, Self-managed learning, Business development

Abstract

The paper introduces the concept of not-yet-embodied or self-transcending knowledge. The concept of self-transcending knowledge proposes a distinction between two types of tacit knowledge: tacit-embodied knowledge on the one hand and not-yet-embodied knowledge on the other hand. The distinction is relevant because each of the three forms of knowledge – explicit, tacit-embodied, and self-transcending – is based on different epistemological assumptions and requires a different type of knowledge environment and learning infrastructure. Moreover, the differentiation among markets with decreasing, steady, and increasing returns suggests that, in order to successfully compete for increasing return markets, leaders need a new type of knowledge that allows them to sense, tune into and actualize emerging business opportunities – that is, to tap into the sources of not-yet-embodied knowledge.

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Introduction

Throughout the twentieth century, industry in the so-called developed economies was transformed from one that largely processed raw materials and conducted manufacturing to one that largely processes information and knowledge (Teece, 1998)[1]. As a consequence, the logic of competition has shifted from markets with decreasing returns to markets with increasing returns driven by positive feedback loops (Arthur, 1996). According to Arthur, in increasing-return markets, that which is ahead tends to stay ahead: “If knowledge-based companies are competing in winner-takes-most markets, then managing becomes redefined as series of quests for the next technological winner”. Bill Gates is not so much a wizard of technology, says Arthur, “but a wizard of precognition, of discerning the shape of the next game”. Arthur compares the new competitive game around emergent markets and technologies with casino gambling, where part of the game is to choose which games to play:

We can imagine the top figures in high tech – the Gateses and Gerstners and Groves of their industries – as milling in a large casino. Over at this table, a game is starting called multimedia. Over at this one, a game called Web services. In the corner is electronic banking. There are many such tables. You sit at one. How much to play? you ask. Three billion, the croupier replies. Who’ll be playing? We won’t know until they show up. What are the rules? Those’ll emerge as the game unfolds. What are my odds of winning? We can’t say. Do you still want to play? (Arthur, 1996, p. 104).

Leaders confronted with this question face a new challenge. The challenge is to develop the capacity for “precognition”, the ability to sense and actualize emerging potentials. To do this, leaders must be able to see the emerging opportunities before they become manifest in the marketplace. This kind of knowledge can be thought of as *tacit knowledge prior to its embodiment*, or “self-transcending” knowledge.

Self-transcending knowledge – the ability to sense and presence the emerging opportunities, to see the coming-into-being of the new – is usually associated with artists, not business managers. For example, there are three ways to look at a painter and her work: one can look, first, at the completed painting; second, one can watch the painter in the process of painting; or, third, one can watch the painter before she lifts a brush, as she considers the

blank canvas. Each structural perspective offers a different type of access to the artist's work.

The completed picture is the explicit reflection of the artist's work. The artist in the process of painting offers insight into the tacit knowledge she brings to the work. The artist in front of her blank canvas senses the emergent painting, much as Michelangelo, talking about his famous sculpture of David, sensed the emergent figure: "David was already in the stone. I just took away everything that wasn't David." The ability to see a David where others just see rock is what distinguishes the truly great artist. The same applies to leaders. As J. Jaworski, founder of the American Leadership Forum (ALF), says: "The capacity to sense and actualize emergent realities distinguishes great entrepreneurial leaders from the rest" (Jaworski and Scharmer, 2000). Today, leaders increasingly find themselves standing in front of their own blank canvases. They are faced not only with the challenge of figuring out what in their business environment may contain the potential new "David" – but also with how to take away everything that isn't David. In order to learn to intuit emergent form, leaders have to access a new type of not-yet-embodied knowledge.

While the knowledge management discussion of the 1990s revolved around the interplay of two forms of knowledge – explicit and tacit (Nonaka and Takeuchi, 1995) – the underlying proposition of this essay is that the discussion of the current decade will revolve around the interplay of three forms of knowing: explicit, tacit, and self-transcending knowledge.

The purpose of this essay is to introduce the concept of self-transcending knowledge. The remainder is organized into seven sections, which:

- (1) introduce the concept of self-transcending knowledge and discuss the implications in terms of;
 - (2) knowledge types;
 - (3) epistemology;
 - (4) basho;
 - (5) infrastructures; and
 - (6) requisite conversational complexity;
- section 7 discusses the preceding sections.

1. Self-transcending knowledge: the other side of tacit knowing

At a 1997 meeting in Palo Alto, California, Richard LeVitt, Hewlett-Packard's director of

quality, explained where HP's corporate quality came from and where he saw it going:

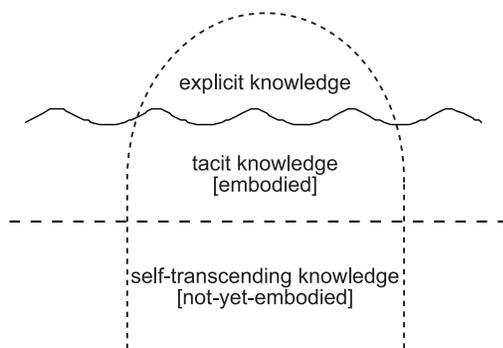
In the earliest stage we mainly focused on product outcomes and concrete results like product reliability. Though these are important, we realized we could achieve more by shifting our focus upstream toward the processes that precede and produce the results. The issue was, How can we get our processes right? This stage of managing quality was the heart of the TQM movement in the 1980s.

But once you and your competitors have the processes right, the question is, what will be next? What will be the next basis of competitive advantage? For us, one critical new focus area is how managers can improve their quality of thought – especially their deep thought about customers and the experiences they should have with us.

LeVitt's depiction of HP's shift of focus from results to the processes that produce these results, and then from processes to the preceding thought conditions that allowed those processes to emerge, corresponds with the analogy of the painter. Like the painter, who used a different type of knowledge at each stage of creating a painting, each stage of quality management requires a different type of knowledge. When measuring the outcomes of quality, managers need explicit knowledge. When improving process management like TQM, the overall focus is on knowledge in use – that is, tacit knowledge. However, when moving toward the upstream domain of quality that LeVitt described – improving qualities of experience, awareness, and thought – a manager has to access a different type of knowing. He finds himself in the same situation as the artist. The leverage for improving the quality of thought is not be found in things that are around him, but within his own self. The lever is in the capacity of the self to see the David hidden within the stone.

Figure 1 depicts the three forms of knowledge using the model of an iceberg.

Figure 1 Three forms of knowledge



Above the water line is explicit knowledge. Explicit knowledge is the least difficult to disseminate and distribute. Below the water line are two types of tacit knowledge: tacit-embodied knowledge and self-transcending knowledge. Both forms of tacit knowledge are very difficult to disseminate and to transfer from one part of the organization to another.

The example of a loaf of bread can be used to ground these distinctions. Certain kinds of information about bread – like its weight, price, and ingredients – are examples of explicit knowledge. The activities of baking and producing the bread are examples of tacit knowledge (Nonaka and Takeuchi, 1995), and the knowledge that enables a particular baker to invent baking bread in the first place is an example of not-yet-embodied knowledge. This “self-transcending knowledge” is tacit knowledge prior to its embodiment in day-to-day practices.

The discussion of knowledge management (KM) has evolved historically in three phases, each with a dominant point of view. During phase I, the primary focus was on explicit knowledge. KM revolved around information technology (IT) solutions. From this vantage point, knowledge was conceived of as a thing. Hence, knowledge could be gathered and stored in remote data banks and IT systems. Knowledge was nothing but information, and knowledge management the processing of information.

In the second phase, the process of knowledge creation took precedence (Nonaka, 1991; 1994). Here knowledge was conceived of as tacit knowledge, embodied in human action. Knowledge, according to Nonaka and Takeuchi (1995), is not a thing but a process. In this phase, KM started to revolve around the interplay between explicit knowledge and tacit knowledge. Knowledge creation evolves in a spiraling movement between the explicit and implicit knowledge held by individuals, teams, and the organization (Nonaka and Takeuchi, 1995).

However, Nonaka and Takeuchi left one question unanswered: What is the force that drives the knowledge spiral itself? This question leads directly to the third phase of KM, which focuses attention on the thought conditions that allow processes and tacit knowledge to evolve in the first place. Examples of this form of knowing are what Nonaka and Konno (1998) call “originating *ba*”; what von Krogh (1998) refers to with his

notion of “*care*”; what Senge (1990) calls “personal mastery”; what Kappler (1993) calls “presencing”; and what Scharmer (1999) calls “not-yet-embodied” knowledge.

All of these refer to a territory of knowledge formation that is upstream from both explicit and tacit-embodied knowledge. It is the kind of knowledge Buber (1970) meant when he talked about the basic word “I-Thou”, and Heidegger (1993) meant when he talked about Being as “coming from absence into presence” and truth as coming from “concealment into unconcealment”, and what the Japanese philosopher Nishida was referring to when he spoke of “pure experience” (1990) and “action intuition” (1987). All of these scholars point at a formative state of knowledge that precedes the separation of subject and object, or knower and known, as we will see in the following sections.

Summarizing, the concept of self-transcending knowledge proposes a distinction between two types of tacit knowledge: tacit-embodied knowledge on the one hand and not-yet-embodied knowledge on the other hand. The distinction is relevant because each of the three forms of knowledge – explicit, tacit-embodied, and self-transcending – is based on different epistemological assumptions and requires a different type of knowledge infrastructure, as is discussed below. Moreover, the differentiation among markets with decreasing, steady, and increasing returns suggests that in order to successfully compete for increasing return markets, leaders need a new type of knowledge that allows them to “sense and actualize what wants to emerge” (Jaworski and Scharmer, 2000) – that is, to tap into the sources of not-yet-embodied knowing.

2. Mapping the landscape of knowledge in organization

The framework below is based on two distinctions: one epistemological and the other ontological (Nonaka and Takeuchi, 1995). The epistemological distinction differentiates among three forms of knowledge: explicit knowledge (K1), tacit knowledge (K2: knowledge in use), and self-transcending knowledge (K3: not-yet-embodied knowledge). The ontological

distinction differentiates among four levels of corporate action (Scharmer, forthcoming):

- (1) A1: delivering results that create value (performing)
- (2) A2: improving the process-based context of performing (redesigning)
- (3) A3: improving the assumption-based context of performing (reframing)
- (4) A4: improving the intention-based context of performing (regenerating)

A1 represents the stream of customer-focused value creation. The other three action levels represent underlying layers of embedding context, of “contextual activities” that improve the conditions for and quality of A1. Combined, both distinctions result in the framework of 12 types of knowledge shown in Table I[2].

The epistemological distinctions between the three forms of knowledge (explicit, tacit, and self-transcending) are depicted in columns K1, K2, and K3. Based on the differentiation among the three columns (Table I), the historical development of knowledge management can be presented as a play that is enacted on three stages.

Act I: Knowledge about Things. Act I takes place on a single platform. We will call this platform Stage One. On this stage, knowledge is conceived from the traditional point of view: knowledge is a thing. Thus knowledge can be gathered and stored in remote data banks and IT systems. Knowledge is nothing but information. The traditional IT-based view of knowledge still prevails as the dominant view in most contemporary institutions. In Western business schools and universities, for instance, the main emphasis is on conceptual and explicit knowledge, not on building skills and competence for action. Examples of this kind of knowledge are a balance sheet (know-what), accounting rules (know-how), reports based on activity-based costing (know-why), and the purpose statement of a company (know-who). In all these examples, knowledge is conveyed in the

same structure: as a piece of information that is separate from the practice or reality it denotes.

The challenge on this stage is related to relevance (Johnson and Kaplan, 1991): How do these types of explicit knowledge relate and contribute to the capacity to innovate and create value?

Act II: Knowledge about Doing Things. Act II takes place as the interplay between the action on two stages. On the second stage, knowledge is not a thing but a process. Knowledge is conceived of as tacit knowledge that is embodied in human action. Thus Act II is based on the interplay between explicit knowledge (Stage One) and tacit-embodied knowledge (Stage Two).

Act II is largely based on the work of Nonaka (1991, 1994) and Nonaka and Takeuchi (1995). Says Nonaka (1996, p. 668): “What I found was that the existing theory of information processing is not enough. The process of innovation is not simply information processing; it’s a process to capture, create, leverage, and retain knowledge.” In their theory of the knowledge-creating company, Nonaka and Takeuchi present a view of knowledge creation that takes into account both “stages” – that is, explicit and tacit knowledge. Knowledge develops as it cycles between explicit and tacit forms of knowledge in an evolving “knowledge spiral”.

Today, Nonaka and Takeuchi’s (1995) work has become widely accepted as state-of-the-art. In this view, knowledge is a living process. Examples of this kind of knowledge focus on surfacing: knowledge in use (Lave and Wenger, 1991); theories in use (Argyris and Schön, 1996); culture and metaphysics in use (Schein, 1992; von Krogh and Roos, 1995); and aesthetics in use (de Monthoux, 1993; Scharmer, 1991). In all these examples, knowledge is considered to be embodied in situated practice (Orlikowski, 1996). It is not external to the reality it describes but in the

Table I Twelve types of knowledge in organizations

Epistemological/ action type	K1: Explicit knowledge	K2: Tacit knowledge	K3: Self-transcending knowledge
A1: Performing	Know-what	Knowledge in use	Reflection-in-action
A2: Redesigning	Know-how	Theory in use	Imagination-in-action
A3: Reframing	Know-why	Metaphysics in use	Inspiration-in-action
A4: Regenerating	Know-who	Ethics/aesthetics in use	Intuition-in-action

midst of it (Polanyi 1966). Hence, knowledge is not about describing but about enacting the reality it refers to (Argyris *et al.*, 1985).

However, Nonaka and Takeuchi's (1995) work still does not answer one question: What is the force that drives the knowledge spiral itself?

Act III: Knowledge about Thought as the Origin of Doing Things. The question "What is the force that drives the knowledge spiral?" shifts the focus of attention to the third platform. On this stage, knowledge is situated in an incipient, not-yet-enacted reality that is brought into existence through an act of action-intuition (Nishida, 1987; 1990) or presencing (Husserl, 1985; Heidegger, 1993). The terms "action-intuition" and "presencing" signify a state of mind that transcends the distinctions between "inside" and "outside", between "I" and "thou", and between knowing and acting. The focus of attention is on the emergent common ground from which all these distinctions arise in the first place. Thus Act III is based on the interplay among three stages, on which the explicit, the tacit-embodied, and not-yet-embodied forms of knowing are enacted simultaneously.

Self-transcending knowledge is the scarcest resource and the most difficult to attain. Hamel and Prahalad (1994) give an example of how it relates to the other two stages of knowledge formation.

Competition for the future can be linked to pregnancy. Like competition for the future, pregnancy has three stages – conception, gestation, and delivery. These three stages correspond in competition to foresight and intellectual leadership, competition to foreshorten the migration paths, and competition for market position and share. It is the last stage of competition that is the focus of strategy textbooks and strategic planning exercises. Typically, the assumption is that the product or service concept is well established, the dimensions of competition are well-defined, and the boundaries of the industry have stabilized. But focusing on the last stage of market-based competition, without a deep understanding of premarket competition, is like trying to make sense of the process of childbirth without any insight into conception and gestation. The question for managers to ask themselves at this point is which stage receives the bulk of our time and attention: conception, gestation, or labor and delivery? Our experience suggests that most managers spend a disproportionate amount of time in the delivery room, waiting for the miracle of birth. But as we all know, the miracle of birth is most unlikely, unless there's been some activity nine months previously (Hamel and Prahalad, 1994, p. 46).

3. Three underlying epistemologies

Explicit, tacit, and self-transcending knowledge are based on three different bodies of epistemological assumptions – that is, three different relationships between knower and known (see Table II).

Explicit knowledge captures knowledge about things. The data point is observed reality. The experience type is based on observation. The conceptualization is usually based on reflection without action. The criterion for truth is the test, "Can you observe it?" (see Table II).

Tacit-embodied knowledge captures knowledge about things we do (Nonaka and Takeuchi, 1995; Polanyi, 1966). The data point is situated, enacted reality. The experience type is based on action. Thus capturing this type of knowledge requires "reflection-on-action", reflecting on one's actions. The ultimate criterion for truth is the test, "Can you create it?" (Argyris *et al.*, 1985).

Not-yet-embodied knowledge captures knowledge about the *sources* or "place" from where thought and action come into being. The focus is on the primary ground from which human action arises in the first place. The data point is not-yet-enacted reality (Fichte, 1982; Rosch, forthcoming). The experience type is based on aesthetic or pure experience (Nishida, 1990). In order to capture this most upstream level of social action, we have to engage in what Schön (1983) calls "reflection-in-action", in what Csikszentmihalyi (1990) calls "flow", or in what Rosch calls primary knowing (1999; forthcoming). The ultimate criterion for truth is the test, "Can you tune into and presence it?" (Rosch, 1999; Scharmer, 2000).

The three forms of knowledge – explicit, tacit-embodied, and self-transcending – constitute three fundamentally different epistemological stances – that is, three different relationship modes between the knower and the known. Each form of knowledge relates to the reality that it describes from a different point of view.

Explicit knowledge relates to the reality that it denotes from outside. The statement "this bread costs one dollar" does not enable the knower to actually produce the thing (bread) that the knowledge signifies. The knower produces a statement about, but cannot bring into existence, the known. From this point of

Table II Three epistemologies

Epistemology	K1 Explicit knowledge	K2 Tacit-embodied knowledge	K3 Self-transcending knowledge
Type of knowledge	Knowledge about things	Knowledge about doing things	Knowing about thought-origins for doing things
Data	External reality	Enacted reality	Not-yet-enacted reality
Experience type	Observation experience	Action experience	Aesthetic experience
Action-reflection ratio	Reflection without action	Reflection-on-action	Reflection-in-action
Truth	Matching reality	Producing reality	Presencing reality
Truth criterion	Can you observe it?	Can you produce it?	Can you presence it?
Perspective	External: View on objective reality	Internal: View on enacted reality	Both internal and external: View on not-yet-enacted reality
Subject-object relation	Separation	Unity (after action)	Unity (in action)

view, knowledge represents and denotes a thing.

Embodied tacit knowledge relates to the reality that it signifies *from within*. Here the knower does not talk about bread but actually bakes and produces bread. Tacit knowledge enables the knower to produce and bring into existence the known. From this point of view, knowledge denotes not a thing but a living process.

Self-transcending knowledge relates to reality both from within and from outside. The locus of the denoted reality (outside the knower in the case of explicit knowledge and inside in the case of tacit-embodied knowledge) is both outside and within the knower. Or, as Nishida puts it, it is neither outside nor inside the knower (Nishida, 1990). From this point of view, knowledge emerges from a *basho*, a field or shared space that gives rise to the process of enacting tacit knowledge in the first place (Nishida, 1987; Nonaka and Konno, 1998). This epistemological stance is echoed in the forthcoming work by Rosch who talks about the primary knowledge of wisdom awareness. Mind and world, says cognitive psychologist Rosch, are not separate but two aspects of the same underlying field (forthcoming).

Summing up, explicit knowledge is based on the separation of the knower and the known, whereas both forms of tacit knowledge are based on the unity of subject and object. However, this unity differs in one important way. The difference lies in the locus from which the self conceives the unity of subject and object (action). In the case of tacit-embodied knowledge, the self conceives of its action after the fact (reflection-on-

action). In the case of self-transcending knowledge, the self conceives of its action while acting. Because aesthetic experiences are often described as being simultaneously inside oneself (acting) and outside of oneself (observing), the various types of self-transcending knowing all qualify as genuine aesthetic experience[3].

4. Three bashos, three metamorphoses

The shift from the second (K2) to the third epistemology (K3) – that is, from organizing around tacit-embodied to organizing around not-yet-embodied knowledge – is not only at issue in cutting-edge practices in knowledge management, as we will see below, but is also at issue in contemporary philosophy's transition from "modern" to "postmodern" modes of thought. At the heart of this underlying theme of twentieth-century philosophy, and at the heart of the thinking of Martin Heidegger, Edmund Husserl, Kitaro Nishida, and Friedrich Nietzsche, is a fundamentally different way of sensing, approaching, and conceiving of reality.

Martin Heidegger begins with the question: "Why are there beings at all, and why not rather nothing?" (Heidegger, 1993). With this question Heidegger tries to conceive of reality from the locus of origin, from a space in which being emerges out of nothing, out of no thing. This locus allows Heidegger to approach reality in a radically different way. From this point of view, reality is not simply "out there". Rather, reality is brought forth from absence into presence, from concealment into unconcealment. The

process of “presencing” and disclosing reality is the essence of true thinking.

Kitaro Nishida articulated the same turn from an Eastern point of view. In *An Inquiry into the Good*, he articulates the locus and starting point for his philosophizing as “pure experience”. Pure experience, according to Nishida (1990), has three defining properties. It, first, precedes the subject-object distinction; second, conceives reality from within and; third, accomplishes a union of knowledge, feeling, and volition. Reality, according to Nishida, is the self-development of a single system. Reality is that “which constitutes in itself a single system”. The unifier of reality is the self. This self is not a thing, but an activity. The activity in which the self unites with things is called love. Hence, real knowledge is based on the unity of subject and object – that is, on love (Nishida, 1990).

In his later works, Nishida extended his notion of pure experience into his idea of self-consciousness and later to his notion of “basho”, field or shared space. Nishida’s basho is never a subject or an object but a place or field of emerging relationships. Or, as Carter (1997) puts it, “basho is the given-intuition prior to analysis and expression of objectification”. Basho is the primal place/field/system that gives rise to knowledge and knowing. Nishida distinguishes among three types of bashos that correspond with the three forms of knowledge introduced above (Carter, 1997; Wargo, 1972).

The first universal basho is what Nishida calls the “universal of judgment”. It refers to and gives rise to the content of judgment and knowledge. The second universal basho is what Nishida calls the “universal of self-consciousness”. This basho is more fundamental and contains the first basho. The second basho focuses on how the content of judgment (first basho) arises in consciousness and self-consciousness in the first place. It reflects on the relationship and the activity of the self to the content of judgment. The third basho is the deepest and most fundamental field. Called “the intelligible universal”, it envelops the first two and moves attention from the self and self-consciousness to acts of consciousness in which the self is no longer the focus.

Nishida’s three universal bashos relate to the three forms and epistemologies of knowledge as follows. The first basho

corresponds with K1, the epistemology of explicit knowledge in so far as both focus on objective things in the external world. The second basho corresponds with K2, the epistemology of tacit-embodied knowledge in so far as both focus on the relationship between content and self, i.e. on the process of coming-into-being of the content. Both are based on reflection-on-action. The third basho corresponds with the epistemology of self-transcending knowledge in so far as both focus on that which transcends the current self toward the most ultimate common ground (source) that is prior to subject-object distinctions. Both are based on reflection-in-action (Schön), “action-intuition” (Nishida), or what Rosch refers to as “primary knowing”.

Primary knowing, according to Rosch, differs from our standard way of cognition in that it knows:

by means of interconnected wholes (rather than isolated contingent parts) and by means of timeless, direct, presentation (rather than through stored re-presentations). Such knowing is ‘open’, rather than determinate; and a sense of unconditional value, rather than conditional usefulness, is an inherent part of the act of knowing itself. Action from awareness is claimed to be spontaneous, rather than the result of decision making; it is compassionate, since it is based on wholes larger than the self; and it can be shockingly effective (Rosch, forthcoming, p. 2).

Let us close the philosophical investigation of self-transcending knowledge with a quotation from Nietzsche’s *Thus Spoke Zarathustra*. The passage deals with three metamorphoses of the spirit. These can be read as embodiments of the movement through the three bashos discussed above:

Of the three metamorphoses of the spirit I tell you: how the spirit becomes a camel; and the camel, a lion; and the lion, finally, a child.

There is much that is difficult for the spirit, the strong reverent spirit that would bear much: but the difficult and the most difficult are what its strength demands.

What is difficult? asks the spirit that would bear much, and kneels down like a camel wanting to be well loaded. What is most difficult, O heroes, asks the spirit that would bear much, that I may take it upon myself and exult in my strength? Is it not humbling oneself to wound one’s haughtiness? Letting one’s folly shine to mock one’s wisdom? Or is it this: parting from our cause when it triumphs? Climbing high mountains to tempt the temper?...

Or is it this: loving those who despise us and offering a hand to the ghost that would frighten us?

All these most difficult things the spirit that would bear much takes upon itself: like the camel that, burdened, speeds into the desert, thus the spirit speeds into its desert.

In the loneliest desert, however, the second metamorphosis occurs: here the spirit becomes a lion who would conquer his freedom and be master in his own desert, here he seeks out his last master: he wants to fight him and his last god; for ultimate victory wants to fight with the great dragon.

Who is the great dragon whom the spirit will no longer call lord and god? “Thou shalt” is the name of the great dragon. But the spirit of the lion says, “I will”. “Thou shalt” lies in his way, sparkling like gold, an animal covered with scales; and on every scale shines a golden “thou shalt”.

Values, thousands of years old, shine on these scales; and thus speak the mightiest of all dragons: “All value of all things shines on me. All value has long been created, and I am all created value. Verily, there shall be no more ‘I will.’” Thus speaks the dragon.

My brothers, why is there a need in the spirit for the lion? Why is not the beast of burden, which renounces and is reverent, enough?

To create new values – that even the lion cannot do; but the creation of freedom for oneself for new creation – that is within the power of the lion. The creation of freedom for oneself and a sacred “No” even to duty – for that, my brothers, the lion is needed. To assume the right to new values – that is the most terrifying assumption for a reverent spirit that would bear much. Verily, to him it is preying, and a matter for beast of prey. He once loved “thou shalt” as most sacred: now he must find illusion and caprice even in the most sacred, that freedom from his love may become his prey: the lion is needed for such a prey.

But say, my brothers, what can the child do that even the lion could not do? Why must the preying lion still become a child? The child is innocence and forgetting, a new beginning, a game, a self propelled wheel, a first movement, a sacred “Yes” is needed: the spirit now wills his own will, and he who had been lost to the world now conquers his own world.

Of the three metamorphoses of the spirit I have told you: how the spirit became a camel; and the camel, a lion; and the lion, finally, a child. Thus spoke Zarathustra. And at that time he sojourned in the town that is called The Motley Cow (Nietzsche, 1982, pp. 137–40).

In the first metamorphosis the spirit becomes a camel by submitting completely to external reality, bearing whatever it must: “What is most difficult, O heroes, asks the spirit that would bear much, that I may take it upon myself and exult in my strength?” The camel relates to reality from outside, which is isomorphic to how the knowledge of the first epistemology (and the first basho) relates to the reality that they denote: from outside.

In the second metamorphosis the camel becomes a lion. In the “loneliest desert” the spirit meets the great dragon, whose name is “thou shalt”, but the spirit of the lion says “I will”. Moving from “thou shalt” to “I will” shifts the origin of action from a reality that is externally based to one that is internally based. The lion relates to his will-based reality from within, which is isomorphic to how the knowledge of the second epistemology (or basho, respectively) relates to the reality that it denotes: from within.

In the third metamorphosis the lion finally becomes a child: “The child is innocence and forgetting, a new beginning, a game, a self propelled wheel, a first movement”. Moving from a “sacred No” to a “sacred Yes” again shifts the relationship mode between self and reality, or knower and known. In order to engage in “a new beginning, a game, a self propelled wheel”, the self has to transcend the lower self of the lion, stuck in his own “I will”, to reach the emerging movement of the self-propelling wheel. The way the child relates to his “sacred Yes” is isomorphic to how the knowledge (knower) of the third epistemology relates to reality (known): both from outside and from within at the same time, or, as Rosch puts it, as two aspects of the same primary field.

5. Learning infrastructures: the triadic spiral of knowledge creation

What does all of that have to do with knowledge management?

Everything. Companies, consultants, trainers, and business schools usually have fairly well developed practices about how to manage and disseminate explicit knowledge, slightly less sophisticated practices about how to manage and disseminate tacit-embodied knowledge, and relatively undeveloped practices about how to manage and disseminate forms of self-transcending knowing. In fact, the very term “managing knowledge” seems inappropriate at this point. Knowledge management is a typical “stage one” term. We can manage data banks. But we cannot manage human experience.

Here I distinguish among three types of learning infrastructures.

Type I learning infrastructures are based on a one-dimensional process. Type I learning infrastructures include Web sites, electronic databases, films, books, and other forms of

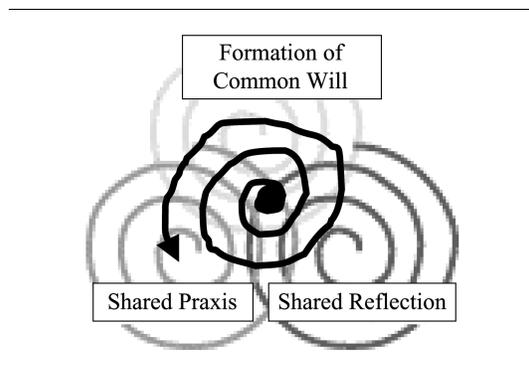
self-service media. These learning infrastructures are ideal for disseminating explicit knowledge and are easily scalable and replicable.

Type II learning infrastructures are based on two-dimensional processes that build on the interplay between action and reflection-on-action (Kolb, 1984). Examples of Type II learning infrastructures are all sorts of parallel structures in which practitioners reflect and learn from their experience on a regular and repetitive basis (Bushe and Shani, 1991). Schein (1995), for example, describes the institutions of the MIT Learning Consortium as a set of parallel learning structures within and among companies. Type II learning infrastructures are required for all systems that focus on surfacing and disseminating tacit knowledge through sharing experiences. Since reflection-on-action usually requires shared time and shared space among a group of practitioners, Type II learning infrastructures tend to be much more expensive and difficult to scale and replicate.

Type III learning infrastructures are based on three-dimensional processes that build on the interplay between shared action (praxis), shared reflection, and forming shared will (Scharmer, 1999; Senge and Scharmer, 1997). Type III infrastructures allow practitioners to repetitively go through the whole cycle of shared praxis, shared reflection, and formation of shared will, which then leads again to a new praxis. Since the surfacing of both tacit knowledge (shared reflection) and self-transcending knowledge (formation of shared will) requires a very high quality of shared time and space, Type III learning infrastructures are the most expensive and difficult to attain.

Figure 2 depicts the three-dimensional knowledge spiral that enables organizing and strategizing around not-yet-embodied

Figure 2 The spiral of self-transcending knowledge creation



knowledge. For example, a global health systems company takes its leadership team to three-day off-site meetings every six months. In these meetings, the managers engage in the following three activities: they reflect on their experiences and identify key learnings; work to uncover what truly motivates each individual; and use this knowledge to redefine the agenda of action for the upcoming months.

The more distributed organizations and networks of collaboration become, the more critical Type III learning infrastructures tend to be, because shared praxis, shared reflection, and formation of shared will are the glue that keeps distributed networks in synch and together.

Shared praxis is everything that people do together. All “communities of practice” (Wenger, 1998) evolve around what people do together. Everyone who has gone through a real “action experience” with others knows that after such an event the nature of their relationship is different. However, most virtual teams do not qualify for shared experience. Distributed work does not create community. Shared experience does. Only when distributed work is perceived as a shared body of action can the intangible nature of community evolve and manifest.

Shared reflection includes all shared experiences and the expression of their underlying themes, puzzles, and questions. All “communities of reflection” revolve around what people reflect on and think about together. However, most discussions and discussion groups do not qualify as shared reflection or communities of reflection. Abstract discussion and the mere transaction of speech acts do not create community. Shared reflection on common experiences does. Only when abstract discussion turns into shared bodies of reflection can the intangible nature of community evolve and emerge.

Formation of shared will is the most rare and least tangible of the three sources of networked community-building. It happens in conversations in which participants form and articulate a common intention. “Communities of commitment” (Kofman and Senge, 1993) and “communities of creation” revolve around what people care about and wanting to create together. However, most discussions about setting goals, targets, and objectives do not qualify as the formation of shared will. Negotiations about targets and objectives do not create

community. The formation of shared will does. The difference between the two is that the former is a one-stage process, and the latter is a four-stage process.

Negotiating objectives starts where it ends: with negotiating objectives. Shared will formation starts with subjective reality and ends with objective realities. Shared will formation starts with the expression of individual experiences (phase I: individual perspectives); continues with reflecting on common themes, questions, and patterns that underlie the various individual perspectives (phase II: dialogue); proceeds with uncovering what the participating individuals truly care about and what they really want to create (phase III: reconceiving purpose); and ends with agreed upon leverage points and commitments to act (phase IV: objectives).

Hence what appears to be the same, the negotiation of objectives and the formation of shared will, is not. The former starts and ends with objectives and objective realities. The latter is a process that uses the eye of the needle of individuality to mold the collective will into a new social sculpture (Beuys, 1992). It starts with intrasubjective realities (phase I), continues with intersubjective (phase II) and transsubjective (phase III) realities, and concludes with redefining objective realities (phase IV). Only when abstract discussions of group objectives turn into a shared body of collective will can the most intangible sphere of community-building be actualized (Scharmer, forthcoming).

Summing up, the core principles that underlie Type III learning infrastructures are those of wholeness and movement. These interweave and integrate the three domains by:

- (1) turning distributed labor into shared experience;
- (2) turning abstract discussions into shared reflection; and
- (3) turning negotiation of objectives into the formation of collective will.

All three represent different aspects of a single underlying process: the process of self-transcending knowledge creation.

6. Field-logics of languaging: requisite conversational complexity

The single most critical issue affecting success or failure of knowledge infrastructures is

whether the communication in use has the conversational complexity required to access the particular type of knowledge. Many KM systems fail because they do not meet this criterion. Without the capacity for dialogue, for instance, teams are unable to express their tacit, taken-for-granted assumptions about how reality works.

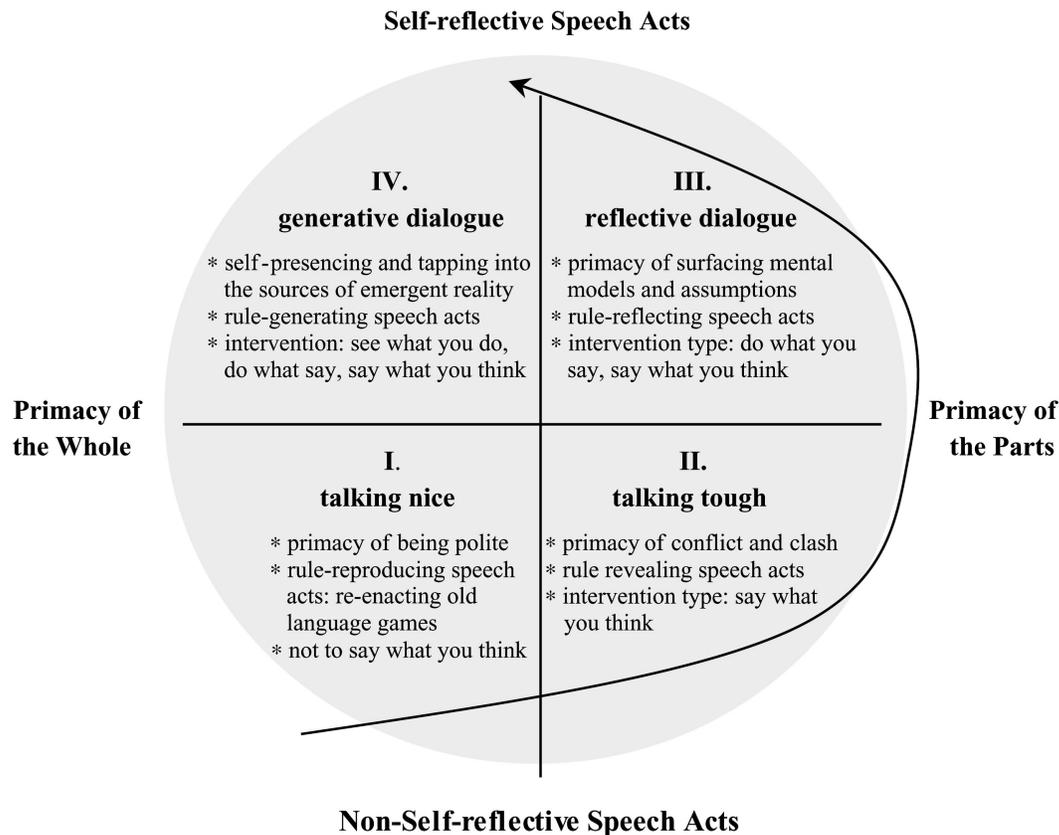
The model in Figure 3 outlines a process archetype that I have seen in numerous management and organizational settings and developed through many consulting, action research, and community-building experiences (Scharmer, forthcoming). The model is based on four generic stages and field-logics of listening and “languaging”.

Within each of these four different field-logics, people relate to each other at a different level of conversational complexity by using different kinds of language structures:

- (1) in field-logic I by talking nice, or using rule-reproducing language games;
- (2) in field-logic II by talking tough, or using rule-revealing language games;
- (3) in field-logic III by using reflective dialogue, or rule-intuiting language games; and
- (4) in field-logic IV by using generative dialogue, or rule-generating language games.

The four field-logics differ in two dimensions (see Figure 3). First, the speech acts are either self-reflective or non-self-reflective; that is, they either refer to the self who is speaking or they do not. An example of a non-self-reflective speech act is: “We are in trouble because the new Chinese competitors do not play according to the rules of the game”. An example of a reflective speech act is: “We are in trouble because we failed to meet the challenge of our new Chinese competitors”. Second, the respective speech acts differ in that they are driven either by the primacy of wholeness (in which the focus is on unity) or by the primacy of parts (in which the focus is on differences).

Throughout the full cycle, the conversation moves through four field-logics of performed speech acts. Each speech act relates differently to the rules of the underlying language game. Rule-repeating (talking nice), rule-revealing (talking tough), rule-intuiting (reflective dialogue), and rule-generating (generative dialogue) speech acts produce different kinds of conversations, each of which allows participants to access and communicate different types and layers of knowledge and knowing.

Figure 3 Four field-logics of languaging

Each of the previously discussed forms of knowledge requires a different level of conversational complexity in order to be accessed and disseminated in organizations. The requisite conversational complexity for creating and disseminating K1 knowledge usually tends toward the second field-logic of communication (talking tough). In order to access and disseminate the tacit dimension of knowledge in use (K2) throughout organizations, conversational complexity must move one quadrant up, to reflective dialogue (Figure 3). Finally, in order to access and enhance the not-yet-embodied dimension of knowing, the requisite conversational complexity again moves one quadrant up, to generative dialogue (Figure 3). Without the capacity for generative dialogue, teams are unable to tap into the sources of imaginative, inspirative, and intuitive knowledge. Thus without the fourth field-logic of languaging they lack the capacity to innovate by "sensing and actualizing what wants to emerge" (Jaworski and Scharmer, 2000).

The leadership challenge is to help teams and institutions get "unstuck" in the first quadrant (talking nice), and increase their capacity to move up across all four quadrants and field-logics of conversational action.

What sort of interventions or speech acts can help leaders move the field-logic up?

In shifting from field-logic I to field-logic II, the principal leverage is based on reconnecting what we think with what we say. The work of Argyris (1992) on accessing the "left-hand column" focuses on these kinds of interventions. An example of this kind of intervention would be to create a space that allows participants to articulate opposing views and to confront difficult issues. No learning or genuine knowledge creation will ever occur without moving the field-logic from the first to the second quadrant, for field-logic I only reproduces what is already known.

The principal leverage in field-logic III is based on reconnecting what we think and say with what we do. The work of Argyris and Schön (1996), Schein (1992, 1993), Isaacs (1993), and Srivastva and Cooperrider (1990) addresses this issue and focuses on "double loop learning" (Argyris and Schön), "taken for granted assumptions" (Schein), "containers of conversation" (Isaacs), and "appreciative inquiry" (Srivastva and Cooperrider).

The principal leverage in moving from field-logic III to IV is based on reconnecting what we think, say, and do with what we see.

Examples of this rare event are difficult to summarize. Sometimes they occur, after many days of shared work, as intentional quietness or sacred silence (Isaacs, 1999). The issue is how to move from reflective dialogue – that is, from talk that revolves around tacit-embodied knowledge to the emergent space of presencing (Husserl, Heidegger) and action-intuition (Nishida) – that is, toward the self-transcending dimension of knowing.

The four field-logics represent four generic attractors that define the rules according to which the drama of human conversation plays out. They differ in the degree of complexity that they are able to capture and represent. The more teams and companies learn to move with ease across all four quadrants or field-logics of conversational action, the more they will succeed in turning their customer relationships into shared bodies of imagination, inspiration, and intuition for continuous, radical innovation.

7. Concluding discussion: bringing your self into reality

What new insights does the distinction between two types of tacit knowledge, embodied and not-yet-embodied, add to the discussion? Why not just use the old distinction between explicit and tacit?

We have discussed five distinct areas in which the differentiation between tacit-embodied and self-transcending knowledge does, in fact, add new insights:

- (1) *Epistemology*. The theoretical argument is that tacit-embodied and self-transcending knowledge are grounded in different epistemologies, and, as discussed above, different bashos. What Nishida calls the second basho, the universal of self-consciousness, corresponds with the epistemology of tacit-embodied knowledge in that both focus on the relationship between content and self, or knower and known, respectively. Both are grounded in reflection-on-action. The third basho, the intelligible universal, corresponds with the epistemology of self-transcending knowledge in that both focus on that which transcends the current self toward the ultimate common ground that is prior to subject-object distinctions. Both are based

on reflection-in-action, or, as Nishida puts it, “action-intuition”.

- (2) *Praxis*. The practical argument is that the managing and nurturing of tacit and self-transcending knowledge requires managers to create different types of environments and learning infrastructures. Tacit knowledge requires Type II infrastructures, which are based on the interplay of action and reflection-on-action. Self-transcending knowledge requires a Type III infrastructure that evolves during the interplay of shared action, shared reflection, and formation of shared will. Thus managers design and engage in different process types, depending on whether they organize around tacit or not-yet-embodied knowledge.
- (3) *Requisite conversational complexity*. The requisite conversational complexity differs not only for explicit and tacit knowledge, but also for tacit and self-transcending knowledge. Whereas tacit knowledge requires reflective dialogue as the minimum condition of conversational complexity (field-logic III), self-transcending knowledge needs generative dialogue in order to emerge in conversations (field-logic IV).
- (4) *Strategy*. Self-transcending knowledge matters because within increasing return-based competition, nothing counts more than precognition – that is, the ability to sense and organize around not-yet-embodied knowledge.
- (5) *Self*. “Ba may also be thought of as the recognition of the self in all”, write Nonaka and Konno (1998). I would like to echo this statement from a Fichtean perspective: Ba may also be thought of as the space that allows you to bring your self into reality. Both sequences, recognizing your self in what surrounds you, and bringing your self into reality, are part of a larger social breathing rhythm that keeps societies alive across generations and civilizations. The essence of this breathing rhythm concerns the capacity of the self to transcend and jump beyond the boundaries of one’s current organization.

Thus there is both theoretical and practical evidence that the concept of self-transcending knowledge constitutes a knowledge type *sui generis*. The more the world economy moves toward the logic of increasing returns and, as

a consequence, the leadership challenge becomes one of being “in front of a blank canvas”, the more the capacity to sense and actualize self-transcending knowledge will turn out to be the most critical source of future competitive advantage.

Notes

- 1 An earlier version of this paper will be published in: Nonaka, I. and Teece, D. (Eds), *Managing Industry Knowledge*, Sage (forthcoming).
- 2 The 12 types of knowledge represent an analytical distinction. In practice, all dimensions of knowledge creation are intertwined. The two cornerstones of the field are the upper-left and lower-right fields: *know-what* about results and performance, and *intuition* which reshapes and reframes itself and all 11 other fields. To test whether the framework is a useful device we have to ask whether the lower-left (know-who) and the upper-right fields (reflection-in-action) refer to the same or distinct knowledge types. An example of know-who is to outline the fundamental causes and belief systems (such as shared value standards or purpose statements). Reflection-in-action is an entirely different form of knowledge, that does not refer to things (such as mission statements) but to “no-things” at work. Hence, the framework based on the differentiation among ontological (four streams of action) and epistemological (three forms of knowledge) assumptions does create new distinctions.
- 3 The term “aesthetic” refers to those kinds of experiences that meet the following three conditions. The subject of experience (a) sees something (seeing 1), (b) observes her observing at the same time (seeing 2), and (c) closes the feedback loop between “seeing 1” and “seeing 2” (“seeing 3”). Hence, in an aesthetic experience, the subject is within (watching something) and outside of herself (watching herself) at the same time. Technically speaking we refer to those experiences as aesthetic experiences that have the property of synchronicity between action and reflection, i.e. zero feedback delay.

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