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If Knowledge is Everything, Maybe it is Nothing:
Reconsidering Organizational Knowledge

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Abstract:

The notion of knowledge is given more and more importance. Paradoxically enough, in the current debate on knowledge management the understanding of knowledge is getting more and more fuzzy. One even wonders whether knowledge still has any clear meaning at all. Knowledge management, however, cannot become effective if there is no clear understanding on what its subject is. The aim of this paper is to point out some essential conceptual flaws in the debate on knowledge management and to reconfigure the notion of knowledge. The paper advocates some basic requirements which have to be met for assigning the qualified term knowledge. This discussion also reveals that tacit knowledge cannot easily be subsumed under a qualified term of knowledge. It is likely to confuse the knowledge discourse. In terms of practical implications it is pointed out why knowledge management badly needs a clear understanding of what knowledge exactly means.

1 Introduction

Recently Knowledge Management has become one of the central themes in the management discourse. By now there is hardly any major corporation which has not yet started a project on knowledge management. Also in the scientific community there is a growing interest in knowledge and its potential value to organizations. In the meantime it is widely agreed, that knowledge is a major factor for corporate success and more generally that knowledge has to be attributed a high economic value. Knowledge is even considered as the most valuable resource and the most critical basis for strategic advantages in the economy of the 21st century (Krogh/Roos 1996, Probst/Raub/Romhardt 1997). Popular keywords like the knowledge intensive corporation (Starbuck 1992, Spender 1996) or the knowledge society (Stehr 1994) not only point to the high importance given to knowledge but also to the dramatic increase in knowledge resources and its broad access (Schneider 2000).

The growing consensus on the importance of knowledge does however not concur with a growing clarity on what the concept really means, as it happens often when a concept gains fast popularity. Opposed to that, the concept of knowledge is getting more and more sweepy and fuzzy. A discussion of what knowledge exactly means tends to be avoided and sometimes it is even explicitly urged not to define the term knowledge (Schneider 2001). As a result there is a tendency to continuously broaden the scope of issues covered by the notion of knowledge: codified data, mental material, the whole range of cognitions, unconscious assumptions, all kinds of skills and practices, talents, tacit feelings, emotions, routines, culture, norms and standards, etc. Along this path of thinking, it is difficult to find any issue at all which is excluded, which lies beyond knowledge. Is knowledge everything?

Such sweeping and unspecific understanding of knowledge sharply contrasts with the postulated high importance of knowledge as a resource of sustainable competitive advantage. The aim of this paper is to point out that such unspecific notion of knowledge cannot, under any circumstances, be the basis for a reflective knowledge management. This does not only hold true for the academic discourse, it is also true for the practice of knowledge management. The latter be easily demonstrated by a pressing problem in many corporations. Knowledge management is no longer an effort of storing and gathering knowledge in whatever form, more and more organizations are confronted with knowledge overflow and the question of selection. What can the basis of selection be if we accept everything as knowledge? Or, to put

it differently, effective selection cannot be done unless there are criteria specifying the quality and enduring validity of the knowledge features in question. And from the perspective of the user the same intriguing questions arise: Which of the available knowledge objects are right, reliable and checked, so that an efficient use is possible and makes sense for me?. On all these questions – that is the thesis of this paper – an answer can only be found on the basis of a clear concept of knowledge which allows for qualification. By implication knowledge has to be a selective term, which cannot include any kinds of features.

2 Knowledge concepts in knowledge management

Considering the high importance attributed to knowledge it is surprising to learn, how little attention is given to the notion of knowledge itself. Rarely there are so many references to a conception and so few efforts undertaken to clarify its meaning. This is even more surprising as the term knowledge has a century long tradition in philosophy and science. In the philosophic discourse there is a long standing tradition to draw a sharp distinction between mere meaning and knowledge in order to get a precise understanding of knowledge.
In the knowledge management debate, however, the conception of knowledge is very vague. If a reflection on knowledge is done at all, two different versions seems to emerge:
The first version refers to information theory, in the second version knowledge appears as a compilation of any features which potentially contribute to successful action.

In information theory based understanding of knowledge, knowledge is differentiated from information, data and signs (Steinmüller 1993, Rehäuser/Krcmar 1996, Scheuble 1998). Knowledge is conceived as the final point in a hierarchy, which starts with signs, data, information and finally boils down in knowledge. Signs are the elements in that hierarchy. Data then consists of different signs which are related to each other ordered by a special syntax rule. Information is brought about when data are put into concrete contexts. Knowledge as the final point of this hierarchy emerges when a subject combines different information to accomplish a specific task.

This conception is merely formal and does not allow for any qualification. In this conception information of all kind can build knowledge, there are no selection-rules. Furthermore knowledge is intimately connected with a specific context. Knowledge can only be build in a concrete situation of use, when different information are combined to achieve a specific task

and it is only suitable for this situation. According to this understanding knowledge refers to kind of a combinative process which needs no special qualification procedure. Surprisingly enough any possibility of generalising knowledge is denied, a sharp contrast to the notion of knowledge as it stood for hundreds of years.

The second version of knowledge mentioned above is not interested in the differentiation between knowledge and information, it rather focuses on potential determinants of successful action. Knowledge is used as an umbrella notion which is supposed to cover any kinds of human skills and practices, emotions, norms, etc. which can potentially cause effective action. Any clear cut definition of knowledge is avoided because this may exclude causes for successful action from knowledge (Spinner 1994, p 24). The knowledge definition given by Davenport/Prusak is characteristic for this pragmatic and compilative understanding of knowledge: " Knowledge is a flux mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers." (Davenport/Prusak 1998, p. 5).

This conception claims to draw heavily on the work of Ryle (1949) and Polanyi (1966). The underlying logic is as follows: every successful action is the outcome of a specific knowledge of the actor; every successful action can therefore be traced back to knowledge. In this logic it makes no difference at all whether the actor applies the knowledge consciously or whether it is used unconsciously. And furthermore there is no difference whether the actor´s knowledge is explicit (understood) or implicit (not understood) in the sense of tacit knowledge (Polanyi 1966, Nonaka/Takeuchi 1997). The latter points to the knowledge of individuals, which cannot, by definition, be put into words. In recent literature tacit knowledge is put in a premium position, it is assumed to have the highest value to organizations (e.g. Nelson/Winter 1981, Tsoukas 1996, Baumard 1999, Osterloh/Frey 2000, Nonaka/Krogh/Ichijo 2000, Lubit 2001, Schanz 2001). It is unique just because of its non-verbal character and can therefore be considered as a corporate resource which is hard to imitate.

In this logic knowledge can no longer be separated in any way from its specific context [1]. By implication the problem of qualifying is rendered irrelevant.

A similar conception insists that knowledge is embedded and transferred in narrations and stories (Orr 1990, Boje 1991, Brown/Duguid 2000, Lounsbury/Glynn 2001, Reinmann/Vohle 2001). In this understanding knowledge also depends on a specific time and context frame, but there is a striking difference: Narrations and stories are told verbalized and they are told to transfer a "moral" into other contexts and situations. The transfer of a moral implies a decontextualization of knowledge.

All these conceptions refer, at least implicitly to the idea that everyday life is based on everyday-knowledge (Schütz 1981, Schütz/Luckmann 1984). Every-day-knowledge is assumed to represent the subjective and intersubjective reality of a community (Berger/Luckmann 1966). In this view knowledge is no longer something special, which is cultivated in special scientific institutions like universities and scientific text-books, but is something self-evident, and the basis for every action. Knowledge is conceived as being simply ubiquitous.

Whatever the details are, all these conceptions refrain from giving the term knowledge any specific contours, rather it is conceived as being boundaryless with a flavour of anything goes. The result however is that knowledge is likely to loose any specific meaning. There is no cognition, emotion, disposition etc., which is not knowledge.

Is this a promising position? Is it actually helpful to subsume any possible cognition, story or information under the notion of knowledge? Or does the opposite hold true: if knowledge is everything, maybe it is nothing - at least nothing special but an undifferentiated mass of signs, emotions, communication etc.? The blind spot of this conception immediately becomes obvious when asking the question what non-knowledge is. The logic of this conception does not allow for any answer here. But does a concept makes sense without any idea of what it excludes? Is knowledge management without drawing a difference between Knowledge/Non-knowledge practicable at all?

These intriguing questions already point to the problems of this position. And furthermore, if knowledge actually represents the most important resource nowadays - and there are good reasons why this seems to be true – then knowledge has to be something special which can be separated from other concepts like information, emotion, skills, capabilities, culture etc. If

[1] For a few authors the culture of an organizations represents its specific knowledge-base (e.g. Schein 1985,

knowledge is not supposed to mean something special it would be difficult to understand why knowledge can be given such high importance in management and why it is considered to be the most critical resource for future competitive advantages of corporations and societies. Conceptions like knowledge society or knowledge intensive firms would have to be dropped, they pointed to something which seems to be very special, but in the end does not mean anything specific. The inherent contradictions of a boundaryless conception of knowledge are unavoidable. The notion of knowledge therefore badly needs reconsideration: If knowledge is conceived as a resource of high importance it is necessary to specify the notion of knowledge as a construct with specific exclusive qualities.

3 Knowledge and the philosophy of science

The question of what knowledge and its defining criteria are is not a new one: In the philosophy of science this question is one of the most discussed and reflected one. There has always been a continuos debate on how to specify knowledge and differentiate it from other concepts like mere meaning or quackery. Surprisingly enough, this long standing tradition in the reflection on what knowledge is has not at all been taken into consideration in the recent debate on knowledge management (see for further details Schreyögg 2001). This is even more surprising since the practice in knowledge management often puts forward the same questions on quality, reliability and validity of the knowledge produced or transferred.

The philosophy of science has always been concerned with theories of truth and true or false knowledge. It is well known that the philosophy of science did not succeed in finding one widely agreed answer on all these fundamental questions. But on the other hand science and humanities has become well established and scientific knowledge gained a salient status in all developed countries. That means despite all controversies there exist well accepted procedures in science on how to distinguish knowledge, no matter what kind of philosophy is preferred. Doubtlessly the philosophies are in flux, but there is a broad consensus that science, scientific articles etc. have to meet other criteria than non-scientific statements.

In the process of knowledge generation science has been operating from the very beginning with the difference true/false. Allegations, hypotheses etc. have to be tested or checked by consented examination procedures whether they can be accepted (validated) or not (falsified)

Pautzke 1989, Sackmann 1992, Collins 1993).

(Popper 1966, Kamlah/Lorenzen 1967, p. 116). Assertions which proved to be true in the defined sense are accepted as preliminary scientific knowledge and are separated from other allegations – at least as long as no other argument becomes known which can prove the contrary. Only through the use of an examination procedure which is accepted in the scientific community, it is possible to draw a distinction between knowledge and non-knowledge. Assertions which have successfully passed the examination procedure are marked as scientific knowledge. It is possible that statements which had been claimed to be true are later on proven to be false. In that case one would speak of false knowledge (Luhmann 1998). An example for that kind of false knowledge is the geocentric theory of the world.

False knowledge should not – like Popper (1972) did – be understood as non-knowledge. False knowledge is always present in the scientific discourse and is still seen as knowledge in order to mark the difference to knowledge claimed to be true. False knowledge has an important function because it guides further research by making the distinction between true and false knowledge obvious (Luhmann 1998, p. 170). False knowledge is, in sharp contrast to non-knowledge, knowledge which is known by the scientific community, but has been rejected after a systematic examination procedure. Also, false knowledge only describes a temporary status anyway, another observer may rehabilitate it as true knowledge.

In contrast to false knowledge, non-knowledge describes a deficit, the unknown, or as Spencer Brown puts it, the unmarked state. The amount of missing knowledge is not precisely definable. From a principle point of view non-knowledge is the unknown, the negation of knowledge. It comes close to the notion of environment in system theory, where environment is defined as everything which is not part of the system, everything beyond the (well defined) border (Luhmann 1984). Of non-knowledge it is only known, that it is not known. There is a well-known paradox: whenever the amount of knowledge increases the perceived amount of non-knowledge increases at least proportionally (Popper 1972, Luhmann 1998).

In science, knowledge has (and should) always been communicated inherently doubtful (Popper 1966, Kamlah/Lorenzen 1967, Habermas 1981). That means the possibility that the knowledge claimed to be true might become false is part of the communication; this in fact is constitutive for any scientific discourse.

There is a tradition that different scientific communities operate with different methods of determining truth, which are sometimes called to be different philosophies of science (Lorenzen/Schwemmer 1973). It is quite well-known that there is an ongoing and unresolved debate on which theory of truth should and can be applied within and across disciplines (Habermas 1973, 1995, Puntel 1993). This is not the place to recapitulate this long standing and far reaching debate. Despite the vast differences in the philosophies it nevertheless does not seem hopeless to determine some overall meta-dimensions which define the nature of scientific knowledge. The fact that science is well established encourages to do so. Our proposal is three-fold:

1. Knowledge represents verbalized statements (Musgrave 1993, p. 101) which are communicated in specific discourses, e.g. scientific knowledge is the outcome and fundamentally embedded in a discourse (Lyotard 1999). Knowledge is communicative in nature.
2. Assertions claim validity, which has to be examined (Mittelstrass 1974, p. 74, Habermas 1981, p. 189). That implies scientific statements cannot be put forward without reasons.
3. Reasons are only valid if they have passed an examination procedure which is accepted in the scientific community (Mittelstrass 1974, p. 72, 1990, p. 52).

All three conditions have to be met, otherwise one would not call it scientific knowledge. To put it differently, knowledge has to pass a "second order observation" which reflects on the validity of knowledge (Luhmann 1998, p. 123). The process of second order observation qualifies, justifies and improves knowledge. The second order observation refers to a process of reflection: the second order observer (or to put it differently, the observer of the observer) reflects the criteria the first order observer uses. The examination criteria in use must be accepted by the scientific community, i.e. the criteria are not arbitrary. This does not imply that truth can be discovered in any objective sense. Of major importance is the fact that there has been a discursive examination procedure which knowledge has passed successfully. Nowadays it goes without saying that these examination procedures can never be completely objective in the sense that they can claim to be a final truth or represent the world as it really is (Luhmann 1998, p. 167). Most of us agree that truth is always socially constructed. Nevertheless, any scientific community has agreed on criteria and uses them to qualify their knowledge.

4 What is knowledge?

In old philosophic tradition and in the world of positivism only scientific criteria are accepted for the evaluation of any knowledge. According to the positivistic ideal, knowledge can only be generated and evaluated by scientists, science is considered to be the only institution which is capable of deciding on the validity of knowledge (e.g. Popper 1966). They claim that only science can generate knowledge. This point of view has become less and less accepted. The rise of constructivism and its relativistic impetus at the latest made it clear that knowledge can be generated and evaluated in different functional systems, not only in science (Gibbons 1994, Luhmann 1998, Lyotard 1999). Functional systems, like business or jurisdiction usually operate on their own logic in a complex functionally differentiated society (Luhmann 1975, p. 60). All these system are seen as producing a knowledge on their own. As a result scientific knowledge is only one type of knowledge used and generated in society (Luhmann 1998, p. 342).

From that point of view scientific knowledge represents a type of knowledge which fulfils criteria and evaluation processes of the subsystem science. Other knowledge types must fulfil different evaluation criteria along the rules brought about in their subsystem. These rules or criteria are part of the specific discourse in the subsystem.

There are good reasons to broaden the scope of knowledge generation beyond scientific borders. But how can the differentiation be run? Why are these suggestions, tips from cooks or lawyers etc. knowledge – and not quackery or personal belief? Should we accept all suggestions, assumptions etc. as knowledge? As shown above the recent literature on knowledge management urges exactly this, all these issues are accepted as knowledge. However, if we want the term knowledge to be a distinguishing one, to mean something special, the answer can only be “no”. Here again the question arises how the distinguishing features can be found.

To determine overall criteria for differentiating generally knowledge from non-knowledge is a subtle thing, some would say it is an impossible mission. But despite all difficulties knowledge management badly needs a qualified understanding of what knowledge is or how the term can be used in a selective way. What could those meta-criteria be? Let us try it and

start with the philosophy of communicative practice and its implications for all practical discourses whatever the context is.

The most fundamental requirement which could be derived from the reasoning above is that knowledge must be some kind of (1) verbal statement or better: assertion. That means knowledge is communicative in nature, it cannot exit outside from communication. Assertions can only be examined, if they are made subject of discourses. There is no selection without differentiation, and there is no differentiation without examination and there is no examination without communication.

However the communicative requirement is obviously not sufficient to qualify an assertion as knowledge. How to differentiate useful and reliable recommendations from nonsense and rubbish? Here again reference should be given to the essentials of any discoursive practice. (2) Statements, assertions etc. cannot be examined (discussed, reflected etc.) and therefore not become knowledge unless they are given reasons in whatever form.

To give reasons is, however, not enough for qualifying knowledge, because we have in addition to know something whether or not the reasons given are good (acceptable) or not. So knowledge does not only need reasons, but *good* reasons. And for reasons to become good reasons (3) they have to pass an examination which is accepted in the discourse (community) (Mittelstrass 1974, 1990, Lyotard 1989, 1999). These three rules or requirements are still quite general. They have however to be quite general because the specific criteria can only be developed in the specific discourses where knowledge is generated. They determine the criteria for good or bad reasons which legitimize knowledge.

Following this line argument at least one thing gets clear: knowledge is neither anything nor is it boundaryless. It is not anything because it had to pass successfully an examination procedure. It is not boundaryless because only assertions can become knowledge.

Another implication should be stressed. The three requirements for qualifying knowledge separate the notion of knowledge from single action-context. The requirement for giving and examing reasons implies at least partially a decontextualization of knowledge. Experiences form a specific action have to be reflected in order to become knowledge (Habermas 1981). To put it differently, knowledge is social in nature.

Along the suggestions provided here scientific and non-scientific knowledge do not differ in the requirement of having a second order qualification process and reasoning, the differentiation comes through the criteria which are used in that process. The criteria in use stem from the specific discourse and the community in question (Luhmann 1998, Lyotard 1999, Koch 1999). Corporations for example are used to process knowledge, in contrast to science, along the criteria: profitability/non-profitability (Vries 1996), or in the judicial system knowledge usually is built on the criteria: just/unjust as opposed to true/false in science. As a result those knowledge can be classified as profitable/non-profitable knowledge or just/unjust knowledge etc.

Despite all differences, it should however be made clear that the different knowledge discourses are not completely isolated from each other. The different discourses therefore have to know the criteria the other discourses use and sometimes simply have to accept the result of their qualification processes. For instance, an electronic equipment firm usually accepts the results of academic research in physics. Moreover, organizations often run simultaneously different qualification processes according to the specific problem to be solved. As a result organizations are in many cases multi-criteria-systems, they run different types of examination procedures and discourses at the same time and they use knowledge from other communities.

5 Knowledge conceptions reconsiderd

It seems worthwhile to contrast the suggested conception of knowledge with conceptualizations in use in knowledge management. As mentioned above the latter can be differentiated more or less in two versions.

The first version builds on information theory and understands knowledge as the top of the hierarchy of signs, data and information. At first glance the hierarchical procedure seems to promise a qualifying procedure. This promise however does not hold true. The idea that a task specific combination of available information equals knowledge is problematic. That would mean that the existence of knowledge only depends on the existence of a specific task and information elements which are combined according to it. It is puzzling why this finally should lead to knowledge. There is no qualifying procedure designed to guide the selection

process with regard to the quality of information. Actually there is no structural difference between information and knowledge, it therefore seems to be better to avoid the notion of knowledge in this case and just to call it combined information.

Even more troublesome is the term of knowledge in the second compilative version of knowledge. Knowledge there is conceived to cover every kind of cognition, emotion, value, feeling etc. All potential determinants of successful action are simply called knowledge. There is no selection criteria at all which allows for distinguishing between knowledge and other constructs and therefore also non-knowledge. In this understanding knowledge comes close to an arbitrary crossing point of features which can guide successful action. The question why the term knowledge is used at all is even more difficult to answer than in the information theory based conception. The information provided by this construct is almost nothing. This use of the term knowledge is often said to be rooted in Polanyi's oeuvre and especially in his concept of tacit knowledge. Facing the high acceptance of this concept and its important role in the literature on organizational knowledge management a closer reflection in the light of our advocated understanding of knowledge seems to be imperative.

6 Is tacit knowledge knowledge?

The highest attention in the debate on organizational knowledge management has douptlessly gained the structural distinction of explicit and tacit knowledge by Michael Polanyi (Polanyi 1966, Nelson/Winter 1982, Franck 1991, Nonaka 1994, Schüppel 1996, Spender 1996, Nonaka/Takeuchi 1997, Probst/Raub/Romhardt 1997, Scheuble 1998, Willke 1998, Subramaniam/Venkatraman 2001).

Explicit knowledge is understood as that kind of knowledge which is verbal in nature, transferable and can be stored in archives. It is not bound to a specific person. Polanyi (1966) calls it "disembodied knowledge". Explicit knowledge refers to facts and rules, which are documented or at least codifiable and can be reproduced by applying special construction rules. According to Ryle (1949) explicit knowledge can be labelled as "knowing what".

Opposed to that tacit knowledge draws on the fact that many aspects of individual skills are of non-verbal nature and cannot be explicated because of their specific quality. This is why Polanyi stated: "We know more than we can tell" (Polanyi 1966, p. 4). Tacit knowledge is

unconscious to the individual, it brings about individual action the actor cannot explain. He or she acts on the basis of something he or she "knows", but cannot explain. Tacit knowledge rests only in the competence of one specific knower and therefore is a strictly individual category. This is why it is often called "Personal Knowledge" (Polanyi 1958). It cannot be removed from the knowing individual. Tacit knowledge comes close to a personal skill or capability, something individuals can rely on in every-day life without being aware of it, let alone understanding it. Tacit knowledge refers to a competence which exists beyond language, Polanyi therefore calls it "embodied knowledge", an inseparable part of the actor's body (Franck 1992, p. 169). It is action-orientated in nature. That means tacit knowledge is only present in a concrete action situation where it is used. This is why Ryle (1949) calls it "knowing-how". As a logical consequence tacit knowledge can only be actualized within actions and cannot be removed from an actor's context (Cook/Brown 1999, p.387, Neuweg 1999).

It goes without saying that tacit components are a feature of high importance for both, theory and practice. But what are the reasons to call this tacit competence knowledge? According to Polanyi the tacit dimension is to be subsumed under the conception of knowledge because it contributes to successful individual action. From a methodological point of view he refers to an ex-post attribution procedure that goes as follows: If an individual action was successful and if it is not possible to trace this action successfully to the use of explicit knowledge then the working of tacit knowledge is assumed. Tacit knowledge therefore is conceived as a kind of residual category; everything which cannot be explained by the existence of explicit knowledge is assigned to a unspecific rest that is unexplainable. The procedure is a little bit like it is in many cross-cultural studies; the unexplained variance is assigned to the (mostly vague) category culture.

The most important characteristic feature of tacit knowledge is its non-verbal nature. Polanyi points out that explicit and tacit knowledge are meant to be two completely different categories or dimensions. These two dimension therefore can never be converted into each other. They at best complement each other (Polanyi 1966, p. 20).

This by the way raises some doubts on the popular concept of the knowledge spiral developed by Nonaka/Takeuchi (1997), which builds on the idea that tacit knowledge can be easily converted into explicit knowledge (e.g. Nonaka 1994, Spender 1996, Nonaka/Takeuchi 1997,

Krogh/Köhne 1998). Tacit knowledge is by definition not convertible into explicit knowledge. A theory that explains how to drive a car is not at all sufficient for having the capability of driving a car. Driving cannot be learned through a process of verbal explanation but needs practical non-verbal experience to be acquired (Polanyi 1966, p. 20). If Nonaka were right tacit knowledge would only refer to a preliminary state of explicit knowledge which is simply not yet discovered. It is explicit knowledge which is tacit not because of its nature but because it has not yet been explicated. But that is not Polanyi's conception. He draws the distinction between explicit and tacit knowledge to mark the existence of two structurally different forms of knowledge. The concept of the knowledge spiral and other concepts in knowledge management that place the articulation of tacit knowledge as central to the process of knowledge generation (Nonaka 1994, p. 16) can therefore not be legitimized by Polanyi, they are questionable (see for a similar argumentation: Franck 1992, p. 642, Tsoukas 1996, Cook/Brown 1999, p. 385, Brown/Duguid 2001, p. 204)

Polanyi's second argument which stresses the necessary interplay between explicit and tacit knowledge renders the conversion approaches even more questionable. According to Polanyi explicit knowledge never exists without tacit knowledge, tacit knowledge is the counterpart of explicit knowledge (Polanyi 1966, p. 20). Explicit knowledge always contains tacit parts. It is not possible to eliminate all personal elements from a knowledge action, that would lead to the destruction of all successful action (Polanyi 1966, p. 20). The tacit dimension forms an indispensable background for understanding explicit knowledge. By implication the tacit background ("Lebenswelt") is not convertible by its very nature.

The most pressing question in our context however is whether the tacit competencies are actually knowledge and whether they can be made subject to an advanced organizational knowledge management.

Tacit knowledge is conceived as a personal skill or capability which builds the basis of individual action. It is not understood by the actor and not consciously applied. Since it cannot be expressed in words, it cannot be discussed and therefore not made subject to any examination procedure. This methodological peculiarity is underlined by the fact that it is not possible, as opposed to explicit knowledge, to differentiate between true and false tacit knowledge. Because it is conceptually bound to successful action, tacit knowledge is always true. There is no such thing as false tacit knowledge. In sum, when using the criteria for

knowledge defined above, it immediately becomes obvious, that tacit knowledge cannot be seen as knowledge in any meaningful sense. It neither exists in verbal form and can not be reflected in discursive processes, nor can it be examined by any interpersonal examination procedure. The ex-post procedure suggested to prove existence of and to validate the knowledge at the same time is odd. Firstly it represents logically a very questionable conclusion (how can I refer to something I do not know?) and secondly the assumption that this unknown entity were knowledge is an arbitrary classification. It does not make much sense to call it knowledge and it is definitely not knowledge if we apply the minimal standards of knowledge given above.

That conclusion does not in any way call the importance of tacit "knowledge" into question. The often claimed importance for successful every-day practice in organizations should not be denied (Franck 1992, Stehr 1994, Nonaka/Takeuchi 1997, Neuweg 1999). What is argued against is that it is subsumed under the notion of knowledge and thereby making the notion knowledge sweepy and finally meaningless.

Also the embededness argument is important. Doubtlessly, any knowledge is embedded in a every-day-life background (Habermas 1981). What is important here is that knowledge should not be confused with concepts like "Lebenswelt" or every-day-practice. Knowledge represents qualified assertions, that always have a "Lebenswelt" background but are not identical with it (Habermas 1981, p. 189). The differences between these concepts are imperative for any meaningful knowledge management.

As a result of this discussion we urge to replace the misleading term tacit knowledge by the term skilfulness or practical proficiency or the German word "Könnerschaft" (see for a similar proposition Ambronsini/Bowman 2001). This stresses its nature as being a specific individual bodily capability (Franck 1992). Last but not least Polanyi himself has wondered if tacit knowledge is not better understood as skill or "Könnerschaft" (Polanyi 1966, p. 7). The conception of skills has remarkably different implications for both theory and practice which differ in a significant way from the management of knowledge. For example, management of skills means largely human resource management, e.g. the identification of skilled individuals and the proper use of the bodily skills.

Furthermore, the conception of tacit “knowledge” or embodied skills is an individual one by its very nature. It is not so easy as it appears in the mainstream literature on knowledge management to use it on a collective level as well. The question arises if there is a collective body or embodied skills. The concept of core-competencies (Prahalad/Hamel 1990) might offer an interesting and promising starting point here, but a theoretical template is still missing. A simple reference to Polanyi does not substitute a thorough argument for using the conception on a collective level.

There is another harmful conceptual confusion in the use of the term tacit knowledge in the knowledge management literature. In many contributions the concept of narrations is considered as being one with tacit knowledge. The idea is that tacit knowledge is activated and transferred through stories and narrations. The following chapter is designed to show why these conceptions must not be confused. Narrative knowledge has a basically different status than tacit knowledge because of its verbal discursive origin.

7 Narrative knowledge

To further explore the methodological nature of the tacit dimension and narrations it seems promising to draw on the conception of the French philosopher Jean-Francois Lyotard, who elaborated on the distinction between scientific and narrative knowledge.

In the context of this paper the salient question to be asked is whether narrative knowledge can be considered as knowledge. According to Lyotard the knowledge of the information society can be separated in two different forms of knowledge, the scientific and the narrative form (Lyotard 1999, p. 32). He starts with the thesis that scientific knowledge does not represent the whole range of knowledge of a society but represents only a top-up to narrative knowledge (Lyotard, p. 76)

Narrative knowledge refers to contexts which largely differ from science. Narrative knowledge is depicted as a kind of storytelling knowledge. In societies, organizations etc. many stories are told. The different stories contain ideas on various subjects: making-how, living-how, listening-how etc. (p. 64). The stories tell something about success or failure, good problem-solutions or failed problem-solutions, about good luck, justice, beauty etc. By telling the stories these contents are supposed to be transferred and acquired by the listeners

(p. 68). The narrations are assumed to transport two different aspects simultanuously: on the one hand special know-how and on the other hand criteria for distinguishing good from bad know-how; the evaluative dimension is communicated at the same time (p. 68). This wicked character of narrations is important to realize. Such processes of practical acquiring norms, standards, assumptions etc. and simultaneously evaluating them are also well known from the debate on organizational culture (Kluckhon/Strodtbeck 1961, Schein 1985).

Narrative knowledge, in contrast to scientific knowledge, embraces all different kinds of discourses. And all different kinds of statements, normative, descriptive, evaluative etc. coexist within one story and are not separated (Lyotard 1999, p. 68). This is a similarity to the handling of knowledge in organizations mentioned above. Within organizations different types of knowledge have to be proceeded at the same time, a clear and distinct separation is often neither necessary nor possible.

But is narrative knowledge actually knowledge in the defined sense?

First of all it should be stressed that narrative knowledge is expressed in words and is discursive in nature, it therefore has the character of assertions, statements, etc. This structural feature signals a nearness to knowledge and makes a difference to tacit know-how. But what about the examination procedure? In Lyotard's view opposed to scientific knowledge narrative knowledge does not need any formal and explicit evaluation procedure, it rather legitimates itself (p. 74pp.). This self- legitimation of narrative knowledge is achieved through the constant transfer and telling of the story, the story is accepted as such, it is taken for granted and told further on. The criteria which legitimate narrative knowledge are part of the narrations itself and are therefore more or less automatically accepted in the discourse (p. 75). Narrative knowledge does not explicitly demand for legitimation, it is accepted through its own narrative logic.

This self-evaluation process places narrative knowledge between knowledge and non-knowledge. On the one hand narrative knowledge has to fulfil evaluation criteria which are accepted in the specific discourse where the narration is told (p. 65). But these criteria are not subject to any authorised evaluation process, they rather are an implicit part of the discourse community and are therefore tacitly applied. All narrations which do not fit in these tacit criteria are not accepted in the specific discourse and are rejected as non-knowledge.

Does this self- legitimizing narrative practice represents an examination procedure in the sense of a critical requirement for distinguishing knowledge from non-knowledge? It seems quite clear that these procedures are no second order observations which explicitly apply these evaluation criteria. The examination procedure remains tacit and therefore unreflected. At first glance one would conclude that this is not knowledge. But a closer look reveals that this is not a structural barrier: Evaluation criteria which are not yet reflected can potentially be explicated and made subject of a second order observation process, this is because of the communicative character of the whole process. As a result one could consider narrative knowledge as a kind of latent knowledge. Through an explicit second order observation and qualification process it can become knowledge (Lyotard 1989, p. 101). Tacit knowledge cannot because of its non-verbal nature.

8 Implications for knowledge management

What does all that mean for knowledge management. Let us start with narrative knowledge. Its importance for organizational knowledge management has made itself felt recently. There are various organizational practices and knowledge generating processes which can be interpreted as opening procedures for managing narrative knowledge. The concept of the "communities of practice" is a popular example for such organizational practices (Wenger 1990, Wenger/Snyder 2000). Within communities of practice narrative knowledge resulting from specific problem-solutions in the organization is activated, transferred and evaluated in a narrative manner (Orr 1990, Boje 1991, Brown/Duguid 2000, Lounsbury/Glynn 2001, Reinmann/Vohle 2001). Stories are told, accepted or turned down, re-told to members of the community and possibly to outsiders as well. Communities of practice are institutions for cultivating narrative knowledge and narrative capabilities of an organization. They are communicative by their very nature, they can however not proceed tacit embodied know-how.

We should however be aware of the fact that the stories told in communities do not represent approved and qualified knowledge. They transfer experiences which might represent something useful for the whole organization or not. The narrative mode does not imply clear cut examination procedures to determine whether or not the experiences can be qualified as being something just/unjust, profitable/non-profitable etc. The narrative mode has no explicit validation process, the community accepts the story because it fits the implicit agreement among the experts that the story is worth telling. This is however no fluid alley, the story can

eventually be made subject to an explicit validation process. The organization can establish a second order observation and thereby check whether the stories' moral can successfully pass the organization's validation procedure. This is a possibility, not a necessity. In many cases organizations manage problem-solving procedures quite successfully an the basis of narrations. This holds particularly true for complex ambiguous situations (Tsoukas/Hatch 2001).

Whatever the procedure in all cases it is obviously assumed that narrative knowledge is a generalizable one and its validity is not limited to one specific situation. Indeed it is the very nature of narrative knowledge that it is transferable and therefore generalizable. This is eventually the very reason for telling the story, otherwise it would be meaningless in the context of knowledge management. Knowledge strictly bound to one specific case would not be worth to be narrated. This brief discussion shed at the same time light on an issue of more general importance. As mentioned, the bulk of the recent knowledge management literature holds that knowledge must be conceived as being time, space and person bound. Aside from the fact that the distinguishing feature of knowledge has for centuries been its generalizability (manifested in text books, encyclopaedias etc.) makes the narrative mode quite clear how misleading and confusing this restrictive notion of knowledge is. The narrative mode can be seen as the full negation of this conceptualization. Narrations mean transfer. The idea of knowledge management does only make sense if the generalizability of knowledge is assumed.

Aside from the issue of knowledge generation communities of practice are confronted with a problem which is fundamental and highly practical at the same time, the problem of selection. Communities of practice are confronted with a broad range of experiences, narrations; how can they take a decision which of these narrations are valuable and which not? And concurrently for the organization as a whole the problem arises which of the narrations told in those communities can be qualified as profitable/non-profitable knowledge, just/unjust, true/false and so on. The frame of reference of the community of practice may be at variance to that of the whole system.

On a more general level this issue stresses a major task of knowledge management largely neglected so far. If the assumption is true that the critical organizational knowledge consists to a large extent of narrative knowledge so organizational knowledge management has the

fundamental task to manage the selection process and therefore to make narrative experiences subject to a systematic reflection and qualification process. By leaving narrative knowledge in its original state it can not become subject to any reflexive effort and organizational knowledge management would limit its ability to make use of communities of practice.

In conclusion, knowledge management has to be content orientated, it has to manage the process of knowledge qualification as well. Knowledge management cannot limit itself to only managing the context of knowledge generation, it must make knowledge itself subject to its management efforts. To neglect the content is risky business, the danger arises, that all features would be accepted as knowledge, even obsolete, misleading or non-generalizable contents. Such risky knowledge policy is not advisable to any organization. Effective knowledge management badly needs a qualifying selection process. A task which does not apply to tacit know-how because of its embodied nature. This again reveals the fundamental differences in both theoretical and practical terms.

All the questions raised in this paper finally converge in the question of selection. The argument advocated has been primarily a methodological one. It has been shown that the concept of knowledge is logically bound to qualification and communication. This is not only an academic feature, in fact the problem is always present in every knowledge practice. Knowledge management therefore has to provide systematic evaluation procedures.

This argument is further strengthened when taking a system theoretical point of view. Organizations are confronted with a vast array of knowledge elements. In order to find an orientation for action organizations have to reduce the complexity of their knowledge field by establishing selection criteria and procedures (Luhmann 1969, 1984, Daft/Weick 1984). No organization can absorb and store all kinds of knowledge offered internally and externally. It has to impose a selective order and thereby create a workable frame for acting. Knowledge management therefore has not only the task of generating and storing of knowledge as it is proposed by most of the literature on knowledge management, but has equally to focus on the question of selecting the relevant knowledge from the complex knowledge environment [2]. The latter also includes refusing knowledge. According to this argument non-selective knowledge management is not possible at all. The question therefore no longer is if knowledge

[2] see e.g. Baecker 1998, 1999 and for the necessity of unlearning Hedberg 1981

management should be selective but rather how it can run its selection most effectively. This likely is a central theme of future knowledge management.

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