

Epistemological Problems Concerning Explication Of Tacit Knowledge

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ABSTRACT:

Many authors in the contemporary knowledge management literature have highlighted *explication of tacit knowledge* as one of the most important functions of modern organizations. However, the theories stressing the importance of explication of tacit knowledge have to adopt assumptions from both Polanyi's theory of knowledge and objectivist theory of knowledge, in which case the resulting epistemological view often remains puzzling. We analyzed the epistemological foundations of the idea of explication of tacit knowledge. We argue that the idea of explication of tacit knowledge is based on a combination of two different epistemological views that are shown to be mutually incompatible in certain significant aspects.

Keywords: *Epistemology, Explication, Explicit knowledge, Objectivism, Polanyi, Tacit knowledge*

1. Introduction

Tacit knowledge has been one of the most discussed concepts in area of knowledge management (KM) during the recent years. Tacit knowledge is usually defined as "knowledge difficult to articulate" (Nonaka and Takeuchi 1995; Baumard 1999), and is therefore often used to refer to practical knowledge, such as expertise, know-how and professional intuition that are rooted to personal experiences. It has been also contrasted with codified, objective knowledge that is easy to share in words and numbers (Busch 2008).

The main motivation for the popularity of the concept in the area of management studies is the widely supported claim that organizations can achieve competitive advantages by using effectively their unique knowledge (Spender 1996). According to many authors, individuals' tacit knowledge is particularly important source of unique and sustainable knowledge in the organizational context (e.g. Argote and Ingram 2000; Kikoski and Kikoski 2004). Various authors have remarked that individual's tacit knowledge might be of little advantage for the organization if it is not shared among other members of the organization (e.g. Nonaka and Takeuchi 1995; Kikoski and Kikoski 2004). That is why *explication of tacit knowledge* has been particularly discussed topic in the contemporary KM literature.

The concept of tacit knowledge is adopted from Polanyi's theory of knowledge. Polanyi, however, did not present a condensed definition of the concept, which partly

has led to varying interpretations of his theory. Accordingly, while some authors (e.g. Kikoski and Kikoski 2006; Sternberg 1999) stress the importance of making tacit knowledge explicit to be further shared, others (e.g. Tsoukas 2003; Hislop 2005) argue that explication of tacit knowledge is not possible. These two different views are said to represent two different epistemological schools, *objectivist epistemology* and *practice-based epistemology* respectively (Hislop 2005). Thus, the possibility of explication of tacit knowledge is a significant and widely discussed issue in the contemporary KM literature.

The core of this problem goes back to the question concerning the nature of tacit knowledge; what is tacit knowledge, and what kind of epistemology the concept presupposes in its *original* sense? These questions are the key to better assess the possibility of explication of tacit knowledge independently of scholarly emphases. Although epistemic problems are not the most central matter of management studies, these questions cannot be completely bypassed if theories concern knowledge conversions or creation of new knowledge. However, this seems to be often the case in KM literature dealing with the concept.

We claim that the explanation of the nature of tacit knowledge must be based on Polanyi's epistemology for three reasons:

- I. There is generally no disagreement over the origin of the concept. This is a widely recognized fact that most of the KM theorists also mention.
- II. Polanyi spent a great deal of his career studying this phenomenon and developing his epistemology. Therefore, as far as is known, he is the scientist who has studied the phenomenon most thoroughly.
- III. According to our understanding, not only the expression providing the definition of the concept but the entire theoretical context signifies the concept to be defined (Bunge 1967). Hence, the meaning of a concept in a certain theory is dependent on the theory itself (Tuomela 1973). Therefore, separating the concept of tacit knowledge from the rest of Polanyi's theoretical framework includes the risk of unintentional conceptual change if the original theory is not taken into account.

The theories that stress the importance of making tacit knowledge explicit differ in an epistemological sense from Polanyi's theory because Polanyi did not make ontological distinction between tacit and explicit knowledge equivalent to the distinction often presented in KM literature (usually claimed to be adopted from Polanyi). Thus, we address the question, *what kind of epistemological theory is required for a procedure of explication of tacit knowledge*. The theories stressing the importance of making tacit knowledge explicit generally seem to lack this kind of theoretical considerations.

We claim that the epistemology that enables the explication of tacit knowledge presumes a combination of two different kinds of epistemologies that are, however, shown in this work to be mutually incompatible. In this sense the idea of explication of tacit knowledge seems to lack theoretical plausibility. Also, the introduction of the

concept of tacit knowledge to a different kind of epistemological environment seem to have led to distortion of the original meaning of the concept.

2. Related Work

According to Cook and Brown (1999), the traditional understanding of the nature of knowledge is widely adopted in the literature concerning organizational knowledge. They call this view an *epistemology of possession* due to its way to treat knowledge as an entity that people can possess; it highlights objectivity of knowledge and therefore privileges explicit knowledge over tacit knowledge. However, Cook and Brown remark that there is more epistemic work being done in something that humans can do than can be accounted in terms of knowledge that humans possess; knowing is doing. Cook and Brown call this view an *epistemology of practice*. It stresses that knowledge is essentially about human activity, and furthermore, knowledge is embodied in people. Cook and Brown’s thinking seems to refer also to subjective aspects of knowing. Therefore, this view raises new issues from the perspective of knowledge sharing compared to the epistemology of possession.

Hislop (2005) makes practically the same distinction between two schools based on different kinds of epistemological assumptions; *objectivist* perspective of knowledge assumes that knowledge is an objective entity possible to be codified into explicit facts by cognitive processes in the human brain. On the contrary, *practice-based* perspective stresses that knowledge is embedded in practice. This means that knowledge is not seen as an objective entity that can be separated from people. Instead, development of knowledge is seen as an ongoing process that involves the whole body; it is impossible to disembodiment that kind of knowledge from people into objective form. In table 1 are presented the epistemological core assumptions of these schools according to Hislop (2005).

**Table 1: Differences Between Objectivist And Practice-Based Epistemologies
(Hislop, 2005; Cook And Brown, 1999)**

Objectivist epistemology	Practice-based epistemology
Knowledge derived from an intellectual process	Knowledge is embodied in practice Knowing/doing inseparable
Knowledge is disembodied entity/object	Knowledge is embodied in people Knowledge is socially constructed
Knowledge is objective facts	Knowledge is culturally embedded Knowledge is contestable Knowledge is socially constructed
Explicit knowledge (objective) privileged over tacit knowledge	Tacit and explicit are inseparable and mutually constituted
Distinct knowledge categories	Knowledge is multidimensional

From the objectivist perspective sharing of explicit knowledge is a trivial procedure because explicit knowledge is considered to be objective. Also sharing of tacit knowledge is seen possible when enriched with the presupposition that tacit knowledge

can be converted to explicit. Instead, practice-based epistemologies do not generally support the conception of explication of tacit knowledge. Given that our interest is focused in the idea of explication of tacit knowledge, in Hislop's terms our analysis concentrates particularly on the so-called objectivist view.

Despite that the KM field is closely related to the philosophical questions concerning the nature of knowledge, it is obvious that its main interests are not in analysis of the definition of knowledge but in more practical questions such as utility and value of knowledge, and knowledge sharing. Thus, theory of knowledge in this context seems to stress the *form* in which knowledge may appear. This perspective is understandable as the main concern is *management* of knowledge.

On the other hand, in the area of philosophical epistemology, *validity and origins* of knowledge have been the most fundamental problems since the times of philosophy of Ancient Greek (Vehkavaara 2000). Therefore, the meaning of the term *epistemology* in the context of KM is somewhat looser compared to epistemology as a branch of philosophy that addresses issues concerning *what knowledge is* and *what justifies it*. Despite the more pragmatic aims of theories of KM, the traditional epistemological problems, should not be left uncovered—at least if the resulting KM models are expected to be theoretically coherent and credible.

3. Different Characterizations Of Knowledge: Traditional, Objectivist And Polanyian Views

Traditionally knowledge has been defined as justified true belief, which is the *classical definition of knowledge* (Niiniluoto 1996). However, the traditional view on knowledge is not totally unproblematic. Gettier (1963) was the first to show that a justified true belief can be false, suggesting that the classical definition of knowledge is inadequate. Thus, there is no generally accepted consensus about the definition of knowledge. Nevertheless, the classical definition of knowledge is often some kind of basis or at least an important point of reference for any epistemological considerations. Therefore we briefly discuss what the traditional view consists of, and what kind of properties it requires of knowledge.

According to the classical definition, knowing something posits that the thing being known must be believed. In this sense belief is the basic component of knowledge to which the truth and the justification conditions are set (Scheffler 1965). To believe something is mentally to represent it as true (Graham 1998). Hence, belief is a mental state in which a subject holds a proposition to be true. To represent something mentally as true naturally includes an idea that the knowing subject is *conscious of that belief* (Vehkavaara 2000).

The content of the belief must correspond the prevailing state of things in reality in order to be regarded as knowledge; it is intuitively clear that a false proposition cannot be *known* (Steup 2008). However, the truthfulness does not make the belief knowledge according to the classical view. For example, in the case of a lucky guess it does not seem reasonable to claim that the subject *knew* how the things were because the subject had no rational explanation for the belief. In this sense it have to be assessed, what *the*

grounds are for holding the belief. Therefore, a theory of knowledge is most basically a theory about epistemic justification because justification makes a belief “epistemically permissible” (Pollock and Cruz 1999).

According to Vehkavaara (2000) the condition of justification presupposes that knowledge can be expressed in a form of propositional sentence(s), because an essential idea behind the condition of justification is that the “verification” of knowledge should be repeatable, or at least examinable, by anyone. Indeed, justifiability of knowledge is specifically related to the ability to publicly present evidence supporting a claim (Niiniluoto 1996). Thus, knowledge is supposed to be *presentable linguistically*. Also, the propositional form of knowledge suggests that no knowing subject is actually required, because a justified, true proposition exists as an ideal object independent of the knower and time (Vehkavaara 2000). In this sense the condition of justification seems to have a close connection with *objectivity*.

3.1. Objective Knowledge And Objectivism

As explained earlier, the theories that highlight the importance of explication of tacit knowledge are related to objectivist-based epistemological tradition (Hislop 2005; Cook and Brown 1999). *Objectivism* can be understood as an ontology or an epistemology. Objectivist ontology (metaphysical objectivism) refers to the idea that there is one objective reality that exists independently of human mind (Niiniluoto 1999). We can perceive the existing reality with our senses, but the understanding we form about the world might not be entirely correct. Thus, objectivist ontology concerns the world and its form of existence. Instead, objectivist epistemology holds that our knowledge concerning the world is objective.

Objectivism as a branch of epistemology has a history starting from late 1950’s. It refers to Ayn Rand’s philosophical view that a knowing subject can acquire objective knowledge of reality only through reason. Objective knowledge can be formed from a perception in a process of concept formation and reasoning (Darity 2007). Rand (1962 p. 35) wrote: “Reality exists as an objective absolute—facts are facts, independent of man’s feelings wishes, hopes and fears.” Rand (1962 p. 35) further describes human relation to reality in a following way: “Reason ... is man’s only means of perceiving reality, his only source of knowledge, his only guide to action, and his basic means of survival.” Hence, knowledge is based on rational reasoning that can be executed by anyone

Consequently, epistemological objectivism essentially concentrates on the objective nature of reality and on the justification of knowledge. It seems even useless to deal with the question of the relationship between tacit and explicit knowledge from the perspective objectivist thinking because, strictly speaking, the notion of inarticulate and vague (tacit) knowledge is senseless within the objectivist theory of knowledge; the theoretical framework of objectivism simply does not support such a conception.

In the next subsection we present the core of Polanyi’s theory of knowledge. It is precisely the requirement of justification that differentiates Polanyi’s thinking from the traditional view.

3.2. The Core Of Polanyi's Epistemology

According to Polanyi (1958) epistemological theories of the time had described human knowledge too narrowly because an absolute objectivity was traditionally emphasized as an attainable ideal for knowledge. He claimed that modern science that was based on disjunction of objective and subjective aimed to eliminate passionate and personal human appraisals of theories from science. Polanyi claimed that if all the knowledge were objective, it would be impossible to make scientific discoveries. Instead, scientific discoveries were often made on the basis of unexplained informed guesses, intuitions and imaginative ideas that reflected some kind of *tacit knowledge*. From this critique of modern epistemology and philosophy of science raised the concept of *personal knowledge*. According to Polanyi, all the acts of conscious mind included *a personal coefficient*; "Into every act of knowing there enters a passionate contribution of the person knowing what is being known, and ... this coefficient is no mere imperfection but a vital component of his knowledge." (Polanyi 1958 p. viii)

Consequently, Polanyi adds subjective elements of knowing to the traditional conception of knowledge; the knower is situated in the most fundamental position instead of what is being known. The knower does not simply pick up the meaning of knowledge but actively forms it by integrating his personal appraisals to the thing that is being known. This is exactly opposite approach to epistemological objectivism, which claims that knowledge should be independent of the knower. However, Polanyi's theory is not subjectivist. Polanyi's concept of personal knowledge has strongly objective element because it affirms the possibility to establish contact with knower-independent reality (Mitchell 2006). Thus, in the ontological sense Polanyi's theory refers to realism.

3.3. The Structure Of Knowing: Subsidiary And Focal Awareness

The major feature of Polanyi's theory is a distinction between two kinds of awareness that are involved *in all conscious acts*. *Focal awareness* concerns the object of conscious act represented in the mind, for example a perception of an external object or a propositional belief. *Subsidiary awareness* refers to the basis on which the focal awareness operates. Processes of subsidiary awareness provide the elements that the focal object consists of. For example, when we perform a skill, we attend focally to its outcome, while being only subsidiarily aware of the several moves we coordinate to this effect (Polanyi 1969). The most essential idea of the theory is that while attending to focal awareness a person *dwells in* subsidiary awareness that contains subsidiary elements, or clues, of the focal target. Polanyi (1964 p. xiii) explains:

When we are relying in our awareness of something (A) for attending to something else (B), we are but subsidiarily aware of A. The thing B, which we are thus focally attending, is the meaning of A. The focal object B is always identifiable, while things like A, of which we are subsidiarily aware may be unidentifiable. The two kinds of awareness are mutually exclusive: when we switch our attention to something of which we have hitherto been subsidiarily aware, it loses its previous meaning.

This is the structure of knowing that Polanyi sees valid for *all acts of knowing*. The idea is that the thing we are focally aware of as a result of a conscious act is formed subsidiarily of tacit elements, which enriches focal knowledge with personal coefficient. Therefore we base our knowledge of the things we are focally attending to something more fundamental.

For example, if we observe a moving object, we see thousands of rapidly changing clues as one, unchanging object; we are not aware of calculations of changing distances, variations of light or movements of our eye muscles, but simply the focally attended object (Polanyi 1968). The resulting visual perception is a matter of focal awareness. We cannot reach clues, calculations and physiological functions that take place in the subsidiary awareness enabling our knowledge of the focal object. The process has only one direction terminating in the focal awareness.

According to Polanyi the two kinds of awareness are mutually exclusive; we cannot attend to both of the awareness at the same time. In fact, we cannot attend to what is functioning subsidiarily at all, because the moment we shift our attention to the subsidiary elements, it becomes focal losing its subsidiary meaning, and having its own subsidiary basis. Polanyi describes (1968 p. 31) this in a following way:

... Anything serving as a subsidiary ceases to do so when focal attention is directed on it. It turns to a different kind of thing, deprived of the meaning it had in the triad.

Therefore, the meaning of tacit knowledge cannot be seized on *by definition*. For example, we can shift our focal attention to movements of our eyes (a subsidiary element) while observing a moving object, but it changes radically our perception; the thing we are now attending to (the movements of our eyes) is focal and we can understand hardly anything of how it functioned subsidiarily as a part of attending to the moving object.

3.4. Justification Of Knowledge According To Polanyi

The focal part of knowing corresponds relatively well to the belief in the traditional definition of knowledge; the focal representation is the conscious understanding that the knowing subject forms of the object of knowing, and that the subject might be able to articulate. However, this focal “belief” is a result of something more fundamental, not the starting point of the knowledge, as it is in the traditional definition of knowledge.

As all knowing is based on tacit elements in Polanyi’s theory, objective knowing is not possible by definition. However, logical deduction is a process that comes near explicit knowing in the sense that it is based on connecting focal items, namely the premises and the consequent (Polanyi 1975). The deductive conclusion is attained using operations with fixed mental structures, which minimizes the need of indwelling to subsidiary awareness because the premises are already given (Polanyi 1965). The most important difference between deduction and knowing based on tacit subsidiaries is that deduction is a reversible process; it is possible to go back mechanically from the

consequence to the premises. However, knowing based on tacit subsidiaries is not similarly reversible. It is not possible to go back from the integrated focus to its subsidiaries (Gill 2000).

Thus, in addition to being capable of stated clearly, explicitness seems to refer also to the possibility to trace the origins of the focal knowledge—the justification *would* make knowledge more explicit. However, *knowledge cannot be exhaustively justified because it is always based on unspecified particulars* (Polanyi 1968). This logic leads to the culmination of Polanyi's theory: the rejection of the idea of fully explicit knowledge.

This claim might seem problematic because it questions our ability to e.g. to verify scientific knowledge claims, meaning that knowledge would always be only subjective. Polanyi (1958) answered this problem by stressing that knowing is a responsible act that claims for universal validity. As he (Polanyi 1958 p. 65) puts it:

It is the act of commitment in its full structure that saves personal knowledge from being merely subjective. Intellectual commitment is a responsible decision, in submission to the compelling claims of what in good conscience I conceive to be true.

Therefore even scientific knowledge claims cannot be verified by means of explicit articulation. The confirmation of scientific knowledge claims would require the use of skills and insights, which themselves lie outside of empirical demonstration (Gill 2000). Instead, knowledge will be tested in reality that all knowing agents can access; knowledge will justify itself in case it is worth it. On the other hand, reasons that justify our beliefs can be repealed as our understanding of the subject area accumulates. This, indeed, seems to be often the case in science.

4. Epistemological Framework For The Idea Of Explication Of Tacit Knowledge

The idea of explication and sharing of tacit knowledge was originally made famous by Nonaka and Takeuchi (1995) in their theory of organizational knowledge creation. Their SECI-model describes conversions between tacit and explicit knowledge types. The most essential part of the model is the conversion of tacit knowledge to explicit (Nonaka and Takeuchi 1995). Since the publication of Nonaka and Takeuchi's theory tens of authors have embraced the idea of explication of tacit knowledge.

The idea of explication of tacit knowledge is rooted on the distinction between explicit knowledge and tacit knowledge (Hislop 2005). E.g. Nonaka and Konno (1996 p. 42) make the point clear by stating: "There are two kinds of knowledge: explicit knowledge and tacit knowledge." Despite this classification, many authors still recognize some kind of inseparability between these two types (e.g. Nonaka and Takeuchi 1995; Ambrosini and Bowman 2001). However, explication of tacit knowledge seems to logically presume such a classification; the aim, after all, is to convert knowledge existing in a tacit form to more exploitable explicit form. Generally

speaking, there hardly is any conversion of one form to another form if two or more different forms are not presupposed.

According to KM theories embracing the idea of explication of tacit knowledge, explicit knowledge is seen codified, impersonal and objective (Hislop 2005). As Nonaka and Konno (1998) put it, "Explicit knowledge can be expressed in words and numbers and shared in the form of data, scientific formulae, specifications, manuals and the like." Thus, explicitness seems to refer to the form in which knowledge is presented. Also, explicit knowledge is assumed to include the correct meaning unchangeable and ready to be received by anyone. This characterization of explicit knowledge clearly sets a strong objective nature to that kind of knowledge and corresponds well the traditional definition of knowledge.

Tacit knowledge is usually defined as subjective knowledge that is *not yet explicated*, considering tacit knowledge as a latent resource that needs to be shared (e.g. Sternberg 1999; Nonaka and Takeuchi 1995; Kikoski and Kikoski 2004). The use of the concept of tacit knowledge in general is very inconsistent depending on author, but according to the usual characterization it refers to expertise or know-how that is difficult to articulate.

Hislop (2005) considered the theories concerning explication of tacit knowledge objectivist opposing them to practice-based epistemologies. However, this classification of epistemologies seems somewhat crude in a sense that the idea of vague and non-justified knowledge cannot be accepted easily into the realm of objectivist thinking, in which the strict justification is a fundamental requirement for knowledge. For example, expert's intuitive hunch simply is not knowledge according to objectivist definition because it is not based on rational, objective reasoning. In order to be useful or even understandable a concept must be supported by other concepts within a conceptual system. This is not the case of the concept of tacit knowledge within the objectivist framework. However, the theories concerning explication of tacit knowledge would consider intuition as an instance of tacit *knowledge*. Therefore, the theories stressing the explication of tacit knowledge are not objectivist. Rather, they seem to be some kind of extensions of traditional view on knowledge, because according to these theories objective and "real" (explicit) knowledge can be created basing on non-specific forms of "knowledge" (tacit knowledge).

In sum, the theories of explication of tacit knowledge seem to be based on a relatively straightforward distinction between tacit and explicit knowledge. The notion of explicit knowledge comes from traditional view on knowledge, whereas the notion of tacit knowledge is based on Polanyi's theory of knowledge. Since there is no explicit knowledge according to Polanyi's theory, and unjustified tacit knowledge seems rather questionable idea from the perspective of traditional theories of knowledge, explication of tacit knowledge requires an epistemological environment that combines Polanyian elements with traditional idea of knowledge.

4.1. Explication Of Tacit Knowledge Enabling Epistemology

The idea of explication of tacit knowledge presupposes that the inarticulate tacit knowledge is first made articulate. An articulated, explicit form of tacit knowledge can then be shared with other individuals. This idea clearly has a strong objectivist presupposition; as long as tacit knowledge is explicated, it is supposed to be understandable and usable by others as such.

Nonaka and Takeuchi (1995) have considered the definition of knowledge that their theory presupposes. They (p. 58) explain:

In our theory of organizational knowledge creation, we adopt the traditional definition of knowledge as "justified true belief." It should be noted, however, that while traditional Western epistemology has focused on "truthfulness" as the essential attribute of knowledge, we highlight the nature of knowledge as "justified belief."

Nonaka and Takeuchi do not make clear whether this definition concerns both explicit and tacit type of knowledge. If this is considered to be a general definition of knowledge, and knowledge is then supposed to have various types, this implies that the definition concerns both types of knowledge; both tacit and explicit knowledge are justified beliefs.

However, according to Polanyi's theory indefinable tacit elements cannot be rationally justified, which makes knowledge partly unjustifiable in general. Also, as Vehkavaara (2000) remarks, a requirement of justification presupposes that the representation of knowledge in question can be made *linguistic*. However, the most common feature of definitions of tacit knowledge in the KM literature is the problem of articulation. Also, intuitive knowing is often equated with tacit knowledge in KM literature. It is self-explanatory that an intuition is just an intuition exactly because of the lack of justification; it is a feeling of knowing something without a well-defined explanation. Therefore the requirement of justification supposedly cannot concern tacit knowledge in these theories.

Consequently 'justified belief' may only concern 'explicit knowledge' in the theories that make the distinction between different types of knowledge. This seems to place tacit and explicit knowledge in an unequal position in a way that is contrary to Polanyi's thinking; instead of being a fundamental basis of all knowing, tacit knowledge is seen rather as some kind of possible resource for new, "real" knowledge. Now, in the case of explication of tacit knowledge it is logically presumed that tacit knowledge functions as a justification of explicit knowledge as it is the only source of this attained knowledge. However, if tacit knowledge itself is at most very weakly justified, can it function as a justification of something else?

In sum, the idea of explication of tacit knowledge seems to provide that the attained objective knowledge is based on a weak justification, that is, for example on characterizations of beliefs, hunches and implicit know-how. In other words, the requirement of objectivity of knowledge is seen to true, but the application of Polanyi's thinking leads necessarily to rejection of requirement of rational justification. Hence, the resulting epistemology seems to be a combination of Polanyian epistemology and

the traditional view on knowledge; it both assumes and rejects some features from both views. This idea is presented in Figure 1.

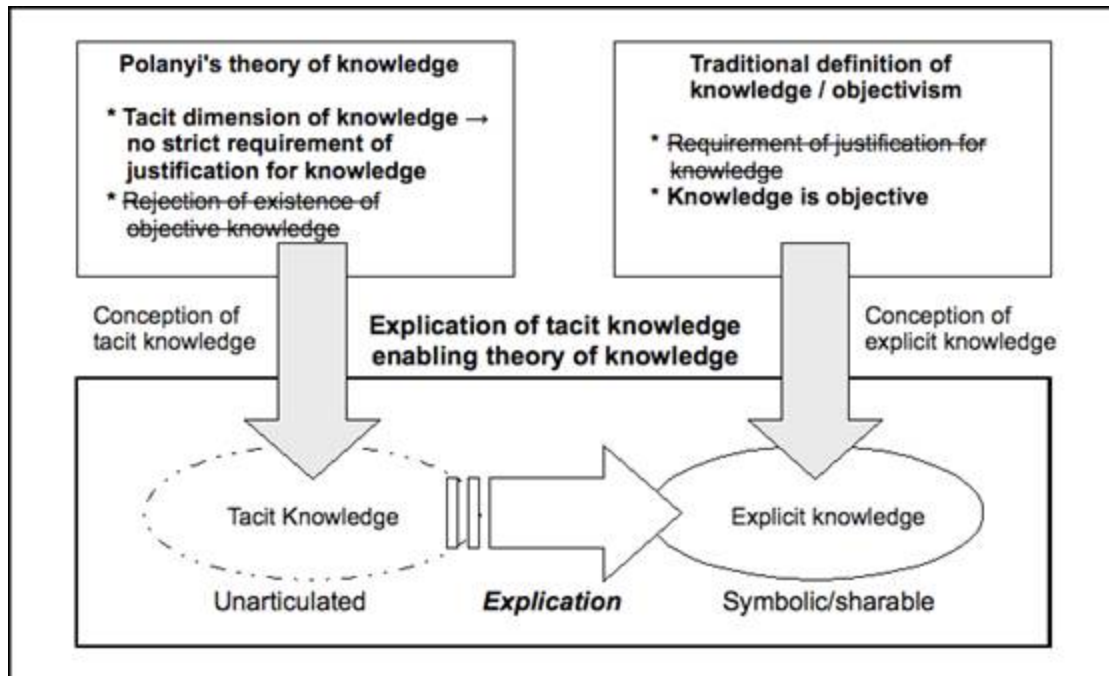


Figure 1: A Model Of Explication Of Tacit Knowledge Enabling Theory Of Knowledge

The concept of tacit knowledge comes from Polanyi's theory of knowledge, but the idea of explicit knowledge corresponds to the traditional, or even objectivist view, on knowledge. The resulting theory of knowledge has to reject some features both from Polanyi's theory of knowledge and from the traditional view on knowledge (struck through in the upper boxes of the Figure). The features that the resulting theory of knowledge adopts from these theories are highlighted in the upper boxes of the Figure. The problems concerning the combination of these two different types of epistemologies are discussed in the next section.

5. Problems Of The Explication Of Tacit Knowledge Enabling Epistemology

Given that the basis of Polanyi's theory of knowledge was a critique against the objective ideal of knowledge, it is not surprising that these two views conflict in some crucial points. This is also why an epistemology that combines features from both of these theories seems to head for some theoretical problems.

5.1. Non-justified Objective Knowledge

The idea of accepting non-strict criteria for the basis of objective, explicit knowledge that can be exchanged between individuals seems to be controversial in itself. In a theoretical level, to attain reliable objective knowledge it should be derived and

justified by anyone based on the same criteria—this is the basic idea behind the requirement of justification; people should end up having the same conclusion, which cannot be generally expected if there are no recognizable premises or if the premises vary a lot from individual to individual.

As objectivist epistemology (and also Polanyi) states, logic and reason are the most straightforward means to attain fully objective knowledge. Objectivist epistemology considers this possible, whereas Polanyi rejects the idea of fully explicit knowledge. However, neither of these epistemologies, nor the traditional view on knowledge, accepts that *objective* knowledge can be based on vague justification.

Let us consider a concrete example of a theoretical problem that follows from this view. Kikoski and Kikoski (2004 p. 72), among others, illustrate the difference between tacit and explicit knowledge by giving characteristics that distinguish tacit knowledge from explicit knowledge:

- Explicit (known): Public, conscious/aware, logical, certain, strong, hard, structured, goal oriented, stable, direct perception, rules/methods/facts/proof.
- Tacit (not yet known): Private, unconscious/unaware, alogical, uncertain, fragile, soft, unstructured, indeterminate, unstable, indirect, subception, intuition/sensing.

Drawing from Polanyi, Kikoski and Kikoski (2004 p. 73) state: “all knowledge either is tacit, or is rooted to tacit knowledge; that is, explicit knowledge depends on and is encompassed by tacit knowledge.” However, following their characterization of different knowledge types it seems logically controversial, that strong, certain and stable knowledge is based on fragile, uncertain and unstable knowledge.

Therefore, tacit knowledge understood as a foundation of all knowledge (the Polanyian conception) simply is not compatible with the idea of objective, explicit knowledge. If the idea of fully objective knowledge is, however, still adhered, it leads to distortion of the concept of tacit knowledge; its original intension must be modified in order to make it fit the new theoretical environment.

5.2. Simplified Image Of Tacit Knowledge

Polanyi’s notion of tacit knowing goes far beyond the idea of tacit knowing defined merely as intuition or context-specific know-how that accumulates as a result of experience. Instead, tacit knowing belongs inextricably in all conscious acts. The predominant conception of tacit knowledge in the KM literature that supports the idea of explication of tacit knowledge seems therefore to be based on simplification of the concept of tacit knowledge.

Let us consider an example given by Sternberg (1999 p. 232) as he explains the way explication of tacit knowledge reduces individual differences:

For example, if, in the past, knowledge about the importance of buying the boss a gift for his or her birthday was tacit, those who possessed this knowledge

were at distinct advantage. But if now everyone knows and uses this piece of knowledge, it will no longer serve to differentiate employees, in the boss' eyes, and most likely some other as—yet tacit knowledge will take its place. As this example points out, tacit knowledge can become explicit.

The awareness of certain way of action (as in this case) is hardly unspecified or subsidiary. “Tacit knowledge” in this example, namely the awareness of the importance of buying the boss a gift, seems to be a focal belief (justified or not) that can be shared if wanted; someone simply *knows* or *believes* that buying a gift is important in certain culture. This kind of conception of tacit knowledge has very little to do with Polanyian contents of subsidiary awareness. In fact, we might critically ask, what additional value or explanatory power the introducing of concept of tacit knowledge brings to this example?

The way intuition and its relation to tacit knowledge are discussed in the literature of management studies serves as another example of the simplified conception of tacit knowledge. Nonaka and Konno (1998 p. 42), among others, argue that intuitions and hunches fall into the category of tacit knowledge. Also Nonaka and Takeuchi (1995) describe externalization (the conversion of tacit knowledge to explicit knowledge) by saying that the use of figurative language is a way to articulate intuitions and insights. From this seems to follow that articulation of intuition is considered to be articulation of tacit knowledge, which pretty much equates tacit knowledge with intuition. However, it is important to make a distinction between the conscious representation of unexplained feeling of knowing something (simplified view on tacit knowledge) from the meaningful elements that *precede and enable the feeling of knowing* (Polanyian view on tacit knowledge).

The sensation of knowing a solution (not to speak of its verbal description) belongs in Polanyi's terms to the focal, not the tacit, part of that act. Indeed, a relevant question seems to be, where the sensation of knowing does come from. Why is the intuition just that and not something else? An intuition must be based on something because otherwise it would be just a random guess. In Polanyi's terms integrated subsidiary knowledge that finally forms the focal sensation remains unexplained in the process. Thus, intuition is an innate sensibility to coherence that cannot be explained with rules or algorithms (Polanyi 1966). The knowledge on which intuition is based remains tacit. As Polanyi (1968 p. 42) puts it:

It is intuition that senses the presence of hidden resources for solving a problem and which launches the imagination in its pursuit. And it is intuition that forms there our surmises and which eventually selects from the material mobilized by the imagination the relevant pieces of evidence and integrates them into the solution of problem.

Therefore, if intuition itself is equated with tacit knowledge, we logically need a third level of knowledge that is even more quintessential than tacit knowledge, namely the instances of meaning that form the intuition. Although intuition indeed is an outstanding manifestation of tacit knowing, tacit knowledge does not seem to become articulated in the process of articulation of the intuition. Instead, intuition seems to

only reflect knower's tacit resources more or less the same way that a skilful performance reflects performer's skills that also cannot be described in words.

5. Conclusions

Explication of tacit knowledge has been proclaimed as the most important function of modern organisations in the contemporary KM literature. However, it seems that the theoretical grounds of this idea has not been profoundly studied, which cuts down the plausibility of the theories stressing the importance of making tacit knowledge explicit. On the other hand, the development of efficient practises is based on coherent theories. This suggests that the conception of knowledge still calls for more theoretical development and research also in the organizational context.

We have described two significant theoretical problems of the idea of explication of tacit knowledge. First, the division of knowledge into tacit and explicit. Interestingly, many authors claim that the classification of knowledge to tacit and explicit comes from Polanyi's theory of knowledge (e.g. Baumard 1996; Spender 1996). To be sure, focal ("explicit") and subsidiary (tacit) knowledge are central concepts in Polanyi's epistemology. However, the distinction is not ontological, but functional. Polanyi did not say that certain things are known tacitly, while others are known explicitly. Instead, the distinction describes the structure of knowledge that concerns *all acts of knowing* being the basis of Polanyi's *theory of knowledge*—it is not a theory of the existence of two types of knowledge.

Second, theories that embrace the idea of converting tacit knowledge to explicit are based on two mutually incompatible epistemologies. The concept of tacit knowledge is obviously adapted from Polanyi's theory of knowledge, whereas the characterization of explicit knowledge corresponds objectivist theory of knowledge. The most crucial contradictory feature is the view that these theories take on the requirement of justification. Interestingly, many authors seem to bypass this controversy. Hence, the focus seems to be on the questions concerning application of tacit knowledge whereas the considerations concerning the theory of knowledge that the application of the concept presupposes are almost completely bypassed.

Polanyi's theory does not signify that people could not share knowledge or have same conceptions concerning reality. Knowledge does not have to be entirely objective for that people could act efficiently together. The guidance of an expert undoubtedly is an immense help when a non-professional tries to assimilate a certain skill. Therefore we do not want to question the methods and goals of the theories of knowledge creation. However, this does not change the fact that the concept of tacit knowledge is being used in a questionable, simplified and even incorrect way in some of the KM literature, which has separated its meaning from its original role as a foundation of conscious acts, reducing it to refer to any type of knowledge that is difficult to manage.

Tacit knowledge is first and foremost a theoretical concept (i.e. a concept introduced by a theory), and hence, its application even in more practical environment should be based on the original theory. However, many authors seem to base their conception of tacit knowledge on the loose idea "knowledge difficult to articulate" that can refer to

virtually any mental or social phenomenon. As the extension of a concept grows this way, it is in danger to become unclear, even meaningless, nonsense.

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