

A discussion focusing on Polanyi's "Tacit Knowing"

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Abstract

The essay is a contradiction, of sorts. Its problem is prompted by use of Michael Polanyi's term tacit knowing in the knowledge management literature. So the problematic for the essay is what does Polanyi mean by tacit knowing? We will attempt to dwell in Polanyi's description of tacit knowing as he has written extensively about the tacit coefficient of human existence. He has described this phenomenon in Personal Knowledge (1962), The Tacit Dimension (1966), Knowing, and Being (1969), and Meaning (1975). The essay is an exploration of the ideas of tacit knowing, tacit knowledge, and the tacit dimension.

Keywords: tacit knowing, subsidiary ... focal, from ... to, Gestalt, personal commitment, tacit coefficient, conviviality.

Introduction

We are in the middle of teaching a course about knowledge management. We are, and have been living with some of the basic ideas of the subject matter. One of the most fundamental ideas, if not the most basic, is the idea of tacit knowledge or tacit knowing. These ideas being essential – sets the problematic of this essay which is a description and analysis of Michael Polanyi's conception of tacit knowing. For many reasons, tacit knowing is a difficult notion to describe and analyze. In all likelihood because what we may know or understand is silent, ironically so. That being said, the context of who was Michael Polanyi and what he contributed to the foundational underpinnings of what has been labeled knowledge management is an essential part of this essay. His influences were widespread—particularly in physical chemistry, philosophy, and economics with respect to a counter perspective on positivism. His notion of tacit or silent knowledge is derived from “culturally” derived meaning and influence must necessarily be considered in all knowledge management application and use. His many works in numerous academic arenas provided a forum for his readers to understand intellectual variation even in the context of well-defined and structured doctrine and practice. Variation in thought and action can be explained in part because of inherent culturally determined variation in world perspective.

The essay is divided into three segments serving as subsidiary elements from which we hope to discover some fixed comprehensive perspective. The first segment uses a heuristic from Ortega y Gasset (1967) who argues that every writer has a soil, subsoil, and adversaries from which and against whom he or she writes. Thus, this proximal part of the essay looks at Polanyi's writings as he responds to his world's contemporary issues about the nature of science, such as scientific rationality, formalism, mechanism and other aspects of an objectivist and positivist scientific perspective. The second subsidiary segment is in the form of a dialectic between Polanyi's

notion of tacit knowing as the tacit coefficient operating in human existence, and ideas of tacit and explicit knowledge as they operate in the knowledge management literature. This is a dialectic in which authors of the literature turn Polanyi to their ends. The third and final segment, contradictory as it may seem, is a description, hence also an analysis, of Polanyi's conceptualization, how he has recorded and documented, or indwelling, of tacit knowing. This essay presumes that, while ultimately what Polanyi meant by tacit knowing will remain silent and somewhat mysterious (and indeterminate), we can express something of what we do know or understand about Polanyi's tacit knowing by looking at how others have construed the idea of tacit knowledge, and how Polanyi has described his theoretical adversaries to whom he is opposing his ideas of tacit knowing.

We use Ortega y Gasset's (1967) idea that every writer has a "soil," "subsoil," and "adversary" (or adversaries) (p. 73) to work at discovering what Polanyi means. Our ploy, to understand Polanyi's ideas of tacit knowing, tacit knowledge, as well as the tacit dimension, is to uncover as much as we can, given the situation, about the contemporaneous and historical circumstances, a kind of intellectual genealogy which makes up (made up) his environment. Polanyi is better than most writers because he does record these influences.

Soil, subsoil, adversaries and friends

Polanyi (1966) writes that "...we can know more than we can tell" (p. 4). Polanyi is doing more than merely creating an iconic statement about human knowing (we have found other quotes of this in Rebernik and Širec (2007, p. 408), MacFarlane (2013, p. 19), and Johannessen and Olsen (2011, p. 143), and Kreiner (2002, p. 115)). And, Bourdieu (1977) writes: "It is because subjects do not, strictly speaking, know what they are doing that what they do has more meaning than they know" (p. 79). This situation is about language and our capacity to use it to express completely and precisely what and how we know stuff about the world in which we live. The situation is also about the function of belief and values in our existential knowing about our world. There is no tacit dimension without belief (Mitchell, 2006, pp. 59-62). This is part of his soil, the ideational currency of contemporary concepts of the relation of language and reality, but it is part of his subsoil, the genealogical reach of theories about language and the problem of universals. The limits of our world are not the limits of our language. A similar sense shows up in Dewey's (2008) *Experience and Nature* and Ortega y Gasset's *Some Lessons in Metaphysics*. For Polanyi, experience begins in the ineffable.

Another layer of his soil is the problem of "denotation; or linguistic "naming-cum-pointing" (Polanyi, 1966, p. 5). Denotation is a way of knowing analytically, reflectively; the act of denoting is a linguistic act of pointing to meaning. It is an act of integrating details in their meaning. While Dewey (2008) in his *Experience and Nature* argues that his empirical method of choice is the denotative method, Polanyi (1966) argues that denotation is not really exact and leaves a residue (p. 6).

For Polanyi (1962), denoting a meaning is an art form, and that claims about knowing things in the world is a matter of crafting the assertion in such a way that rethinks it because of the "ineffable" which is intrinsic to our language and our thinking (p. 81). There is a "tacit coefficient" of speaking and writing (p. 86). There is a mistrust of language and its ability to be

used as a proper tool for communicating or informing. Knowing something in detail and speaking of the details are not the same (Polanyi, 1962, p. 91).

Another major stratum in Polanyi's soil, which he "plows" in his works (Polanyi, 1962, p. 56), is the idea of Gestalt. He writes (1966): "...I am looking at Gestalt ... as the outcome of an active shaping of experience performed in the pursuit of knowledge" (p. 6). Polanyi relies on us to bridge a gap of understanding left by his use of Gestalt; it is crucial to his concept of tacit knowing. Although writing in 1966, he digs up an idea current in the 1920s and 1930s (the idea is older). Dewey among others translates Gestalt as situation or field (its translation), and environment, while others wrote of context.

Perhaps, we can use the example of a Japanese rock garden wherein the rocks, relative to one another, reconstructs a physically visible and ontological space. It is the space, tacit as it may be, that creates the significance, the sense. There is an element basic to the situation. This part (of the whole) is unspeakable and invisible; this is the nothingness which now stands out as the structural relationships which create the garden, the Gestalt. The field is a consequence of inquiry configuring in a particular manner not only what one knows but how one knows. As Polanyi writes "The structure of Gestalt is then recast into a logic of tacit thought ..." (p. 6).

Polanyi (1966) goes on to discuss "perception" (p. 7) and then current psychological "experiments" (pp. 7-9), of electric shock. Being shocked by electric jolts at the hearing of nonsense syllables, a person learns to avoid the jolt by recognizing the coming syllables as signs of the jolt. For Polanyi, the Gestalt, or situation involves the particulars, the nonsense syllables, and their consequence, the jolt; this then creates in experience a meaning joining the particulars together. What is silent is the logic of the association of the particulars within the field. We will discuss this in greater detail later in the essay. Here we are only pointing to the most important ideational tool, Gestalt, in play in Polanyi's web of significance (Geertz, 1973).

Polanyi (1966) further indicates his embeddedness in his soil by using the terms "proximal" and "distal" which he borrows from anatomical vocabulary (p. 10). Polanyi (1966) writes that we have an "understanding of a comprehensive entity" (p. 13) by which he alludes to Dilthey's (1976) notion of *verstehen*.

Polanyi (1966) is anti-reductionist, believing that explanation of a meaning by focusing on the details will destroy the meaning, or the pattern, which holds the particulars together (p.19). Polanyi (1962) writes: "All particulars become meaningless if we lose sight of the patterns which they jointly constitute" (p. 57).

An aspect of Polanyi's (1966) subsoil as it bears on the conception of tacit knowing is the problem of knowing described in Plato's dialogue "Meno" (p. 22) where it is argued that you either know already the solution to a problem or you will never know the solution; in both cases it is absurd to search for an answer. If knowledge is explicit, we already know; if it isn't, we can never know. Polanyi, in discussing the nature of tacit, references Poe's (1975) *Purloined Letter*, a mystery story about how a letter is "hidden" in plain view (pp. 208-222).

Language is our interpretive frame from experiences. But for Polanyi (1962, pp. 106-110), our experience in and out of the world is always changing and, thus, our interpretive frame, our language is always changing to re-interpret our experiences. Deduction of meaning is an art. There is a distinct distrust of the fitness of language to describe and explain in a precise way the

things are in their multiplicities and complexities. He would not appear to agree with Whorf although he footnotes Sapir approvingly (Polanyi, 1962, p. 77).

Polanyi (1962) writes "...that complete objectivity... [of] the exact sciences is a delusion..." (p. 18). This is part of Polanyi's soil. On the other hand, he does not write that objectivity is an illusion only that "complete" objectivity is. Besides the "objectivity" problem, there is also a "mechanistic model" problem. A good example of this mode of thinking can be found in Craik (1967) *The Nature of Explanation*. For Polanyi (1962), a major adversarial situation exists, because he believes that it cannot be claimed that all things are rationally knowable (p.60).

Additionally, for Polanyi (1962), another major adversarial position of modern science is its use of formal systems as a way of describing and explaining theory (p. 87). It is not so much that you cannot formally be specific about the details of a situation but that it is difficult or impossible to express how the details work together to create a formal picture of things. The relationships are indeterminate because of the "existential meaning of the whole" (Polanyi, 1966, pp. 88-90). In this perspective, Polanyi recognizes Gödel (1962, p. 94) as a friend in the conflict with formal systems.

Catalogue of knowledge management literature

Generally, the Knowledge Management literature in its descriptive discussion of tacit knowledge presents two perspectives (perhaps three if we separate out Nonaka's view); tacit knowledge is either individual and personal effort sustained in a process of thinking with use of mental models or it is collective shaped by social practices of a community of practice. In the former perspective, it is a psychological phenomenon and in the latter, it is a socially constructed phenomenon.

In this segment, we offer a kind of dialectic which opens with several questions (Toom, 2012): What is tacit knowing? What is tacit knowledge? What is the tacit dimension? And what is explicit knowledge? This review is brief and does not include everyone who has written on the tacit-explicit distinction; an exhaustive review, we believe, is an difficult task; we will try to summarize as many as we can in the pace given. We are faced with another difficulty which is the vocabulary in use about these topics. Our practice here will be to use quotation marks for the first appearance of a term in a particular author. Thereafter, the word will lose its privileged status.

Nonaka (1998) uses the term "tacit knowledge" (p. 24) throughout his works, and references Polanyi. The term is indeterminate. Nonaka has been interested in the process of creating innovation of products and services within corporate settings. He is concerned with how companies creatively develop what they know organizationally to be innovative, and profitable. For Nonaka (1998), tacit knowledge means here "highly subjective insights, intuitions, and hunches" (p. 24).

We might consider these words synonyms, but we have to inquire into what he means. But, he relies on us readers to give sense here and he relies on a kind of associationistic presentation of a definition. Further on, Nonaka (1998) writes that tacit knowledge is "highly personal," "hard to formalize," and "difficult to communicate" (pp. 27-28). Elsewhere, Nonaka (1994) referencing Polanyi claims tacit knowledge is "personal" (p. 24).

Here we might want to frame our thoughts multiculturally, if only because Nonaka frames things as Japanese in contrast to Western (Nonaka & Takeuchi, 1995). Nonaka and Konno (1998) discuss that the Japanese view of knowledge is at its core “tacit” (p. 42). They (1998, p. 42) present the same list of attributes of tacit knowledge as Nonaka (1998, p. 24). Nonaka and Takeuchi (1995) add the term “know-how” (p. 8) to the list.

Nonaka and von Krogh (2009) explain tacit knowledge as grounded in sensory experience and activity, a consequence of “inarticulated mental modes, or implicit rules of thumb” (p. 636). They state that tacit knowledge is “rooted in action, procedures, routines, commitment, ideals, values, and emotions” (Nonaka & von Krogh, 2009, p. 636). For Nonaka and his co-authors tacit knowledge best characterizes the experiential state of affairs of Zen Buddhism.

What is subjective is private, individualized, the seeing of an event or affair from a self-centered perspective. Rhetorically, to refer to anything as subjective is to deny its validity, or to sustain it as a form of fiction. When we speak of highly subjective insights, intuitions, or hunches, we are speaking to a kind of indeterminateness, anecdotal in effect. If we use personal rather than subjective, then we suggest some kind of conviction.

However, in this day of scientific rationalism, subjective means not objective and not factual; because tacit knowledge is a private experience, finding words to describe it or explain it is hard; because it is self-centered, it is hard to say anything about it. Nonaka (1998) quotes Polanyi: “‘We can know more than we can tell’ : (p. 27).

Davenport and Prusak (2000) write that tacit knowledge is an intellectual or mental affair of persons working in organizations (p. 142). They name Polanyi as a “philosopher” who originally contrasted “tacit versus explicit knowledge” (p. 71). They suggest that “tacit experience” (p. 71) is best understood if you try to describe in detail how one performs the actions of swimming or bicycle riding. They appear to view tacit knowledge to be grounded in the habitual competencies or skills of a person.

Davenport (1997) writing with Prusak states that tacit knowledge “... exists symbolically in the human mind and can be made explicit only with difficulty” (p. 11). For knowledge management theory, this form of knowledge is “knowledge in the head” (Norman, 1988, p. 17). By this, the theorists mean mental models. Knowing, and the mind, are reduced to representative views of things. Some use the notion of “script;” others refer to the brain. It is indeterminate what “symbolically” means. But we may conjecture that Davenport is writing of patterns of the mind.

The representation and understanding of tacit knowledge is the “holy grail” of knowledge management theory. KM theory argues that this way of knowing, and its contents, is very difficult to make explicit or “convert into information” (Berkowitz & Williams, 2000, p. 3), because it is a personal or subjective idiosyncratic affair, a private and individualistic way of knowing, or “ingrained at a subconscious level” (Bergeron, 2003, p. 17).

It isn't that you don't know but that you can't say, or articulate what you know or how you know; that is, you cannot say precisely what you know and how you know it. But it is unclear if the term articulation should be understood as stating something unequivocally, precisely, or exactly (Blair, 2002, p. 1025; McInerney, 2002, p. 1011). Jennex (2007), following Nonaka, argues that tacit knowledge is what an individual, in his mind, comprehends and that it is the outcome of “mental models” as frameworks of explicit ideas (p. 3).

For Awad and Ghazeri (2004), tacit knowledge is “embedded in [the] human mind through experience and jobs” (p. 47). This becomes the basis for “explicit knowledge” and can be shared only in stories and “metaphors” (p. 47). Faley and Prusak (1998) write that tacit knowledge is embedded knowledge (pp. 265, 268). Eisenhart (2001) writes that tacit knowledge is in the head (p. 49). Detlor (2002) writes that tacit knowledge is a mental construct (p. 196), as Ceric (2003) posits tacit knowledge as what persons have “in their minds” (p. 20).. Pai et al. (2002) enumerate “experience,” “intention,” and “beliefs” as examples of tacit knowing (p. 267).

Tiwana (2002) also writes that tacit knowledge is “personal, context-specific knowledge” (p. 45). We consider that the idea of personal follows others in the sense that this kind of knowledge is idiosyncratic and individual. The idea of context-specific is that such personal subjective knowing depends upon a specifiable or explicit situation (Alavi & Tiwana, 2002, p. 1029). Some aspects of tacit knowledge, according to Tiwana (2002), are “intuitions, experience, ground truth, judgment, values, assumptions, belief, intelligence” (p. 45). We surmise that what Tiwana calls tacit knowledge is reducible to this named affairs. Tiwana is relying on the fact that the reader brings to these words their meanings as implied by the collective frame of knowledge management theory.

Becerra-Fernandez, Gonzales and Sabhernal (2001) write that tacit knowledge “„includes insights, intuitions, and hunches. This knowledge is difficult to express and formalize, and therefore difficult to share” (p. 20). The authors do not completely reduce tacit knowing to insights, intuitions, or hunches, but for them, tacit knowing appears as a subjective affair. Tacit knowledge is construed as mental phenomena. The mantra that tacit knowledge is difficult to express or articulate gives us a slogan (in Nonaka’s sense) for continued use in knowledge management discussions.

Martin (2009) states that “hunches” are “prelinguistic intuitions” (p. 10). Tacit knowledge is experiential (Bautista-Frias, Romero-Gonzalez et al., 2012, pp. 48-49). Tacit knowing is a consequence of induction, an empirical affair. Goffin and Koners (2011) supports this by claiming that tacit knowledge is hard to “articulate” and “communicate” (p. 301). They add that “stories” and “metaphors” are used to express inexpressible experiences (p. 301) referencing Lakoff and Johnson (1980) *Metaphors we live by*.

Insch, McIntyre and Dawley (2008) give us a list of components of tacit knowledge; these are: “inarticulable,” “action” which leads to tacit knowing, “skills,” “knowledge of experience,” “abstract,” and “practical experience” (p. 564). Insch et al. refer to Polanyi’s *Personal knowledge* (1962) and *The tacit dimension* (1966) as well as Nonaka and Takeuchi (1995) *The knowledge-creating company* and Nonaka and Konno (1998) essay on the “Ba”. Insch et al. (2008) are the only ones who assert as background theory for tacit knowing, or the “tacit knowledge model” the “information processing theory and the concept of cognitive schemas” (p. 564). Their tacit knowledge model understands conceptual schemas to be “mental representations” or “knowledge structures” as consequential constructs of thinking and social interaction (p. 569). This frame of tacit knowledge definitely set up a dialectic with Polanyi’s term and idea of tacit knowing.

Brown and Duguid (2000) refer to Polanyi and write that his “explicit and tacit dimensions of knowledge” (p. 134) can be related to Jerome Bruner’s notions of “leaning about” and “learning to be” (p. 128), and to Gilbert Ryle’s terminology of “know that” and “know how” (p. 128).

Since Brown and Duguid are social constructionists, this mention of Polanyi may be merely honorific. A kind of analogy can be teased out: explicit knowledge is to learning about and know that as tacit knowledge is to learning to be and know how. Perhaps this is Brown and Duguid merely pointing to Polanyi in terms of Bruner and Ryle.

Brown (1998) views tacit knowledge in “work practices” (p. 162) of teams and organizations, encapsulated by “formal procedures” defining activities and “informal practices” shaping how the activities are carried out (p. 163). Tacit knowledge is an affair of the “collective social mind” (p. 167). “[C]ommunities of practice” embody knowledge tacitly in the details of practices (Frappaolo, 2006, p. 12; Corres de Silva & Agusti-Cullell, 2003, p. 131; Liebowitz, 2003-2004, p. 2).

Thus, tacit knowledge, for many, consists of a set of cognitive-emotive conceptualizations (models or scripts) which are the intellectual (mental) grounds of everyday consciousness. Some, instead of focusing on individualized mental models making sense of things, write of practices, as socially constructed models of action, grounded in communities of practice which collectively shape individual behavior through social conceptualization. These individualized or socialized conceptualizations form and influence a person’s interaction with others, with things, and with tasks in any situation. They are conceptualizations ready-to-hand and ready-for-use in any set of circumstances. They are, or can be, construed as taken-for-granted views which channel, if not determine – weakly or strongly – actions in organization (Durrance, 1999; Sverby, 1999; Tiwana, 2002).

A comprehensive entity of tacit knowing

We begin this section with a short taxonomy of terms which Polanyi uses throughout his work: tacit knowing, the tacit relation, tacit knowledge, the tacit dimension, tacit coefficient, tacit matrix, tacit integration, tacit performance, and tacit inference. Readers of Polanyi’s life-work will encounter this vocabulary. To understand these words and ideas, we must dwell in Polanyi’s theory of the world. This is not an easy thing to do as he gives only the clues, or the particulars, as signs to which we, as readers, must bring an active, but silent, integrative seeking for knowledge (Gill, 2000, p.63).

This is an ironic situation: to write about the term and idea of tacit knowing. Why is this ironic? Because the words which we must use, even re-interpret, will not precisely express what we understand about the tacit dimension of knowing and living in, indwelling, in Polanyi’s view of the world (Nørretranders, 1991, pp. 144-145, 300-301). As Polanyi (1962) writes: “[...]because of] the ultimately tacit character of all our knowledge, we remain ever unable to say all that we know... [and] in view of the tacit character of meaning, we can never quite know what is implied in what we say” (p. 95). This is similar to Bourdieu’s (1977) statement which we used earlier.

While we have tried to indicate that Polanyi, in his work, is writing against adversaries, which are mostly conceptual frameworks of “normal” science (Mitchell, 2006), and while we have tried to suggest the use of “tacit knowledge” as a term and idea in the knowledge management literature does not convey Polanyi’s meaning, we have not had the time or space to uncover, in any detail, the sources of his position. We can only mention them here. One source is Gestalt psychology (Polanyi, 1962, pp. 56, 57; Polanyi, 1966, p. 6; Polanyi, 1969, pp. 218-219).

There are other sources more pertinent to understanding what Polanyi is trying to express. These sources belong to the phenomenological and existential literature. Polanyi is intentional in suggesting that, besides adversaries such as logical positivism, he also has friends. Some of these friends are Husserl, Merleau-Ponty, Rothschild, Ryle, Brentano, and Sartre (Polanyi, 1969, pp. 221-223; Polanyi & Prosch, 1975, pp. 4-5, 40-41). Although they are friends, he does not always agree with them. It is our belief that Polanyi is especially endeavoring to re-interpret and apply, via his vocabulary and language, the phenomenological stance which Husserl (1965) developed. This is not to say that Polanyi is a phenomenologist. The exposition of this hypothesis would require more space and time which we do not have. Polanyi's major work, *Personal Knowledge* (1962), is an integration, a Gestalt, of these intellectual flows and strata of his soil, and their details, focusing on the phenomenology and existentialism of personal commitment (Merleau-Ponty, 1962, 1968) to the pursuit of knowledge. These are the tacit frameworks underlying Polanyi's work.

It is an iconic statement and one quoted numerous times in the knowledge management literature with various misinterpretations. When Polanyi (1966) wrote "... we can know more than we can tell" (p. 4), he was writing from presuppositions about experience and language re-interpreted through phenomenological and existential theories. His position is that all explicit descriptive and reflective use of language about our experiencing of the whats and hows of our world in which we live depends on something not only not spoken or written, but fundamentally inexpressible (Polanyi, 1966, pp. 5-6). This is called the Gestalt (Polanyi, 1946, pp. 11-12) which is as close as we can get (Polanyi, 1966, p. 6). This is the "organizing field" (Polanyi, 1969, p. 218) which is the consequence or result of our personal shaping of a sense of affairs as we work at understanding a problem and its circumstances (Polanyi, 1966, p. 6). Polanyi (1966) reworks the Gestalt concept into his idea of tacit relation of From-To (pp. 6, 10), or his idea of tacit knowing. This relation of tacit knowing is Polanyi's semiotic.

The Gestalt consists of the field which positions some details in terms of a named entity or pattern which is the inherent meaning of the details as the intended contents of human consciousness (Polanyi, 1966, pp. 10-13). Polanyi (1966) breaks out the logic (the tacit From-To relation) of the Gestalt (p. 6) into four aspects of the "comprehensive entity" moving from the details to their conjoint pattern; these aspects are the "functional," the "phenomal," the "semantic," and the "ontological" as an "understanding" of the holistic pattern (pp. 10-13).

Polanyi (1966) presents examples of how the tacit relation of from-to works as a psychological part of human experience. One set consists of the nonsense syllables-electric shock experiments (pp. 7-9) prevalent in his time; we avoid the shock by using it as the meaning of the syllables. Another example is the "performance of a skill" (p. 10). The performed skill is part of the from-to tacit relation building the Gestalt (p. 19).

The skill of riding a bicycle is basically the result of putting together muscle movements, balance, etc., with the goal of "riding-a-bicycle" to create the Gestalt. The idea here is riding a bicycle is not creating or following any rules or directions as explicitly given. The rules are not the riding. The riding of a bicycle transcends the directions for riding a bicycle. The meaning of all the physical movement and effort a person does to ride is the riding. In other words, bicycle riding as riding cannot be reduced to the directions. It is an acquired habit which is tacit. This is the essence of the "tacit dimension": the "comprehensive entity" cannot be understood or known,

or performed, by its reduction to its supposed elements (Polanyi, 1966, p. 13). Polanyi (1962) argues that “a skilful performance” (pp. 49, 90) does not depend on someone knowing and following, in the performance, rules or directions about what is being done; the doing of a skill is not found in talking about it (p. 90). We depend upon acquired habits.

Polanyi (1962) argues that everything we do and say has a “tacit coefficient” (p. 86). This is the personal side of knowing; the subjective side of tacit knowing. This knowing goes on within a “tacit matrix” (Polanyi, 1969, p. 144). The objective ground provided by the culture we live in. This is because the details or the particulars that we deal with existentially (p. 90) everyday, have meaning because of how we form the “pattern”, as Gestalt, in which they participate (p. 59). One of his favorite examples of this is the act of reading the words of a letter, but attending only to their meaning, and not even seeing the language (German, English, etc.) that the words belong to. Polanyi (1962) writes that “...the tacit component is the information conveyed by easily intelligible speech, so that the tacit is co-extensive with the text of what it carries the meaning” (p. 87).

The tacit dimension (Polanyi, 1966) is about meanings and how we infer them, which is the from-to relation; Polanyi has developed a semiotic (Prosch, 1986, pp 152-154), and possibly a hermeneutic (although he does not use either of these terms in his writings.) Polanyi (1962) argues that knowing something and trying to express that something are processes of expressing tacit meaning and if we focus on the details we lose the meaning (pp. 90-93).

The tacit coefficient shows up in the descriptive and reflective (denotative) use of language (Polanyi, 1962, pp. 103-105; Mitchell, 2006, p. 87). Language used to express what we know involves fundamentally a re-interpretation of the present situation because our language, expressive of culture, already is an interpretive frame, a world theory (Polanyi, 1962, pp. 80, 105, 110). In our use of our language to communicate, we are involved in that theory of our world, our world view, as we are applying that world view. “Different languages” result from “different groups of people” which frame and provide different interpretations (Polanyi, 1962, p. 112). Thus, the tacit coefficients which underlay and make things coherent “...are also coefficients of a cultural life shared by a community” (Polanyi, 1962, p. 203; Scott, 1985, p. 73). We understand our world from our tacit matrix. We live in a convivial web of tacit knowledge (Polanyi, 1962, pp. 195, 203). Every action or communication has an underlying web of tacit understanding of “cultural life” (Polanyi, 1962, p. 203). We live in a “matrix” (Polanyi, 1962, pp. 252, 267) wherein the tacit coefficients inform our living (Polanyi, 1962, pp. 213-214).

Polanyi (1969) writes that the tacit relation of from-to is used “to create meaning” (p. 181). Meaning giving is an act of integrating, using the organizing field or Gestalt, the subsidiary details to the focal concept (p. 182). This is the semantic aspect” (p. 182) which is an act of “sense-giving” (pp. 183, 184) and it is also an act of “sense-reading” (p. 187); to articulate something as X, we know it first as an inarticulate belief (p. 187). To express or verbalize something is to give sense to our experience.

Learning a language means learning to comprehend the experience had as described and reflected upon in and by the language we use (Polanyi, 1969, pp. 188-189). What a word denotes is formed by a “tacit integration” from the word to the meaning (Polanyi, 1969, pp. 191-192). The use of language interprets or re-interprets particular details in terms of named conceptions

(Polanyi, 1969, p. 183). This is a type of personal hermeneutic. For Polanyi (1969), "...tacit knowledge seems to swallow up all discursive thought" (p. 195).

Thus, the meaning of a set of details is the pattern, the Gestalt, which is an active integrative coherence given of the details of experience (Polanyi & Prosch, 1975, p. 35). It is a cultural take within a situation. This is a result of using the tacit relation, the process of tacit knowing, of "from-to knowing" or "from-at knowing" (Polanyi & Prosch, 1975, p. 34). We use the tacit relation or "tacit inference to integrate, as a coherent holistic entirety, the details or particulars and their meaning, as comprehensive conceptions (Polanyi & Prosch, 1975, pp. 35-39). We know the objects of our world by a "intentional...conscious act of the mind..." (Polanyi & Prosch, 1975, pp. 40-41). This is an indwelling in the integration, or field, of the particulars and their meaning, a tacit inferring of sense in a situation s (Polanyi & Prosch, 1975, pp. 61-63). As Polanyi might write: we live in a tacit web of meanings which we may not be able to talk about with any exactness s (Polanyi & Prosch, 1975, p. 66).

Conclusions

The essay is a contradiction, of sorts. Its problem is prompted by use of Michael Polanyi's term tacit knowing in the knowledge management literature. So the problematic for the essay was what does Polanyi mean by tacit knowing? We have tried to dwell in Polanyi's description of tacit knowing. The first segment used a heuristic from Ortega y Gasset (1967) who argues that every writer has a soil, subsoil, and adversaries from which and against whom he or she writes.

Thus, part of the essay looked at Polanyi's writings as he responded to his contemporary issues about the nature of science such as scientific rationality, formalism, mechanism and other aspects of an objectivist and positivist scientific perspective. Polanyi is about the grand search for knowledge based on a belief that the world is knowable. The second subsidiary segment was to be in the form of a dialectic between Polanyi's notion of tacit knowing as the tacit coefficient operating in human existence, and ideas of tacit and explicit knowledge as they operate in the knowledge management literature. This is a dialectic in which authors of the literature turns Polanyi to their ends, and Polanyi on his head.

Polanyi's conceptions about how we know and what we know are still very much relevant. He present us with a platform from which to critically investigate current ideas in many areas. On of his adversaries, nominalism, is still around; his position on formal systems and their affects is still salient. Thinkers still consider him to be an important figure in Western thought (see Mitchell, 2006 and Gill, 2000). Polanyi's ideas offers a counter-balance to the extreme individualism of current scientific work. But, even John Dewey is somewhat forgotten. His hermeneutic, if uncovered systematically, would greatly help with our understanding of what it means to share knowledge.

The third and final segment, contradictory as it may seem, was a description, hence also an analysis, of Polanyi's conceptualization of tacit knowing. This presumes that, while ultimately what Polanyi means by tacit knowing, or tacit knowledge will remain silent and somewhat mysterious (and indeterminate), we can express something of what we do know or understand about Polanyi's tacit knowing by looking at how others have construed the idea of tacit knowing

and knowledge, and how Polanyi has described his theoretical adversaries to whom he is opposing his ideas of tacit knowing and knowledge.

Finally, Polanyi's work assumes that we live in a "particular culture" (Mitchell, 2006, p. 87) which informs our way of knowing the world. As Dewey (1986) has written, all our inquiries arise out of our "cultural matrix" (p. 28). That what we know and how we know are a kind of hermeneutic based in our culture. What is silent is the cultural ground, the systems of meaning, of our understandings of what and how we experience.

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