

A Conceptualization of Knowledge Management Practices Through Knowledge, Awareness and Meaning

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Abstract: Knowledge management practices are based primarily in conceptual frameworks that are responsible for the design and development of methodologies and technologies that can provide some common ground in the way people use and manage knowledge in an organization. These conceptual frameworks are often derived from integrated perspectives that are influences not by one but multiple disciplines and practices. Can a knowledge management framework be useful and practical when is based on the universal constructs for knowledge, awareness and meaning? Operational definitions for these constructs were designed within a recent research study that was conducted by reviewing and analyzing 180 relevant sources from a variety of disciplines and practices including psychology, cognition and the cognitive sciences, human and organizational development, complexity theory and physics, computer science and artificial intelligence, philosophy, neuroscience and biology, mathematics and statistics. The operational definitions obtained from the research process were combined with general principles that were formulated in order to explore a potential model that may integrate and apply the three constructs of knowledge, awareness and meaning with the view of facilitating the conceptualization of knowledge management practices. The research presents the multiple perspectives from various disciplines on knowledge, awareness, meaning, thinking methods and organic models and at the same time provides a conceptual framework to determine the effectiveness of knowledge management practices with the purpose of integrating the know what, the know how and the know why of managing knowledge.

Keywords: Knowledge, Awareness, Meaning, Thinking methods, Organic models, Knowledge Management

1. Introduction

In recent years, an increasing number of research projects, studies, case practices, perspectives and publications have shown a variety of approaches and methodologies to what people and organizations refer as the “practice of knowledge management”. The review of the multiple schools of thought, disciplines and epistemologies that contribute to the practice of knowledge management, suggest each perspective is valid in its own right and shapes our view of what knowledge management is. To ask the question ‘Is knowledge management is an art, a science, a practice or the integration of all three?’ Is to acknowledge that many different and yet common perspectives provide an insight in how we generate, manage and share knowledge. Nevertheless, the answer to this question can not be found within the realm of a single perspective.

By exploring the interrelationship of the various perspectives, three fundamental questions provide the basis for the analysis under the research project

conducted as part of a thesis (Nifco, 2004):

- Asserting the past: What do we know when we know?
- Asserting the present: How do we know when we know?
- Asserting the future: Why do we know when we know?

2. The constructs of knowledge, awareness and meaning

The first question, “What do we know when we know?” seeks to explore an operational definition for the construct of knowledge. The second question, “How do we know when we know?” seeks to explore an operational definition for construct of awareness. The third question “Why do we know when we know”, seeks to explore an operational definition for the construct of meaning.

Throughout this research project, various disciplines and areas of knowledge were explored to classify the data. The data is comprised of extracts and pieces of relevant text from the original sources that have been carefully analyzed. Each of

them provide a form and style of inquiry and offer a unique contribution and perspective to build an integrated operational definition for these constructs. Seven groups were used to organize the areas of knowledge and disciplines:

- Psychology, cognition and the cognitive sciences
- Human and organizational development
- Complexity theory and physics
- Computer science and artificial intelligence
- Philosophy
- Neuroscience and biology
- Mathematics and statistics

The task to develop operational definitions for the constructs of knowledge, awareness and meaning by integrating the multiple perspectives derived from the research study, involves the use of self as part of the context of analysis. From the readings, it became apparent there are gaps that are being caused by the reductionist approach employed by each discipline. These gaps impede the understanding of integrating the art, the practice and the science of knowledge management. Although the findings from each of the disciplines are quite appropriate to their specific area and focus of knowledge, they often are limiting to explain Knowledge Management by themselves or on their own merit of their area and focus. Furthermore, each of these disciplines employed their own models to provide their perspectives on knowledge, awareness and meaning. The need to bridge the gap between each reductionist approach and a more holistic approach could provide a new insight in the practice of knowledge management.

An organic metaphor, as Merali pointed out, is useful in bridging the gap between reductionist and holistic views in knowledge management (Merali, 2000). An organic metaphor played a fundamental role in reviewing the literature from the various disciplines in order to make sense of the interconnectedness and interdependencies that form a web of realities that evolve and expand the operational definitions for knowledge, awareness and meaning.

The use and application of an organic metaphor opens up unexpected

possibilities and explores multiple ways (Ortony, 1993) to apply the constructs of knowledge, awareness and meaning and their dynamics in human and organizational development.

3. Conduct of the research process

During this research, multiple sources were reviewed and organized in five key topics: Knowledge, Awareness, Meaning, Thinking methods and Organic models. The total number of sources reviewed and logged during this research based on each of the key topic categories are represented in the following table:

Table 1: Results from the quantitative analysis

Key topic category	Number of sources reviewed and logged
Knowledge	19
Awareness	16
Meaning	14
Thinking methods	35
Organic model	37
Totals	121

By conducting a detailed and systematic examination of the text logged in the research log and mapping the entries to each of the respective key topic categories, the research methodology includes an analysis of the frequency, relevancy, and interconnectedness of the material and text logged in the research log. The research process consisted in the collection, generation and analysis of data from sources from the literature and my own reflections within the areas of inquiry from each of the seven groups of disciplines identified in this study. This process was followed by a thorough and comprehensive evaluation of the relevancy and applicability of this data in the context of the research question and based in an original holistic model which supported the concept formation and concept development for the model.

The following table provides an overview of the organization of entries in the research log analyzed by key topic category based on the contributions logged from each of the discipline to each key topic category:

Table 2: Key topic categories by discipline

								In order to ask “what do we know”, we can claim that in order to know what we do know, we need to be referring to the past. As Damasio pointed out, “we rely on our core consciousness as the rite of passage for knowing” (Damasio, 1999).
	Knowledge	Awareness	The construct of knowledge looks at knowledge both as an object and as a process where both interpenetrate to generate the other and that knowledge is manifested in the past experience at a particular moment in time. Knowledge and knowing never constrain each other but rather give birth to new (knowledge) and processes (knowing) through time.	Knowing	Method	Model		
Philosophy	☐	☐	☐	☐	☐	☐	☐	
Knowledge Management	☐	☐	☐	☐	☐	☐	☐	
Human and Organizational development	☐	☐	☐	☐	☐	☐	☐	
Biology and Neuroscience		☐	☐	☐	☐	☐	☐	
Complexity theory and Physics			☐	☐	☐	☐	☐	
Psychology, Cognition and Cognitive Sciences		☐	☐	☐	☐	☐	☐	Knowledge of the present only exists in the future: we can know what has passed and we can make judgments about what may come but we have knowledge of the
Computer Science and Artificial Intelligence		☐	☐	☐	☐	☐	☐	
Mathematics and statistics			☐	☐	☐	☐	☐	

The analysis contained in the previous table provides not only a map of what disciplines contributed to each of the key topic categories identified for this research, it also suggests further exploration and future research that may potentially contribute to each of these key topic categories.

4. Preliminary results

The operational definitions, produced from the literature reviewed and the content analysis research methodology for the constructs of knowledge, awareness and meaning, were intended to provide a framework that integrates and derives an abstracted model based on the contributions from the multiple perspectives on knowledge, awareness and meaning.

4.1 The construct of knowledge.

The process of knowing and its end product we call knowledge, is based on, and subject to a time and space dimension that affects the way we know and the way we produce knowledge. Time and space influence the nature of our thinking methods and the nature of the knowledge produced by them.

When we know about something we are asserting the past. Asserting our knowledge is asserting that the process of

knowing is a process that manifests knowledge obtained in the past.

In order to ask “what do we know”, we can claim that in order to know what we do know, we need to be referring to the past. As Damasio pointed out, “we rely on our core consciousness as the rite of passage for knowing” (Damasio, 1999).

The construct of knowledge looks at knowledge both as an object and as a process, where both interpenetrate to generate the other and that knowledge is manifested in the past experience at a particular moment in time. Knowledge and knowing never constrain each other but rather give birth to new (knowledge) and processes (knowing) through time.

Knowledge of the present only exists in the future: we can know what has passed and we can make judgments about what may come, but we have knowledge of the present only when we have lived through it and so it becomes known as knowledge of the past (Merali, 2000).

4.1.1 Operational definition for the construct of knowledge

To know is to assert the past through the process of knowing. To know is to acknowledge that somehow the generation of such knowledge has occurred in the past and is being presented before us.

Knowing organically is to be aware of different methods of knowing when awareness and meaning function as fundamental catalysts in the knowing process.

4.2 The construct of awareness

We are biological beings that rely on the ability to process information from our environment in order to survive. We become aware of our environment by processing a variety of input. We don't need to know in order to become aware. Awareness does not require knowing just as knowing does not require awareness (Taylor, 2001).

To be aware is to assert the present, to sense the present, to be conscious of all the sensory input we are exposed at the present or given moment.

In order to talk about awareness we need to talk about the emergence of consciousness. An experiment conducted by Libet demonstrated that consciousness must have a long enough duration of neural activity to emerge from awareness. "Provided just enough electrical power achieves the turn-on of awareness, continuing to supply the same amount of power enables that conscious sensation to continue almost indefinitely" (Taylor, 2001). This means awareness is a prerequisite to consciousness. Consciousness requires a length of time in order to emerge from awareness.

Consciousness and depth are synonymous (Wilber, 2000). Consciousness, according to Damasio, from its basic levels to its most complex, is the unified mental pattern that brings together the object and the self (Damasio, 1999) and it is entirely a private phenomenon.

To be aware of the present moment is to sense, is also to feel. Damasio in his work "Looking for Spinoza" maintains that neural maps that are critical for the governance of life turn out to be a necessary basis for the mental states we call feelings and had there been no neural maps of body states there might never have been such a thing as feelings (Damasio, 2003).

4.2.1 Operational definition for the construct of awareness

We adopt the notion that to be aware is to be conscious of sensing the present moment. To know how the world presents itself before us is to assert the present.

Being aware organically is to be conscious on how knowledge and meaning function as fundamental catalysis in awareness process.

4.3 The construct of meaning.

To see a reality unfold before our eyes is to be driven by meaning. Meaning requires freedom that can be achieved with or without knowing. In order to pursue and search for meaning we need to realize freedom.

Victor Frankl, the main proponent of the notion theory that man is characterized by his search for meaning, maintains that it is

in the transcendental quality of man where consciousness originates (V. E. Frankl, 2000).

Meaning is conferred not only by a one-to-one correspondence of a symbol with some external concept or object, but by the relationships between the structural components of the system itself. This does not deny a causal relationship between the outside and inside of the system. It does however; deny that the structure of the system is determined by the outside. Meaning is the result of a process, and this process is dialectical – involving elements from inside and outside (Cilliers, 1998).

Wenger in his work with communities of practice, refers to the human engagement in the world as first and foremost a process of negotiating meaning and states that meaning exists neither in us, nor in the world, but in the dynamic relation of living in the world (Wenger, 1998).

Another perspective states that meaning is about valence and values. Schwanenberg's perspective on meaning states (Schwanenberg, 1990):

Robots do not need a world of meaning, they get their set of values from their designer; humans as self-governing and self-sustaining organisms need a world of meaning as it relates to the set of values which they bring with themselves into the scene.

Meaning can be found and communicated when we reach a level of awareness, but meaning cannot be found unless we consider new levels of awareness.

Each person is responsible to fulfill a purpose in their lives – to attain meaning. As Frankel stated, being human means responding to life situations, replying to the questions they ask. For the meaning of life is unconditionally ultimately with respect to outer as well as inner conditions (V. E. Frankl, 2000). Finding meaning in life does not depend on who we were in the past or who we are today.

The cognition of meaning has been described by Frankel as the question which we have to answer by doing something about a given situation. His basic premise is founded in the fact that

the world is more than the mere expression of self (V. Frankl, 2000a).

Finding meaning, according to Frankl's theory, involved "perceiving a possibility embedded in reality" and searching for challenging tasks "whose completion might add meaning to one's existence". A reality integrates the past and the present, the knowledge and the awareness, with the outlook of the future, the meaning.

Meaning flows from a complex process of interaction between information from the world, on the one hand, and a web of already existing relationships, built up through previous interactions, on the other hand (Cilliers, 1998). Awareness is the process of interaction between information from the world and knowledge that can form a web of already existing relationships built up through previous interaction.

4.3.1 Operational definition for the construct of meaning.

To find meaning is to assert the future. To derive meaning organically is to assert the future by using knowledge and awareness as fundamental catalysts.

5. Conclusions

The process of knowing is relative to the underlying thinking process we adopt. This same underlying thinking process is also relative to our awareness and meaning.. This relativity not only exists in relation between different individuals, it is also relative to the continuing states evolving and changing through time.

Reality does not exist for us in a ready-made form; we construct it (Steier, 1991). The essence of human nature lies in the acknowledgement that people enjoy different states of knowledge, awareness and meaning through life in relation to particular subjects or situation. To be human is acknowledge that to know, to be aware and to derive meaning is always a fluid, ever-changing and dynamic co-creative process that enables us to develop ourselves and others through the constructs of knowledge, awareness and meaning.

Knowledge, awareness and meaning ultimately originate in an individual. When they are shared among a group of people,

they produced a new emerging experience leading to new shared knowledge, shared awareness and shared meaning; new ways of knowing what, knowing how and knowing why: The ultimate goal of any organization of people.

An organic model is concerned with the ability to process and integrate knowledge, awareness and meaning in order to seek for new levels of knowledge, awareness and meaning in both individuals and groups. To achieve alignment in an organization through these three constructs. A new insight may be found within the gap that exist between a person's individual knowledge, awareness and meaning and the organization's collective or shared knowledge, awareness and meaning.

Man's existence is not the product of what he knows; it is the product of what, how and why he knows and the interdependency that is required for the evolution and progress of new emerging what, how, and whys of knowing and perhaps being.

Our experience is an emergence from the total system and one that we experience from the inside. We make meaning of it and interpret it in terms of the model we have of the world (O'Connor & McDermott, 1997).

To know is not to possess 'true representations' of reality but rather to possess ways and means of acting and thinking that allow one to attain the goals one happens to have chosen (Steier, 1991). One of these 'truths' is that the 'scientific method' places the products of science (scientific knowledge) in some way beyond its knower by virtue of its objectivity (Steier, 1991).

To effectively share and manage knowledge requires not only addressing the construct of knowledge, but the need to integrate the construct of awareness and the construct of meaning within the same generative and sharing process.

Furthermore, to effectively share and manage knowledge is to acknowledge that the process eventually and inevitably will lead to both generation and depletion of knowledge, awareness and meaning in both the individual and its organization.

Most of what we know, most of the knowing we do, is concerned with trying to make sense of what it is to be human and to be situated as we are (Steier, 1991).

Where knowledge is favourable, aligned and shared among a group of people, awareness emerges. When awareness is favourable meaning emerges. This is also true when awareness or meaning is favourable in order for knowledge to emerge.

They say that a good life, or a good job, institution, society or generally a good construct, is one that affords people both the unity experience (to connect with a larger whole through whatever part one plays) and the diversity experience (to appreciate that this wholeness may be equally fully experienced through other parts of life that the one currently engaged in) (Steier, 1991).

In life, there are phases where we lead by one predominant construct. A phase primarily driven by what we know, through the construct of knowledge, driven by asserting the past, the knowledge we have gathered. A phase primarily driven by how we know, the construct of awareness; driven by asserting the present, the awareness of the current and present moment. And a phase primarily driven by why we know, the construct of meaning, by asserting the future, by constructing and deriving meaning from the things we know and of which we become aware.

A business is structured through the mental models of people who operate it. First we have the ideas and then we operate those ideas (O'Connor & McDermott, 1997). The role of knowledge, awareness and meaning in constructing and operating these ideas can provide new insight to the human and organizational potential.

In an organic model, the whole is conveyed and unfolded in the parts. In a healthy and sound organization, the shared knowledge, shared awareness and shared meaning is conveyed and unfolded in the members and participants of an organization by maintaining both diversity and unity.

Leibnitz metaphysics is based on a pair of properties of the world with simultaneous character of unity and diversity (Steier, 1991). We addressed in previous sections that in individuals no two brains are the same, that no two people have the same state of knowledge, awareness and meaning about a subject or a situation.

An organic model should permit both the unity and diversity of the experiencing the subject or the situation in an organization.

6. Research implications

This research project provided a new insight to formulate a model founded by the operational definitions developed for the constructs of knowledge, awareness and meaning.

Our experience is an emergent from the total system and one that we can experience from the inside. We make meaning of it; we interpret it in terms of our model of the world (O'Connor & McDermott, 1997).

Every individual working in an organization has a wonderful brain. Even though it may not be used effectively, the potential is there. The potential for new forms of intelligence to emerge from this vast network of connections is enormous (Morgan, 1997).

The use of self through our perception and interpretation of knowledge, awareness and meaning, may provide some insight to a new way for appreciating human and organizational capacity.

The observed, the known, is as important as the observer, the knower, and by integrating them both and exploring an initial attempt to develop the model in order to better understand what, how and why the knower knows about a particular subject or situation.

The human being is always changing, has no clear boundaries, and cannot be described fully (Anderson, 1997). An organic model is always growing, sustaining and depleting without any clear boundaries, it cannot be described fully. Our knowledge, awareness and meaning is always growing, sustaining and depleting without any clear boundaries, it cannot be described fully.

The research study summarized in this paper produced as part of a thesis is not by any means completed. It represents the very initial steps toward a way to explore and represent knowledge management practices using an integrated theory constructed from multiple perspectives in order to pursue a better understanding of human and organizational experiences.

There are new questions emerging from this research and its future and potential applications, in particular, the area of human and organizational development, the area of game theory and simulation, the area of complex adaptive systems and artificial intelligence, the area of phenomenology and in the area of mental health.

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