WHERE IS THE WISDOM WE HAVE LOST IN KNOWLEDGE?

“Every increase in knowledge requires an increase in wisdom”

Bertrand Russell

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INTRODUCTION

The purpose of this paper is to understand what Wisdom means, why we need it, and how it can be developed and enacted within organizations. I begin by describing the Knowledge Trap, a self-feeding loop between knowledge and destructive change that threatens our existence. Then, to better define the different issues, I introduce the Epistemological Pyramid, which separates four levels of knowledge: Data, Information, Knowledge, and Wisdom. Within this framework, Wisdom is positioned as the highest level, focused on integration and sense-making.

As a third basic concept, I discuss Schumacher’s (1977) notion of Divergent Problems, defined as problems that require options between opposites that are logic defying, but simultaneously needed. I take the position that all organizational issues are Divergent Problems and, consequently, require Wisdom to be solved or integrated.

As my central argument, I focus on the essence of Wisdom and its relationship to virtues and values and reach two key conclusions: First, while knowledge is intrinsically related to action, Wisdom is intrinsically related to options; and second, the essence of Wisdom is to resolve or integrate divergent problems arising from the nature of human life.

Finally, I forecast the future of Wisdom by reaching and proposing recommendations on how organizations can develop and enact Wisdom, not only for hubris and profit, but also for meaning and human survival.
I. THE KNOWLEDGE TRAP

Our actions create the problems we experience.

-Peter Senge

According to Maturana and Varela (1992), all living organisms are autopoietic, in other words, involved in a constant process of learning about their changing environments and adapting to them. Thus, learning and adapting are both essential for survival. If we accept the metaphor of organizations and societies as living entities (Meyer and Davis, 2003), we can conjecture that organizations also require continuous learning and adaptation for survival and flourishing.

For a hundred thousand years (Diamond, 1992), a very short period in terms of geological time, human change-generating behaviors made little difference to our environment or to ourselves. However, we seem to have now reached a turning point (Gladwell, 2002): as our species grows in number and in knowledge, humanity has moved from a passive subject of environmental change to the main agent of those changes.

From Spiral Dynamics (Beck and Cowan, 1996), we know that our cultural “memes” evolve in response to life conditions. We are now beginning to face changes created by our own knowledge. Those changes require new knowledge that generates further changes, and so on. Thus, we are now caught in a trap: a mutually feeding and out-of-control loop between knowledge and change. Addiction to power and disregard for human values (Rapoport, 2000) accelerate this loop. As a result, our technical and social creations now haunt us (Senge, 1990; Tsoukas, 2005).

Change is accelerating to the point that, by the time we become aware of undesirable side effects, it will be too late to implement the necessary knowledge to adapt (Adizes, personal communication, 2009). In other words, we are adapting slower than required by the damaging changes we create.

Additionally, what was once only a threat to individuals has now become a threat to humanity. Not only do we now have the ability to destroy ourselves, but we continue to pollute our environment to unsustainable levels.

KNOWLEDGE DISINTEGRATION

For Adizes (2009), all problems are manifestations of disintegration. Since all systems are composed of subsystems (Simon, 1997), disintegration arises from the inability of subsystems to change in synchronicity. As described below, knowledge (sensu lato) is composed of four subsystems or levels: Data,
Information, Knowledge (sensu stricto), and Wisdom. These four levels of knowledge do not adapt at the same pace to the demands imposed by changes created by prior knowledge. In particular, Information has become privileged in our new society, while Wisdom has been left behind. What we are seeing are manifestations of problems from knowledge disintegration.

II. THE LEVELS OF KNOWLEDGE

Peter Senge (1990), in his book The Fifth Discipline, offers a definition that helps distinguish between knowledge (sensu lato) and Knowledge (sensu stricto). For Senge, Knowledge (sensu stricto) means to understand the “underlying structures and processes.”

Literature and the media generally use knowledge in its sensu lato meaning, which includes all four levels. According to Watzlawick, Weakland, and Fisch (1974), confusing a member of a class for the class itself is a common fallacy in the social sciences; thus, to better understand what knowledge is and what forces impact it, we must distinguish among the four levels of knowledge.

The Epistemological Pyramid (Valdesuso) is a graphical representation (see Figure 1) that describes the different levels of knowledge and their Means (theory) and Ends (practices). The Pyramid references the Adizes Methodology to explain how each level focuses on different organizational functions.

The conceptual levels are not totally separate or stable, but help us better understand these four basic levels of knowledge and their relationship. If one accepts that each level is different, then, as Moldoveanu (2002) points out, for each level there will be differences in the following:

- Nature of beliefs
- Means-Ends relationship
- World ontology
- Problems: ignorance, conflicts, ambiguities
- Processes: generation, selection, refutation, and revision
- Impacts and consequences

The four-level Pyramid implies a hierarchy of knowledge, with Data at the lowest level and Wisdom at the highest level. Therefore, in order to understand the meaning of each level, the higher levels must be realized. The different levels can also be associated with an increasing degree of judgment (Vickers, 1983).
Where is the Information we have lost in Data?
Where is the Knowledge we have lost in Information?
Where is the Wisdom we have lost in Knowledge?

Adapted from T.S.Eliot
Cited by Tsoukas (2005)

ORGANIZATIONAL LEVELS AND FUNCTIONS

Wisdom (Values and Virtues)
Relationship between Knowledge and the meaning of life

Knowledge
Understanding of underlying structures and processes

Information
Data relevant for a decision

Data
Unquestioned event or condition

EPISTEMOLOGICAL PYRAMID

P-A-E-I are Adizes Methodology Functions
Carlos Valdesuso 2000-2010

Make Sense
Proact

Existential
For whom or what do we exist?
Vision (I)

Strategic
What should we do?
Planning (E)

Managerial
How well are we doing it?
Control (A)

Operational
What are we doing?
Execution (P)

ENDS (PRAXEOLOGY)

Decide

Perceive
1. THE DATA LEVEL

“If the door of perception were cleansed, everything would appear to man as it is: infinite.”

-William Blake

Data is an unquestioned event or condition. The data level is our interface with the world through our five senses. This level raises issues of Perception. The general epistemological question for this level is in regards to our ability to perceive the world “as it is.”

It seems there is a general agreement regarding our inability to fully sense the world as “it really is.” There cannot be such a thing as an exact one true and complete description of what the world is (Putnam, cited by Lakoff, 1987). In addition, the body participates in the act of perception; thus, there are bodily roots in all knowledge (Polanyi, cited by Tsoukas, 2005).

Science and technology have the potential to extend our level of perception further and further. For instance, in November 2009, the Hubble Telescope sent home spectacular images of the NGC galaxy, created as the result of a gigantic stellar explosion 6,000 years ago. These images, in their raw form, represent Data. However, phenomena beyond our five basic senses need to be converted, through analogy and metaphors, to Knowledge we can understand (Lakoff, 1987).

2. THE INFORMATION LEVEL

We are drowning in Data and thirsty for Information.

-Information technology proverb

The key issue at the Information level is to distinguish Data from Information and Information from Knowledge which, in literature and in the media, are usually treated as equivalent concepts. The root of the word Information comes from Latin, meaning “cutting or separating.” We could read the word “information” as “in-form-action”; that is, as giving form to purposeful action. Thus, Information is Data that is relevant for a decision. The word “decision” also comes from Latin and means “cutting or separating” and, as such, implies the pre-existence of implicit or explicit choices. At this level, Data becomes Information only when it makes sense to Knowledge or Wisdom (Pepper, 1942). Otherwise, it remains only Data.
For example, the Data received from the Hubble telescope was in the form of images. If by analogy we recognize that the images resemble a huge butterfly with its wings wide open, then we could decide to use the shape of a butterfly to convey a sense of universal meaning.

3. THE KNOWLEDGE LEVEL

Knowledge and human power are synonymous,  
Since the ignorance of the cause frustrates the effect.

-Francis Bacon

Society’s current emphasis on Information and the confusion between Information and Knowledge (senso stricto) underestimate the importance of Knowledge and Wisdom and obscure the relationship among the four levels. For this level, we understand Knowledge according to Peter Senge’s (1990, p.40) definition: “understanding the underlying structure and processes.” This definition helps us distinguish between the levels and allows us to analyze why current society deemphasizes the importance of Knowledge and Wisdom.

It is at the level of Knowledge that we talk about a creative act, a creative leap from Information to understanding the underlying structures and processes (Senge, 1990). For Tsoukas (2005), Knowledge enables practitioners to select and undertake novel forms of actions to be reached through analogies and metaphors (Lakoff, 1987). The distinction between Knowledge and Information is that Knowledge understands causality; thus, it can predict the impact of our actions or inaction. Information alone cannot make such a prediction.

Not only is our perception conditioned by our sensorial capabilities (Lakoff, 1987), but also our Knowledge. Our capacity for understanding and meaningful thought is also embedded in our bodily existence. The fact that our minds reside in a physical body impacts the way we perceive, understand, and learn.

For example, the Data images from the Hubble, which as Information take the shape of a butterfly, can be compared with similar geometry discovered on Earth by Benoit B. Mandelbrot and, as new Knowledge, we can conclude that fractal geometry applies to the whole universe.
4. THE WISDOM LEVEL

*Every value has a cost, no cost no value.*

-Jerome Kohlberg

The Greek word for Wisdom is “*paideia.*” It means more than being cultured and well educated; it implies an ethical obligation to improve society and an attitude of caring (Aubrey and Cohen, 1999).

While Knowledge (senso stricto) is related to action, Wisdom is related to options and how to judge what we should do (McIntyre, 1985). Therefore, Wisdom is making (human) sense of Data, Information, and Knowledge and is composed of Values and Vision (Nonaka and Kyoto, 2008).

Values are broad tendencies to prefer certain states of affairs over others (Tsoukas, 2005). According to Sir Geoffrey Vickers (cited by Tsoukas, 2005) the business of government is the regulation of institutions; such regulations are guided by purposes and values. Vickers’s “appreciative judgment” belongs to this Wisdom level.

Western society has assumed that science and technology would solve all human problems, but they have not. Instead, the evolution of Knowledge has caused an involution of Wisdom; the sense-making of Wisdom has been pushed aside by the hubris of Knowledge. As a result, the 20th century ended up being the cruelest century ever.

The key issue at the Wisdom level can be summarized by a phrase from Jerome Kohlberg (founder of the famous KKR investment firm): “Every value has a cost: no cost, no value.” Thus, it is not that we lack a long tradition of wisdom (Bloom, 2004; McIntyre, 1985). It is that as individuals, organizations, and nations, we are often unwilling to pay the price of values.

To increase the validity of our Knowledge (senso stricto) claims, we need to reflect not only on what we do and how we do it, but even more relevant, to question why we do it and for whom (Tsoukas, 2005). Knowledge does not provide the questions or the values that allow us to decide which option to act upon; such questions and answers come from Wisdom (Tsoukas, 2005).

According to Nonaka and Kyoko (2008), the Values component of the Wisdom level includes Truth, Goodness, and Beauty, three of the four that Aristotle (cited by McIntyre, 1985) saw as the transcendental properties of being. The fourth transcendental property is Unity, which in Adizes (2009) terms can be
understood as Integration. Thus, Wisdom is more important than Technology (Nonaka and Kyoko, 2009; Tsoukas, 2005).

Vision consists of a vivid and owned image of the organization we want to become. It is my contention that the energy required for organizational change resides in that “want.” What individuals and organizations are is reflected in everything they do. Thus, for Adizes (1992), it is better to be than to know.

In summary, Wisdom comes from making sense of Knowledge, just as Knowledge comes from making sense of Information, and Information comes from making sense of Data (Aubrey and Cohen, 2009).

### III. WHY DO WE NEED WISDOM?

*We have learned too much to survive without wisdom.*

-E.F. Schumacher

In his insightful book *A Guide for the Perplexed*, Schumacher (1977) makes a distinction between Convergent and Divergent problems. Convergent problems relate to the physical part of the universe and eventually get resolved, for example, the cure for cancer. Divergent problems refer to the essence of life and consist of conflicts between two simultaneously necessary opposites.

Divergent problems cannot be “solved,” teaches Schumacher; they can only be “integrated” by appealing to a higher-level concept. In Schumacher’s opinion, the best example of a divergent problem is the motto of France: “Liberté, Egalité, Fraternité” where “liberty” and “equality” are the two opposed and simultaneously necessary values, and “fraternity” is the higher-level principle that integrates them.

It is my contention that the essence of management is to deal with divergent problems. If a manager does not have sweaty hands from dealing with divergent problems, then he or she is not doing his the job. In this sense, management is not only an art (Schön, 1983), but also the wisdom to transcend apparently unsolvable conflicts.
IV. WISDOM, VALUES, AND VIRTUES

Moral ideas are essential parts of organization.

-Mary Douglas

We have seen that Knowledge is intrinsically related to action and that Wisdom is intrinsically related to options: how to decide what we should do (McIntyre, 1985). Wisdom makes sense out of the available options and decides which alternative should be followed, thus guiding decisions and behaviors (Douglas, 1986).

The decision-making process is guided by values, seen as the preferred states of affairs. Making a choice among values qualifies such decisions as Divergent Problems; that is, choosing between opposite and simultaneously desired states of being. We have also learned that every value has a cost: either choice will result in tangible or intangible costs that are implicit in each option.

Since Plato, philosophers have wondered how Wisdom (a mostly tacit knowledge) could be learned. I believe the answer resides in virtues (McIntyre, 1986). Virtues validate the notion of a higher good that exists above individuals. Virtues are like decanted general criteria to decide and orient behavior (MacIntyre, 1985) towards higher goods or integrating concepts (Schumacher, 1977). According to Plato, the four traditional great virtues are Prudence, Justice, Fortitude, and Temperance. Since all knowledge is related to our bodily existence (Lakoff, 1987), we can also relate each virtue to one of Zaltman’s (2008) deep metaphors of Balance, Relationships, Container, and Control:

**Prudence:** ability to act in a thoughtful and timely manner (Balance)

**Justice:** faculty to give to each one what belongs to them (Relationship)

**Fortitude:** disposition to overcome difficulties (Container)

**Temperance:** capacity to self-restrain emotions and desires (Control)

According to Schön (1983) and MacInytre (1985), three additional virtues are of particular relevance for all professional practices: **Altruism**, **Honesty**, and **Tradition**.

In addition to virtues, focused on “what we should do,” we should also take into consideration the “what we should not do.” According to Aristotle (cited by Macintyre, 1985), for each virtue there are also two corresponding and opposite vices. Within the volatile, unpredictable, complex, and ambiguous world we live in, many times it is more important and evident what not to do than what to do.
Wisdom, values, and virtues constitute an ethical decision system, sculptured by humanity along thousands of years of written history. One of the first non-numeric documents ever found, from around 4000 BC, was a letter from a Sumerian father saying that the world was about to end because children no longer were obeying their parents. This attests to how many basic human issues remain similar even today, despite the rapid changes brought about by technology.

To effectively apply such an ethical system to organizational sense-making, organizations must be willing to accept the primacy of ethics and the cost of values. **In summary, we can define the essence of Wisdom as human sense-making choices related to life’s divergent problems and directed toward higher social aims.**

V. THE FUTURE OF WISDOM

*By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is easiest; and third, by experience, which is the bitterest.*

-Confucius

As discussed above, divergent problems refer to the essence of life and consist of conflicts between two simultaneously necessary opposites. I have described the essence of Wisdom as making choices related to divergent problems for human sense-making. As society moves up the spiral of development, underlying values and wisdom will also evolve.

“Necessity is the mother of invention,” states an old saying, underlining that competition and challenge seem to spark Knowledge. On the other hand, Wisdom seems to arise from meditation (reflection), from imitation, and mostly, from painful experiences. Humans seem to learn more from failure than from success (Bazerman and Malhotra, 2007).

The increasing use of electronic media does not seem to favor the development of Wisdom. On the contrary, it privileges the fast and the shallow over the slow and the deep at the individual, organizational, and societal levels. To develop Wisdom, then, we must deliberately practice it, reflect on it, and mentor others in it (Schön, 1983).
CONCLUSIONS

*One cannot solve problems at the same level of consciousness that created them.*

-Albert Einstein

From the above discussion, one can reach the following conclusions:

1. The development of Knowledge, what to man was to be the panacea for all problems, pushed Wisdom aside. The consequences of our wisdom-less knowledge now threaten our happiness, welfare, and survival.

2. “There is a need for a new consciousness of, not to adapt, but to pro-act and to coalesce the necessary forces for knowledge implementation” (Adizes, personal communication, 2009).

3. The success of every social change depends on its philosophical foundation (Tsoukas, 2005). Therefore, philosophy is more important than technology (Nonaka, 2009). However, today's materialism, hubris, and selfishness rule the world.

4. Humankind needs to assume a new philosophical position that sees the tangible and intangible parts of the universe, and that gives meaning to all knowledge through Wisdom.

5. From an organizational point of view, we need to adopt the metaphor that organizations are living, learning, and ethical organisms, with bodies and souls, and treat them accordingly (Pepper, 1967).

6. According to Tsoukas (2005), the two most important organizational processes are strategy and structure. Strategy must be enriched with a) a direct treatment of Vision and Values, and b) strategic targets for knowledge and Wisdom (Aubrey and Cohen, 1995). Structural forms and processes must reinforce Wisdom, Values, and intrinsic rewards, while avoiding predatory business and heartless bureaucracies.

7. Human society seems on its way to a major catastrophe where we might find, by the bitterest way, the Wisdom we lost in Knowledge.

END


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