

On Integrative Knowledge

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Abstract

To know is an existence's feature. Knowledge is the main informational behavior of existence. Human knowledge is only a form of knowledge that interacts with other forms. The *integrative knowledge* must take into account a possible integrative human knowledge acting together with the whole knowledge. Knowledge is also a process evolving in *time*, and it is not only a cumulative process. Knowledge gains and loses. It is an irreversible process, like the entire existence. The *integrative* human knowledge requires an integral human being. The **phenomenological unity** of existence can be known only by a human being that is able to balance a *phenomenological-spontaneous-structural* approach due to its well tuned *spiritual-imaginative-rational* capabilities. But, first of all, we must (re-)gain the ability to feel the subtle signs of existence's knowledge which knows that we know.

In the beginning was the deed

Goethe

1. A Three-Level Dissociation

For the past two millenniums we have been living in a world which substituted, too many times, the good *differentiations* with bad *dissociations*. Ken Wilber emphasized this process in modernity, but we believe it is latent in Christianity, and had only flourished in modernity. In this context various *integrating* processes are justified. There are many to be *integrated* or to be *re-integrated* after a long and disastrous dissociating process. Different kinds of *differentiations* where and are very useful, but excessively applied most of them degenerate in *dissociations*. The integrating tendency is imposed by the increasing understanding that the whole existence is **phenomenal** and only our bad *dissociating* attitude promoted the simplified **formal-structural** approach¹.

¹ "At a certain moment and in a certain part of the world people start to be obsessed of finding fast and safe evolving ways. The most safe way to have a fast solution is to make as much as possible net *delimitations*. Thus, any approach starts by even more rigorous delimitations, the conceptual spaces are dominated by extreme oppositions embodied in irreconcilable dualities. If for Plato, for example, the *Good* dominated lonely, then after few centuries only, the thoughts about the Existence where dominated by the *opposition between Good and Bad*. When rigid delimitations characterize the intimate support of thought, the *Truth's* obsession imposes relentlessness in presence of that the *truth of everyone* turn pale, the imposed joining is possible, the high ways of truth must be traced, in order to be able to march off in a line synchronized in action - not in thought - in the light of the Unique Truth. The only chance for the human being is to accept the external imposed split of its personality into a *spiritual* behavior and a *rational* one. This dissociation, followed by others, will break the individuality and will atrophy natural behaviors. All that the Occidental man created in the last two thousand years is positively or negatively marked by this tendency of *dissociating*." [Stefan '92]

In this context takes place the discussion about *integrative science* [Kafatos '2000] [Draganescu '01], or about *integrating science and religion* [Wilber '98].

Human knowledge is a consequence of a bad dissociation which separates it from a widely spread process: the **existential knowledge**. Before being a human act, knowledge was a process inside of the entire existence. Long time ago we started to speak of *human knowledge*. This was **the first**, strongest dissociation when we forgot about the existence's ability to know.

The second one occurs when the human knowledge was dissociated to know in turn about *structures*, about *spectacular things* or about *phenomena*. Thus, show up rigorous forms, beautiful objects, and spiritual feelings. The human being started to *have* spiritual feelings, to *admire* beautiful objects and to *know* only forms and structures. Most of knowledge degenerated in feelings and contemplation.

The third level of dissociation corresponds to a sort of labor division. We have now *scientists*, *artists* and *ministers*, each with their own way of knowledge. "True" knowledge is practiced only by scientist. When we refer to the knowledge of artist and of minister we use the term "to know".

We must fight now with all the three dissociations in knowledge. The integrative knowledge means to avoid, in reverse order, all the three levels of these bad dissociations.

First, each of us must become able:

- to practice the formal-structural knowledge
- to have the imaginative-spontaneous abilities in understanding the spectacle of existence and to contribute to it
- to feel and to participate to the wholeness of existence.

Second, each of us must use in a non-dissociating manner all the three forms of knowledge, fighting with problems using "synchronously" all three weapons: *reason*, *imaginary*, *spirituality*. In other words, we must transform the dissociation in differentiation.

Third, the human knowledge must "co-operate" with existential knowledge. My knowledge effort, as human being, is part of a process that is beyond mankind. We know and we are known. "Who" knows us becomes something else and we are forced to take into account this fact. Our knowledge is only part of a very complex process having a permanent output. Knowledge never stops, it is like a "music" continuously interpreted by existence. But what is the result of this existential music? In this respect we must put the question: what is the result of knowledge?

The knowledge is the main, *never ending* deed of existence as a whole.

The human being and the mankind tried to distort the main deed of existence, dissociating from it. Now they must reintegrate in this whole harmony. The music of knowledge will sound *well* again.

2. What Does It Mean “Integrative Knowledge”?

Almost all current concepts are defined in the context of the formal-structural scientific and philosophic approach. Thus, it is not easy to use them in an enlarged context of the phenomenological thought. We must redefine most of them in order to offer coherency and spontaneity to our structural-phenomenological discourse. *Integrative knowledge* refers to the existence as a whole. Therefore, we must define what means *knowledge* in this enlarged context. The following definitions are not formal. They represent only suggestions, guiding our way in the non-formal domain of the existence as phenomenon.

“Definition” 1. Knowledge is the informational interaction in existence.

“Definition” 2. The information in existence is a re-presentation that acts.

“Definition” 3. A re-presentation is a partial replication of a sub-domain of existence which is represented.

“Definition” 4. A partial replication of a sub-domain is a replication which gains a view point and loses what that view point ignores.

“Definition” 5. The view point is responsible for the meaning associated of representation.

“Definition” 6. A view point occurs as a spontaneous act of the deep intentionality of existence.

“Definition” 7. The deep intentionality is one of the main processes of existence consisting in a spontaneous phenomenological fluctuation.

A partial replication can have different range of similarity corresponding to different kinds of information:

- phenomenological information is induced by a point of view which ignores the matter and cares of deep meanings (senses)
- interpretative information deals with informal forms carrying contextual meanings (a meaning occurred in a certain context represents a discontinuity because a representation gains, in a lost context, a capacity to act somehow)
- structural information occurs starting from view points dealing with patterns.

These three types of information have associated distinct knowledge modes:

- phenomenological knowledge, operating with deep senses

- spontaneous knowledge, using contextual meanings
- structural knowledge, operating with forms and structures.

The *integrative knowledge* consists in all the three modes of knowledge. The existence's processes take into account the integrative knowledge and manifest accordingly in three forms: as phenomena, spontaneous and structural.

Because of the spontaneous knowledge, the integrative knowledge consists in a kind of "signed" knowledge: knowledge with *gains* and *losses*. The contextual meanings work like an irreversible informational process: the meaning occurs and the context disappears. The existence loses the knowledge about itself. *In its becoming existence forgets*.

If the existence would not contain intentionality as a spontaneous fluctuation, then the knowledge would be only a cumulative process without losses. The *pure* structural-formal existence *could be*² reversible because it is governed by time invariant rules and *pure* phenomenon self-contains all its history. In this case, a *pure* structural-phenomenal existence could be characterized by a cumulative integrative knowledge. However, the existence is phenomenal-spontaneous-structural and, in this case, the integrative knowledge is a "signed" process.

What is the "existence's attitude" as against the human knowledge? The existence transfers the main characteristics of its integrative knowledge toward the human knowledge. The human being, as part of existence, gains knowledge within the limits imposed by the integrative knowledge.

3. Knowledge & Time

The integrative knowledge is time dependent. This dependency originates in the spontaneous behavior of existence. In this context, knowledge about passed phenomena is possible? Yes, it is, but only a **limited** knowledge.

Because of the existence's self-knowledge, which contains only non-forgotten representations, the knowledge, even if it is integrative, does not have access to the lost information. Forgetting is a "symmetrical" process in existence acting like a "garbage collector". The existence maintains in its "internal" representations only the *useful* integrative knowledge. Only the information used to maintain the integrity of existence is preserved.

In some "moments" the spontaneous becoming of existence makes useless parts from the existence's knowledge. Sometimes some representations end to act. A representation

² Some times the structural reality could be irreversible. The best example is the structure of the current computing machines (if we add two numbers, then the result does not contain no enough information the two numbers just added). It is possible, using Ed Fredkin's proposal, to build reversible computers but results big a non-efficient structures.

which doesn't *act*, because its action domain changes or disappears, is "removed" and the integrative knowledge loses some of its content.

A representation acts only if it is *interpreted* (by another acting representation) or *executed* by a physical structure. If the "interpreter" or the "performer" changes or disappears, then the representation becomes a simple structure without any meaning. Some times, if the "interpreter" or the "performer" is affected only by a small change, the representation takes another meaning and the old meaning loses. In both situations something disappears and doesn't let any trace in existence.

The informational aspect of knowledge makes it time sensitive. The information is a match between a re-presentation and an "interpreter/performer". Even if the representation remains unchanged, then the "interpreter/performer" can change and thus the information loses. If changes in the organization of the "interpreter/performer" are pure structural, then there is a possibility to "preserve" the old organization. But these changes are sometimes spontaneous, phenomenological or phenomenological-spontaneous and the informational loses can not be avoided.

Pre and *ante*-dictions are thought to be possible only in a pure formal-structural approach where we *believe* in "laws" and in "rules". They should be possible also in a pure phenomenological approach if the human beings should deal with phenomena.

The "archaic" existence occurs like a partial skeleton and the future existence can be predicted only like a too schematic plan. The first can be rebuilt only approximately and the second can be designed only like a general frame. Furthermore, it is possible that an approximated approach to leave aside too much about the essence of the "archaic" existence, and it is sure that the predicted frame will ignore the spontaneous behavior of the future.

The laws of existence (if they exist) evolve in time, together with existence and our knowledge tends to keep into account only the perennial behaviors.

The "perfect" integrative knowledge could be only one about the instantaneous "state" of the existence. But, even if it is possible, it is useless.

The continuous thread of knowledge can not be imagined because of the spontaneous behavior of existence. The integrative existential knowledge is a discontinuous process in which some knowledge is lost. Thus the human integrative knowledge has no chance to achieve a complete knowledge about the entire existence. In this context questions about general laws and rules must be formulated carefully. A future integrative human knowledge has more chances than the present dissociating human knowledge, but our expectations must be moderated by a better understanding of what existential integrative knowledge is.

4. The Knowledge Domains

Existence is a whole. The knowledge is fragmented. Responsible for this discrepancy is information. The spontaneous phenomenological fluctuations do not affect the wholeness of existence but break the continuous thread of knowledge.

To speak about existence's domains is sometimes useless. To speak about knowledge domains is mandatory. Each knowledge domain must be submitted to a special kind of knowledge. It is very important to have appropriate answers to distinct type of questions like:

- *What can I know about mind?*
- *What I wish to know about this Vermeer's painting?*
- *What I want to know about computers?*

Regarding the **first question**, it is very important to understand mind in a specific manner. It is useless the intention to know about mind like about planets or computers. Klaus Mainzer is right, in a very well tuned book on complex knowledge:

*Is the "Newton of the human brain and mind" found? Of course not. The complex system approach cannot explain what mind is. But we can model the dynamics of some mental states under certain conditions.*³

If we intend to know what the mind is, for example, we must put the questions in an appropriate manner. *Brain, mind* and *consciousness* are related topics, but very distinct knowledge domains. The brain is, maybe, a structure, the mind is a non-formal function of this structure and the consciousness is a phenomenological behavior of mind. How to deal with a non-formal function which sometime behaves phenomenological? It is obvious that not in a formal-structural way as almost all contemporary approaches try to make it.

Certainly, many are to be structurally know about the brain, maybe about the mind, but a satisfactory answers to the question "*what the mind is?*" can be given only in an extended space where, beside concepts, forms and structures, *other kind of human acts will be involved.*

Regarding to the **second question**, a painting of Vermeer, let be "A Street in Delft", will be known in a certain way, but this way must be specific. Can be this painting described? It is possible to tell something about the pavement of the street, about the walls of the

³ [Mainzer '97], pag. 113.

buildings and so on, and nothing about the visual experience offered by the direct perception of this masterpiece. But, is it a description enough to know a masterpiece? Obviously not. Sometimes a detailed description leads us far from a deep understanding. We must be able to use the state reached in the direct experience of the free contemplation of the painting. This state "added" to the previous experiences and to the formal knowledge previously accumulated will contribute to our knowledge about Vermeer's creation.

The **third question** seems to be the simplest. Apparently the computer domain is completely formal-structural. Wrong! The computer is a tool used by a human being and it is a very complicated problem to understand how to make useful a computer, excepting a few typical simple applications. An apparent simple question like "*how a program for solving the problem P can be written?*" doesn't have a formal answer. It is very simple to explain how looks a correct program written in a certain language, because it is a problem of syntax. But, what is the way from problem to the associated program is, at least partially, a non-formally tractable subject.

The main problems regarding the knowledge originate just in the formal-structural domain, at that very place where the problems look simplest. In the mathematical sciences occurred the first signs about the limits of managing the truth. The explanation could be that in mathematics worked the strongest (bad) dissociations which characterize the knowledge process. The formal sciences, who most exercised different ways of knowledge, guided our research beyond of the formal-structural approach.

We assisted in the last half century to many ridiculous attempts to use the formal-structural approach in inadequate domains. The brute force of our computing machines stimulate also many inadequate approach in different knowledge domains. But this over-trust in the power of forms and of concepts has a good point: emphasized the fundamental limits of the bad dissociating process which oppress us in the last two thousand years.

The good differentiations of the knowledge styles will impose:

- *structural knowledge* based on a rational use of formal forms
- *spontaneous knowledge* based on an imaginative use of forms
- *the phenomenologic knowledge* based on the human ability to be connected with the wholeness of the existence.

If this differentiation doesn't degenerate in a strict dissociation, the three emphasized styles are able to fruitful "collaborate" in the human integrative knowledge. Each time the integrative knowledge will be dominated by one of the previous style, depending on the knowledge domain. But, no time one of the previously emphasized styles will be ignored by the human integrative knowledge.

We must know that each "part" of the existence must be submitted to a specific knowledge, specified by an appropriate set of weight associated to the three styles. The human integrative knowledge implies that no one weight has the value zero.

5. Final Viewpoints

The spontaneous behavior of existence has been emphasized in the ancient Greek philosophy. The atomist philosophy introduced the *clinamen* in order to explain how the actual things occur. But, this kind of behavior is also responsible for the “signed” existential integrative knowledge which limits the human integrative knowledge to what is not-forgotten.

We are in the stage of substituting *bad dissociations* with *good differentiations*, in order to make steps on the way leading toward the integrative knowledge.

Our far away target is to integrate the human integrative knowledge in the existential integrative knowledge accepting the limit imposed by the spontaneous behavior of existence.

The first step in this very long process is *to put aside the Ockham's razor because the existence is a complex spontaneous whole.*

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