



## **INFOSEMANTICS. The systematization of the individual way of transforming perception into perspective.**

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### **Abstract**

The human need for knowledge has existed since our emergence as a species and will always persist, as it can be unequivocally described, both from an evolutionary and a cognitive point of view, as a form of adaptation to an environment. If we consider the fact that the instructions for human adaptation to the environment in which he appeared are encoded in his genetic makeup and, at the same time, the fact that humans possess the natural ability to consciously detect their presence, their actions and the environment in which those are manifesting, then a rigorous examination of how the need for knowledge produces effects at the individual level may offer new perspectives into our collective evolution.

*Keywords: Basic research /consciousness / habits / adaptation through knowledge / organization/ observations*

### **Goal**

This series of articles aims to emphasize the fact that, the way people consciously adapt to an environment through knowledge functions as a mechanism enabling methodical systematization. The systematization method, in turn, thus becomes an explicit guiding tool, essential to individual cognitive processes, enabling the evaluation of the chosen path's correction and identifying the need for potential adjustments. By non-arbitrary choice, this mode of adaptation will be named Infosemantics (IfS).

### **Introduction**

At the level of ideas, Infosemantics mirrors the observation that whenever a purpose is present, the mind has a natural impulse to take the necessary steps to achieve it.

If, in general, a pivotal idea describes a conceptual fulcrum that allows changes in the definition of the terms within a system, without affecting its structural integrity, then Infosemantics is a pivotal idea with the following characteristics:

- Is flexible without being arbitrary – *it can be adjusted without straying from the governing purpose*
- Prevents reconstruction from zero – *adjusts only the key elements, not the entire model*
- Uses learning – *changes with real-time feedback*
- Maintains and reinforces the core value.

Next, to transition from an abstract realm to a concrete one, we can compare the idea of IfS with the definition of a mechanism.

- By definition, a mechanism is an organization of “components” that interact through interdependencies to achieve a predetermined outcome.
- The idea of Infosemantics can overlap with the definition of a mechanism if we replace “components” with [a set of observations], a predetermined outcome with [a specific need for knowledge] and [the organization of interacting interdependencies] with the concrete way in which a set of observations can be transformed into specific knowledge (Figure 1).

Set of observations

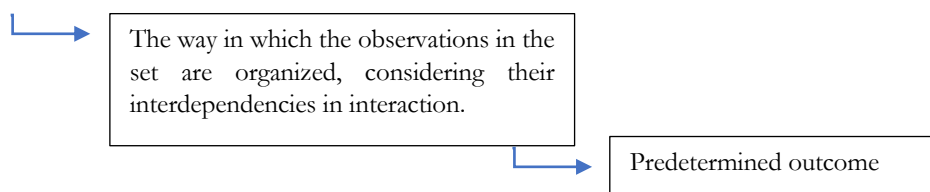


Fig. 1. Schematic representation

In which case, we observe that the result of our overlap between the idea of Infosemantics (abstract) and the definition of a mechanism (concrete) leave no room for ambiguity. Thus, we can delimit and name with Infosemantics, the way of organizing a set of observations that have interdependencies when they are in interaction.

Consequently, if we describe with:

Info – a set of unorganized observations. Observations can be data (correct or incorrect), knowledge with or without equivoque (theory or theorems), patterns (alleged or real), intuitions, beliefs, etc. – in a word, perceptions  
and with

Semantics – a meaning of some sort

then, by juxtaposition, Infosemantics will describe the individual mode of systematizing perceptions as they develop into perspectives.

Brief preamble:

It is certain that human minds can create or establish principles.

The “construction” of these principles is done starting from the remark, made after observing reality, that certain things are repeated (certain behaviors lead to similar result).

When such repetition becomes frequent in a certain context, the human mind has a natural tendency to formulate a general rule that can describe the initial remark.

If this formulation takes on a clear, concise and easy-to-apply form it becomes simple for other human minds to use it. In this way a verification takes place.

If, following the verification, the general rule holds up, it is accepted and becomes a principle.

If, following the verification, the general rule does not hold up, it is adjusted until the errors are clear and distinct, thus easy to be eliminated. Then, the principle becomes functional.

Finally, the principle takes on the role of a guide according to which people conduct their actions or the role of a general law that explains how things work in a certain field (an environment).

Within the context of the short preamble, I will describe how I “constructed” the principle underlying Infosemantics, clarify its easily applicable form and present it for verification and subsequent validation.

Relevant observations from objective reality:

1) The conscious human mind (HM) is naturally equipped with a cognitive tool essential for defining Infosemantic’s principle:

The ability to differentiate distinct things and subsequently name them (*the transition from “anything” to “something” and/or “something else”*). This tool enables (HM) to use comparison by forming categories which, in turn, allow for classifications when the elements of the category are quantifiable with the same measurement unit.

2) People have a natural tendency to conserve their energy. One common form of conservation is to take a “short cut” to understanding. By a “short cut” to understanding we mean a conclusion reached without first analyzing all available observations in depth.

From Infosemantic’s point of view, the relevant point is that, regardless the cognitive process involved, individuals have a natural tendency to conserve mental energy, and this tendency can affect their level of understanding.

3) (HM) can traverse 4 “territories” during any cognitive process. These territories were described by Euclid (c. 300 BCE) and, since then until today, have remained the basic didactic model in the study of Euclidian geometry. Euclid named them Definitions-Axioms-Propositions (*theorems and constructions*)-Demonstrations.

By extension, the 4 territories that (HM) can traverse in a cognitive process becomes: the territory of names and definitions, that of hypotheses, that of theories and that of experiments and demonstrations. As a process, the order in which the steps are followed is critical for the outcome.

The interesting observation is that, at the individual level, people's attention in everyday matters- yet not only- is focused on the territory of theories when they want to prove something to themselves. In this way, they can often assume wrong hypotheses and names/definitions as being correct. *(In the history of knowledge there are errors made even though scientific rigor demands great attention in this regard. A well-known example is the geocentric theory, which endured for a very long time despite its inaccuracies)*

Now, if we examine observations 1, 2 and 3 concisely:

- 1) (HM) makes distinctions that lead to categories and classifications,
- 2) (HM) has a natural tendency to make crude generalizations that can limit the level of individual understanding,
- 3) (HM) may make incorrect assumptions in the processes of reaching a conclusion,

we can see that these habits are found in all people, regardless of the individual need to adapt to an environment through knowledge. In other words, they reflect similar and repetitive behavior.

However, the concrete results of this similar behavior are not, consequently, the same from individual to individual. The results may be identical, somehow similar or completely different.

We are now in a situation where similar behavior leads to distinctly different outcomes. This situation is correctly reflected by many examples in the category of human achievements. We can take one example:

*all bicycles (sailboats, automobiles, etc.) operate on the same basic principle, but in practice, they vary between manufacturers.*

In this context, it may be postulated that a principal of human mind is at work, when individuals are adapting to an environment through knowledge. This principle underlies Infosemantics.

### Findings

The principle becomes easy to apply if, during any thought process, whenever we focus on achieving a result, we consciously and repeatedly ask ourselves the following questions:

- What do I understand while I'm understanding?
- How do I understand what I understand when I'm understanding?
- Why do I understand how I understand while I'm understanding?

By consciously maintaining this introspective control, one can avoid mistakes in correctly understanding terms and eliminate generalizations that are detrimental to the overall level of understanding. Thus, one can train a way of thinking to the point of habit, leading to the elimination of repeated mistakes.

### Conclusions

The systematization of the individual way of transforming perception into perspective (infosemantics) is grounded in a principle that becomes readily applicable once it is consciously recognized.

The concrete way (*the method*) by which the principle is applied when systematization takes place (*organization of a set of observations that have interdependencies when interacting*) accounts for the differences in the results obtained by each individual undergoing a cognitive process.

In other words, Infosemantics can function as a unit of measurement of discernment when it is used in contexts that are rigorously defined. *By discernment I mean the individual's ability to judge things with wisdom and prudence. A context defines an environment.*

In the next article, I will detail the systematization method and how it can be used as a concrete and explicit tool for orientation in communication processes.

### References

The concept of the pivot was introduced by Eric Ries in June 22 -2009 in his blog "Startup lessons learned" (<https://www.startuplessonslearned.com/2009/06/pivot-dont-jump-to-new-vision.html>)

Euclid – *Elements* -(c. 300 BCE)

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