

# **THE SOURCE AND THE NATURE OF LIFE AND CONSCIOUSNESS**

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## **ABSTRACT**

It seems to the author that, though it is possible to reach an explanation of consciousness, there is no direct way for us to go. In other words, the author believes that, only through a detour, through an understanding of everything outside mind, we may and can and will finally reach an understanding of those inside.

The author tries in this article to discuss some details of such a detour, first from the understanding of Being and being, universe and life, organism and human, and finally to the understanding of the mind and the mystery of our consciousness.

Here, to understand Being is the core activities of the whole detour, and there the being is understandably the source and the nature of life and consciousness.

## MAIN TEXT

Scientists and philosophers have the same task in life: To find something that may enable us to live with the kind of value reserved in old time only for gods. In order to fulfill this task, scientists seek inspiration from observation and experiment while philosophers explore the power of logical imagination.

Observation and experiment are important for us to know and logical imagination is however important for us to understand. And understanding is the central part of the processes from knowing to doing.

Scientists believe that we do not understand life and consciousness because we have not known enough but philosophers would say that we have already known very much and now let's try to understand more about what we know.

The most important reason for me to favor the approach of logical imagination in this case is that to understand consciousness is such a task as the same as to understand our ability to understand. It means the same to both scientists and philosophers: There is no direct way for us to go.

And, just as Einstein said: "Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution", I also believe: Only through a detour, through embracing the entire world, through understanding of everything outside mind first, we may and can and will finally reach our own minds, reach an understanding of our ability to understand and reach an explanation of the mystery of human consciousness.

### 1. Being

Our way to embrace the entire world begins with the understanding of what called by ontologists as "Being" or "being" or "beings".

Being or being or beings are not only a question asked and thought by ontologists, not only a word or the grammar of certain language, not only the logos found or created by logicians and mathematicians, not only all the facts known and proved by scientists, not only the meaning for us as human beings and for our universe as the universe, and even not only the value for our God as God.

**It is all of them and more, and always more.**

In other words, the “all of them and more, and always more” may be understood, here in context of this article, as what the ontological concept “Being” or “being” or “beings” mean.

Philosophically as well as scientifically, if a more unified definition is required, then the concept “being” or “beings” may be defined and proved as the unification of two different kinds of changes, the **return change** and the **one-way change**. And the concept “Being” may be understood as the limitation and the transcendence for being to either or both of the two changes.

Return change is the change back to a self and one-way change is then the change away from a self. For example, if comparing a man’s childhood with his adulthood, nothing could be found the same, not the same materials nor the forms nor the functions even nor the states of those gens found in cell nuclei, which may be called as his one-way change, but he is obviously still the same person, which may be called as his return change, and both changes together are his being. And, in this case, the Being may be understood as the changes that transcend both his birth and death.

Without the return change, we cannot experience any one-way change in our reality. And, without one-way change, we can also not identify any return change.

And, with the same ontological meaning, the return change is what called by Parmenides as “one”, may also be called as “matter” or “space” or “intellect” or logos, and the one-way

change is what described by Heraclitus as “in flux”, may also be called as “energy” or “time” or “will” or nous. For example, since all waves are unification of return changes and a one-way change, therefore all waves are unification of matter and energy. Since light and sound are waves, therefore, both of them carry gravitational mass.

And causation is also what the one-way change means. However, reciprocal causation, any kind of it, is only what the return change means.

Emphasize: To say that being or beings are the unification of both one-way change and return change means that no entity alone may be understood as being or Being. That is, not a quark, not a proton or a neutron, not an atom or a molecule, not a plant or an animal, not a man or a woman, not the earth or the sun or the universe alone may be understood as beings or being or Being.

Being or beings may only be understood but may never be known. And all what we can understand are nothing more or less than being or beings.

## 2. Four possibilities to be

Logically, there are four possibilities for the return change of being to change:

- To be either of two absolute different states, or
- To be either of two processes with absolute different directions.

For example, if the return change of being may be considered or described in terms such as “matter” and “energy”, then, one of the absolute state may be called as **absolute energy** and another as **absolute matter**, and one of the process is with a direction from absolute energy to absolute matter and another from pure matter to pure energy. And all the matter and energy found during both of the processes may be called as **relative energy** and **relative matter**.

The “absolute” is absolute and the “relative” is relative only when as one of the four

possibilities of a return change.

All the four possibilities may be understood together as **Carnot cycle** described by Nicolas Léonard Sadi Carnot in the year of 1824. However, as any return change, Carnot cycle, the same as Noether's first theorem (1918), is not the whole truth of being or Being.

### 3. Universe

Our universe is a being or a part of Being.

According to the second law of thermodynamics, our universe is an irreversible course during which there is less and less energy but more and more matter. This irreversibility or its one-way change may be called as **the general direction of our universe**.

Since this general direction is the only basis of all the causality in our universe, therefore:

- It determines that there was absolute energy at the beginning of our universe and there will be absolute matter at its end. And, if comparing the relative energy and relative matter found between the beginning and the end, some of them, more like the absolute energy, may be called as **dual energy**, and the others, more like the absolute matter, may be called as **dual matter**.
- It also determines that we are in **a universe of holism**, in which the parts are always created and selected by a whole and its change, not by "God" or "nature".

### 4. Life

Life is being, the being of changes, and nothing more than those changes.

Theoretically an **absolute life** is an eternal return change between absolute energy and absolute matter, but, since there are only dual matter and dual energy in our universe, all lives have to be the unification of both return change and one-way change.

A life may be called as  $L_{em}$  if its one-way change follows the general direction of our universe. And a life may be called as  $L_{me}$  if the direction of its one-way change is opposite to

it.

$L_{em}$  consumes dual energy and produces dual matter.  $L_{me}$  consumes dual matter and produces dual energy. Approximately, humans, animals and plants are all  $L_{em}$ , and the lives that produce energy in the sun are all  $L_{me}$ .

The reason why  $L_{em}$  but not  $L_{me}$  dominates our universe may be found only from the general direction of our universe, but nothing else.

## 5. Death

A  $L_{me}$  consumes only certain dual matter from its **matter environment** and a  $L_{em}$  consumes only certain dual energy from its **energy environment**.

The  $L_{me}$  will die when all the dual matter in its environment is consumed, which may be called as **hot death**. And the  $L_{em}$  will die when all the dual energy in its environment is consumed, which may be called as **cold death**.

And the dual matter left behind by a  $L_{em}$  after its cold death may be called as **frozon**. All those protons and neutrons found in different atomic nuclei and all kinds of chromosomes found in different cells are examples of such frozon.

## 6. Generations of life

It is also deducible according to the general direction that there might be three different generations of  $L_{em}$  and  $L_{me}$  during the different periods of our universe's development: The generation emerged at our universe's beginning may be called as **life of high energy**, the generation to emerge at its ending may be called as **life of high matter**, and the generation between them both may be called as **life of high organization**. All, though not only, plants, animals and humans are lives of high organization.

The energy environment for life of high energy is something like the pure energy. The matter environment for life of high matter is something like the pure matter.

For lives of high organization to be active, only a few electron volts are needed to create its energy environment, but, if for the lives of high energy existed approximately at the  $10^{-12}$  second after the beginning of our universe, such an environment may cost one hundred thousand million electron volts. We may therefore understand that most of the non-living matters around us are only frozons from lives of high energy very deeply frozen by our environment.

All frozons from previous generation of lives may be the **genes** of some later generation of lives.

## 7. Organization

Life of high energy depends on dual energy for its activities, life of high matter depends on dual matter for its activities, and all lives of high organization depend on organization of both dual energy and dual matter for their occurrence, activities and development.

All the “biological living beings”, such as bacteria, plants, animals, human individuals or even biological environments, compose, are and are composed of some basic organizations that are fundamentally identical to each other. This basic organization may be called as **highly organized system** or **HOS**.

There are four parts that may be identified from every HOS, called as **input part**, **output part**, **react part** and **feedback part**. Anything that is not part of a HOS may be called as its **system environment**. The interface between system environment and input part is called as **receptor** and between output part and system environment is called as **effector**. Dual matter and dual energy may enter the input part only through a receptor and leave the output part only through an effector.

Input part and output part are parts of the one-way change of a life. Feedback part is a part of the return change. And input part, output part and system environment may together be parts of the return change.

There are basically three changes that may ever occur in a HOS, called as **life change**, **form change** and **location change**. The location changes may be found in any part of a HOS. The form changes are mainly found in input and output parts. And the life changes are found only in react part.

Brain's functions cannot be explained only with the activities of the nerve impulses and neurotransmitters, because impulse moving through a nerve or neurotransmitter through a synapse is only the location change, and the nerve impulse converts into neurotransmitter or vice versa is only the form change.

#### 8. System relation

Dual matter or dual energy that enters the input part of a HOS may be called as **sensation**, that leaves the output part may be called as **behavior**, and that remains within HOS, being neither input nor output, may be called as **memory**. And there are two kinds of memory in every HOS, called as **hereditary memory** and **acquired memory**.

The HOS, with biological macromolecules such as sugar, fat, protein and nucleic acid as its components and environment, may be called as **biological HOS**. In a biological HOS found in a human body, the hereditary memory is its structures determined by gene and the acquired memory is its structures determined by the interaction between the HOS and its system environment.

Memories are always contrary in nature to both sensation and behavior. A HOS may have either **EME system relation** when both sensation and behavior are dual energy but memory is dual matter, or **MEM system relation** when vice versa. A HOS with MEM system relation contains  $L_{me}$  in its react part and with EME system relation contains  $L_{em}$ . Our immune system is a typical HOS with MEM relation while our visual system is then a typical HOS with EME relation.

HOS, which is a combination of subsystems with both system relations, may be called as a

**complex HOS.** Human mind is such a complex HOS.

## 9. Communication

Every HOS may exchange dual matter or dual energy with others, which may be called as **communication**. But, there is no information ever exchanged during such communication.

The meanings of the communication among HOS are determined individually by life changes within each HOS.

## 10. Behaviors

Communication may also be understood as behavior of or interaction among HOS.

An adult human body consists of approximately  $10^{14}$  cells that both compose and are composed of many biological HOS. Most of those HOS generate cellular or sub-cellular **individual behaviors**. Some generate **collective behaviors** of a group of cells, an organ or a function system. Only a few HOS generate the behaviors of the whole human body, which may further be divided into **hereditary body behaviors** based on hereditary memory and **acquired body behaviors** based on acquired memory.

Human mind is a complex HOS that generates both hereditary and acquired body behaviors. Every animal that shows both hereditary and acquired body behaviors has a HOS essentially identical to human mind.

In the body of a person who is in so called vegetative state, HOS may still generate individual, collective and even hereditary body behaviors, and the only what absent is those acquired body behaviors.

## 11. Mind

Human mind is a being of changes, a life of high organization, a complex HOS, and especially a system that generates the body behaviors of a human being, which hides itself

widely in brains, spinal cord, nerves, vegetative nerves and ganglia, sense organs, motor organs, even inner organs.

As a complex HOS, mind is composed of both MEM system relations among inner organs and EME system relations between sense organs and motor organs, especially between sense organs such eyes and ears and motor organs such as those voluntary muscles of vocal organs and of hands and fingers.

Shown as by Figure (1), a human mind may be divided into seven parts: a **sense brain** (SB), an **emotion brain** (EB), a **behavior brain** (BB), three **intermediate brains** (IB) and a **feedback brain** (FB). SB has more direct connections with the sense organs that compose the surface of the human body. BB has more direct connections with the voluntary muscles. EB has more direct connections with inner organs. IB has more direct connections with SB, EB and BB. And FB has more direct connection with all the hereditary parts.

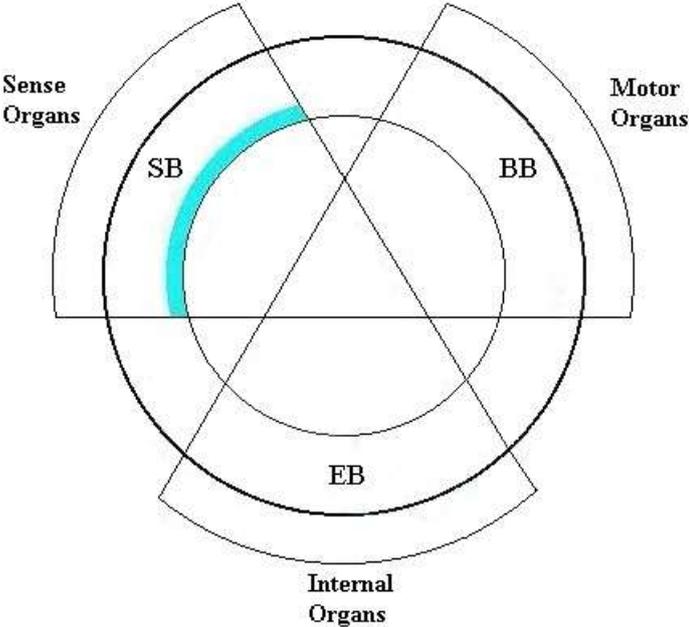


Figure (1) Mind's overall view

The areas between the peripheral circle and the central circle are mind's hereditary memories, and within the central circle are mind's acquired memories. The three cones

are SB, EB and BB, and between them are IBs and FBs. And the solid blue stripe is where consciousness is produced.

There are both dual energy and dual matter, and both  $L_{me}$  and  $L_{em}$ , but nothing found in our mind may be called as a “self” or “soul”.

## 12. Consciousness

Consciousness is not a being nor a life nor a HOS that generates behaviors.

Our consciousness is only the dual energy produced by the  $L_{me}$  in certain EME system relation in our minds.

Different from sensation and behavior, consciousness may neither be input into mind nor be output out of mind. Both sensation and behavior may initiate or influence the producing of consciousness but may never become the consciousness itself. Whenever consciousness appears, the mind is not gaining or feeling it but only producing it.

Consciousness by itself does not sense or recognize, does not feel or think, does not remember or recall, and does not initiate a boy action, which may all be proved by any introspection experiment.

For example, during XXII World Congress of Philosophy (Seoul, 2008), I asked my audiences to join me in two introspection experiments. In the first one, I asked a question, such as “Who is your first lover?” Audiences found their answers first and then were asked to report what they had done in consciousness to get the answer. In the second one, I asked audiences to do an action, such as “Put your right hand up”. Then they were asked to report what they had done in consciousness to initiate the action. The result of both experiments was the same: The audiences could not find anything to report. In the first experiment audiences cannot report what they did in consciousness to recall the name or the image that appeared in their mind, and, in the second experiment audiences cannot report what they did in

consciousness to initiate the action.

Those two experiments also mean that what that appears inside mind as consciousness and what that appears outside mind as voluntary movement may essentially be the same. The voluntary movement is now known as the result of neuron's bioelectric activities. Therefore, consciousness may be the same in nature.

And it is a fact already known for almost 200 years that consciousness as well as voluntary movement may be evoked by direct electric stimulation to the human cortex. And at least voluntary movement may also be evoked by direct electric stimulation to animal cortex.

### 13. Thinking

The relations among those mental brains are the same as the communication among HOS, during which no information but only either dual matter or dual energy is exchanged. And the meanings of the communication among them are determined individually by life changes within each brain.

Thinking is the kind of communication, in which the consciousness output from sense brain interacts with memories in both emotion brain and behavior brain. The interactions cause creation of new memories or output of new consciousness. This interaction may be called as **the central process of thinking**.

Before and after the central processes of thinking, there are two possible processes of feedback, either through the output of feedback brain or through the output of behavior brain.

### 14. Will and intellect

All our mental activities may be divided into will and intellect, the will is the results of the interaction between consciousness and hereditary memories and the intellect is then the results of the interaction between consciousness and acquired memories.

However, both the concept "will" and "intellect" are ontologically more fundamental than

concepts such as “mind”, “human”, “organism”, “life”, “particles” and “the universe”.

Fundamentally all our activities of knowing or doing are the interactions either between thing’s will and human’s intellect or between human’ will and thing’s intellect. For example, what Einstein’s theory of relativity tells us might essentially be the unification of our intellect and macroscopic body’s will, and what quantum mechanics tells us might essentially be the unification of our will and microscopic particle’s intellect.

Conclusion:

If “the source and the nature of life and consciousness” is a question and one question, it should be the one more for philosophical understanding rather than scientific knowing.

Being may be understood as the unification of return change and one-way change, from which it is possible for us to derive logically a unified explanation of our universe, different lives, organisms, human minds and consciousness in turn. And such an explanation may even be proved scientifically.

The return change of being determines that we may reach such an explanation. However, return change or logos is not the whole truth of being. The one-way change also determines and it determines that all our explanations are limited.

The one-way change always means an open, the open of the beginning and the end of any return change or any explanation. The one-way change means that our logos is always open. In other words, the open to our logos is ontologically fundamental, no matter if it is language or logic or mathematics or science.

And it means that there is something, always there, which we, however, may never know or can never do, no matter how much more we may still know and can still do.

Perhaps, for us, to be a part of being or Being is the most perfect what we may understand and the upmost what we can do.

It works when we work together.