



GABRIEL VACARIU

Being
and the
Hyperverses



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BEING AND THE HYPERVERSE
AN AXIOMATIC-HYPERONTOLOGICAL FRAMEWORK
FOR EPISTEMOLOGICALLY DIFFERENT WORLDS

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**An axiomatic-hyperontological framework
for epistemologically different worlds**



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For *Cris*

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I am highly indebted for writing this book to Ilie Parvu and Mihai Vacariu.

“The greatest enemy of knowledge is not ignorance, but the illusion of knowledge.”

Stephen Hawking

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PART 1

THE „UNICORN-WORLD”, THE HOUSE OF KNOWLEDGE – THE HUMAN GREATEST ILLUSION

In this work, I will try to show that the greatest illusion of human knowledge that has been surviving from the oldest times is the notion of „world”, of „uni-verse” or as I called it the „unicorn world”. (Vacariu 2005, 2008, Vacariu and Vacariu 2010) The unicorn world is the greatest illusion because human beings have constructed the entire knowledge within this „house” and nobody inquired it.¹ I will attempt to illustrate that the unicorn world is the greatest enemy of human knowledge, especially regarding its foundations. It is not about the daily life knowledge, not even many knowledge furnished by special sciences, but the foundations of such knowledge. Actually, the state of affairs at the foundation of human knowledge is very problematic: some of its greatest problems are still unsolved! Some of these problems appeared few centuries ago (the mind-body problem), others several decades ago (the non-locality from quantum mechanics) or only two decades ago (cognitive science). These

¹ Even the physicists that proposed many-worlds or multiverse have not rejected the unicorn world. For the hyperontological difference between the hyperverses and the many-worlds or multiverse, see VACARIU 2008.

problems are still unsolved since the unicorn world is the house of human knowledge. Human being constructed this illusory house. In this framework there appeared the great theories of some particular sciences but also the great anomalies and paradoxes of human knowledge. Obviously, such anomalies and contradictions have not been solved because of the general framework of thinking: the unicorn world. The amazing thing is that our ignorance has been so profound that we could not realize that our entire knowledge is built within this wrong framework.

The main mistake that led to the creation of the unicorn world is that we, the human beings, believed (consciously or not) that we are the only observers of the “world”. As a result, Gods, all beings (humans with their mind, brains and bodies, and plants, cells, microbes, animals) and all objects (tables, stones and planets, electrons, waves and fields) have been placed within the same world, the unique world, the uni-verse. The world is all the entities and their relationships inevitably placed within the same spatio-temporal framework. Everybody has thought that all living organisms *observe/perceive*, more or less, the same world. Nobody has ever wondered if a planet or an electron “observe” (as we will see, “observation” is equivalent with “interaction”, also see Vacariu 2005, 2008, Vacariu and Vacariu 2010) the same unique world. As we will see throughout the entire book, we, the human beings do not observe the “world”, and this is the main reason the unicorn-world does not exist. Sometimes, we recognize the fact that through the perceptual mechanisms, human beings do not observe the real world: we perceive only the phenomena (the results of the interactions between our transcendental mechanisms and the noumena, Kant), or our perception of the world is a huge approximation of the real world, or we perceive only certain aspects of the real world. Ever since the Ancient

period, the philosophers have made the strong distinction between ontology and epistemology (as we will see, one of the greatest mistakes of human thinking, the essence of the unicorn-world). The distinction between ontology (metaphysics) and epistemology was probably imposed by the religious human thinking in reflecting the limits of human knowledge in contradiction with the infinite power and knowledge of gods. Nevertheless, the gods (God) should exist in the same world with us; otherwise, their (his) existence and power would be without any meaning. In philosophy, the distinction between ontology and epistemology was the main topic since Ancient period. Plato officially instituted the distinction that framed the human thinking until today.² The great debates or approaches in philosophy were more or less variations of the Platonic approach, even for those who tried to contradict Plato. Even in Kant's work, we can find the essential noumenal-phenomenal distinction, somehow a copy of Plato's distinction between ideas and appearances. We have to notice that this distinction was a very important problem for transcendental philosophy! We can add that many other Ptolemaic epicycles were created by the majority of philosophers within the unicorn-world. The philosophy of the last two centuries was strongly influenced by Kant. Unfortunately, even if many philosophers tried to replace something from Kantian philosophy, everybody had been working within the unicorn-world. Within this paradigm (or better said meta-paradigm), the results of human thinking have been paradoxical. In particular sciences, there have been quite great progresses (mainly, regarding certain "local" knowledge that refers to local "aspects" of the "world"), but no more. If we can speak of progress in science, it has been always a contradiction to promote progress in philosophy! As a

² We have to remember that Whitehead noticed, correctly, that all philosophy after Plato is a footnote of his philosophical system!

rule, a systematic philosophy has to “change the world”, that is, to offer a new *image* of the world, a new “Weltanschauung”. Normally, until now nobody wondered about the world, but only about *our* image (“imperfect”, of course) of the world. Both researchers in science and philosophers accepted, in general, the ontological distinction between reality and appearances. In science, we have to think of Bohr who accepted the Kantian noumenal-phenomenal distinction. Other physicists (so many) have been searching for the elementary particles. As a remnant of religious thinking, the philosophers and the scientists recognized the ontological and epistemological limits of humans, limits that needed, for some thinkers, the introduction of God. With such limits, it was compulsory for us to create the phenomenological world, the apparent world. Amazingly, the effects of recognizing such limits have been exactly in opposition with our status officially imposed: from imperfect beings, we reached the status of creating the “world”! Thus, such imperfection acquired a special status: the imperfect knowledge became “ontologically loaded” (Kant – see Parvu 2004) in creating the “phenomenal world”. If the philosophers have always inquired about the relationship between real and phenomenal world, in general the scientists have never wondered about this relation. They inquired only about the entities and processes of the “world”.

Obviously, humans (priests, philosophers, scientists, etc.) have greatly exacerbated this amazing capability of creating the “world”. God has been placed somewhere in a corner of our “phenomenological” world, many of the human beings becoming the supervisors of the world. From limited entities, some of us became the dictators of human knowledge! Inevitably, within this framework of human thinking, we can find many debates/fights (with disastrous consequences) in the history of human thinking.

In this work, I will try to incorporate many ideas from my previous works (2005, 2008, 2010) in a general, abstract framework. As I showed in those works, we have to reject the notion of the world and the distinction between ontology and epistemology. Moreover, even if many ideas from Kantian philosophy are still important, we have to eradicate some important notions/ideas from his transcendental philosophy. One of the main revisions refers to the noumenal-phenomenal distinction. As I showed in the past (Vacariu, 2008), we have to accept Konrad Lorenz's idea: during the evolution of species, the evolution of our perceptual tools has been in accordance with our external macroscopic environment. Thus, we perceive/know certain characteristics of the world that really exist. (Lorenz 1941) In this way, our perception gains on ontological status: we perceive the macroscopic world that really exists. From the EDWs perspective, perception will be extended from the human organism to all the other entities (living and nonliving) that exist/are in EDWs. Each entity has the same conditions of observation/interaction with the entities from the same class and, therefore, each class represents an epistemological world (EW). That is, each entity "observes"/interacts with the other entities from the same class/EW. I emphasize again the important idea that, through the EDWs perspective, we have to reject the distinction between ontology and epistemology and to replace the "world" with the EDWs.

In order to show that the "world" does not exist, I will investigate the eternal philosophical topic (a topic that science has undertaken in the last century): "What exists?" and "What are the relationships between entities that exist?". Apparently, these questions seem to be forgotten by the majority of philosophers, but as we will see, both scientists and philosophers have created their answers within the unicorn-world, so their answers are at least partially

wrong. The main exception is Einstein with his theories of special and general relativity. The general theory of relativity, for instance, correctly explains the relationships between macroscopic entities that belong to the macro-EW. On the contrary, quantum mechanics incorporated some essential but very troubled concepts (nonlocality or nonspatiality, entanglement), while cognitive science is still in a “pre-history period” (using Thomas Kuhn’s expression) mainly because of the problematic relationship between neuronal and conceptual “levels”.

I strongly emphasize the fact that I will try to provide some answers to the greatest problems of science within a scientific framework (as much as possible) and not a philosophical one. I am interested in defining, in a new “meta-paradigm” (Friedman 2001) what is it that existed in past, present, future without the contribution of the human being. That is, I try to reject Kant’s main assumption that involves the difference between noumena and phenomena. As I wrote above, some important notions (more exactly, a part of the framework) of Kantian philosophy will be extended from human organisms to all the entities (living and nonliving). The human being will not be the only (class of) entity that ontologizes its epistemology, but all the “epistemologically different entities” will have this property. The viewpoint in “constituting” (Kant) the EDWs does not belong only to the human being, but all the other entities have the same right of “constituting” the other entities that belong to the same EW. Moreover, we will see that “God’s eye” and “the view from nowhere” will be excluded.³

Unfortunately (or maybe fortunately), we should reject many notions regimented by our very old paradigm of thinking, the unicorn world with its main notions like the “world or the

³ More exactly, “God’s eye” belongs to the church, while the “view from nowhere” creates an empty world, so both views are meaningless.

universe”, the “essence” of the world, the “causality” between many entities and a single spatio-temporal framework. Also, we have to be aware that all philosophical approaches were created within the unicorn world. Therefore, these constructions are wrong: certain entities that exist are incorporated within the unicorn world. This incorporation creates problems mainly for the relationships between those entities. Nevertheless, we can notice that working within the unicorn world, many great philosophers became aware that certain problems could not be solved. Let me take as example of the modern philosophy. In desperation, Descartes searched the relationship between the mind and the body. Spinoza was forced to introduce the existence of a totally unknown “neutral” substance (mind and matter are just attributes of this neutral substance). Hume denied the notion of causality (as a reply to Newton’s ignorance in explaining the nature of gravitation). Leibniz created the “monads” that mirror the world. Finally, introducing the noumenal-phenomenal distinction, Kant tried to offer the philosophical foundations of Newton’s theory. All these presuppositions were fabricated within the unicorn world. The perspective of EDWs will go beyond these (and the other) alternatives. However, I have to mention the fact that I imported something from each of these approaches for the construction of the EDWs. In this work, I will elaborate the *axiomatic-hyperontological framework* (with 13 propositions) available for every known or unknown EW. Referring to any EW, such framework has to be as abstract as possible. I will construct it using abstract notions available for an entity or interaction that belongs to any EW.⁴

If we reject the hegemony of human being that uses certain conditions of observation for observing that “unique world”, then

⁴ The applications of the perspective of EDWs to various particular sciences are available in VACARIU 2005, 2008 and VACARIU and VACARIU 2010.

we have to wonder about the conditions of “observation” available for the other entities. As we will see in detail, conditions of observation are equivalent to conditions of interaction. In this context, the question that arises is “Does each entity ‘observe’ the same world?”. As we will see below, each class of entities represents an EW that is epistemologically different than other EWs. Thus, we have more “worlds”, but these worlds are neither ontological worlds or many-worlds or multiverse (nor even possible worlds – a useless philosophical notion), nor the epistemological aspects of the same world, but there are epistemologically different worlds with epistemologically different entities and their interactions. The epistemologically different viewpoints/interactions have the same hyperontological status of objectivity: all have the same objective reality. Therefore, all EDWs have the same objective reality.⁵

Almost certainly, many people will consider this project too ambitious or too futile. The question “What exists?” is either too complicated (and nobody could answer it, so we have to limit ourselves in analyzing concepts or in moral-politics philosophy) or the question is quite old-fashioned (searching for an answer is worthless). We have to take into account that, in the last century, nobody even tried to create a “Weltanschauung”. This state of affairs is not paradoxical for at least two reasons: (1) The framework was the unicorn world (2) Science absorbed almost all particular problems of the old philosophy. Scientists have been trying to explain all the phenomena (entities and process, relationships and functions, etc.) that exist or at least we know they exist somewhere in the Universe. Each particular science occupied a place in describing a part of this unique “world”. In the last two centuries, the trend in science was the insertion of

⁵ I emphasize that when I speak about entities that belong to a particular EW, I will use the word „ontology”. When I refer to the status of the entities from all the EDWs, I will use the notion “hyperontology”.

more and more mathematics in such descriptions of the world (even this tendency is a remnant from Plato's framework).⁶ Furthermore, the language for a special science (or even for a branch of it) became more and more specialized. As a result, the long-standing philosopher, that once had to accumulate essential knowledge from the particular sciences (not a lot as in present day), was totally overcome by the actual scientific knowledge that explains the "world". Under these circumstances, the philosopher abandoned the fight for creating the "Weltanschauung" and retired, with a solemn dignity, under the logical-linguistic wrapper of analyzing the linguistic notions⁷, and later, running in moral and political mind-blowing debates. However, this powerlessness was reflected by the attitude of the majority of philosophers in rejecting even the temptation in creating the "Weltanschauung".⁸ Devastated by such enormous knowledge from the particular sciences, the philosopher was captured by sterile disputes on "profound" topics. The philosopher of the last century remained unsettled in front of the decisive steps ahead taken by the great scientists.

We have to remember that long time ago philosophy and science were strongly interconnected, or better said, melted in a

⁶ About the extreme mathematization of knowledge regarding the physical world (the superstring theory), see VACARIU and VACARIU (2010).

⁷ If the logical positivism (the beginning of analytic philosophy) was a reply to the absurd metaphysics of the final part of the 19th century, nevertheless, the metamorphosis of a tool (the analysis of language) in a goal shows the incapacity of the philosophers to create a new "Weltanschauung" of the "world". This incapacity mirrors the incredible disputes among scientists of the last 100 years in their great efforts of explaining the unicorn world! Within such disputable framework, a philosopher could not indeed generate a new philosophy.

⁸ Beyond „Never say never“, if someone (one or more) is incapable of creating a new Weltanschauung, it does not mean that, from now on, nobody will be able to offer an "image of the world"!

paradigm of thinking (“Weltanschauung”) that could dominate human thinking a short or long period of time. Once upon a time, the great scientist was a philosopher, the great philosopher was a scientist. Being long time under the sword of philosophy, science was finally liberated by the dogmatic and dictatorial⁹ philosophical paradigms (the religious framework falling long time ago). In the present day, the scientists completely ignore the contemporary philosophy. Anyways, quite many philosophers still try, hopelessly, to do philosophy of science in general (or philosophy of a particular science), but their endeavor is usually pitiable, since they furnish only certain “analytical textbooks” regarding some notions of a particular or general science. The scientist is not interested in such analysis!

The relationship between philosophy and science is totally broken, but the question that arises is “How can a new philosophy, which will influence science decisively, appear?” According to Ilie Parvu (particular conversation), a philosophical “image of the world” (“Weltanschauung”) is created by a philosopher immediately before or after a great theory in science. “Before” a scientific theory implies the existence of many paradoxes/anomalies (Kuhn) that are the results of working within an old philosophical or scientific paradigm. “After” means that the philosophical foundations of that scientific theory are absent, and a philosopher furnishes them (Kant after Newton). In both cases, I can say that scientists provide theories of “local” knowledge on particular phenomena. The missing element is a framework that incorporates the “global” knowledge that represents the paradigm, within which the majority of scientists usually work. The scientists are usually correct in ignoring the (meta)paradigm in which they work (think), since they investigate specific

⁹ A philosophical approach has to be a dictatorial way of thinking, otherwise it is not philosophy, or better said, it is not “pure” philosophy.

phenomena that do not explicitly entail the paradigm. The scientists manipulate empirical or less empirical concepts that are not the essential concepts of the meta-paradigm, within which they work. They do not try to furnish an “image of the world” but only an image of a part of the “world”. Nevertheless, even in such situations, the scientists could not solve *completely* the local problems, since “completely” involves certain fundamental concepts.

The unicorn world has been, in general, quite peaceful. Even if it has been a fictitious paradigm, the progress of particular sciences has been possible. However, when the knowledge reaches certain limits, the unicorn makes its appearance more and more violently. The researcher or the philosopher is surprised, then astonished and finally outraged by certain unexplained phenomena. After a period, a “better” paradigm successfully replaces the old one. Paradoxically, the change of a paradigm creates deeper problems, since the knowledge becomes closer and closer to the non-existing foundations of the unicorn world. In this context, the situations are very strange: the entities, in general, exist but nobody realizes that the general framework of thinking has been wrong.

Analyzing the actual great problems in (particular) science(s), I believe that both the scientist and the philosopher need to return to the old relationship between philosophy and science. Following Friedman, (with his “meta-paradigms”) (Friedman 2001), we can now return, with a new perspective, to the long forgotten image of philosophy that once guided science. More than ever, this movement is necessary because, in the last one hundred years, the researchers from science and philosophers worked in an “ocean” of knowledge congested by many deep anomalies and mysteries. This movement would mean the replacement of the unicorn world with the EDWs.

One of the major problems in philosophy and science has been the relationships between certain entities. I want to emphasize here that, from an EDWs perspective, the relationships between entities that belong to any two EDWs are only of *correspondence*. There is no causality between two entities that belong to any EDWs. More exactly, (*pace* for Hume) the question about the causality between two EDWs (entities that belong to two EDWs) is meaningless! Just by wondering about the causality between entities belonging to two EDWs, we place the problem in a wrong framework. We could think that there are no causalities between some entities that belong to two EDWs, but we situate those EDWs in the same spatio-temporal framework (the unicorn world) and that is the fundamental error. Placed within the same world, the major problems have been created by the relationships between certain entities. Such relationships are meaningless within the framework of EDWs. Thus, even in this section, I emphasize that I change Hume's doubt on causality (Newton's gravitation force acting on the macro-objects) to the causality between various entities (like mind and brain, wave and particle, or microparticles and macroparticles) that belong to the EDWs. The "relationships" between such entities have created the greatest problem in the human knowledge. Such relationships have either been explained through the introduction of incredible Ptolemaic epicycles, or remained unexplained. Unfortunately, many of these problems were pseudo-problems impossible to be solved. Hume would be delighted by the endless disputes regarding the relationship between mind and brain, wave and particle, or microparticles and macroparticles. For instance, extremely competent researchers in physics have been inquiring the relationship between Einstein's theory and quantum mechanics or between wave and particle. The scientist who

explains such relationships will be awarded the Nobel price! Even the relationship between mind and brain is no longer a topic only for philosophers, but many scientists (cognitive neuroscience) try to explain the relationship between these two entities. As presented in Vacariu (2008) and Vacariu and Vacariu (2010), these relationships do not exist. As underlined, the main causes for this way of thinking is that the objects (entities) really exist, but in the EDWs, not in the unicorn world. The scientific theories that refer to the entities belonging to the same EW were generally correct. (For instance, Einstein's both theories of relativity) It is the theories relating entities that belong to the EDWs that led to such huge errors.¹⁰

My main feeling is that the "nature" is much simpler than we have thought! If Hawking wrote that "*the greatest enemy of knowledge is not ignorance, but the illusion of knowledge*", then the unicorn world is the greatest enemy of knowledge. Consequently, it will be extremely difficult to change the human mentality in which the unicorn world is deeply established! I showed in Vacariu (2005, 2008) or Vacariu and Vacariu (2010) the devastating consequences of the unicorn world in particular sciences. In this work, through the axiomatic hyperontological framework available to any EW, we finally return to *pure philosophy* ("Weltanschauung"). I highlight again that from the EDWs perspective, the Weltanschauung does not depend on human perception/conception. The EDWs perspective is beyond Kant's noumenal-phenomenal distinction. The notion of "noumenal" is meaningless, the "world" has to be replaced with the EDWs.

¹⁰ For instance, the essential notions from quantum theory, like entanglement or nonlocality; Searle's idea that the brain produces the mind, etc.

PART 2

DEFINITIONS

Unquestionably, once a (meta-)paradigm of thinking is changed, the language is altered, as well. It is about the language of science (referring to the fundamental knowledge) and philosophy. As I wrote in part 1, I will try to change as little as possible from the language of the old paradigms. Nevertheless, some essential concepts (the form and the content) will be completely changed, other notions will receive other meanings (the meaning being given within the meta-paradigm). I adopt this position because I am aware that the change of a meta-paradigm produces enormous turmoil in many areas of human knowledge. A fully new vocabulary would determine great delay in understanding and accepting the EDWs perspective.

I would like to introduce the definitions of the main concepts that are necessary for building the EDWs framework. These definitions overstep certain pseudo-notions of the unicorn world and refer to entities (and their interactions¹) that represent the EDWs.²

¹ The propositions refer to *entities* but we can replace entities with *interactions* in getting other set of propositions.

² If we think of EDWs simultaneously, we get the concept of the „hyperverser“. This word is an abstract notion, since it is necessarily a hyper-entity that is

- (a) “Non-living” entities that *exist* will be called it^s. (The singular is “it”).³
- (b) “Living” entities that *exist* will be called It^s ⁴. (Singular: “It”)
- (c) The entity that *corresponds* to an It will be called “being”.⁵ The correct statement is “Being is.” The incorrect statement is “Being exists”. “Being” refers to all these notions like the mind, life, the subjectivity or the “I”, but is something beyond them.
- (d) “Correspondence” refers to the *conceptual* (not real) relationships between entities that belong to the EDWs.
- (e) “Interaction” (notion available for all entities) is equivalent with “observation/perception” (notion available for certain human actions).
- (f) “Determinate” refers to certain determinations/characteristics/traits; “indeterminate” refers to an entity

able to observe/interact with entities from all EDWs. As I will show, such a hyper-entity is not possible to be/exist.

³ „it” is a neutral pronoun for neutral entities. In Romanian we have “el” for masculine gender, “ea” for female gender, but we do not have a pronoun for neutral. In English there are “he”, “she”, and “it”, in German we have “der”, “die”, and “das”. This is the reason, I am obliged to introduce in Romanian the word “ent” for neutral. However, I need plural for “it” (it does not exist in English) that will be “it^s”. (In Romanian it will be “enti”). I mention that if there is an “it” at the beginning of a sentence, I will not use the capital letter. For “living” entities, I use “It” with capital letter in any place of a sentence. “Entity” is a general notion that includes it, It and the being (we will see later about the being). This is the reason I do not use “entity” for neutral.

⁴ As we will see later in this work, from the EDWs perspective, the expression of “living organism” is wrong (it mixes the EDWs), the expression of “living being” is a pleonasm.

⁵ I will use singular “being” instead of plural “beings”. I will introduce a reason for this rule in part 5.

that has determinations in possible states; “non-determinate” refers to an entity that has no determinations, not even in possible states.

- (g) “Human being” means the “I”, “human organism” means the intermingle between brain and body.

I would like to emphasize the difference between those three types of entities: it^s and It^s *exist*, while being *is*. Later, I will introduce 13 propositions for each type of entities that exists or is that represent the axiomatic-hyperontological framework for known or unknown EDWs. The order of these propositions reflects the chronological appearance of all entities.⁶ I should remind you of the fact that when I use “ontology” (that is equivalent with epistemology), I refer to the entities belonging to one EW; when I use “hyperontology” I refer to at least two EDWs.

Essential is that the notion of “observation” is equivalent with that of “interaction”. Imagine that you, the reader, are a microparticle (electron or photon) or macroparticle (table or planet; cell or multicellular organism). Obviously, an electron does not “observe” but interacts with something. What is this something? An electron interacts with/observes other microparticles from the same EW. An electron does not interact with a planet! Having this equivalence, I introduce the first hyper-rule:

Humans are not the only entities that observe (interact with) other entities.

⁶ As we will see, this chronological order of appearance is just a presupposition. Nobody can guarantee the non-existence of other EDWs that would require other spatio-temporal frameworks.

This rule is elaborated so as to reject the dictatorial status of the human being as the sole “observer”. In order to avoid the errors created by the framework of the unicorn world, I introduce the second hyper-rule (an epistemological-ontological rule) that I called the Kant-Carnap rule of concepts *impossible to be used* that constrains us in creating false notions produced by the mixture of entities belonging to the EDWs:

The extension of some notions/principles initially constructed within a scientific theory that explains the phenomena from a particular EW1 to another theory that explain the phenomena from another EW2 are, in general, empty concepts/principles.⁷

As we saw in part 1, many paradoxes, anomalies, and contradictions from science and philosophy appeared just because people had broken this rule. Usually, a notion that is successfully used in a theory that explains correctly certain phenomena belonging to a particular EW is incorporated in other theories with the hope of explaining phenomena belonging to other EDWs. Obviously, this dangerous movement has been possible because of the unicorn world framework. Nevertheless, even in the unicorn world paradigm, we can find this rule elaborated by a philosopher, Kant. Explaining the difference between objective validity and objective reality in Kant’s philosophy, Hanna comments on A239/B298-9 and A248/B305, writing that “empty concepts cannot be meaningfully applied by us either to noumenal objects or to objects of our sensory intuition, and in that sense they have ‘impossible’- that is, impossible EW to *use*.” (Hanna 2001, p. 90-1) Carnap introduces a similar rule with his “linguistic frameworks”.

⁷ This hyper-rule will be transformed in a proposition (no. 12) that refers to the human knowledge (part 11).

(Carnap 1950) I strongly highlight that if Kant was partially accurate in introducing this rule for language (“one language”, since people did not know microparticles in that time; “partially” because Kant avoided the mind-body problem), Carnap uses “empty concepts” after the great debates between Einstein and researchers working in quantum mechanics. As I illustrated in Vacariu (2008), Carnap’s movement is just a philosophical recoil from ontology to logic and language. From my viewpoint, we have to follow our ontological/epistemological limits in creating our knowledge of what really exist. We can do this only by avoiding breaking the rule of concepts *impossible to use*. Paradoxically, the philosophers of the last 100 years (analytic philosophy) made the major mistake in breaking the Kant-Carnap linguistic rule! This infringement reflects the difference between ontology (the “pure philosophy”) and language (the analytic philosophy).

PART 3

PROPOSITIONS FOR it^s

According to the actual physical theories that explain the unicorn world, after the Big Bang, there was the quantum plasma (quarks and gluons) with an extremely hot temperature. As the plasma became less and less hot, the first microparticles (photons) escaped from that plasma. Later, the planets appeared in the "Universe" and much later, life "emerged" on the surface of at least one planet, the Earth. Following this chronological order, I will introduce the first set of propositions for it^s and their interactions.

(1) Epistemologically different interactions constitute epistemologically different it^s , and epistemologically different it^s determine epistemologically different interactions.

(2) Any it exists only at "the surface" because of the interactions that constitute it.

(3) Any it exists in a single EW and interacts only with the it^s from the same EW.

(4) Any EW (a set of it^s – and eventually It^s – and their interactions) appears from and disappears in the hyper-nothing.

(5) Any EW is, therefore all EDWs have the same objective reality.

The notion of “exist” is used always for an entity that has certain determinations. The determinations of an entity require a (spatio-)temporal framework. Each set of it^s exists in *one and only one* EW. It means that each it interacts with the it^s from only one and the same EW. These two notions, “existence” and “interaction”, are strongly interrelated. Proposition (1) can be re-written in the following way: “To exist means to interact”. If an it is *constituted* by certain interactions with other it^s, what does “constitution”¹ mean? Interactions constitute the “surface” of an it. Through this process, an it accomplishes an ontological reality. An it exists only at the surface, notions like “internal existence”, “internal determinations”, “essence” are meaningless to characterize an it. Constitution refers to the entire entity, so we have to exclude the idea that there are “parts” of an it. An it exists only as a whole, i.e., the surface has no parts. As we will see, the relationship parts-whole is just a conceptual notion created by the human mind that has nothing to do with the existence of an it. From an ontological viewpoint, the notion of “composition” for an it is meaningless.

In the unicorn world, the distinction subject-object (world) leads Kant to create the noumenal-phenomenal distinction. In this context, the notion of synthesis has no substitute. Synthesis is created by the cognitive functions of the human being, but it is an epistemological notion rather than a purely ontological one, even if Kant somehow ontologized the epistemology. The noumenal is “synthesized” in phenomenal. Within the EDWs perspective, the “constitution” replaces “synthesis” and discards the noumenal-phenomenal distinction. As we will see in the next section, constitution performs actions upon something (like synthesis on the noumenal). Constitution proceeds on determinations, determinations act on constitution, so there is a bidirectional relationship between “constitution” and “determination”. However,

¹ This notion has to replace an important Kantian concept, the “synthesis”.

constitution and determination carry out on the “hyper-nothing” (see below). If these functions performed on something else, we would have the constitution of a set of entities from another set of entities and we would have two cases: both sets of entities are from the same EW or from EDWs. In the first case, we have “composition”, but not constitution; in the second case, we have a mixture of EDWs.²

Through constitution, an it acquires existence with certain determinations. These determinations determine the constitution of other it^s. We cannot talk about constitution without determination (vice-versa is not possible, either), even if both functions refer to the same it. Because of the bidirectional relationship between these two functions, we can talk about the unity (in Kantian line) of an EW. Obviously, this unity regards the relationship between entities and their interactions that presupposes a (spatio-) temporal framework. It is not the unity similar to individuality or identity of an entity. An entity from an EW “perceives” (i.e. interacts with)³ other entities that have certain determinations from the same EW, but this does not mean that a particular entity perceives all determinations of other entities. There are certain *primary* determinations for some it^s that belong to an EW, but there are also *secondary*

² For instance, the existence of macroscopic objects is not given through the cognitive synthesis applied to the microscopic objects because we would have a mixture of the micro-EW with the macro-EW. As we see in part 5, the being is not composed of certain biological elements; the being is an EW, while the biological entities belong to the macro-EW.

³ Berkeley’s “To be means to be perceived” is transformed in “To exist means to interact”. In the EDWs, we do not need the presence of a human being or God that perceives the entities in order to furnish an ontological status for perceived entities. The notion of “interaction” is ontologized, the interactions replace Berkeley’s mandatory notion of “perceptions”! Obviously, if an it has no interactions with other it^s, then that it does not exist.

determinations⁴ for other it^s that belong to the same EW. In this respect, it is possible for a set of it^s to have several sub-sets of it^s. This means that an it and parts of an it or certain determinations of an it interact with epistemologically different entities that belong to EDWs. Nevertheless, for the human being, all the sub-sets belong to the same EW.⁵

As we saw in the first part, one of the main problems in the history of human thinking was the relationships between entities. Causality is such a problematic relationship. Obviously, the notion of “relationships” is strongly related to the notion of “levels”. Used under an ontological framework, “levels” entails “causality”. Used under an epistemological framework, “levels” becomes an empty ontological word. Nevertheless, “levels” have created incredible Ptolemaic epicycles in the contemporary human thinking. For instance, the notion “levels of analyses”⁶ is just a linguistic game, which dominated the analytical philosophy, “levels of organization” leads to contradictions regarding the identity of certain entities, and “ontological levels” contradict the unicorn world. Therefore, we have to replace “levels” with EDWs. Otherwise, contradictions and anomalies will continue to dominate philosophy and science.

Regarding some “causalities”, the scientific or philosophical explanations seem to be correct. However, other “causalities”

⁴ It seems that I somehow extend Locke’s notions of “primary” and “secondary” qualities from human perception to all interactions of epistemologically different entities. In reality, from the viewpoint of any entity (except for the human being), the distinction between primary and secondary qualities is meaningless.

⁵ Locke’s primary and secondary properties depend of the conditions of observation. The relationship between a class and sub-classes is a topic for scientists, not for philosophers. Therefore, I will not develop this topic in this book.

⁶ “Bottom-up” and “top-down” are expressions inevitably associated with “levels”.

produced strong anomalies that created Ptolemaic epicycles. Obviously, since the causalities were between entities belonging to EDWs, these anomalies could not be explained by means of generally accepted scientific theories. In other words, such anomalies were created by the power of human single viewer: one observer, one world.⁷ Within the unicorn world, Kant's alternative (eventually, with K. Lorenz's improvement) to Hume's skepticism would be available. Nonetheless, there are EDWs, so Kant's philosophy is not enough to explain the epistemologically different phenomena that belong to EDWs. Moreover, when we try to grasp the relationship between entities belonging to the EDWs, we have to replace causality, identity or certain linguistic games with "*correspondence*".

Let us imagine a human being is a planet (respectively, an electron). For that person as a planet (electron) there exists only the gravitation (respectively, the three micro-forces). We do not have to break the Kant-Carnap rule using empty notions. Those four forces (interactions) belong to the EDWs, and the trend to unify them is a huge error that dominated the Physics of the last 6-7 decades. The understanding of "*correspondence*" between entities that belong to EDWs will lead us to reject the so-much wanted *relationships* or *identity* between mind and brain, microentities and macroentities, wave and particles. Consequently, other essential notions from the various fields of human knowledge have to be rejected: emergence (all kinds), reductionism-antireductionism debate, supervenience, nonlocality and nonspatiality, mental causation, etc. It seems that it was easier for philosophers or even for some scientists to play with some concepts (let us

⁷ As we saw in VACARIU (2008) and VACARIU and VACARIU (2010), in quantum mechanics, the majority of scientists gave up searching for explanations of some essential concepts (entanglement, non-locality, etc.) being content with the amazing accurate empirical results of theory.

consider only the Ptolemaic epicycles, linguistic games – many times, “the only game in town”) in an ideal (or better, “ultimate”) framework than to recognize the defectiveness of a theory.⁸

This book is about an axiomatic-hyperontological framework for EDWs, “pure philosophy”. In order to fabricate the pure philosophy someone has to investigate the main problems of science (particular sciences), and then to go beyond specific scientific frameworks (that contain specific notions). The mission of a philosopher is not to elaborate “empty” notions but to furnish a new framework for scientists who inquire about fundamental problems of “nature”.⁹ This new framework has to fit perfectly with the correct scientific theories, to clarify or reject problematic scientific concepts, and to reject all the incorrect scientific theories. This construction is possible only within the landscape of “pure philosophy” that furnishes a new *Weltanschauung* that has to go beyond any old philosophy or particular scientific framework.

We return to it⁵. Again, I emphasize the fact that the identity of an it is neither given by its “essence” or “inside” (or other metaphysical empty notions), nor by the perceptual-constitutive mechanisms of human being (Kant and quantum mechanics).¹⁰ The conditions of possibility of the existence of

⁸ We have to remember Newton who recognized his inability in explaining Mercury’s epicycle. However, he was convinced that somebody, using his theory of gravitation, would find such explanation. In fact, Mercury’s epicycle was strongly related to the nature of gravitation (another notion by which Newton recognized he could not explain it).

⁹ I strongly reject the idea that the job of a philosopher is to raise questions (Socrates, etc.). Philosophy simply has to guide science; otherwise, it is not (pure) philosophy!

¹⁰ Bohr borrowed from Kant the noumenal-phenomenal distinction. In quantum mechanics, the movement made by famous scientists within the unicorn-world throughout the whole century (from the first decades up until

an it are given by its interactions with other it^s within the same EW. An it is constituted at the surface by certain interactions, an it cannot interact with it^s belonging to the other EDWs. Finally, an it is not “composed” of other it^s. I have to mention the fact that the notion of “composition” refers to the natural entities, not the human artifacts, like a car. A car means not only its “surface”, but also its internal components. Nevertheless, the car, on one side, and its components, on the other side, cannot exist in the same spatio-temporal framework at the same time. Otherwise, we get a hyperontological contradiction. There are two alternatives for the notion of “composition”.

(1) From the point of view of the human being, there is an *organizational* threshold between parts and whole. This means that the composition is just a mental artifact, both the parts and the whole being just mental notions. A “composed” it (i.e. an it as a whole, but not its “parts”) interacts with another it from the same EW. More exactly, it is meaningless to consider that parts interact with other it^s.

(2) If the whole and the parts belong to EDWs, then we have an *epistemological-ontological* threshold¹¹. The parts and the whole exist in the EDWs not in the same EW. Otherwise, we have again a hyperontological contradiction. For instance, a table

our days – superstring theory) could be compared (at a different scale) with certain Medieval movements. The mysterious things of quantum mechanics could be explained through voodoo notions, like entanglement or nonlocality. As observers, we could change certain phenomena that took place billions of years ago (Wheeler’s “delay experiment”). For quantum mechanics, the probability acquired an ontological status. The classical world changed dramatically into a weird “world” that had to be accepted by everybody. The dispute between Einstein and the scientists of quantum mechanics mirror this dramatic situation (see VACARIU 2008).

¹¹ More details about organizational and epistemological-ontological thresholds, see VACARIU (2008), VACARIU and VACARIU (2010).

and the microparticles (that “compose” the table) exist in EDWs. In case (2), we have to replace the notion of “composition” with that of “correspondence”.

The parts-whole distinction has produced many metaphysical (linguistic) games that have nothing in common with “nature”! The main difference is between that what really exists and that what we think that exists (very dangerous “illusions of knowledge”). Again, human language (thinking) has the dictatorial status in establishing the dominance of the unicorn world.

Regarding the parts-whole distinction, I ask myself the question whether we can explain the gravity of a planet through the properties of certain microparticles (the quantum gravity)? For Einstein, gravity is the deformation of the spatio-temporal framework around the macroscopic entities (planets). Nevertheless, almost all physicists extended gravity from the macroscopic “level” to the microscopic “level”. In this way, they invented quantum gravity. Nobody has yet discovered the gravitons, but hope never disappears! From the point of view of EDWs, the notion of “gravitons” is meaningless. (For details, see Vacariu 2008, Vacariu and Vacariu 2010) Within the unicorn world, it seems normal *to think* that gravity exists at the microscopic level. Nonetheless, quantum gravity is just an illicit extension of the “macro-gravity” and thus it is nothing more than a break of the Kant-Carnap rule. Maybe we can say that the quantum gravity is a real phenomenon, but due to the limits (ontological and epistemological nature) of the human being, this notion is *impossible to use*. If we remember that epistemology is equivalent to ontology¹² and the epistemological-ontological threshold, then the notion “impossible to use” becomes “*impossible to exist*”. So, from the perspective of EDWs, we are

¹² “Nature” (i.e., the EDWs) has no idea about the distinction between epistemology and ontology!

obliged to extend an epistemological rule (Kant-Carnap rule) to an ontological (hyperontological) principle. For overtaking the linguistic limits, we have to recognize that quantum gravity really does not exist!¹³ As we will see, the epistemological Kant-Carnap rule will acquire a hyperontological dimension being transformed in a proposition of axiomatic-hyperontological system. Without this rule (proposition), certain amazing Ptolemaic epicycles would continue to dominate science and philosophy.¹⁴

In the proposition (5), for the expression “all the EDWs have the same objective reality”, I used the Kantian expression of “objective reality” with almost the same meaning. “Conditions of observation” is replaced by “conditions of interactions” and thus the Kantian epistemological notion of “constitution” (even if “ontologically loaded”) becomes a true ontological-epistemological concept available in the hyperverse. The first part of proposition (5) is “any EW is”. An EW does not exist (i.e. it does not exist in a spatio-temporal framework), but it “is”. Only certain epistemologically different entities (and their interactions) exist within an epistemological spatio-temporal framework. Nevertheless, all the epistemologically different entities and their epistemologically different interactions have the same objective reality. Therefore, the EDWs have the same objective reality. The human being is no more or less than an

¹³ Again, I strongly emphasize the fact that this step from epistemology to ontology (hyperontology) seems to be similar to the movement imposed by famous thinkers (Born, Heisenberg, Dirac, etc.) that created the bases of quantum mechanics in explaining the entanglement, nonlocality, probability of reality, etc. The difference is that the last step is within the unicorn world producing great anomalies (see VACARIU 2008, VACARIU and VACARIU 2010).

¹⁴ “Imagination is more important than knowledge.” (Einstein) Nevertheless, we really need to impose certain hyperontological constraints on the human imagination! Otherwise, we misplace the real knowledge that we have about “reality” in a surrealist surrounding.

entity like all the other entities. Various instruments of observation (measurement) just allow the “I” to perceive the EDWs. As we will see in part 5, the relationship between the brain (body) and the entities that belong to the macro-EW is bidirectional (the body “observes” the macro-entities, these entities “observe” the body). The relationships between the body and the micro-entities do not exist; any microparticle interacts with an amalgam of microparticles belonging to the micro-EW not with a body that belongs to the macro-EW.

PART 4

SPACE, TIME AND HYPERNOTHING

In this part, I will analyze the status of space and time as dimensions of EDWs. From what we actually know, the EDWs have at least one of these dimensions. I should emphasize that space and time are dimensions of an EW only by taking into account the entities of each EW. It is meaningless to consider space and/or time without any entity. These dimensions are necessary to describe the existence of entities (Leibniz's framework¹), so again, we can talk about space and time only in relationship with certain entities. We cannot describe an EW in a spatio-temporal framework because it is meaningless to observe/perceive an EW as a whole. An EW has a unity (in a Kantian sense), but this unity cannot be perceived/observed/interacted by a limited entity. This unity corresponds to entities and their relationships that constitute the EW. Moreover, it is possible (not necessary) that some EDWs do not to have the dimensions of space and time or even that the notion of entity is meaningless. The problem is that even if this possibility exists (and we should not neglect it), we cannot even conceive the entities of an EW

¹ To a certain extent, with the perspective of EDWs, I adopt Leibniz's framework: we can talk about space and time only in relationship with some entities.

without space and/or time. Our epistemological-ontological limits impose certain constraints in our mode of thinking, constraints that probably are not available for all the EDWs.

Why is it possible for an EW not to have the dimension of space and/or time? There are entities that have no time (photons), or there is an EW (the mind-EW, see part 5) that has no space (its entities are not spatial). However, from the human perspective, the interactions between a photon and other entities need space, the interactions of mental states (entities of the mind-EW – see again part 5) need time. In order to avoid breaking the Kant-Carnap rule, we should not extend the dimensions of time and/or space to all EDWs. We can now realize that a major mistake has been the extension of these dimensions to all “parts” of the unicorn world, and this is one reason why we cannot even conceive the EW that was (or may still be) “before” the Big Bang². The main idea is that a particular spatio-temporal framework has to be attributed to a specific EW. Thus, we can speak of the epistemologically different spatio-temporal framework. For instance, the space of a microparticle exists only in relationship with the microparticles, in general. Again, it is not a matter of whether the question “Are an electron and a planet situated within the same spatio-temporal framework?” has a negative or positive answer; the question is meaningless. We ask such questions only from the dictatorial viewpoint of the human being.

At least some EDWs have the dimension of time. The existence of a single spatio-temporal framework (and therefore of the unicorn world) is created through the projection of the “I” onto the outside. Each of us has the feeling of being an entity with an identity (except for some brain-damaged people). The

² As we will see below, the expression “before Big Bang” is a problematic notion.

“I” thinks there is a single external spatio-temporal framework outside the mind; the body exists in the same world.³

Newton’s absolute space and time, rejected by Einstein’s relativity theory, has no meaning within the perspective of EDWs. Moreover, as we saw above, the perspective of EDWs also rejects the Kantian noumenal. Eliminating the absolute space and time, we have to explain the appearance and the existence of the EDWs (at least of some of them). An essential question is this: Does the first EW (or “first movement” or the “first engine”) exist? Does there something that was before anything else exist? As we will see below, these questions are meaningless.⁴ Within the perspective of EDWs, we have to explain the appearance and existence of any EW. The problem is that, even in our days, the notion of absolute space is not completely rejected in physics (mainly in astronomy)⁵, but the

³ As I wrote, even the physicists that accept Everett’s “the many-worlds” (somehow different from “multiverse” – see VACARIU 2008, VACARIU and VACARIU 2010), work within the unicorn-world.

⁴ The human being has always thought that something exists because of a cause. This idea created the necessity of introducing God as the primordial cause of the unicorn-world. Paradoxically, the human being logically thought God needed no cause (obviously, in order to avoid the regress *ad infinitum*). Moreover, Big Bang replaced God as the first “movement” of the actual world. Within the EDWs, the “first engine” has to be eliminated without falling into a regress *ad infinitum* and without postulating the existence of any supra-entity or a primordial process. “God” has been the surrogate for many pseudo-problems within the unicorn world! (About Big Bang, see below)

⁵ The extension of the galaxies needs an already existing space (and time) that can be an absolute space-time. It is known that the extension of the galaxies takes place into a flat spatio-temporal framework. Then, does an absolute spatio-temporal framework exist or not? Within the perspective of EDWs, from the viewpoint of a galaxy, the space exists only in relationship with other galaxies. It is meaningless to wonder about an empty space. Nonetheless, it is possible for the space of this extension to *correspond* to the space of another EW that existed “before” the Big Bang. Moreover, as we

EDWs perspective is an extension of Kantian transcendentalism and Einstein's relativity. Extending Einstein's theory of special relativity (space and time – and therefore the ontological dimensions of objects – depend on the speed of the observer), and the general relativity (the gravity is equivalent to the acceleration and, therefore, the spatio-temporal framework of planets and galaxies is curved) within the EDWs perspective, we get neither an ontological relativity, nor an epistemological relativity but a kind of epistemological-ontological relativity. Any relativity is from now on equivalent to the “relativity” of epistemologically different entities and their interactions. More exactly, in this framework, the notion of “relativity” becomes useless. A microparticle “observes” other microparticles, a macroparticle “observes” other macroparticles, but “observation” is not a relative word. That is, the notion of “interaction” is an epistemological-ontological notion that should not be relativized. Only within the unicorn world, it was compulsory for us to relativize such notions.⁶

If space and time are not absolute, where does an EW appear from? What causes the appearance of an EW? Well, any EW appears “spontaneously”⁷ from *hyper-nothing*. Hyper-nothing is

will see below, an EW appears from the hyper-nothing, and therefore, the notion of space and time outside an EW is meaningless.

⁶ Once more I emphasize the fact that the epistemological-ontological relativism of EDWs is completely different from Quine's “ontological relativism” or Carnap's “linguistic relativism”. (For more details, see VACARIU 2008, chapter 6)

⁷ Kant wrote that our thoughts appeared “spontaneously” in our mind. (Critique of Pure Reason) In our days, Raichle hints at a special topic in neuroscience: the dark energy of the brain. The question is why does the brain need so much energy? “The brain apparently uses most of its energy for functions unaccounted for – dark energy, in astronomical terms.” (RAICHLE 2006, p. 1249) Raichle writes about the spontaneity of cognition and intrinsic functional activity of neurons, suggesting that further research needs to

a hyper-ontological element that goes beyond any EW. It presupposes the absence of any spatio-temporal framework and of any entity or interaction. Hyper-nothing has no determination. If any EW is indeterminate, hyper-nothing is non-determinate, that is it has no determination (not even potential determination). Hyper-nothing has no dimensions like space and time. The difference between nothing and hyper-nothing is that nothing presupposes a spatio-temporal framework or an EW, while hyper-nothing rejects any spatio-temporal framework or any EW. An EW appears from hyper-nothing because it cannot appear from something that exists (or is). If an entity A appeared from an entity B (that exists), then inevitably the entity B would belong to the same EW, so it would not be about the appearance of a new EW, but only the appearance of new phenomena within the same EW. If an EW appeared from something else, then we would have the interaction of two EDWs, and this phenomenon is not possible.

Hypernothing is a hyperontological notion, correspondence is an epistemological notion. As a hyperontological notion, hypernothing is hyperontologically placed between any two EDWs. We can say no more than “Between two EDWs there is hyper-nothing”.⁸ If we do not accept that hypernothing is

clarify the spontaneous activity of neurons. (p. 1250) (See VACARIU 2008) As I showed in Vacariu (2008), the spontaneous activity of neurons corresponds to the spontaneous cognition (that is the explicit knowledge). The spontaneous cognition is the product of the implicit knowledge. If we recognize that the brain belongs to the macro-EW and the mind is an EW (see below), we will understand why such questions in neuroscience have no answer. Such “dark energy of the brain” could not be explained using notions from neuroscience, but only by means of the *correspondence* with the implicit knowledge (that is the “I”). (See part 5)

⁸ In this sentence, the notion of “between” does not require any spatio-temporal framework.

hypernothing, then we cannot accept the being of EDWs. Again, we can say that there is a correspondence between two epistemologically different it^s belonging to EDWs. A new EW_1 can appear from hyper-nothing and corresponds to another EW_2 , but the EW_1 does not appear from the EW_2 . Alternatively, an entity from the EW_2 does not appear from it^s that belong to the EW_1 . Probably, there is a correspondence between the entity from the EW_2 and an amalgam of it^s from the EW_1 . Correspondence is only the relationship between it^s which belongs to EDWs. I recall that the proposition (4) is “An EW appears from and disappears in hypernothing”. The most important reason why we can say, “An EW is” is that an EW appears from hypernothing. In this case, “is” is a verb without any predicate just because the EW *as a whole* is indeterminate. Finally, we cannot even conceive an EW as a whole. Without interacting with other entities, an “EW is” but does not exist. On the contrary, any it^s or It^s exists and has determinations given by the interactions with other it^s and/or It^s . An EW appears from and disappears in hyper-nothing. In this way, hyper-nothing attains its hyperontological status.

Someone can reject this framework of thinking and existence claiming that the microentities and the macroentities that appeared after Big Bang were placed within the same spatio-temporal framework. One can also add that the macroentities are “composed” of microentities within the same spatio-temporal framework. I would like to underline the fact that these statements imply the viewpoint of a human being, and as I showed above, the “composition” is an incorrect notion in such cases. The human being, as a dictatorial observer, has imposed the unique spatio-temporal framework (even if it was relativized by Einstein’s theory). Situating all entities within the same spatio-temporal framework, the creation of the unicorn

world was inevitable; and vice-versa. On the contrary, from the viewpoint of each class of entities (which represents an EW), we can talk about a *specific* spatio-temporal framework only in relationship to the epistemologically different entities belonging to EDWs. Otherwise, any spatio-temporal framework has no meaning. We have to remember again that introducing the existence of absolute space and time, Newton needed the viewpoint of God (in which he obviously believed). The relativity of space and time was in relation with the movement of objects. If we eliminate the existence of God, we introduce either the perspective of nobody, or the perspective of each entity that belongs to a particular class of entities. Is perhaps the viewpoint of nobody the viewpoint of hypernothing? Hypernothing eliminates even the viewpoint of nobody. The only possibility to explain the existence of it^s is the viewpoints of each class of it^s belonging to the EDWs. Thus, we are forced to eliminate the notion of the unicorn-world.

Let us return to the question about space and time “before” the Big Bang. We state again that the space and the time of the microparticles (or macroparticles, for instance) appeared at the same time with the microentities (respectively, the macroentities). Probably “before” the Big Bang there was (or has been) an unknown EW (let me call it pre-Big-Bang-EW). It has to be very clear that space and time of EDWs are not the same. The question “What was/has been ‘before’ the Big Bang?” could receive an unexpected answer. “Before” is a temporal notion, and time is a dimension of all the EDWs that we know, but it is impossible for us to use “before” in relationship with an EW. “Before” an EW is hypernothing and nothing more. We do not know if the pre-Big-Bang-EW has space and/or time. Moreover, even if the pre-Big-Bang-EW has space and time, these dimensions are not the same dimensions with the micro-EW or

macro-EW. The appearance of an EW is from hyper-nothing and it has nothing to do with the dimensions of another EW. We do not know if the pre-Big-Bang-EW disappeared in the past. Maybe that EW still exists. There are no arguments in denying this presupposition. The correspondences between the pre-Big-Bang-EW and the micro-EW or the macro-EW can solve many actual scientific problems.⁹

We return to the notion of spontaneity and the appearance of an EW from hyper-nothing. An EW appears spontaneously from hyper-nothing but hypernothing is not absolute even if it is a hyperontological element. Hypernothing depends on the being of any EW. Thus, the status of hypernothing is overwhelmingly dialectical. Even if the ontology of any it seems to be in opposition with the hypernothing, without hypernothing we do not have the EDWs.

Hypernothing excludes the philosophical notion “One”. Since the EDWs appear from hypernothing and not something else, the idea of One (or the world in physics and philosophy) is meaningless. Again, without hypernothing, we would have a causal relationship between the EDWs. We cannot assert that either hypernothing is primordial (that is, we cannot have hypernothing without any EW), or that there is an EW prior to

⁹ For instance, it is believed that the time immediately after Big Bang ran much faster than the actual time of the “Universe”, few seconds being equivalent to millions/billions of years. For me, this idea is an amazing Ptolemaic epicycle. With the EDWs, we replace this extraordinary expansion of the “universe” with the correspondence between certain phenomena that belong to EDWs. The matter that appeared in few seconds is nothing more than *spontaneous* appearance from hyper-nothing that *corresponds* to something from the pre-Big-Bang-EW. The dark matter and the dark energy, the infinities in physical phenomena or even the black holes are other Ptolemaic epicycles created by the human scientific imagination! These elements just correspond to some phenomena that belong to other EDWs. (About these notions and the perspective of EDWs, see VACARIU and VACARIU 2010)

hypernothing. The appearance of an EW presupposes hypernothing, so hypernothing is always in relationship with an EW. Nevertheless, through the hyperontologization of hypernothing, we can finally eliminate the necessity of a spatio-temporal framework in the appearance of an EW. Therefore, the Big Bang as the beginning of everything has to be eliminated. If an EW is, hypernothing is hypernothing. It is not a vacuum or something empty but it is just hypernothing. The relationship between any EW and hypernothing is the best example of *opposite contradictorium*. Without hypernothing, we would have regression *ad infinitum*; the number of EDWs would be infinite. Maybe someone can stick to the opinion that hypernothing has as determination the infinite, but this idea would be just a speculation. Since hypernothing is hypernothing, the question “What was there before hypernothing?” is meaningless.

The universal principle “Nothing is lost, everything is transformed” is available for the unicorn world. In a unique world, indeed, nothing is lost.¹⁰ Nevertheless, in an EW, many things can disappear and maybe there are some corresponding changes in another EW. For instance, a macro-object can disappear from the macro-EW, while in the micro-EW nothing appears, just the spaces between certain microparticles (that “compose” the macro-object) increase. Those microparticles exist before the appearance and disappearance of that macro-object. The macroscopic parts of the macro-object may exist in our mind (if the object is not really “decomposed”), or if we decompose the

¹⁰ There is a scientific problem with the black holes. What happens with the planets/galaxies that enter in a black hole? From what we know (we know nothing), everything that enters in a black hole disappears because the gravity is infinite. But where do they disappear? According to the perspective of EDWs, the notion of “infinite” is just a human mental creation. Maybe, such disappearances are nothing more than disappearances of certain entities from one EW and appearances of the corresponding entities in another EW.

object in several macroscopic parts, the object disappears. Thus, if there is an organizational threshold of decomposition, an entity as a whole disappears and the parts appear in the same EW. If the threshold is an epistemological-ontological one, the entity just disappears and some properties and relationships of the parts are changed, but the corresponding parts do not appear or disappear in another EW because of the decomposition. Usually, these parts exist in another EW (for instance the micro-EW) before the decomposition of the macro-object (that belongs to the macro-EW) takes place. Even an EW can appear or disappear. It means that all entities of that EW appear or disappear.

PART 5

PROPOSITIONS FOR IT^S AND BEING

In this part I intend to introduce the proposition referring to It^s and the corresponding being. An It is a cell or a “living” organism. It^s refer to all living entities like cells and human organisms. As we saw in the previous parts, we have the hyper-framework in which human entity is not the only observer. Each entity has its own viewpoint of/interaction with other entities that belong to the same EW. Even in the unicorn world, it is more plausible to believe that certain animals have viewpoints more or less different from those of the human being. More exactly, many animals “perceive”¹ their external world quite differently from the human organisms. From animals, we can move to less and less complex “living” beings like bacteria, multicellulars and unicellulars. Besides, if we accept the postulate that the smallest entity that “has” life (life “emerges” from) is the cell, we can wonder how a cell “perceives” its surrounding environment? Somebody may find this statement ridiculous, but we have to remember that, within the EDWs, even an electron or a planet “perceives” (i.e. interacts with) other entities from the same EW.

¹ I used inverted commas for this word just because, as we will see below, “perceiving” is an improper notion.

Before introducing the proposition about being and It^s, I should add something about the composition of an It, even if I intend to introduce more details later on in this section. An It, as a whole, has no parts – the whole and the parts cannot exist in the same place at the same time. From the viewpoint of the whole (an It), the parts do not exist. The whole is those parts. Any “part” of an It is just a mental construction (if the It is really decomposed, the It will not exist as a whole).² Essentially, as we will see below, each It corresponds to an It or an amalgam of it^s. The propositions for being and It^s are the following.

- (6) Being corresponds to an It.**
- (7) Being is an EW. Therefore, being is.**
- (8) Having certain determinations, from our viewpoint an It is composed of an amalgam of It^s/it^s and their relationships.**
- (9) Certain states and processes form knowledge that is being.**
- (10) As an entity, being has unity as indeterminate individuality.³**

² Even if the parts-whole distinction has no ontological status, for its utility in our daily language we have to continue using it. However, in some cases, this distinction produces anomalies and contradictions that can be avoided with the EDWs.

³ Between the propositions (7) and (9) there seems to be a contradiction, but as we will see below, with the help of EDWs, we avoid such contradictions. I emphasize the fact that if in proposition (9) we have “Knowledge is being”, we cannot write “Being is knowledge”. Proposition (7) is “Being is”, and therefore, we cannot add something after the predicate “is”. “Knowledge” from proposition (9) refers to different types of knowledge: implicit-explicit, declarative-procedural, conscious-unconscious, etc. (see VACARIU 2008).

Being needs the existence of a corresponding It. Without this correspondence, being cannot be. Being is an entity and an EW at the same time. It is the only case when we can find this paradoxical situation: something is an entity and an EW at the same time. Obviously, as any EW, being appears from and disappears in hypernothing.

Essential for the correspondence between being and an It is the fact that without this correspondence, the It would not be able to survive in its environment. We cannot stick to the opinion, as we have done so far, that the biological functions (that are the results of evolution) are enough for an It to survive in its environment. Within the unicorn world, the coordination of all the biological functions of an It is thought to be the result of such evolution. The evolution of an It is explained by such coordination. From the EDWs perspective, the coordination of all biological functions needs a unity *impossible to use* within the mechanisms of an It. Consequently such a unity does not exist in an It. Even if there is a correspondence between this unity and the mechanisms/functions of an It, this unity is no more or less than being. *This unity corresponds to the development of an It and the evolution of species.* I consider that the scientists from cognitive neuroscience make a major mistake in avoiding taking into account the essential role of development and evolution when they analyze the relationship between mind and brain (especially using brain imaging with fMRI and PET). In reality, using for instance, fMRI in imaging the brain we could not grasp the consequences of development of an It and the evolution of species. Many mental and behavioral functions appear during the development of an It. After a period of training (of weeks, months or years), probably many neural areas reduce their activation for realizing such functions. In psychological terms, the explicit knowledge is transformed into

the implicit knowledge so as to perform certain tasks. Therefore, when we scan the brain of an adult, we cannot grasp all these processes. Certain neural patterns (that at the beginning of that task were most activated) seem not to be activated or at least a lot less activated. Most probably, because of their habitation, the neural patterns reduce their activation but not completely, since the task is still accomplished. The same processes are available during the evolution of species. Therefore, in order to achieve a task, there are many parts of the brain involved, but we are unable to observe all of them. However, the major mistake is that we “correlate” some mental functions only with certain neural functions that we observe using fMRI and PET. In reality, if we go back in time (the development of an It and the evolution of species), then we will notice that many other neural areas are involved in fulfilling a certain mental function, in fact the whole brain and body. For instance, if we can scan the brain of a child during the first months after its birth, we would probably observe the activation of numerous parts of the brain even for the elementary movement of arms, legs, and even the eyes. After a period of training, many parts of the brain become less active for such actions. Nevertheless, the same tasks are still accomplished. Very possibly, such processes are available even for the “sensation” of the self. In consequence, using fMRI and PET, we can find only certain neural areas (maybe the most activated ones but not all of them) that are activated in correlation with certain mental functions.

Each mental function is the unity of being. This unity represents the *indeterminate individuality* of being, or better said, being is an indeterminate individuality. Using any condition of observation, we will not be able to identify the individuality of being. Therefore, this individuality is indeterminate (not non-determinate). Trying to reduce the

indeterminate individuality to a *complete* determinate individuality means a mixture of EDWs. If we were able to perceive certain determinations (within a spatio-temporal framework), it would mean that we could determinate the individuality of being. However, this action would break the Kant-Carnap rule. Moreover, as we will see below, it is even impossible for us to construct the instruments of observation/perception of being (or its unity) as a whole. Once more, within an It, we cannot find the corresponding unity of being, we cannot identify (even trying to find certain “correlations”), a notion from cognitive neuroscience that relates mental functions with neural entities. Within the brain, for instance, the indeterminate individuality is meaningless. Any It (or its parts) has certain determinations. Being is an indeterminate individuality but not hyper-nothing. In fact, being only appears from and disappears in hyper-nothing, but the indeterminate individuality is an entity with *potential* determinations. (See below the relationship between the implicit-explicit knowledge.)

From my viewpoint, an It is composed of other It^s from the same EW (usually, the macro-EW) or of other it^s (from the same or other EW). We identify an it through our sensorial mechanisms (and their extensions) within a spatio-temporal framework, so the It has certain determinations. Being cannot be identified through any kind of perception (or its extension) because human perceptions are being. If all entities (except for the being or any other EW as a whole) can be “perceived”, than we can imagine the 6th sense for perceiving the being. We can only hope that in the future humans will be able to create certain instruments to perceive the being. In this situation, being would be an entity with certain determinations. Is this situation even theoretically possible? From the EDWs perspective, having the

6th sense for perceiving the being is a hyperontological contradiction. (See below) Therefore, the construction of such an instrument is quite impossible. I reiterate the idea that “being is” or “being is an indeterminate individuality”.⁴

I can make a parallel between two pairs of notions: being-an It and a table-the microparticles. From our viewpoint, many It^s are composed of other It^s (for instance, an organism is composed of many cells). We already know that each It corresponds to the being. Then, the question that arises refers to the nature of the relationship between being that corresponds to It as a whole and being that corresponds to each It as parts. In order to get an answer, we analyze the table-microparticles distinction. The extension of a table is not formed by the extension of its parts. Such decomposition is available only in our mind, but not in reality. The extension of parts does not exist in the same place and at the same time with the extension of table. Within a single EW, the parts-whole relationship leads us to a hyperontological contradiction. Trying to find the relationship between the being (as a whole) and the “beings” (of the parts) is meaningless. Moreover, each It corresponds to an EW exactly as the whole It corresponds to an EW. The composition or the sum of “being” is useless since being is the indeterminate individuality. It would be very strange to use a statement like “Being is composed of many beings”. *The notion of “being” has no plural.* Being does not interact, so again, it is meaningless to look for the relationship between the “beings” that correspond to many It^s. Being simply corresponds to an It. If we stated “Being exists” (not as it is correct, “being is”), we would look for such relationships. It is not about the limits of the human thinking

⁴ Only in this proposition, “the being is” is followed by something else, i.e., the notion of “indeterminate individuality”. Again, we cannot state that “Being is something”, but only “something is being”.

(that includes perception), but about the status of the indeterminate individuality of being. Above all, “Do not break the Kant-Carnap rule”! In this context, the “composition” of being is a notion that has no meaning.

Within the unicorn-world, we could say that a “biological organism” has certain knowledge. Within the EDWs perspective, we have the correspondence between any It (a human biological organism or cell) and being but the “knowledge” has nothing to do with an It but (obviously) only with being. In this case, it is wrong to stick to the sentence “A being has knowledge” for at least two reasons. The first reason is that there is not “a being” but only being. The second reason is that we introduce a difference between being and “its” knowledge. This linguistic difference is very wrong, indeed.⁵ There is nothing inside or outside of being. The correct sentence is “Knowledge is being”. As I said above, there are different types of knowledge (declarative and procedural, implicit and explicit, conscious and non-conscious – see Vacariu 2008), but these types of knowledge do not form being or are not parts of being. Knowledge is being. All knowledge of human being is not “of” but “is” being. We have to remember the paradoxical status of being: an entity and an EW at the same time.

Let me introduce a thought experiment⁶: the subjectivity of a planet. You can imagine you are a planet and you cannot observe yourself. Paradoxically, your perceptual capacities are able to perceive only the microparticles. Consequently, you as a macroscopic object cannot observe any macroscopic object. This

⁵ This distinction leads us to a regression ad infinitum in looking for the homunculus!

⁶ It is my duty to draw the attention upon the fact that I consider the thought experiments being useless ways of thinking. I believe that most thought experiments are only linguistic games created by philosophers.

situation is similar with being that cannot observe/perceive itself. In such a situation, you cannot observe your extension as a unity or a macro-object having certain determinations. You are a reductionist and empiricist, so you think that only the microparticles exist. However, there are some phenomena (for instance, the gravity) which cannot be explained by the microparticles (and their interactions). The gravitational force is related only with the macro-objects (like yourself), not with the microparticles.

Being is similar with a planet from this thought experiment. We can perceive a planet (or a table) with the corresponding eyes, but we cannot perceive the being because each of us is being. All mental perceptions (that correspond to the functions of certain biological mechanisms) are being. Therefore, being cannot perceive itself. (As we will see below, the notion of “perception” is meaningless.) It is like asking an eye to see itself! In such a situation, we cannot even think of the 6th sense of perceiving being! It will lead us to a hypercontradiction. I will call this inconsistency the “*being-perceiving*” contradiction that leads to this rule: “*Being does not perceive*”. There are two reasons for supporting this rule:

(1) Being does not perceive itself or an entity from any EW, since being would need a biological mechanism to “perceive” something and this would be a mixture of the EDWs (again a hyperontological contradiction). A biological mechanism and its activities correspond to perceptions that are being. The biological mechanism cannot perceive itself, otherwise we have the “being-perceiving” contradiction. Mental perceptions are the being, but there are no mental representations for perceiving the being. Therefore, being is an indeterminate individuality. Being cannot observe another being because being is an EW and there are no pluralities of beings.

(2) As an EW, being obviously cannot perceive something else. For instance, mind cannot perceive another mind, just because mind is an EW and we would have a mixture of EDWs. Such idioms like “in my mind” or “what is it in your mind” are just unregimented linguistic slogans created within the unicorn world framework.

We can analyze a real experiment that clarifies this contradiction more: “I perceive my hand”. As we already know, the “I” is an EW, the “hand” is “part” of an It that belongs to the macro-EW. What does “I perceive my hand” mean? With the help of light, the eyes (extensions of the brain) interact with the hand, both the eyes and the hands are parts of the body (but only in our mind). The “I” is an EW, the body (brain) belongs to the macro-EW. The conclusion is this one: it is impossible for being to perceive something. It is wrong to assert “The ‘I’ perceive an object of the external world”. The “I” does not perceive anything since perceptions are being. There are only certain perceptual images that are the “I” and correspond to the real objects.

From an EDWs perspective, it is very important to assert that the notion of perception does not exist. If interactions exist, perceptions mean a mixture of EDWs, and therefore they do not exist. Nothing is perceived because it presupposes an entity that “perceives” and an entity that “is perceived”. Perception is an EW (being) and an EW cannot be perceived! In reality, perceptions are spontaneous states that correspond to certain interactions that belong to another EW. Moreover, being always corresponds to an It.⁷ Only within the EDWs framework, we can avoid huge errors of our thinking. The conclusion is this: *perceiving is being that is both an EW and an indeterminate individuality*. Various

⁷ An alternative is Berkeley’s idealism, but in our days, if we accept this alternative, we have to go to church and not to an institute of philosophy.

perceptions (and feelings) are the entities of an EW (being), but their individuality/identity is epistemologically-ontologically different than the individuality/identity of the *it*^s or the *It*^s. The main difference is given by the status of being, the indeterminate individuality. All kinds of perception are being; being is an indeterminate individuality. However, a perception has a kind of individuation different from the individuation of any *it* or an *It* (their individuation is within a spatio-temporal framework). More exactly, for instance, two perceptions are spontaneously different, but not in relationship with the whole being. Both perceptions are not a kind of “internal perceptions”⁸ of being, but are being. Perceptions correspond to some neural patterns of activations (the most activated ones) and the rest of the brain and the body, but we have to take into account the fact that the brain has the property of “superpositional storage” (Clark 1993, 1997), exactly as a neural network. If we accepted the identity theory, due to such “superpositional storage”, we would not be able to make the individualization of mental perceptions “in our mind”. Only the idea that mind and brain are EDWs gives us the possibility to explain the “individualization” (in a temporal and not spatial framework) of perceptions (that are the mind). As an EW, certain entities (mental states and processes) are mind. It is completely wrong to consider, as many people do, that the “*T*” has certain feelings or perceptions since such entities and processes are the “*I*”!

If we accept that the biological mechanisms “produce” (cause) perceptions, we conclude that the mind is the *product* of the brain. In this way, we would return to Searle’s “rediscovery of the mind”. This “rediscovery” is a complicated Ptolemaic epicyle constructed within the unicorn world: the mind is the

⁸ Again, the “internal perceptions” need the eternal homunculus! Working within the unicorn world, Descartes was forced to introduce this notion.

product of the brain. (For details, see Vacariu 2008) “Production” that requires “causality” between the brain and the mind simply has to be replaced with correspondence. Understanding this replacement is a step towards accepting the EDWs perspective. Again, it is meaningless to look for any relationship between being (mind or life) and human organism or any interactions between being and the “world”.

The identification of perception with being is a pure Kantian movement. However, the great problem for Kant was the noumenal-phenomenal distinction, a distinction imposed by the unicorn world. Through EDWs (adding K. Lorenz’s idea, 1941), the noumenal-phenomenal distinction is completely avoided. Brain and body evolved together in a strong relationship (see Sporns 2006) during their interactions with the environment. Nonetheless, mind corresponds to brain (and body), so the Kantian distinction between pure and empirical intuition is meaningless, too. The empirical intuition (part of perception) presupposes the interactions between the “I” and the world, interactions that do not exist. All elements of perception are the “I”, while the corresponding biological mechanisms evolved in connection with the macro-EW, an EW that really is. Obviously, within the unicorn world, it was not possible for Kant to construct a better philosophy.⁹ Nonetheless, the “noumenal” is meaningless within the EDWs, exactly as Newton’s absolute space and time are meaningless for Einstein’s theory of relativity. Moreover, we have to discard the strong differences (ontologically or epistemologically speaking) between our mental representations and the external objects. Obviously, the perceptual representations do not reflect exactly the characteristics of external objects, but nevertheless, the similarity or even the identity is quite strong.

⁹ In science and philosophy, Kant’s philosophy had a major effect. Kant’s philosophy strongly influenced even the contemporary philosophy.

Otherwise, the organism would not have been able to survive in the environment, the macro-EW. The entities of the macro-EW really exist because the It^s of the macro-EW exist and vice-versa. The noumenal is replaced with the EDWs, and the Kantian phenomena are the objects and processes that exist in the macro-EW.

Several times, I emphasized that being corresponds to an It that could not survive in an environment without this correspondence. Hume would be quite right in denying the causality between being (mind, intentionality, subjectivity, will, etc.) and an It. What exactly is the correspondence between being and an It? For answering to this question, we have to take into account the fact that the external space *is represented* somehow in our visual representations. An It is situated within a space and an It is extended in space. Does this extension have any correspondence to being? To an It there corresponds a *virtual It* that is being. If we reject the idea of this virtual It, we have to accept the causality between being and an It, so we create *hybrid models* (using empty concepts) that are just mixtures of EDWs. The virtual It is not mirroring the real It, but anyways it replaces the strange notion of our “internal feelings” or other notions used for reflecting our “inside”. Internal (and external) is meaningless since all Cartesian “external and internal perceptions” are the “I” or being.

The knowledge that is the “I” corresponds to the union between brain and body. We have to remember Ramachandran’s patient with the missing arm. (Ramachandran and Blakeslee 1999, see part 8) The implicit knowledge of the missing arm had been acquired along time and the patient’s life until amputation. The patient still had the knowledge of a missing arm (this knowledge is being), even if the biological arm was missing from the biological organism. The pain reveals the unity that is being (not “the unity of being”, a wrong notion), a unity that does not exist

within the union between brain and body. The pain is being. The “internal sense” of body or mind is a Ptolemaic epicycle since there is no external and/or internal side for being. These notions have been created within the unicorn world and entail either the identity or the causality between mind and body (Searle) (the Cartesian ontological dualism is rejected, anyways). Many thinkers (including Kant) used this notion of internal feelings. Why did they call them “internal feelings”? What are the criteria to make the internal-external feelings distinction? Certainly, if a stimulus is external, it produces a feeling that is not internal. With an “internal” stimulus, we have such internal feelings. But who perceives these feelings as internal? Are they “perceived” by the “I”? This is not possible since all these internal feelings are the “I” (and something more). Eliminating the internal-external distinction in relation with being, we realize that all feelings (like perceptions) are the “I”. All feelings are the implicit knowledge, while our conscious thoughts are the explicit knowledge. Conscious thoughts appear spontaneously (not “in our mind”, thoughts are the mind, the “I”). Because “feelings” are rather related to the implicit knowledge, we have the “sensation” of certain internal sense that presupposes the distinction between the “I” and the external space. This distinction does not exist. We saw that the parts-whole relationship would be a very problematic association even for an It. The existence of something depends on the viewpoint/interactions taken into account. If we specify the viewpoint/interactions, we know what exist. For being, there are no perceptions/interactions, so being does not exist but is. From the viewpoint of the classical notion of objectivity, we really have to accept Kant’s postulate: the “I” really is. Extending the notion of the “I”, we get being. Nevertheless, since the “I” has no spatio-temporal determinations, Kant needed to postulate the existence of the “I” within the

unicorn world. Within the EDWs perspective, we can go beyond the status of this postulate claiming that the “I” is. This assertion is not a postulate, since the “I” has no spatio-temporal dimension and we can prove its “existence” in other ways.

The “internal perception”¹⁰ is strongly related to the great debates of nowadays between the supporters of mental imagery (Kosslyn, the leader) and those who maintain that mental images have no spatial images (very few proponents, Fodor and Pylyshyn, the leaders). Even before trying to answer this problem, we have to wonder on the way the mind represents visual (not imagery) space. Until now, nobody had doubts: mind *perceives* the external space. This is the contradiction “being-perceiving”, so it is a false presupposition. There is only an It that interacts with the external space, not being. That is perceptions are being (an EW), while the It belongs to the macro-EW. Because of the appearance of life and the evolution of species, the space has to be somehow *represented* in the mind, but such mental “representations” are a kind of virtual space (that is being). We cannot find any space within the mind, and a correlation between the space, in which the brain is situated, and the mind, in which the space is represented, is quite wrong.

The space of the macro-EW is always determined by its it^s. We do not have a representation of empty space, without any it. The localization of space in some neural areas of the brain is quite impossible. An it has an identity that unifies certain determinations, including, in general, the space. The unity of the “I” cannot be localized in the brain. (Related to localization, see part 11) There are representations of space (that are being) and the corresponding biological mechanism of an It that interacts with a specific external space. Even if the macro-EW has spatial

¹⁰ We have to remember that Descartes imposed notions like “internal” and “external perceptions” in the modern period of thinking.

dimension, the space has to be “suspended” (represented) in being. If the mind had a space, the mind would be decomposed. The decomposition of the “I” is not possible, so the mind has no space.

This virtual space is necessary for the corresponding It to survive in its environment, but the “space” is not being, the representations of space are being. Amazingly, nobody claims that a color is in the brain because the brain has no color. We can make an analogy between space and color. Nevertheless, many people argue that space exists in the mind because the brain has a spatial extension! We have an illicit extension that breaks the Kant-Carnap rule. The “space” is only “represented” exactly as the color is represented in the mind. That is, the space and the color are no more or less than being. There is no direct relationship between the external space or color and the *representations* of space or color.¹¹ The *representation of space* is something completely different than the real space or the spatial extension of a neural pattern of activation just because such representation is **the** being, and the brain belongs to the macro-EW, while the mind is an EDW. There is no localization of space in our brain! The researchers from the cognitive neuroscience try to localize the mental representation of an object in the brain, but only the object is in a spatial (-temporal) framework. Even for the representation of an object, localization is not possible because that representation corresponds not only to the most activated neuronal patterns, but also to the rest of the brain and body.¹² As an EW and an entity, being has no spatial dimension, so looking for the spatial dimension within our mind is meaningless! There is an epistemological-ontological difference

¹¹ We should not forget that the brain (with its features) is the result of our „perception” (even if the Kantian distinction noumena-phenomena is rejected). It is in our perception of the space where we observe the neuronal patterns.

¹² See the principle part-counterpart from VACARIU (2005), (2008).

between the representation of space and the external space that force us not to break Kant-Carnap rule.

The conclusion is that the “internal sense” or “internal feeling” and the external “perceptions” are meaningless. The fakeness of the perception of an external space is one the main reasons for the human being to create the unicorn world. People working in cognitive science have completely ignored Kant’s main idea that the external world (the representations of the external world) is the self (Waxman 1995). “Being is” does not mean that being interacts with something else, it means that being is an indeterminate individuality. Determinations demand interactions, indeterminations exclude interactions, but require indeterminate identity. To exist means to interact or to be determinate, as any it or It exists. To be means not to interact, or in other words, to be without determinations, to be being or an EW. We have to change completely the notion of “objective reality”. All entities (it^s, It^s and being) (all EDWs) have the same objective reality. Space and time are not the criteria for “objective reality”. Hume is right in imposing the skepticism on causalities between many entities. This skepticism, clarified by the EDWs, changes the status of existence/being.

PART 6

SUBJECTIVITY, KNOWLEDGE AND BEING

As we saw in part 4, hyper-nothing has no determinations and no dimensions. Obviously, we can define hyper-nothing only through negations. Hyper-nothing does not exist/being; hypernothing is not an EW. Nonetheless, the relationship between hypernothing and any EW (including the being) is bidirectional. Being appears from and disappears in hypernothing, even if the being corresponds to an It. The It belongs to the macro-EW, so we cannot claim that being (life, mind, subjectivity) emerges or is caused by an It, since being is an EW and an It belongs to the macro-EW.

If any It exists in a spatio-temporal framework of an EW (usually the macro-EW), time is being, but only in relationship with the mental representations that are being. Thus, time is being, too. The time of being is epistemologically different from the time of the micro-EW or the macro-EW. There is not a unique ontological-epistemological world, (there are no parallel universes or many-worlds), and therefore, there is not a unique ontological-epistemological spatio-temporal framework. There are epistemologically different spatio-temporal frameworks that are dimensions of EDWs. Without space (just only a virtual space, that is a representation of space), being is an indeterminate individuality. If being had a spatial dimension,

there would be no unity for the “I”. Therefore, the corresponding It would not have been able to survive in its environment. If the spatio-temporal frameworks are epistemologically different, we can finally conclude that there is no spatio-temporal continuity between an It and being or between any EDWs. Each time when being appears and disappears as an EW, an It appears in and disappears from the macro-EW. Nevertheless, there is only a correspondence between being and an It. Life appeared billions of years ago, maybe around 8.7 billion years after the Big Bang, but there is neither the continuity of life, nor the continuity between the non-living and “living” entities. Within the unicorn world, only “God’s eye” would require such continuity of time. Each of us has the “feeling” that we were born in a world having a unique spatio-temporal framework, but as shown above this idea is not true.

Hypernothing has no time or space. More exactly, it is meaningless to relate hypernothing to time. Related to time, hypernothing would be an EW but this is not true. Within a spatio-temporal framework, hypernothing has to be something with certain determinations, without any spatio-temporal framework, hypernothing is hypernothing. Nevertheless, when we ask ourselves what the apparition of an EW was, the answer is hypernothing. Therefore, hypernothing is the referential point for all EDWs.

Being is an indeterminate individuality characterized by the notion of “subjectivity”. Subjectivity requires the unity of indeterminate individuality. More exactly, the subjectivity is an indeterminate individuality. At the same time, the subjectivity is given by certain states/processes that have individuality¹ (and appear spontaneously in our mind). These states/processes correspond to certain neural

¹ Again, the determinations of such states and processes are epistemologically-ontologically different from the determinations of it^s or It^s.

patterns of activation that overlap onto the same corresponding neurons (again, this it is quite similar to the “superpositional storage” of a neural network, see Clark 1993, 1997). We can now insert the equation: knowledge = subjectivity = being. As we already know, being does not perceive anything (any of its parts or an it) because perceptions are knowledge that is being. As a whole, being cannot observe itself and this is why being has an indeterminate individuality.

Subjectivity (or being) is the implicit knowledge acquired, by means of *correspondence*, during the existence of an It in the macro-EW. The “I” (subjectivity) has an indeterminate identity that is this implicit knowledge. An element of the explicit knowledge becomes a determinate entity: each element (that appears spontaneously) has to be different, somehow, from other elements of the explicit knowledge. In general, between two elements of the explicit knowledge there is at least a temporal difference. So, the “localization” of an element of the explicit knowledge is given by the temporal dimension. This localization refers to the “syntax” of the components of the explicit knowledge, but not to their semantics (that involves the implicit knowledge). The situation is not the same for the implicit knowledge. The difference between the pair implicit-explicit knowledge is mirrored by the pair indeterminations-determinations. Obviously, the implicit knowledge is the Kantian “I” without any quality or “bare consciousness” or “indeterminately given object” (A346/B404).² “Given” would mean something that “is”, i.e. being. “Object” has to be an entity with some identity that is indeterminate. Within the unicorn world, Kant tries to preserve the identity of any object and the identity of the self. The EDWs perspective pushes further this Kantian movement and rejects various hyperontological

² The implicit knowledge corresponds to Raichle’s dark energy of the brain (RAICHLÉ 2006, and VACARIU 2008, cap. 3).

contradictions that could not be avoided by a transcendentalist philosophy within the unicorn world. The identity of human being is given not only by the implicit knowledge acquired during the corresponding It in the macro-EW, but also by the corresponding biological elements of any It that are the results of species evolution within a particular environment that belongs to the macro-EW. It is the virtual It that reflects the identity of being. The “internal feeling” is not entirely the implicit knowledge, but also the virtual It. The virtual It corresponds to the real It, or in more precise terms, “the virtual It is” because of its correspondence with the real It. Precisely this correspondence has been wrongly named “internal feeling”.

In this framework, we can say a “cell has its identity” and certain senses. The identity of being that corresponds to a cell (with its biological mechanisms) is this correspondence. We should have the 6th senses to perceive this identity, but this sense is impossible. For Kant, the unity of being is transcendental (so, indeterminate), for me this unity is beyond the implicit knowledge (as separate knowledgeable entities). The unity is the result of “superpositional storage” on the same corresponding neural network. This superpositional storage is possible because being is an EW and the brain (neural network) belongs to the macro-EW. Otherwise, this superpositional storage would be devastating for the It in order to survive in the macro-EW. Without being, any corresponding It would not be able to survive. We cannot claim that any It has certain biological mechanisms that work in such a manner that their functions complete one another to guarantee the survival of the It in its environment. There is the unity that is impossible to explain by appealing to certain biological mechanisms of the It. Moreover, such unity does not even exist within an It. Nevertheless, the biological correspondence of such a unity is the *form* of the union between the brain and the body not their *content*.

In what regards the “superpositional storage” of a neural network, let me shortly analyze the association between syntax and semantics applied to the neural networks and the brain-mind dichotomy. A neural network (with its nodes and weights that have certain values) belongs to the macro-EW, but according to Smolensky’s famous analysis, it has “two” levels of description: one is formal (numbers), one is semantic. (Smolensky 1988, Clark 1993, 2001, etc.) What for are these levels of description? Are these levels for the network itself? Not at all, the network works only with “numerical spaghetti” (in Clark’s words, 2001). These “levels” are only for human beings that analyze the network (in Searle’s words, 1992). The same way of thinking is available for the neurons of the brain. The activations of neural patterns are just these “numerical spaghetti”. Where are the words, perceptions, or the subjectivity? All these entities are the mind (more exactly, these entities are the “I” or the being) that is an EDW rather than the brain. The mind is a person (being) who analyzes, through correspondence, the brain or the neural network! The relationship between the mind and the brain is just of correspondence. Any neural network lacks the corresponding mind or more exactly the unity of all knowledge that has to be the mind. Without unity, any neural network has no identity! Without identity, a neural network does not mirror the “I”. If we try to grasp such unity constructing a multi-level neural network, we get just hybrid models constructed through some mixtures of entities that belong to EDWs.

From the EDWs perspective, Searle’s Chinese room has an interpretation: semantics is the implicit knowledge, syntax is the explicit knowledge (even if the syntax is the implicit or the explicit knowledge). The semantics of any explicit word (necessary for forming a thought or a linguistic sentence) is the entire knowledge acquired by the “I” in connection with the

development of the It. This is possible because all knowledge has unity; it is the “I”. The explicit knowledge is the “I”. The neural network does not have such unity, even if it has the “superpositional storage” that represents the superpositional storage of neural activations on the same neurons. The neural network reflects, partially but not completely, only the brain. It is lacking something that seems to be in the brain and corresponds to the unity of being. It is not an entity with individuality in the brain. Obviously, it has to be something in the brain that corresponds to the unity of the mind, but it is something that cannot be identified as an entity with spatio-temporal individuality. Returning to the already classical analogy, the unity of a table *does not exist* within the network of microparticles! The microparticles and their relationships correspond to the table that exists because of the constituting interactions with other macro-entities from the macro-EW.

Neither semantics, nor syntax *is* in the brain. Maybe we can find certain localizations (with very large approximations) for syntax (the localization of explicit words within the brain), but the semantics of any word cannot be localized. In Vacariu 2008, I offered some details about Searle’s attack on the relationship between syntax and physical substance (computer or brain). (Searle 1992 in Vacariu 2008) The supporters of cognitivism (the classical approach or the “computationalism”) consider that the symbols manipulated in the brain, 0’s and 1’s, *cause* cognition. However, Searle believes that these symbols have no such causal powers “*because they do not even exist except in the eyes of the beholder*”. (Searle 1992, p. 215, italics added) The program does not really exist, that is, it has no ontological status “beyond that of the implementing medium. Physically speaking, there is no such thing as a separate ‘program level.’” (p. 215) In order to support his idea, Searle introduces the difference between a mechanical

computer and Turing's human computer. The mechanical computer does not follow rules because "it has no intentional content intrinsic to the system that is functioning causally to produce the behavior." (p. 216) In fact, "without a homunculus, both the commercial computer and the brain have nothing but patterns, and the patterns have no causal powers in addition to those of the implementing media." Explaining the function of the brain, we have to use neurological and not psychological terms or terms simulating those related to a computer. From an EDWs viewpoint, I emphasize the fact that rejecting the identity theory, Searle creates a mixture of EDWs. The "intentional content intrinsic to the system" is not the mind produced by the brain. It seems to me that for Searle the mind (produced by the brain) is a kind of homunculus.

For Searle, the multiple realizability is not a consequence of the fact that "the same physical effect can be realized by different physical substances". It is a consequence of the fact that the properties are purely syntactical. Therefore, the consequences are "disastrous": there is a universal realizability and everything can be a digital computer; syntax is not intrinsic to physics. "The ascription of syntactical properties is always relative to an agent or observer who treats certain phenomena as syntactical." (Searle, p. 208) or

The multiple realizability of computationally equivalent processes in different physical media is not just a sign that the processes are abstract, but that they are not intrinsic to the system at all. They depend on an interpretation from outside. (p. 209; Searle's italics)

The use of 0's and 1's reflects the notions of computation, algorithm and program; these notions "*do not name intrinsic physical features of systems*. Computational states are not *discovered* within the physics, they are *assigned to* the physics." (p. 210;

Searle's italics) Searle emphasizes the fact that this argument is different from the Chinese Room that shows that semantics is not intrinsic to syntax. In his book (1992), Searle argues that syntax is not intrinsic to physics.

From an EDWs perspective, Searle is very correct in rejecting the identity theory, but he is wrong in sustaining the causality between the mind and the brain. Obviously, we cannot "see" the syntax within the brain or the computer. Within the brain, there are some neural entities/processes that correspond to syntax, but both syntax (the rules and the representations) and semantics (the meaning of explicit and the implicit representations) are the mind-EW. In fact, the meaning of any representation involves the whole "I". In a computer, we can see just electronic parts, nothing else. Indeed, the human observer assigns syntax and not only semantics to a computer. What kind of syntax would a monkey looking at a computer observe? A display with some lights flashing from time to time!

Explaining the functions of the brain, we have to use neurological and not psychological or simulating notions related to a computer. This difficulty clearly reflects the difference between the brain (that belongs to the macro-EW) and the mind-EW. Indeed, syntax (given by certain physical elements) has no causal powers. Such causal powers exist, but only for the mental elements and not for the neural patterns of activation. There are, of course, some correspondences for these powers but it is quite impossible to identify them. Again, it would be impossible for us to use such "empty concepts". Therefore, the Kant-Carnap rule is broken. Within the EDWs framework, if certain concepts are impossible to use, then the phenomena that correspond to such notions do not exist. If the localization of mental perceptual representations are realized in the brain with very great approximations (because they are the "I" and do not really exist

in the brain), the situation for localizations of the linguistic representations (for instance, words) is much worse. Obviously, the corresponding biological mechanisms of language were developed billions of years later than the corresponding mechanisms of perception.

The syntax and the semantics of a particular word appear spontaneously in our mind. This means, something indeterminate becomes determinate, i.e. something that really *is* the implicit knowledge becomes explicit. A particular numerical value is recovered from the superpositional storage on the same neurons (similarly as with a neural network). This recuperation involves the “meaning” of that numerical value that is found on the superpositional storage. The superpositional storage has a partial unity that affords the recuperation of a particular numerical value (we find here a kind of corresponding “semantics” of the brain), but this superpositional storage is not an *entity* like the mind (an entity with an indeterminate individuality, but an entity with its unity). The status of entity lacks any neural network in the attempt of representing any function of the mind. A neural network partially reflects the brain (that belongs to the macro-EW), but it does not have the mind-EW (as an entity, the being). Being is an entity that seems to *interact with something else*, but it does not. I would like to mention once more that various researchers working in the neural networks area construct multi-level networks, one level trying to unify the information from different parts of the first level, and so on. In this way, they try to bind various features of a representation (the binding problem) within the neural network. Obviously, the binding problem cannot be solved in this way: we would have a regression *ad infinitum*. The EDWs are not “levels”, since levels are a mixture of EDWs. Exactly the same situation is in the case of the relationship between the micro-level and macro-level.

We can really understand now the reason why space, time and color are not in the brain, but are the mind (being), even if there is a correspondence between the unity of the mind and certain neural mechanisms.

PART 7

CELLS, LIFE AND EDWs

Mind (the subjectivity) and life have the same ontological status. Being denotes not only mind and subjectivity but also life. We cannot make a real difference between mind and life. Godfrey-Smith (1996 in Clark 2001)¹ considers that, indeed, “mind is literally life-like”! Extending this “likeness”, we can say that mind, subjectivity and life should indeed be included in a single concept, being. In the language of the unicorn world, we cannot consider that a cell has cognition, but everybody assumes that life “emerges” from a cell or an organism. In my language, a cell and a human organism correspond to life that is being. If mind is an EW with certain entities and processes (the mental states/processes), life is an EW without any states or processes. It is not compulsory for every EW to have certain states/processes. The feeling of a pain is the “I”, but there is no “feeling of life”. We do not “perceive” life, in any way. The difference is that the pain is an entity of the mind-EW (even if pain is being), while

¹ Clark (2001) emphasizes an analogy between mind and life taken from Godfrey-Smith (1996a, p. 320) in order to grasp the “strong continuity” between them: “Life and mind have a common abstract pattern or set of basic organizational properties. The functional properties characteristic of mind has an enriched version of the functional properties that has fundamental to life in general. Mind is literally life-like.” (CLARK 2001, p. 118)

life has no such entities. The manifestations of life are different from those of the mind. Nevertheless, life is mind-like.

We can make an analogy between two pairs: electron-table and life-cell. We know the relationship between electron and table. The situation is the same between life and a cell. We can perceive a cell (using for instance a standard microscope), but life is a “subjective experience” that corresponds to the entities/processes of an It. We would need the 6th sense to perceive life, but, as we saw above, even theoretically we could not have such instruments. Nonetheless, such a sensorial mechanism would be different from our perception/standard microscope. In other words, we cannot perceive the cell and life with the same instrument, at the same time. Life/living/subjective experience is an EDW from an It. Like the “I”, life neither emerges from, nor is produced by the body. Life is no more or less than being. We can explain an It that corresponds to life, but there is no causality between life and an It, only correspondence.

Mixing the EDWs, many *hybrid models* were created in huge efforts to explain cognition or life. (For details, see Vacariu and Vacariu 2010) Such hybrid models are certain heterogeneous models that mix elements belonging to EDWs. Obviously, the hybrid models are possible only within the unicorn world. We have to be aware of the fact that we cannot explain cognition or life by introducing the hybrid models. The EDWs perspective does not cope with hybrid models! Kant avoided such heterogeneity (created by the mixture of rationalism with empiricism principles) by *bringing the “world” inside the “I”*. The EDWs perspective also avoids the possibility of any such heterogeneity, and this is the main reason why the notion of “world” has to be excluded from our language.

The main topic of biology is the life of cells/organisms. Neurons are a particular type of cells out of the 265 different

types of cells of our body. From the human viewpoint, the mind is an EW that corresponds to the brain and the body. Since the notion of “mind” is included within the notion of “life”, I can assert that life corresponds to the brain and the body. Thus, life corresponds to all the various types of cells that belong to the macro-EW. The similarity is that nobody can localize cognition or life within a spatial framework. An EW cannot be localized in a spatio-temporal framework, but only the entities/process that belong to *some* EDWs. Not all EDWs have a spatio-temporal framework for their entities. In the actual context of cognitive science and biology, the difference between mind and life is this: if something is an It, it does not necessarily possess cognition. On the contrary, cognition needs to be life.

In this context, I would like to change this relationship. From an EDWs perspective, we need to *anthropomorphize* even the cells: any It “possesses” (that is corresponds to) intelligence. There is a gradual (not natural) difference between the “mind” that corresponds to the cell and the “mind” that corresponds to the human being. Human cognition implies much more functions than the cognition of a cell or of a primitive organism. The first cognition corresponds to much more entities/processes than the second one. However, cognition and life have the same hyperontological status. Having this common status, we could really extend the EDWs perspective from cognition to life. Life is an EW that *corresponds* to an It. Accepting that the cell is the primitive entity of life, the life of a cell corresponds to “its” molecules, membrane, DNA, RNA and proteins. Life of an It is an EW, an It belongs, from a human viewpoint, to the macro-EW. If the “I” is knowledge (the implicit and the explicit knowledge), life is a kind of “implicit knowledge”. Without such an implicit knowledge, that is the “innate” knowledge (it corresponds to the evolution of life and species), even a cell would not survive in

its environment. Moreover, this implicit knowledge represents the subjective unity that corresponds to a biological cell. I would like to emphasize once more that we would need the 6th sensorial mechanism to perceive life of a cell or an organism.

If someone accepts the existence of the Big Bang 13.7 billion years ago², one will agree also to the “appearance” of living entities from the non-living matter and the evolution of species. In the 19th Century, Darwin elaborated his theory of evolution that was largely accepted in the last century. If, from the human viewpoint but within the unicorn-world, we analyze the entities and the processes that appeared after the Big Bang, we have to assume a sort of *continuity* regarding the evolution of all classes of entities, from microparticle and macroparticles to cells and animals. In other words, it is a continuity between matter, life and cognition or between it^s, It^s and the “I”. *We have to be aware of the fact that the framework of such continuity is the unicorn-world.* Therefore, from the EDWs perspective, we need to eliminate such continuity. Since we eliminated the “continuity” of appearance between microparticles and macroparticles (there is no relationship between them), we have to eliminate the continuity between matter and life, as well. Obviously, the life-EW (the mind-EW or being) does not exist without the *corresponding* matter. Nevertheless, as I emphasized in other works (see Vacariu 2008, Vacariu and Vacariu 2010), there is no causality (continuity of) between matter and cognition, so there is no continuity between matter and life. Cognition/life and matter are

² Using statistical analysis, MIHRAN VARDANYAN and his colleagues (the University of Oxford) argue that “the photons in the cosmic microwave background have traveled a cool 45 billion light years to get here. That makes the visible universe some 90 billion light years across.” Moreover, it seems the “Universe is flat”. “These show that the Universe is at least 250 times bigger than the Hubble volume.” (Hubble volume is 13.7 billion years.)

or belong to the EDWs, so there are no relationships (causality or laws of complexity) between them, but only some correspondences. As we saw in Vacariu (2008) and Vacariu and Vacariu (2010), we also need to eliminate the idea of “emergence”: cognition does not emerge from the neurons. Life does not emerge from an It. Life is not an “internal” process of a cell or an organism. Life is not internal to any entity (an it or an It), life is an EW and any it or It belongs to an EDW.

Within the unicorn world, it has been quite difficult for everybody to find a definition of life. Everybody thinks that life is somehow related to some biological/physical processes. In fact, life has been attributed to a physical organism that can be localized within a spatio-temporal framework. Temperature is a process, too, but at least we can physically perceive it with the help of some sensorial mechanisms or certain artifacts. Life is not an abstract or perceptual notion. Then, what is life? Even within the unicorn world, it is a tautology to say that life is a *property* of a living entity. This abnormality seems to be quite normal within the unicorn world. Since cognition and life have the same hyperontological status, we could claim that *life does not emerge from cells just like cognition does not emerge from neurons*. Life is an EW and the corresponding It belongs to the macro-EW. An organism corresponds to its cells and their processes or a cell corresponds to “its” molecules (DNA, RNA, proteins, enzymes and their chemical processes). It is a contradiction to consider that a cell is identical with or composed of or emerges from “its” molecules and their activity. From the viewpoint of the human being, there is an organizational threshold between the cell and “its” molecules, there is an epistemological-ontological threshold between the cell and “its” life.

Many researchers (Kaufmann as leader) tried to explain life within the framework of complexity. Searching for the laws

of complexity, Kauffmann insists on one of the main principles of the so wanted theory of complexity for life: “*the whole is greater than the sum of its parts*”. (Kauffman³ 1995, p. 15) Working within the unicorn world, this principle reflects directly the hyperontological contradiction created by the human being by breaking the Kant-Carnap rule and blending the EDWs. It is not possible to consider a whole and its parts within the same EW; it is even much worse to reject the identity between the whole and “its” parts⁴, even if the identity between whole and parts involving the epistemological-ontological threshold is wrong, as well.

I underline again that cognition/mind and life both have the same ontological status: they are both an EW, while neurons and other biological entities belong to the macro-EW. So, if life is in a similar position with cognition or mind, then we cannot mix life with the cells or the organisms. Moreover, we cannot mix the cells with matter that is or belongs to EDWs. In this context, life “of an” It is not the whole that is greater than the sum of “its” parts. Life just *corresponds* to the sum of its cells and their activity. Translating “*the whole is greater than the sum of its parts*”, we get “the whole corresponds to ‘its’ parts”. We use inverted commas for “its” just because the cells and “its” molecules belong to the EDWs. There is here an epistemological-ontological threshold between two EDWs.

³ About Kauffman’s theory of complexity and the EDWs perspective, see VACARIU and VACARIU (2010).

⁴ As I wrote in VACARIU (2008), the best alternative for the mind-body problem within the unicorn world is the eliminative materialism. In one world (having one ontology), the epistemology and languages dissociations (that pretend to describe the phenomena of the same world from “various viewpoints”) become useless. Even worse, the variations of vocabulary can produce a flawed framework that can lead scientists and philosophers to great intemperate and endless debates.

However, from the human viewpoint, we have an organizational threshold between a cell and “its” molecules, both types of entities belonging to the macro-EW.

Imagine you are a cell. Obviously, any cell (as any biological entity) has its own “Umwelt” (von Uexküll). You, as a cell, are alive. You as a human being are alive, too. Both situations require the “I”. I would like to mention again that the implicit knowledge is the “I”. What exactly does the “implicit knowledge” mean for cells or insects? In the case of a cell, we may observe only the corresponding results of the implicit knowledge of a cell: the consequences of their functions. We change the notion of ontology regarding the relationships between microparticles-macroparticles, waves-corpuscles, and mind-brain. (Vacariu 2008) We have to change the notion of ontology regarding the “existence” of the “I” for human subjectivity, cells, insects or animals. It is much more difficult to identify the viewpoints of interactions/observations for the living entities like molecules, cells, neural patterns of activation, animals, and human organisms. The subjectivity that corresponds to an It (with certain biological mechanisms) is the “I” (the implicit knowledge). We have the “it” for non-living entities, the “It” for living entities, and the “I” for subjectivity. Because of the “I”, any corresponding living entity could survive in its environment and, in general, the evolution of species was possible. *The “I” (and even the “It”) corresponds to an amalgam of biological or physical elements and their functions!* Any “It” or “I” is the result of the species evolution. It is important that even if the “It” is the result of the evolution of many “it”s (that involve special conditions of interactions), there are no causal relationships between these two sets of entities. From the viewpoint of an “It”, we can say that the “It” is *not composed* of many “it”s but *corresponds* (involving an organizational

threshold, the “I” implying an epistemological-ontological threshold) to these entities and their interactions. In this way, we have to reject the *continuity* between the non-living matter and the living matter within the same “world”. I should mention again that we have to reject the continuity between the microparticles and the macroparticles, as well. Working within the unicorn world, nobody has any doubts about such “continuities”! Instead of these continuities, we have to introduce the notion of “jumps”: there are jumps from the microparticles to the macroparticles, from the it^s to the It^s , and from the macroparticles to the “I”. *Basically, a “jump” means the “spontaneous” appearance of a new EW from hypernothing.* From a human viewpoint, a jump involves either an epistemological-ontological threshold (changing the conditions of observation from one EW to another), or an organizational threshold (changing the conditions of observation from one entity to its parts within the same EW). From the viewpoint of any entity (except for the human being), these thresholds do not exist, since changing the conditions of interaction does not exist for other entity except for human being. For an entity there exist only the entities from the same class of objects (that is the entities of the same EW) and nothing else.

Let me return to the analogy between two pairs: cells-life and microparticles-table. Within the micro-EW, we have nothing stable except for the identity of some microparticles. Almost everything is in motion. On the contrary, the table is stable in interactions with other macro-objects, i.e. a human subject or a chair. The same reasoning applies in the case of planets and the gravity produced by them. The stability of some entities is given by their interactions within the same EW. As an exception, the stability of life or mind of a person or a cell is not given by the interactions with other entities. It is an EW given

by the implicit knowledge that corresponds to an amalgam of biological entities that are not at all stable. Do not look for stability among the self-organization of cells and their chemical reactions! Both are or belong to the EDWs. We cannot perceive, within the same EW, the order and the chaos; the order is life, the chaos is just certain chemical reactions. There is only a *correspondence* between the chaos and the order! We would need the 6th perceptual mechanism to perceive life, or more exactly the unity (“synthesis” in Kantian terms) of life! Continuing the analogy between two pairs (table-microparticles and life-biological), we can say a table and life both have unity, while their corresponding entities and processes do not have that unity or stability. In fact, as we saw above, the microparticles and the table belong to EDWs. It is meaningless to look for a specific “stability” among the functions of the cells (or the microparticles) so as to mirror the stability of life (or a table). On the contrary, it is meaningless to postulate life without stability.

PART 8

SOME ACTUAL ALTERNATIVES OF THE MIND-BODY PROBLEM FROM COGNITIVE NEUROSCIENCE AND THE EDWs PERSPECTIVE

In this part I will analyze, from the EDWs perspective, the ideas of some important thinkers from cognitive neuroscience or neuroscience that try to solve the relationship between the unity of the self (an “internal feeling”) and the neuronal parts of a brain within the unicorn world: Noë, Llinas, Frith, and Ramachandran.¹ Their efforts are the best examples to illustrate that this relationship could not be solved either by the identity theory embraced by Noë, Llinas, and Ramachandran or by Searle’s approach (the mind is produced by the brain) assumed by Frith.

For Noë, the details of a perceptual image that we have at a certain moment are given by our capacity to “access any part of the scene by a quick move of the head and body and/or by a rapid information-retrieving saccade.”² (Noë 2004, p. 67 in Clark, p. 142) Therefore, the experiential content of perceptual experience is “*virtual*: it is rather a matter of sensorimotor accessibility than

¹ Many ideas from this part are from VACARIU and VACARIU (2010). Nevertheless, I re-interpret some of these ideas in this part.

² “For the brain, perception and action are intimately linked.” (FRITH 2007, p. 130)

inner encoding.” (Clark 2008, p. 142) Due to such accessibility, when we observe, for instance, a tomato³, we have the “feeling” of the whole tomato even though we see in reality only a part of it.⁴ The missing physical part from our representation is “filled” with the implicit knowledge of our sensorimotor mechanisms. In Noë’s words, “the features are present as available rather than as represented (2004, 67)”. (Clark, p. 142) The following idea is important for us: “Perception is not something that happens to us or in us, it is something we do.” (Noë 2004, 1 in Clark, p. 17) Clark named Noë’s perspective as the Strong Sensorimotor Model (SSM) of perceptual experience. Perception is active because it is determined by what we do or “... we enact our perceptual experience: we act it out.”⁵ (Noë 2004, p. 1 in Clark p. 170)

³ The subtitle of one section in Chapter 5, Frith (2007): “The color is in the brain, not in the world” (p. 134) Frith’s explanation: “When illuminated with white light, a tomato reflects red light. That is why we see it as red. But what if the tomato is illuminated with blue light? ... We still perceive it as red. From the colors of all the objects in the scene our brain decides that the scene is being illuminated by blue light and predicts what the ‘true’ color of the various objects must be. What we perceive is determined by this predicted color, not by the wave-length of the light striking our eye. Because we see the predicted and not the ‘real’ color, we can create striking illusions in which patches which are identical in terms of the wave-length of the light seem to have quite different colors...” (FRITH, p. 134)

⁴ We continue with Frith: “If there is a wine glass in front of me, I am aware of its shape and color. I am not aware that my brain has already worked out how to shape my hand to grasp the stem, anticipating the feel of the glass on my fingers. This preparation and anticipation happens even when I have no intention of picking up the glass (see Figure 4.6). Part of my brain represents the world around me in terms of actions: the action needed to get from here to the exit, the action needed to pick up the bottle on the table.” (FRITH 2007, p. 130)

⁵ Perceptual experience as *enacted* is borrowed from Varela, Thompson, and Rosch (1991). (CLARK, p. 169)

From the EDW's perspective, the "virtual" content of the perceptual experience is exactly the implicit knowledge represented by the "I". It is indeed about a "virtual It" that is being. As we claimed above, this implicit knowledge depends on the development and experience of each of us in a standard environment specific to our species. Noë prefers to transfer the sensorial information to the motor information. From my viewpoint, both sensorial and motor knowledge are the "I" and they correspond, to a great extent, to some brain-body states/processes. Perception is action only when both functions are parts of the "I". Noë's movement is similar to Clark's approach in this aspect. Nevertheless, the difference is that Noë indicates the dependence of thinking on the sensorimotor mechanisms, while Clark prefers to extend the mind. (For more detail about Noë's alternative, see Vacariu and Vacariu 2010) For Noë, the features are not "represented" but are "present as available". Obviously, if there are no representations, Noë wants to avoid any kind of homunculus. "To be present" is indeed very close to my idea that knowledge is the "I". The transformation of perception into action rejects the idea of homunculus. We do not need a relationship between the subject and its perceptual representations, since such representations are actions not perceptions.⁶ In fact, the subject is the "I" not the corresponding physical entity (brain and body). I believe that by replacing perception with actions, Noë does not avoid the two Cartesian dogmas (see the footnote below). These dogmas are avoided only through the Kantian movement of bringing the "world" within the self. In the EDW's terms, "perception is not something

⁶ We can relate Noë's approach to Wheeler's idea that two Cartesian dogmas still dominate the "orthodox cognitive science": the subject-world distinction and the idea of mental representation. (WHEELER 2005, 2009, in VACARIU and VACARIU 2010)

that happens *to us or in us*" (my emphasis), perception is the "I". The difference between perceptions and "us" is meaningless! It would require a homunculus, exactly what Noë wants to avoid.

Not surprisingly, we find another person from neuroscience Llinas who makes almost the same movement, the perceptions are "internalized". He includes all "sensorimotor images" and "self-awareness" within the mind. (Llinás 2002, p. 1) In his book, Llinás argues that the mind "has evolved as a goal-oriented device that implements predictive/intentional interactions between a living organism and its environment", considering the *prediction* as the most important mental function. (p. 3) From my perspective, prediction is not a neural function, but a mental function.⁷ Prediction implies an accumulation of knowledge from previous training period, but this accumulation is under the "superpositional storage" method. It is impossible to localize the function of prediction in the brain. Moreover, prediction does not exist in the brain, but only certain corresponding entities and processes. Exactly as a table does not exist in the micro-EW, prediction is meaningless within the brain. In this context, we have to remember Searle's assertion: syntax (not only semantics) exists only in our eyes, in a computer we can find only electronic processes. Prediction is only in our mind (more exactly, prediction is the "I"), in the brain there are no more or less than than plain certain neural states. The computer can "calculate" " $7 + 5 = 12$ ", but there are only electronic processes inside it. The real calculus is only in our mind. Moreover, prediction is an anticipation of a phenomenon, but even if that phenomenon really takes places, the prediction is only a mental state and has nothing to do

⁷ I want to mention here the fact that the relationship between entities and processes (functions) is quite problematic. An entity from one EW can correspond to other entities and processes from another EW.

directly with that particular phenomenon. Based on these reasons, we have to be aware of the fact that we cannot use “prediction” as a characteristic feature of the brain.

For Llinás, due to the evolution, the multicellular organisms develop brains necessary for the property of “motricity.” (p. 15) Motricity implies *prediction*, and this is one of the most important features of the brain. Prediction and motricity are essential to survive, being the result of an evolution based on trials and errors. (Llinás 2002) From my viewpoint, if motricity needs the body, then prediction is the “I” that corresponds to the brain and the body. We cannot clearly delineate the brain from the body especially when we talk about the “prediction” of motricity!

Even Llinás needs to introduce the self in this context, even if he supports the identity theory. Predictions need to be centralized: “*self is the centralization of prediction.*”⁸ (p. 23) Thus, “the brain making predictions on the basis of an assumed self ‘entity’ will lead us to how the brain generates the mindness state.” (p. 23) “Generates” is either a wrong ontological notion (the brain does not cause the mind) or it means “identity”, a notion created within the unicorn world. Self is nothing more than the “I” (the mind-EW or being).

Pellionisz and Llinás show that the brain makes predictions based on the “differences in the electrical behavior among individual nerve cells.” (Pellionisz and Llinás 1979 in Llinás 2002, p. 40) From the EDWs perspective, predictions are possible only because of the existence of the implicit knowledge that is self, a knowledge that is acquired by a person throughout

⁸ Regarding prediction, we have to remember Elman’s first neural networks for this task. From an EDWs perspective, we agree with Llinás that the self is the centralization of prediction. What is lacking from Elman’s neural nets is precisely the unity of the self. (See VACARIU 2008)

all his/her experiences. Maybe certain neural entities and processes correspond to prediction (with very high approximations), but it is totally wrong to put the sign of identity between these notions that refer to phenomena belonging to EDWs.

Even more interesting is Llinás' assertion that the mind and the movement of the body are strongly related being in fact different parts of the same process. From my viewpoint, Llinás is almost saying that the mind and the body are EDWs! We have to remember, however, that he works within the unicorn world. Only the brain moves the body. Evidently, the mind incorporates all the sensorial and motor states and processes the virtual It that corresponds to the real interactions between the brain, body and the external world. Llinás' main idea is that, from an evolutionary viewpoint, the mind (or the process of thinking) is just an internalization of the movement. (Llinás, p. 5) From the EDWs perspective, we can rethink this internalization as a movement from brain-body entanglement to the mind-EW.

Working within the unicorn-world, Llinás assumes two distinctive parts for the brain: 1) a closed system (responsible for subjectivity and semantics) 2) an open system (for the sensorial and motor properties that generate the relations between the first component and the external world. (p.13) Obviously, the "closed system" has to be the "I" (the mind-EW), since the subjectivity and semantics are being. The "open system" is nothing more than the brain and the body in contact with the environment.⁹ Because most of the brain operates as a

⁹ For Kant, it is about the empirical intuitions that realize the interactions between the self and the environment. Even Llinas declares "The brain is quite Kantian in the essence of its operation. It makes representations of aspects of the external world, fractionalized aspects, by making a useful geometry, a geometry with internal meaning that has nothing to do with the 'geometry' of the external world (...)" (LLINAS, p. 108) If the EDWs rejects the Kantian monism (that involves the noumena-phenomena distinction), we

closed system, Llinás considers the brain as a “reality emulator”. (p. 13)¹⁰ The premotor images have to emulate the external world in order to match the movements of the body with the environmental particularities. Therefore, it is necessary to embed these particularities or properties (“universals”) into the brain. “Such internalization, the embedding of universals into an internal functional space, is one of the essentials of brain function.” (p. 55) From my viewpoint, “particulars” and “universals” refer to perceptions that are the “I”. Only being the “I”, can we talk about “universals”. The “internal functional space” is just the above “virtual space” of the “I”. These are not functions of the brain, but the entities and processes that are being. Nevertheless, there are certain neural elements that correspond to these mental functions, but these correspondences are only approximations since two EDWs are involved here.

Our reality emulator acts primarily as the prerequisite for coordinated, directed motricity; it does so by generating a predictive image of an event to come that causes the creature to react or behave accordingly. Such an image may be considered a premotor template that serves as a planning platform for behavior or purposeful action. It may also be considered as the basis from which consciousness, in all living forms, is generated. (Llinás 2002, p. 55)

have to clarify Llinás’ first sentence. It is impossible for the brain to be “quite Kantian in the essence of its operation”. Kant’s transcendentalism has nothing to do with the brain! We cannot find the word “brain” in Kant’s transcendentalism philosophy. Llinás works under the monism’s umbrella, but he breaks the Kant-Carnap’s rule by mixing the mind-EW with the brain (that belongs to the macro-EW).

¹⁰ Llinás emphasizes that this idea came from Kant. (p. 56) Grush supports the same idea of emulator, so he can be included in this section, as well. (GRUSH 2004, in Vacariu and Vacariu 2010) Similar to this position is Frith’s alternative. (See below)

From the EDWs perspective, the idea of the brain as “reality emulator” is a mistake. The mind is indeed an “emulator”, but as an EDW from the brain. Mind is neither identical with nor generated by the brain. We consider that both the reality emulator and the internalization (or the embedding of universals) are the mind-EW. Generating a predictive image as a part of a plan means the implicit knowledge that is the “I”. The “internalization” of the external world has to be very similar to Kant’s transcendentalism: the external world is the subjectivity or the self! Such internalization is possible only because the subjectivity already is; it is about its growth. The last sentence from the above quoted paragraph (that the reality emulator “may also be considered as the basis from which consciousness, in all living forms, is generated.”) impels me to claim that Llinás is really lacking the EDWs perspective.

For Llinás, an organism should *to internalize*¹¹ the external inputs received through the sensorial and motor system through evolution in order to make such predictions. As a result, the brain constructs certain *premotor/sensorimotor images*. Predictions must be centralized¹² because only by doing so, all the “premotor/sensorimotor images formed by the predictive properties” can be “understood as a single construct”. (Llinás 2002, p. 38) Following the route of evolution, Llinás considers that the same neural mechanisms also facilitate the construction of such subconscious premotor/sensorimotor images, the perceptual and cognitive binding¹³. (p. 38) We have here a global strategy

¹¹ I strongly emphasize again the fact that this internalization is equivalent to the implicit knowledge or the virtual “It”!

¹² “Centralized” sends me directly to the “I”! Only with the unity of the “I” we have this centralization.

¹³ The “binding problem” reflects perfectly the framework of the unicorn world! From the EDWs perspective, the binding problem is a pseudo-problem, obviously, impossible to solve. As I showed in this work or VACARIU and

for both motion and cognition. (p. 40) Again, without this global strategy that is for me the “I” with its unity, the corresponding It would have not been able to survive in its environment. I strongly emphasize the fact that into the equation “the ‘I’ corresponds to the brain/the body” we have to incorporate the period of development (available for both EDWs – the mind-EW and the brain/body-EW) and the evolution of species (its results being the construction of biological mechanisms – the brain/body-EW).¹⁴

Obviously, by working within the unicorn-world, Llinás has to offer an alternative to this “single construct” or this “global strategy for motion and cognition” that presupposes the perceptual and cognitive binding.¹⁵ From a monist position, this alternative will be only physical. It is then necessary to use a mechanism that does not only “glue” together the multiple physical elements of the body and brain (nerve and muscle cells), but which also synchronizes their activity. That is why Llinás questions the way the organism, holistic and unitary, controls the movements that are discontinuous through time.¹⁶ The holistic and unitary view is clearly the “I” that cannot be found by a neuroscientist working under the umbrella of the identity theory. For Llinas, this unity is represented by the

VACARIU (2010), we cannot unify (localize) the color, the movement, and the space of a single mental representation within the brain. These features correspond to some neural areas, but we should not break the Kant-Carnap rule through extending an attribute that exists only within an EW.

¹⁴ As I emphasized several times in this work, the instruments for brain imaging do not grasp the consequences of the development of each individual and the evolution of species. This is the reason the results of brain scanning are just rough approximations of the brain/body processes.

¹⁵ As we will see in part 12, Bechtel tries to do the same movement: to preserve not only specific functions for particular neural parts of the brain but also their unity at the same time.

¹⁶ For Llinas, movement and then consciousness follow the same route of evolution and, consequently, the generation of consciousness is discontinuous, as well.

intrinsic neuronal oscillations (8-12 Hz periodic activity) and the specific ionic currents necessary for their generation (Llinás 1988 in Llinás 2002, p. 42) At the same time, this system is also responsible for bringing together the movements of body with the premotor images (responsible for predictions). Therefore, we have here a relation between movement and prediction (cognition). The “intrinsic neuronal oscillations” is an excellent notion that breaks the Kant-Carnap rule! It is similar to saying that the “gravity” of a planet is the summation of all the very “tiny gravitations” (quantum gravity) produced by each microparticle. Nonetheless, for human organisms (limited entities), the “quantum gravity” really does not exist. The unity of all neuronal elements is not given by their intrinsic oscillations; in analogy, the unity of a table is not given by the movement of microparticles and their micro-forces. The unity of a table is not an appearance, but it really exists in the macro-EW.

Again, Llinás defines the self and the cognition as “intrinsic oscillatory electrical activity, resonance, and coherence”. (Llinás 2002, p. 12) The wholeness of the self was constructed in several steps during the evolution process. Certain connections between sensory and motor systems were achieved within the nervous system. “As the nervous system evolved, the constraints generated by the coordinate systems that describe the body were slowly embedded into a functional space within the nervous system.” (p. 56) Then, the appearance of the motor neurons between the sensory cells and the motor cells was required, the so-called “interneurons”. (Llinás 2002, p. 80) Indeed, the self (the “I”) is, but as corresponding to the brain and body strong fusion. Llinás moves illicitly from the mind-EW to the brain (that belongs to the macro-EW). From the EDWs perspective, the “I” is some explicit serial set of mental entities, the implicit knowledge and various internal “feelings”, in parallel. If the mental representations of the

external world are the self, then all our sensor and motor states are the mind-EW (or the “I”), as well.¹⁷ In this way, we clearly avoid the notorious problem of amphiboly avoided by Kant, as well, through his transcendentalism. Due to the evolution rules, all sensations, perceptions, predictions and thoughts are unitary. This idea directly reflects the unity of the “I”. All these entities and their unity are the “I”. Without this unity, the “I” does not exist and Hume would be right in claiming that the “I” does not exist but is only an aggregate of various perceptions and ideas. As we emphasized above, it is almost impossible to identify which particular parts of the brain correspond to certain mental states (that are the “I”). We return to the analogy between two pairs: electrons-table and neurons-the “I” (the mind). It is meaningless to wonder about the unity (in Cartesian terms, about the extension) of a table from the viewpoint of electrons. It is also meaningless to wonder about the unity of a table from the viewpoint of its leg or about the unity of a cell from the viewpoint of one of its proteins.

According to Llinas, the “external world and the internal world have different coordinate system reference frames”, even if the properties of those two worlds have to be “homomorphic”. (Llinás 2002, p. 64) Nowhere else can we find a better expression that reflects the EDWs! In the unicorn-world, Llinas is obviously aware of “the differences in coordinate system reference frames between the external and internal worlds. From my viewpoint, there are indeed two different coordinate system reference frames, but this difference is an epistemological-ontological one. It is about the space of the macro-EW and the virtual space of the mind. Nonetheless, Llinas inquires how the continuity between perception and execution may/must exist.” (p. 65)

¹⁷ Llinas claims the same thing. (LLINAS 2002)

The case of the CNS (central nervous system) is comparable to taking a picture of a moving object, not with an instantaneous flash, but replacing the light with a set of lights (in the CNS, axons), each having a different conduction time. Creating an internal “picture”¹⁸ of the external reality in the CNS in such a manner, through differently delayed neuronal signals, means that simultaneous external events will not be represented in the CNS as simultaneous. Conversely, simultaneous onset of firing of a group of neurons with different conduction velocities will not produce a set of simultaneous external events, either. (Llinás 2002, p. 67)

From an EDWs perspective, there has to be a correspondence between the mental representations and the neural entities and processes that are, in the case of visual “perceptions”, the results of the interactions between light, the eyes and the neural patterns of activation. We do not understand Llinás’ idea that the activity of CNS is comparable with taking a picture of a moving object using a set of lights. If we have “differently delayed neuronal signals”, how is it possible for “us” to have continuous images of the external objects? Again, the answer could be that the continuous images are illusions for “us”. What does “us” mean? Llinás claims that the neural networks *internalize* the images of the external environment through the difference in the electrical properties and connectivity of neurons. What does “internalize” mean? From an EDWs perspective, it means nothing else than the Kantian movement of inserting the external world into the self. Nevertheless, such internalization needs the EDWs framework. These images are then “transformed” into motor behavior. What kind of “transformation” is this one? The electrical processes of the brain (their synchronization) constitute the mind or “us”.

¹⁸ This notion of “internal picture” of the external reality sends me to Kosslyn’s approach regarding the mental imagery, one of the most amazing Ptolemaic epicycles in cognitive neuroscience!

(Llinás 2002, p. 70) Hence, the brain generates or constitutes the mind or the “I”. Again, in the unicorn-world and by accepting the monist position, Llinás can use words like “generate” or “constitute” to grasp the relationship between the mind and the brain. Within the EDWs perspective, the relationship between the mind and the brain is just of correspondence, notions like “generate” or “constitute” being pseudo-notions within the unicorn-world.

As we saw above, from an EDWs perspective, all the sensory-motor images belong to the mind. In other words, the mind creates such “images” of the external world. The conceptual framework, in which Llinás admits he is working, is the Kantian one (the one in which Frith works, as well)! What is an image, a mental image for Llinás?

An image is a simplified representation of the external world *written in a strange form*. Any sensory transduction is a simplified representation of a universal arising from the external world. (Llinas, p. 108)

Therefore the expression “*written in a strange form*” (in an italic form!) is correct. The format of that simplified representation of the external world is indeed written in a strange form, a form, of which we have no idea. If we claim this form is an image (Kosslyn) or a word (Fodor and Pylyshyn), we break again the Kant-Carnap rule making an illicit extension of what we “perceive” as being external (image) or explicit (word). In fact, it is nothing else than the implicit knowledge that is the “I”, indeed written in a strange form! To “write a mental representation in a strange form” means that certain complicated sensory inputs are “transduced” in more simplified mental entities. What does “transduction” mean? I understand that this notion involves a causal relationship between the external world and the brain. Where is the place of the mind? Is it “generated”

by or is it “identical” with the brain? There is a notorious mixture of notions that represent epistemologically different entities within the same world, the unicorn world. Llinás emphasizes that the internal and the external worlds are quite different. If the geometries of internal “meaning” (the “I”, in our perspective) and the external world are very different, then why can we assume that cognition (this internal meaning) is just the synchronization of neural cells? From an EDWs perspective, these movements within the unicorn-world are illicit! We already comprehend that the “internal world” and the “external world” are already wrong notions. They imply a hybrid model that almost leads us to Descartes’ effort to unify the mind and the brain.

Llinás returns once more to the main question: if each neuron and parts of neural networks represent parts of the external world, then how does the brain realize its global functions responsible with the unity of self and the unity of a perceptual object? (p. 114)

What mechanism can one find that will bind processed information from disparate sensory sources so that, for momentary practical purposes, the resulting internal representation or sensorimotor image means the same thing? This mechanism should also associate memories and/or thoughts with this internal construct, such as imagining/remembering a voice reading to you from the book you are holding. (Llinas, p. 117)¹⁹

Interestingly, we can notice here that Llinás is aware of the compulsory unity between “disparate” sensorial inputs, memories and thoughts (that involves the binding problem). If we demand a mechanism that binds information from “disparate sensory sources”, we return to a regress *ad infinitum*! Inside the brain, nothing can bind these disparate sensory sources. In order

¹⁹ We have here again the “binding problem” or Damasio’s “convergence zone” (DAMASIO 1988) and the unity of the self.

to solve the binding problem, it would be necessary to introduce a homunculus, so we return to Descartes or an infinite regression. (See Wheeler 2005 in Vacariu and Vacariu 2010) It is not a mechanism that associates memories and thoughts, there is no internal voice when we read something, there is no homunculus inside our head... It is simply about the spontaneous appearance of thoughts, perceptions and voices that are the "I". Do not ask about the format of such things! It is impossible for us to find that format, so the format does not exist.

As we saw above, in order to grasp the unity of the "I", Llinás bets on the "temporal coherence", the synchronous binding of the activity of individual cells, the neurons. "If the entire module of neurons (whose activities represent fractionalized aspects of the external world) electrically oscillates in phase or resonates (...), a global activity pattern is formed." Thus, the temporal coherence accomplishes the "cognitive" and "motor binding." (Llinás 2002, p. 121) Based on different experimental studies, Llinás indicates the 40-Hz coherent neuronal activity for the temporal coherence.

If we posit that the 40-Hz coherent waves are related to consciousness, we may conclude that consciousness is a noncontinuous event determined by simultaneity of activity in the thalamocortical system (Llinás and Pare 1991). A 40-Hz oscillation displays a high degree of spatial organization and thus may be a candidate mechanism for the production of the temporal conjunction of rhythmic activity over a large ensemble of neurons. Global temporal mapping generates cognition. The binding of sensory information into a single cognitive state is implemented through the temporal coherence of inputs from specific and nonspecific thalamic nuclei at the cortical level. This coincidence detection is the basis of temporal binding. (Llinás, p. 124)

The synchronization makes the transfer from the microscopic to the macroscopic landscape. Nevertheless, as Vacariu and Vacariu (2010) try to illustrate, the synchronization is a problematic alternative. “Global temporal mapping” neither “generates” cognition nor is identical with consciousness. It has to be clear it is only about correspondence. Llinás emphasizes that the self is just the “*temporally coherent event that binds, in the time domain, the fractured components of external and internal reality into a single construct (...)*.”²⁰ (Llinás 2002, p. 120, his italics) The self is the centralization of prediction and this centralization is an “abstraction we call the ‘self.’” (p. 127) “Self” is an “abstraction” only from a neuroscientist viewpoint within the unicorn-world. Again, the internal reality is nothing more than the mind-EW, the “I” that has a unity responsible with prediction. The brain and the mind have the same ontological objectivity: the brain belongs to the macro-EW, the mind is an EW. Llinás writes that

qualia must arise from, fundamentally, properties of single cells, (...) amplified by the organization of circuits specialized in sensory functions. Qualia are that part of self that relates (back) to us! It is a fantastic trick! One cannot operate without qualia; they are properties of mind of monumental importance. Qualia facilitate the operation of the nervous system by providing well-defined frameworks, the simplifying patterns that implement and increase the speed of decision and allow such decisions to re-enter (the system) and become part of the landscape of perception. (Llinás 2002, p. 226, his italics)

Qualia is the “I” or the mind-EW but qualia do not “facilitate the operation” of the brain. It is not qualia that furnish

²⁰ Or “(T)he binding events comprise the substrate of self.” (LLINAS 2002, p. 126, his italics) Binding is nothing more than the being, an EDW rather than the brain.

a “well-defined” framework for the nervous system necessary for quick decision making, but the “I”, since all qualia and perceptual and cognitive states are the “I”, i.e. the whole knowledge acquired throughout life that has the unity absolutely necessary, in correspondence, for an It to survive. Only by introducing the “I” in such equation, can we explain the human predictions and decisions. For Llinás, there has to be a part of the nervous system that “puts the many segments together into something that did not exist beforehand: a unified whole.” (Llinás 2002, p. 226) This part,

does not relate *directly* to the connectivity of the nervous system at any particular, segmental level. The central nervous system abstracts the fact that the animal is composed of a series of unit segments; ipso facto, the process of intersegmental integration is an abstraction, and represents the beginning of abstraction as a naturally selected biological process. That this is the evolutionary direction is supported by the observation that the central nervous system mushrooms out in front of the spinal cord, polarizing encephalization. We see something important happening: from the animal’s very neurological becoming is the fact that the animal can have an internal *representation* of itself not only as a set of parts but as a whole entity. It is here, from this germinal metaevent, that abstraction begins and the self emerges. (p. 226)

Again, “abstraction”, has to be a mental function that is the mind-EW (or being) not the brain (that belongs to the macro-EW). Indeed, the central nervous system has certain entities and processes that correspond to the mental “abstraction”. These neural elements are the result of a naturally selected biological process. Such a process does not start at the level of central nervous system but at the level of cells or even molecules! The mind-EW does not emerge from/is not generated by the brain. “The process of intersegmental integration is an abstraction”, but it is an element that belongs to the mind-EW (that is the “I”).

If we avoid the notion of emergence, we really do not understand what else abstraction could mean. Moreover, what does it mean that an animal has an internal representation of itself as a whole? What kind of representation is this? We can only say that the ‘T’ is an EW; the “representation” that each of “us” has about the ‘T’ is just a theoretical notion because such a representation is the *implicit knowledge* acquired throughout evolution and all our experience (see the principle of knowledge).²¹

It seems that Llinás adopts a position common to Damasio’s “convergence zone” (Damasio 1988), even if he prefers the synchronization alternative. From an EDWs perspective, such a convergence zone is meaningless, it is a framework for a regression ad infinitum or a Cartesian homunculus. There is no convergence zone to bind the features of an external object. We do again the analogy between the mind-brain and the table-microparticle. We cannot wonder about the unity of a table from the viewpoint of an electron! The same state of affairs applies to the unity of the ‘T’: “Don’t ask about this unity from the brain’s viewpoint”!

Another step towards the EDWs perspective is Llinas’s antropomorphization of cells or naturalization of self. He writes that prediction is available not only for animals and human organisms, but also for cells! The argument introduced by Llinás is the control movement of a cell. (p. 25)

Single-cell motricity derives from the activation of contractile machinery often rhythmically modulated by intrinsic voltage oscillations of the cell’s surface membrane driven by transmembrane ionic concentration differences.” (Llinas, p. 59)

²¹ Remember Kant who claims that we cannot prove the existence of the self. (see VACARIU 2008)

When interpreting the outputs of a cell to the external stimuli in an “organized, goal-directed behavior”, a cell has the property of “irritability”, which we may consider similar to subjectivity! (p. 113) This is another argument for me to extend the notion of “being” from humans and animals to plants²², bacteria²³ and cells (in general, the biologists consider the cell as

²² This is available not only for animals but also even for cells and plants. The plants have to interact with the external space in order to survive in their environment. The news from “BIG BANG news”, (10.07.2010) can surprise us completely: Plants can “think and remember”! According to Professor Stanislaw Karpinski from the Warsaw University of Life Sciences (Poland), if we “shone the light only on the bottom of the plant and we observed changes in the upper part, but the most amazing thing is changes occur when the light is off! Moreover, “when light stimulated a chemical reaction in one leaf cell, this caused a ‘cascade’ of events and that this was immediately signalled to the rest of the plant by a specific type of cell called a ‘bund EW sheath cell’ through electrical signals that is quite similar to the human nervous system. Professor Karpinski said that the plants’ responses changed depending on the color of the light that was being shone on them. And the plants “have to survive stresses, such as drought or cold, and live through it and keep growing”, he declared to BBC News. “This requires an appraisal of the situation and an appropriate response - that’s a form of intelligence.” Or “What this study has done is link two signalling pathways together... and the electrical signalling pathway is incredibly rapid, so the whole EW plant could respond immediately to high [levels of] light.” So, the plants have to “represent” their external environment exactly in order to survive. Do you need stronger arguments to accept that being corresponds to the botanical and the biological entities like plants, cells, animals, and humans? (See the next footnote)

²³ The researchers from Newcastle (Great Britain) show that the bacteria have four of the five senses of the human beings. The missing sense is hearing. (<http://ziare.com>, 16th August 2010) How is it possible that a bacterium uses the sensorial information that corresponds to the biological elements without the unity of being? We can recall Uexküll’s “*umwelt*”, the “surrounding world” of any living entity that is the “biological foundations that lie at the very epicentre of the study of both communication and signification in the human [and non-human] animal. (Template: VON UEXKULL, 1920, 1934/1957; cf. LORENZ, 1971

the most elementary entity “possessing” life). Can we move from a single cell to a multicellular level in order to reach a sort of subjectivity? Through correspondence, we think that it is possible (but not necessary) to have a connection or communication among cells. Making an analogy, we have to move from the micro-level to the macro-level. For Llinás, if two single cardiac cells have a connection, “they become electronically coupled” and start to beat together.

And so single-cell motricity and its intrinsic oscillatory properties have generated, through specific topological reorganization, a macroscopic event by the coupling of such properties through connectivity. This is the basis of movement of all types, and will permeate our discussion: *the organization and function of our brains are based on the embedding of motricity over evolution* (cf. Llinás 1986). (Llinás 2002, p. 59)

Here we notice a very important idea for the EDW perspective. As we already know, the “I” (as an EW) corresponds to the brain and body. In this equation of correspondence, the “I” is a macroscopic event in the correspondence relationship with the cells (and their interactions or their “connectivity”) of the brain and the body.²⁴ The evolution and development of all cells (the body or the brain’s cells) need the same correspondence. Their “connectivity” or the organization and function of the brain (more precisely the thinking process) is based on motricity.

(*Studies in Animal Behaviour*, vol 2. Cambridge MA: Harvard Univ. Press) The term is usually translated as "self-centered world". Uexküll theorised that organisms can have different umwelten, even though they share the same environment.” (in <http://en.wikipedia.org/wiki/Umwelt>) From an EDWs perspective, such umwelt is the “representation” of world that is being for the corresponding It.

²⁴ Remember the analogy between the two pairs: the mind-brain and the table-microparticles.

However, this connectivity corresponds to being! It is as if the “I” were a macroscopic object interacting with another macroscopic object. The interactions between these two objects constitutes them (i.e. it furnishes their identity). Even if the “I” (as an EW) does not interact with another entity, we have already seen, the “I” is an entity and an EW at the same time. We have to pay attention to the fact that we cannot find the “I” inside the brain (we cannot localize the “I”), even if there have to be some neural and bodily entities and processes that *correspond* to the “I”. There are *epistemologically different ontologies* for the “I” and the corresponding neuronal entities/processes. Again, do not look for identity!

Due to his work within the unicorn-world and without having the idea of being (offering unity, as an EDW for the corresponding cells or organisms), Llinás needs to anthropomorphize the cells. In order to exist or to survive in its environment, an organism (like that “composed” of cells) has to be an “agreed commonality and in communication” with other entities of the same class and all entities should follow “a set of global rules”. (Llinás, 2002, p. 74) In this respect, “A great advance in the cell-to-cell communication came from the cells’ ability to control the concentration of intracellular calcium ion (Kretsinger 1996, 1997; Pietrobon et al. 1990; Williams 1998).” (Llinás, p. 76) It is essential for such communication – the “meaning” (p. 250) – between cells to be accomplished through their synchronous activation. (p. 250) From an EDWs perspective, we reinforce the idea that *the “communication”²⁵ among cells does not “generate” the self or certain mental states. The self or its mental states are not identical with or*

²⁵ Again about the table-microparticles dichotomy: the continuity of the table is the consequence of certain “communication” among the microparticles. More about this “communication” in part 12.

composed of cells that communicate through synchronization. Evidently, the synchronization is a neural process, not a mental one. When we talk about synchronization, we are within the brain that belongs to the macro-EW. We cannot reduce the self and its unity to a neural process. Obviously, the activities of the brain and the mind belong to or are EDWs!

Frith's approach (Frith 2007) is quite close to Searle's main thesis²⁶ (Searle 1992) that the mind is the product of the brain²⁷. At the end of the prologue (Frith 2007), Frith underlines the main idea from his book: the mind is created by the brain. The brain creates two illusions in us: (1) we have a direct

²⁶ Searle comes up with the idea that mental states are caused by low-level elements in the brain and thus are higher-level features of the entire brain (SEARLE 1991, p. 141). He makes an analogy between liquidity and H₂O molecules with mental states and neural states (SEARLE 1992 in various places; 1995, p. 219). However, even if mental states are physical states, the former cannot be explained in terms of the latter. Regarded in terms of the above distinction (the ontological/epistemological one), Searle's position seems to be rather vague. Paul Churchland comments on Searle's "hybrid position" that tries to create a framework in which the sensations, thoughts and mental phenomena are features of the brain but "they are not identical with and are not reducible to, but rather they are metaphysically distinct from the intricate physical states of the brain that neuroscience quite properly deals with." (CHURCHLAND 1995, p. 203) Churchland characterizes Searle's position by saying: "He has one foot on the dock and the other in the dory" (CHURCHLAND 1995, p. 204). Kim remarks that in order to explain what it means to say that the same phenomenon can be explained at different levels of description, Searle needs to offer a clear ontological and epistemological position on causation. How has the idea of different levels of description been adjusted by Searle's thesis of "first-person ontology" or "subjective ontology" and the irreducibility of consciousness (KIM 1998, p. 49)?

²⁷ Churchland's critics against Searle's alternative are available for Frith's position, too. Interestingly, more and more thinkers from the cognitive science appeal, directly or indirectly, to Searle's approach! The main reason is the rejection of the identity between the mind and the brain within the unicom-world.

contact with the world (2) our mental world is private. Only the brain has contacts with the external world and not our mind. The brain creates the mind. “We all know that our mental life is just as real as our life in the physical world.” (Frith 2007, p. 6) From an EDWs perspective, the mind and the life are not the product of the brain or the organism, respectively. They are both EDWs and not certain physical entities. The mental world is “private” only as a particular EW, not as the “product of the brain”. Frith strongly believes that the “brain activity is not the same as the mental experience”.²⁸ (p. 15) Again, the same mistake: the mind is the “product” of the brain or the mind “emerges” from the brain. Frith works within the unicorn-world and it is clear that he lacks the framework of EDWs. He assumes a materialist position even if he admits that his approach “sounds” like a dualism. (Frith 2007, p. 23, footnote 5) He tries to convince us that we are not aware of most of the neural states and processes, and that the self is the “product” of the brain. Every mental state or process is *caused* by or at least *depends* on the brain activity. (p. 23, my italics) Due to his work within the unicorn-world and the avoidance of the identity theory, Frith is forced to use such notions like “causation” or “dependence”. Hume would be again very disappointed by the use of such “causality” in science!

In the first part of his book, Frith grasps the relationships between the brain, the body, and the external world. He intends to prove the difference between the brain and the mind: to us, the world is an illusion created by the brain, and even the information on our body provided to us by the brain can be false. To support his ideas, Frith offers multiple arguments based on various experiments from the cognitive science.

²⁸ One of his examples is when we see a blue object, we cannot find anything blue in the brain. (FRITH 2007, p. 15)

Evidently, we cannot discuss about all these experiments here. We shall only write his conclusion of the first part.

I have shown how our experience of an effortless interaction with the world – through our perceptions and actions – is an illusion. We have no direct contact with the world or even with our own bodies. Our brain creates this illusion by hiding from us all the complex processes that are involved in discovering about the world. We are simply not aware of all the inferences and choices our brain constantly has to make. When things go wrong, our experiences of the world can be completely false. ... Now, having taken the brain and the mind apart, I have to try to put them back together again and reassure you that we can be confident of our experiences (most of the time). (Frith, p. 81)

When someone reads this paragraph, one has the impression that it was written by someone working within the EDWs perspective!²⁹ From our viewpoint, he is right in claiming that “our” interaction with the external world is an illusion.³⁰ Moreover, “we” do not even have a “direct contact” with our body. But what exactly does “we” mean (that differs from the body and the brain)? I really do not understand the sentence “Our brain creates this illusion by hiding from us all the complex processes that are involved in discovering about the world.” What is the relationship between “our brain” and “us”? Moreover, who “discovers” the world? Then how can Frith put together the brain and the mind within a single world for being “confident of our experiences (most of the time)”? We indeed need to be confident of our experiences, but “we” means the “I”, not the mind and the body in an intermingled state. Working

²⁹ I wrote the same thing about other scientists in this or other of my works. It indicates clearly the necessity for the scientists to change their paradigm of thinking, the unicorn world with the EDWs.

³⁰ “My knowledge of my own body and how it acts on the world is not direct.” (FRITH, p. 81)

within the unicorn-world, it is logical for Frith to put the mind and the brain “back together again”. Frith’s language seems to have no meaning within the unicorn world (at least for an analytical philosopher)!

To support the idea that the mind does not know what the body does, Frith analyzes, among other experiments, the Pierre Fourneret’s experiment³¹.

People were asked to draw a vertical line on the computer screen by moving their hand forward. But they couldn’t see their hand, only the line they were making on the screen. ... Sometimes moving your hand straight forward would not produce a vertical line on the screen, but one that deviated to the side. When this happens it is very easy to modify your hand movement (by deviating to the other side) so that you still draw a vertical line on the screen. Indeed this is so easy that, unless the distortion is very great, you don’t even know that you’re making this deviant movement. So, in spite of the direct connection from my hand to my brain, I am unaware of what precisely my hand is doing. (FRITH 2007, p. 64)

There is indeed a “direct connection from my hand to my brain”, but “I am unaware of what precisely my hand is doing” means that the “I” and the “hand” belong to the EDWs, and this is the reason why “I am unaware of what precisely my hand is doing”.

The notion of habituation is strongly related to the implicit knowledge. (About habituation, see Vacariu 2008) The “*prediction*”, an essential notion for Frith (and Llinás, too – see above) is related to this notion. Frith explains to us that our brains suppress the body sensations when we have certain movements of our bodies.

³¹ As Frith mentions, this experiment was first realized by the Danish psychologist, T. I. Nielsen in 1965.

We all like the feeling of being in control. And the thing we control best is our own body. Yet, paradoxically, because our brain suppresses the bodily sensations it can predict, we feel most in control when we don't feel anything. I reach for my glass and all I experience is the look and taste of the wine as I drink it. I don't experience the various corrections made to the movements as my brain navigates my arm through the various obstacles on the table to reach the wine glass. I don't experience the change in the angles of my elbow or the feel of the glass on my fingertips as they adjust perfectly to the size of the stem. I feel in control of myself because I know what I want to do (have a drink) and I can achieve this aim without any apparent effort. As long as I stay in control, I don't have to bother with the physical world of actions and sensations. I can stay in the subjective world of desires and pleasures. (p. 105)

In the first sentence, “We all like the feeling of being in control”, we find that very problematic word “feeling” associated to “we” and “being”. Again, I do not understand this expression. “The thing we control best” is not “our” own body but the virtual body that is being. Moreover, the suppressions of bodily sensations are the results of two processes: development and evolution. The correspondences between the mind-EW and the brain (that belongs to the macro-EW) reflect to us exactly the processes (that involve the procedural knowledge like the movement of our hand) strongly highlighted by Frith. I agree, however, with Frith (the section of his book “The world of the imagination”):

We can live in this world of intentions, this imaginary world, because our brain can predict the consequences of our movements. Our brain knows in advance how long a movement will take, what our hand will look like at the end, and what the movement should feel like. And even if we do not move at all, we can imagine making movements.³² (Frith, p. 105)

³² “But most of the time I, the actor, move through the world invisibly, a shadow that one can sometimes catch a glimpse of from the corner of one's eye before it moves on.” (FRITH, p. 110)

This world is the product of our imagination (see Waxman about Kant in Vacariu 2008) not a creation of the brain. On the one hand, the mind is not the product of the brain. The world, more exactly our knowledge on the external world is the “I” or parts of the mind-EW that *correspond* to the brain (that belong to the macro-EW). Therefore, it is *not the product* of the brain! Only in this way can we avoid the search in vain for the relationship between the mind and the brain.

From Kant’s position, the brain is an image that belongs to the mind. Therefore, we cannot support the idea that the mind is the product of the brain. On the other hand, we cannot adopt Berkley’s position in supporting that the brain fails to exist. We also cannot support Spinoza’s approach stating that the brain and the mind are attributes of a neutral substance. As entities that exist in a particular EW, we have to accept the fact that every class of epistemological entities from every EW really exists. It is absurd to try to explain the existence of all epistemologically different entities using the “fundamental level” or the “ultimate reality”. As we saw above, even the chronological order of the appearances of epistemologically different entities is not correct, since there is no unique epistemological spatio-temporal framework but each EW has its own spatio-temporal dimensions. Our ontological limits make us reject any kind of monism!

Frith continues with Yue and Cole’s experiment that proves that “training movements in our imaginations can increase strength almost as much as real training can” (p. 106)! If Frith finds the explanation in predictions of the brain, we consider that here we have again the *correspondences* between the mind-EW and brain-body-EW. I would like to emphasize again the fact that in Frith’s approach, the most important idea

to us is that the brain creates models of the world for the mind.³³ A subtitle in Chapter 5 shows us directly this idea: “My perception is not of the world, but of my brain’s model of the world”! Frith argues this idea with the “Ames room” picture, Necker’s cube and other visual illusions. The next subtitle, “Perception is a fantasy that coincides with reality”, shows exactly the “correspondences” between the EDWs!

From the EDWs perspective, the perceptions are being not at all “my brain’s model”. We have to remember the “being-perceiving” contradiction. There are many paragraphs from Frith’s book that can be re-interpreted within the EDWs framework. The conclusion is that the major mistake made by Frith is working within the unicorn-world framework that leads to the idea that the brain produces the mind. Only by replacing the unicorn world with the EDWs, could Frith (and many other scientists from cognitive neuroscience) avoid the hyperontological contradictions and the unacceptable approximations of their “language”.

I finish this part with Ramachandran’s famous example of phantom limbs. (Ramachandran and Blakeslee 1998) This example is an argument for the virtual It that is being. The doctor analyzes a patient with one amputated arm. When the doctor touches parts of a patient’s face, the patient has the “feeling” that the doctor is touching parts of his missing left arm. For instance, Ramachandran touches the left cheek (and later the lip) of the patient’s face. At that moment (and later) the patient says that the doctor is touching his missing left thumb (and later his phantom index finger). In Ramachandran’s words:

³³ The title of Chapter 5 illustrates this idea: “Our Perception of the World Is a Fantasy That Coincides with Reality”. Again, reading this title you have the impression that the approach is created within the EDWs perspective!

There was a complete map, a systematic map of the missing phantom hand on his face, draped on his face. ... The entire skin surface, touch signals, all the skin surface on the left side of the brain is mapped on to the right cerebral hemisphere on a vertical strip of cortical tissue called the post-central gyrus. ... Actually there are several maps but I'll simplify them and pretend there's only one map called the post-central gyrus. Now this is a faithful representation of the entire body surface. It's almost as though you have a little person draped on the surface of the brain. It's called the Penfield homunculus...

Penfield homunculus reflects partially the corresponding virtual body. Nonetheless, there is neither one map (the "post-central gyrus") nor more maps (these are very rough corresponding approximations of correspondences). We cannot find the entire body "represented" on the surface of the brain. Clearly, the virtual body is the mind that corresponds to the entire It (brain and body) not only to a part.

According to Ramachandran, "the part of the cortex of the brain corresponding to the hand is not receiving any signals". That part of the cortex is "hungry for sensory inputs". The sensory inputs from the skin of the face occupy the parts of the cortex that correspond to the missing arm, this process being a cross-wiring in the brain of the patient. These sensory inputs are "misinterpreted by higher centers in the brain". Therefore, the subject has the feeling that someone is touching his phantom hand. The treatment Dr. Ramachandran proposed for the patient was as follows: the patient had to move his right arm in front of a mirror for a few weeks or months. Repeating this process many times each day, the patient had the impression of moving his left phantom arm. After a few weeks, the patient was free from the pain caused by the left phantom arm.

As he declared, Ramachandran's framework is the identity theory. For him, the brain and the mind are the same thing. However, the brain is different from the body. Ramachandran

avoided Sporn's theory according to which we cannot separate the brain from the body. From an EDWs perspective, the "I" corresponds to the It (i.e. the brain and the body, in this case). The union between the brain and the body – this union corresponds to being – is the result of species evolution and the development of each subject that implies the past and the present states. Throughout evolution, our species constructed certain biological mechanisms. Each "I" corresponds to the states and processes of these biological mechanisms. The phantom limbs belong to the "I", but it has no correspondence in real body. The knowledge (implicit/unconscious/procedural/sensorimotor knowledge) is the "I" (being), and this knowledge still contains the virtual arm, the phantom limb, even if the corresponding physical part is missing. Training himself with the mirror, the subject got rid of the phantom limb. From the EDWs perspective, this means that the "arm" from the mirror produces a representation in the patient's mind that represents an explicit knowledge. After training, this explicit knowledge becomes implicit knowledge (both the implicit and explicit knowledge are the "I") and its pain disappears. Making different experiments on his patients, Ramachandran's asserts that the visual inputs influence our subjective experience. (Ramachandran and Blakeslee 1998, pp. 55-6) He emphasizes the Freudian role of unconsciousness for the self. (pp. 152-6) In reality, the unconscious self is the virtual It. Ramachandran uses classical but flawed notions like "higher centers in the brain". The pain is the "I", not higher neural centers in the brain. The Penfield homunculus reflects the union between the brain and the body that corresponds to the "I".

From the researchers analyzed in this part (including Kauffman from the previous part and Bechtel from part 12) we can observe their great struggles in searching the unity (underlying connections) of certain biological (neurological)

entities/processes within a scientific framework: biology or neuroscience. The conclusion of this part is that the researchers from cognitive (neuro)science really need to adopt the EDWs perspective. Otherwise, complicate Ptolemaic epicycles will continue to be constructed within the unicorn world. Amazing is that all researchers from this area embrace the identity theory but each thinker creates his/her approach (that contradicts more or less other approaches) based on many scientific experiments. The experiments are constructed/interpreted within the unicorn world and this is the reason the experiments become arguments for various approaches.

PART 9

THE HYPERVERSE

The hyperverses are the sum of all the EDWs, an abstract notion, ontologically-epistemologically speaking. Ontologically, since the entities from a particular EW do not interact with entities from another EW. Epistemologically, since the human being cannot observe (through correspondence) the entities that belong to two or more EDWs at the same time. In order for the hyperverses to have an ontological status, one needs an entity to interact with (observe) the entities from EDWs (at the same time). Such an entity has to be a hyperentity. Does the hyperentity exist? The human being is not a hyperentity: a human being cannot perceive two EDWs at the same time because the human attention (probably consciousness) is a serial process. (See proposition 13) If attention were a parallel process, the human being would observe (through correspondence) at least two EDWs. The attention is a feature of the mind. Thus, a hyperentity needs two minds to observe two EDWs. Since the mind is being, a hyperentity would be two beings, clearly a hyperontological contradiction.

In order to observe the entities from a particular EW, as observers, we have to use certain conditions of observation. The observation is a unidirectional process, since certain entities observed by us are not in the same EW with the brain and body

(the macro-EW) that correspond to the “I”. For instance, when someone “observes” an electron of the micro-EW with the help of an electronic microscope, the electron does not observe either the brain-body or the mind of that researcher. An electron observes/interacts with some amalgams of microparticles that correspond to the microscope and the brain/body (that corresponds to the mind-EW or the “I”). Our processes of observing entities that belong to the EDWs are always unidirectional processes. The interaction/observation between two entities that belong to the same EW is bidirectional. That is, each entity observes the other entity. Except for the human organism, no other entities can change their conditions of interaction/observation. For all these entities, the conditions of interaction impose their ontological/epistemological limits.

We can change the conditions of observation (or their parameters) and we still observe the same EW. This movement passes an organizational threshold regarding the organization of what we observe using both kinds of conditions. We can “observe” parts of the whole, but both constituents (the whole and the parts) belong to the same EW (even if these classes of entities could not exist at the same time in the same EW). Nevertheless, a person cannot observe both constituents at the same time. If we change the conditions of observation and we pass an epistemological-ontological threshold, we observe entities that belong to EDWs. We have to be aware of the fact that in order to find a new EW, we have to construct conditions of observation that “interact” with the entities from that EW. In Kantian words, within the EDWs perspective (see Vacariu 2008) the conditions of the possibility of our tools of observation should reflect, at least partially (that is, to grasp certain determinations if not all) the conditions of the possibility to constitute interactions of a set of I^s (and/or I^s) that belong to an EW. We can realize

there are EDWs only through the hyperontologization of epistemology. The ontologies of EDWs have become epistemologies and vice-versa. Nonetheless, these ontologies are not “different” ontologies but epistemologically different ontologies that represent the hyperontology of the hyperverses.

The EDWs perspective is really a new framework of thinking that needs a new language. As an abstract notion, the hyperverses creates the semantic framework necessary for the understanding of being EDWs. Each set of interactions constitutes the entities that belong to an EW. The interactions constitute an it at the “surface”¹. Thus, the surface mirrors somehow the EW in which it determines the interactions.² The surface of the it^s determines the interactions that constitute the it. Being represents the external world and not the inside of it through “representations”; the representations are being. As we saw above, it is meaningless to consider the relationship internal-external applied to being.

An EW as a whole could not be known because it is indeterminate. If an EW were determinate, an it would interact with that entire EW. We realize that it is part of that EW, so it does not interact with the EW, but it should be included in the EW. Those interactions would need a spatio-temporal framework, but there is no “outside” (or “inside”) of any EW. Therefore, it is meaningless to ask if “our world” is infinite or not. We can only say that the entities of an EW are within a spatio-temporal framework (that is, their relationships presuppose a spatio-temporal framework). We saw above that any EW appears from and disappears in the hypernothing (that has neither determinations nor dimensions). Any EW is indeterminate (being, as an EW), the hypernothing is non-determinate.

¹ Regarding an it, the distinction surface-interior is meaningless.

² It is not a monad that mirrors the “world” (Leibniz), but an “it” that mirror the interactions that constitute it.

What does the expression “*epistemologically different*” actually mean? Obviously, this difference is not ontological. “Ontologically different” means the ontologically different substances or kinds of matter. There is no ontological (in fact hyperontological) meaning for this expression. (For instance, for Descartes, mind and body are two different ontological substances.) The difference is neither linguistic, we cannot say “entities linguistically different”. (We just return to Kant-Carnap rule and this rule is not enough to explain the existence of epistemologically different entities.) The notion “epistemologically different” imposes certain hyperontological limits related to the limits of each entity from any EW. “To exist” or “to be” means to have certain limits. Such limits entail the determinations of the limits that exist. Even being as an indeterminate individuality has limits (it is not infinite, it does not matter what kind of infinite would be involved), more exactly, certain epistemological-ontological limits. The notion of “epistemologically different” assigns to each class of entities the same epistemological abilities as the man has (these are epistemological-ontological abilities within the EDWs perspective), i.e. the “observation”/“interaction”. As we saw above, if I were a planet (an electron), I would interact with another macroparticle (microparticle). If I were a cell, I would interact with the surrounding environment specific to a cell. However, being that corresponds to a cell does not interact with something else, since it is an EW. The expression “epistemologically different” eliminates many speculations (the Ptolemaic epicycles) created by the human being. It eliminates ontological-epistemological contradictions typically available within the unicorn world. The human organism needs to change the conditions of observation, in order for the human being to “observe” certain epistemologically different entities. The status of this change requires an ontological-epistemological threshold, neither an ontological nor an epistemological threshold.

We can clearly understand now the expression “epistemological-ontological”. Changing certain conditions of observation (the difference between them being an epistemological-ontological threshold), we observe the EDWs. In other words, the threshold is an epistemological-ontological one between entities that belong to the EDWs. We think that we possess certain knowledge about the “world”, but many parts of this knowledge have been counterfeits. The distortions have not been our knowledge about certain entities (that really exist or are), but the pseudo-relationships (causalities or not) between them. As the dictator-observer, the human being imposed the domination of the unicorn world. From the viewpoint of the human being, it seems that all the entities are within the same spatio-temporal framework. From the viewpoint of another entity, the it can “observe” only the entities that interact with it. The interactions between certain it^s take place in a spatio-temporal framework. The framework of an it (for instance, a microparticle) is not the same as the spatio-temporal framework of a biological human organism, since the microparticle does not observe the macroparticle. Therefore, the microparticles and the macroparticles are in epistemologically different spatio-temporal frameworks. This is the main reason why we have to reject the idea that all the entities are within the same spatio-temporal framework, i.e. the unicorn world. Obviously, assuming the same spatio-temporal framework can be helpful in our daily life. However, in science the fundamental problems require the EDWs paradigm.

From the human viewpoint, it seems there are not too many EDWs. Extending the conditions of observation/interaction to all the entities, the number of the EDWs increases considerably. Accepting that being is and corresponds to an It, we have to reject the notions of levels, attributes, supervenience, or composition and elementary particles. Being corresponds to an

It, therefore we have to hyperontologize all classes of entities that do not interact or emerge or are identical (an “epistemological difference”). An entity needs to have a unity that represents its identity (even for the indeterminate individuality). In this context, I will introduce the next proposition, the principle of hyperontologization:

(11) Being is, therefore EDWs are.

The identity between the “I” and an It is rejected and the reductionism fails in explaining the relationships between notions and theories of the special sciences. Moreover, the emergence is a pseudo-notion. (See Vacariu 2008) However, both being and It are or exist. Within the unicorn world, they cannot both “be” and “exist”. Therefore, the only alternative is the *correspondence* between being and an It. Without the existence of an It, being cannot be. Within the unicorn world, we return to the emergence/production regarding the relationship between different pairs or to the fundamental particles. If only the fundamental particles existed, the “I” would not be and this state of affairs is not possible.

The notion of spontaneity (essential for Kant³) creates the place for being and the representations (that are being). The spontaneity reflects the unity of representation and the unity of the “I”. The spontaneity corresponds to some neural activities that pass a certain threshold of activation. The unity is the Kantian synthesis necessary for thinking (that includes

³ “The synthesis of apprehension that involves the imagination needs *the same* spontaneity as the synthesis of apperception that implies the understanding. And this spontaneity brings *combination* into the manifold of intuition. But this combination of the manifold of intuition determines the unity of representations. Thus, spontaneity would determine the unity of representation that, as I said above, is given by formal intuition.” (KANT’S “Critique of Pure Reason”)

perception). If for Kant the synthesis is a transcendental process, for me it is the implicit knowledge, the conditions of possible explicit knowledge. If Kant writes “Even for space as an object, we need the unity of the combination of the manifold of a given intuition”, for me space (more exactly the representation of space) is being. The color (the representation of color) has to be in the same situation. The spontaneity is the determination of being⁴. As a whole, being is an indeterminate individuality, but the spontaneous appearance of an explicit/conscious representation determinates the being to be in a certain state. Thus, we have to make another distinction for the “I”, the explicit and the implicit states. The spontaneity is indeed “a determination of my existence” (see the footnote below) but this determination has to be *explicit*⁵, since being is with or without determination. More exactly, these determinations are being. The spontaneity explains the explicit knowledge. The thoughts could not appear from hypernothing; they appear from being, they are being. Only being, as an EW and as an entity, appears from hypernothing. The thoughts appear spontaneously from the implicit knowledge. The indeterminate individuality (of being) would be the conditions of the possibility of such spontaneity. Kantian transcendentalization that is ontologically loaded in “immanent thinking” becomes “immanent interactions”.

⁴ Commenting B158, for Pippin, spontaneity seems to be the “determination of my existence”. (PIPPIN 1997, p. 34) Spontaneity comes from the self that is being with indeterminate individuality. However, I quoted the last sentence from B158: “But it is owing to this spontaneity that I entitle myself as intelligence.” (See also A546–7/B574–5, in Pippin, p. 34, in Vacariu 2008) In the words of the EDWs, it is about the explicit knowledge not about the implicit knowledge.

⁵ When I sustained that being is indeterminate individuality I refer to the being in general without having any spontaneity.

Even if, in Vacariu (2008), I showed in detail that the EDWs perspective is somehow an extension of Kantian philosophy, I continue to develop this analysis in this section. For Kant, the representations of the external world are the self. If we include the body as an external entity, then in the EDWs language, we can say that the “representations of our body are the self, too”! Kant wanted to construct the philosophical fundamentals of Newton’s theory that explain the “world”. In our days, under Einstein’s influence, Friedman needs to relativize Kant’s theory. (Friedman 2001, see Vacariu 2008) One fundamental element in Einstein’s special relativity theory is the postulate regarding the constancy of the speed of light in relationship with any point of reference that, according to Friedman, acquires the status of “coordinating or a priori constitutive principle”⁶. Extrapolating Kant’s idea, such principles define the “the fundamental spatio-temporal framework of empirical natural science.” (Friedman 2001, p. 43) Each scientific theory has certain *a priori* constitutive principles that define its proper space of empirical possibilities (Friedman 2001, p. 84) or conceptual frameworks that “define the fundamental spatiotemporal framework within which alone the rigorous formulation and empirical testing of the first or base level principles is then possible”. (Friedman 2001, pp. 45-6) (for more details, see Vacariu 2008)

The EDWs perspective follows the same route, an epistemological notion (“observation”) receives an ontological status (“interaction”), since the individuation of the epistemologically

⁶ Einstein transformed the light principle that was an empirical principle for Newton into a constitutively *a priori* one. “Einstein ‘elevated’ an empirical law to the status of a convention or to the status of a coordinating or constitutive principle”. (FRIEDMAN 2001, p. 88, in Vacariu 2008, p. 303)

different entities is given by the corresponding constitutive epistemologically different interactions. Following Friedman, we can say that his constitutive a priori principles of scientific theories represent the “transcendental laws” of EDWs and these principles are, as Parvu uses in his book (2004), the “formal experience” that is “ontologically loaded” and constitutes the “formal unity of experiential object”. Certain scientific theories can reflect that the epistemologically different interactions constitute the epistemologically different entities. In other words, these interactions are “ontologically loaded” in relationships with the EDWs. As we will see below, as I understood from Massimi’s interpretation (2010) of Kant’s works published posthumously, Kant himself tried to apply the transcendental apperception to the movement of physical entities. In this way, an epistemological scheme (that needs the noumena-phenomena distinction) becomes an ontological process.

For Einstein, the coordinating principles constitute a new framework for space, time, and motion (Friedman 2001, p. 107) and therefore all the empirical laws have constitutive meaning only in the framework created by *a priori* constitutive principles. Even the individuation of entities requires such conceptual frameworks. That is necessary not only because the entities that are in motion belong to a certain spatiotemporal framework, but also because “the knowledge of physical rigidity presupposes the knowledge of forces acting on the material constitutions of bodies.” (Friedman 2001, p. 110) From the EDWs perspective, the interactions individualize (constitute) the entities within a spatio-temporal framework. The “rigidity” of physical objects is just their “surface” from the EDWs perspective. What does “practically rigid bodies” mean for Kant? In order to describe the forces, Einstein used geometry. Essential for the EDWs perspective is Friedman’s footnote on

page 55 about Einstein who adopted a perspective on the relationship between a necessary geometry and the entities as “practically rigid bodies” that *ignores* the microphysical forces. (Friedman 2001, p. 114) We simply need strong reasons to ignore the essential forces within a world. The only solution to ignore such forces is the introduction of EDWs. Obviously, analyzing phenomena that belong to the macro-EW, we can “ignore” the microphysical forces (that belong to the micro-EW). Without the EDWs, we appeal to a postulate that brings us in a realm of empty notions.

Similar to light, geometry is used by Einstein for the ontologization of the space and the time. Exactly in the same way, I use “interactions” (some of them described by different geometries) to grasp the spatio-temporal framework of each set of epistemologically different “bodies”. More exactly, I generalize the geometries through interactions, this generalization mirroring directly the movement from the epistemological tools to the realm of ontology. Nonetheless, I avoid explaining what kind of particular spaces some EDWs have, this being the task of scientists not of philosophers.

In this context, we can say that the general theory of relativity indicates that each planet has its own “constitutive viewpoint of interactions” with other planets and the same thing is available, in another EW, for the quantum mechanics: the micro-particles and the waves belong to EDWs. For Kant, the analogies (the “principles of objects”) realize the transcendentalization of ontology into “immanent thinking”. (See Vacariu 2008) From an EDWs perspective, the “principles of it^s” are given by the “immanent” epistemologically different interactions and we have an “immanent” hyperontology. If the “ontology” deals with the nature of things that belong to the unicorn-world, the hyperontology deals with the nature of epistemologically

different entities and their interactions that belong to EDWs. Kant's analogies reflect the unity of nature, and all phenomena (the determination of objects and processes) must lie in one nature. (A216/B263) For each epistemological entity, only the members of its EW exist and nothing else. Each EW has its own unity (given by its entities and their interactions) and unicity and its entities only correspond to the entities from other EDWs.

Epistemologically, we can reinterpret the Kantian expression of "nature as object of experience". Each EW is epistemologically (theoretically) "re-constructed" through Friedman's constitutive *a priori* principles that represent the possibility of epistemologically different interactions. Because of these constructions, all the EDWs (except the "I") have the "epistemologically different objects of experience" for the "I" who needs to change the conditions of observation. Thus, following Kant (see Parvu 2004, p. 401) and Friedman's philosophical meta-paradigm (or meta-framework), each EW is an integral object of possible experience but only as an "integral object" with indeterminate individuality. The unity of each EW implies the unity of its epistemological entities and their relationships. Epistemologically, the constitutive *a priori* principles have the conditions of possible epistemologically different experiences. For Kant, as exponents (or operators) of synthetic unity, the categories "act as a surrogate for space and time in the field of appearances by bringing sensation-reality of appearances to synthetic unity, and thereby endow space and time with objective validity." (Waxman 1995, p. 848) Data-apprehended perceptions "become something for me". (p. 853) Hyperontologically, the epistemologically different interactions (that are the "structural functions" or "operators", Parvu 2004) *constitute* not only the epistemologically different entities, but also the space and time of each EW. For Kant, the functions of categories are the results

of transcendental apperception that has the function of synthesis. (A401) The epistemologically different interactions are the Kantian “operators” that realize the synthesis of the manifold of epistemologically different entities to constitute the epistemologically different experience. Because of these interactions, each epistemological entity interacts only with the entities from the same EW. The planets, the microparticles and the waves exist as epistemologically different entities in their corresponding EDWs. In Kantian terms, the other entities become “something for an entity”. Again, due to their interactions, an electron becomes something for another electron but not for a planet. Similarly, a planet becomes something for another planet but not for an electron. The non-Euclidian space *created* by the mass of planets exists for planets, waves and *trajectories* of the microparticles.⁷ Nevertheless, in a Leibnizian style, the EDWs are given by their epistemologically different entities and their interactions that create, from their viewpoint, the spatio-temporal framework. An electron, even if its trajectory is curved by a planet, does not interact with (does not “observe”) the planet that curves the space but with a collection of microparticles that *corresponds* to that planet. Even in this case, we cannot claim the electron and the planet are in the same spatio-temporal framework because the ontology of an electron does not have gravity (a property of the macro-entities), so the Kant-Carnap rule is broken. Only the humans, as observers, can observe that the trajectory of the electron is curved by the gravity of a planet.⁸ With the EDWs perspective, we have to

⁷ I hope it is obvious now that to speak about absolute space and absolute time is meaningless. We can talk about space and time only from the viewpoints of entities that belong to a particular EW.

⁸ Again, imagine that you are the electron-physicist. Having all the knowledge furnished by the quantum mechanics, you are not able to explain

give up on our dictatorial position regarding the “observation”. We have to reject the unique ontology of the unicorn world.

I mentioned above Masimi’s interpretation of Kant’s works. (Masimi 2010) It is about the transition from metaphysical nature to physics” written by Kant four years before his death. From my personal interpretation of Masimi’s paper, I concluded that Kant himself tried to move the transcendental apperception of human being (that constitutes the representations of objects) to objects. Namely, the forces of motion replace the human conditions of observation. These forces constitute the objects! Kant attempts to offer an ontological status independent of the human perception for the constitution of objects. I believe that Kant himself wants to avoid the problematic noumenal-phenomenal distinction. We could interpret the forces of movement that constitute the objects as being a particular case of “immanent” apperception (interactions) for the objects. This immanent apperception is described by the laws of motion of pure physics that correspond to the empirical laws of physics. From what I understood by reading Masimi’s article, we can talk about an extension of apperception quite similar to the movement I have done in elaborating the EDWs perspective. Nevertheless, Kant could not reject the notion of the “universe”, since in that period, the scientists knew only the gravitational force and the existence of macroscopic objects. Moreover, Kant avoided investigating the mind-body problem. Maybe if he had tried to solve this problem, Kant would have rejected the existence of the universe.⁹

why the trajectory of a microparticle (a photon for instance) is curved near a huge amalgam of other microparticles since quantum gravity does not exist.

⁹ As I wrote in VACARIU (2008), I discovered the EDWs trying to solve the mind-body problem. Knowing that the mind is an EW and the brain belongs to the macro-EW, I understood that the physical objects exist in EDWs!

For Kant, the notion of “synthesis” means the “conditions of possibility”. (Parvu 2004, p. 271) The unity of transcendental apperception – the most important notion for Kant – entails the unity of “nature”, a unity that is represented by the possibility of certain particular laws. If the laws of motion have the same function as the transcendental apperception in constituting the objects, they also represent the unity of nature. This unity mirrors the constitution or vice-versa. Without the unity of an EW, we cannot talk about its laws. Without such unity, we would blend the epistemologically different laws within the unicorn world. The ontology of “immanent thinking” means the empirical experience (interactions) of entities from any EW, since the entity exists as being constituted by the interactions. For Kant, the expression “the ontology is immanent thinking” means that the experience of empirical objects is possible only if any such object can be thought *a priori* as a measure and similar to all the other categories. (Kant in a letter to J. Beck (20.01.1792) in Parvu, p. 247; also see Vacariu 2008, p. 86)

Taken together, the analogies thus declare that all appearances lie, and must lie, in *one* nature, because without this *a priori* unity no unity of experience, and therefore no determination of objects in it, would be possible. (A 216/B263)

In each EW, all its entities and their interactions “must lie” in one “nature, i.e. one EW. Otherwise, without this *a priori* unity, there is no unity of interactions and therefore no determination of objects! The conditions of possible object are given by certain conditions of constitutions that are nothing more than interactions. The conditions of possibility are equivalent to the laws (of motion or not) of any EW. The entity constructed based on the conditions of possible interactions is an EW as an “integral object of possible experience”. This integral

object of possible experience represents the EW as an indeterminate individuality. This indeterminate individuality is but not exists, since it does not interact with something else, cannot be framed within a spatio-temporal framework and is not observed by a hyperentity (that does not is/exist).

The expression an “EW as an integral object of possible experience” is strongly related to the old Ancient philosophical relationship One-Multiple. This is the topic of the great dispute between Parmenides and Heraclitus (static vs. in motion), Plato (with his ideas and appearances) trying to reconcile these positions. Such relationship can be found (directly or indirectly) in many other debates in the history of philosophy: realism-nominalism, noumena-phenomena, etc. All these trends (like the majority of philosophical disputes) are nothing more than speculative language games constructed within the framework of religious and/or subjective beliefs. Such beliefs are the results of projecting the “I” onto the external space (with the help of the corresponding brain and body entanglement). Through the projection of the single “I” onto the external spatio-temporal framework, the only alternative was the postulation of a single world, the unicorn world. More exactly, it was not even a postulate, since nobody wondered about the “existence” of this unique world. In this unicorn world all the entities and their “interactions” (in many cases, their pseudo-causalities) were placed. Starting mainly with Plato, the Ancient philosophy pushed us into a wrong direction of thinking regarding the external “world”. Obviously, we can find this trend developed by Descartes in his two dogmas. (See below Wheeler)

Unfortunately, the Ancient philosophical “One” can be found today in physics. The physicists attempt to unify all the

four forces¹⁰ in one theory under the Big Bang's umbrella. If it were the Big Bang, everything would have the same cause. Everything would be the product of One. All the entities (micro-objects and macro-objects, noumenal-phenomenal, mind-body, wave-particle, etc.) are the products of the One, or more philosophically, they are determinations of the One. Consequently, let us find the theory of everything, the perfect theory! Nevertheless, One does not exist, so the whole struggle of many famous physicist is meaningless. (See Vacariu 2008; Vacariu and Vacariu 2010)

The one-multiple distinction illustrates another essential distinction: the subject and the world, that is, according to Wheeler, one of the two Cartesian dogmas (the other one being the idea of representation) that still dominate the "orthodox cognitive science". (Wheeler 2005, 2008, Vacariu and Vacariu 2010) We already know that the mind is an EW and the brain-body belong to the macro-EW. Both notions from the subject-world distinction are wrong. The world (that is the unicorn world) does not exist, the subject is neither the brain-body (that is, in the orthodox cognitive science, identical with the mind), nor the "I" (as the product of the brain-body).

Obviously, the inquiries about the "primordial entity/world" are meaningless. For the EDWs, the hyperontologization process excludes the idea of "One", the primordial being or entity. If the hypernothing does not exist, the EDWs do not exist, either. On the contrary, the EDWs are, therefore the hypernothing is. We saw that the EDWs appear from hypernothing, otherwise we would have to introduce certain Ptolemaic epicycles to explain the pseudo-causality between the phenomena belonging to the same unique world. I strongly underline again that, in general, nobody inquiries about the *causality* between many phenomena

¹⁰ Against this unification, see VACARIU (2008) and VACARIU and VACARIU (2010).

(except for the causality between the wave and the particle in quantum mechanics). Because of this reason, the unicorn world has been unquestionable! In this context, many Ptolemaic epicycles have appeared in special sciences, in the history of human thinking. Through the EDWs and the hyperontologization of nothing (i.e. the hypernothing), all the tricky causalities are rejected. In addition, the Big Bang loses its status of the “first movement”.¹¹ Without doubts, the limits of actual science will be pushed forward in the next several hundreds of years. The new *Weltanschauung* has to guide science in explaining the trouble phenomena that, in reality, belong to EDWs. The EDWs perspective indicates only the correspondence between the pre-Big-Bang-EW, on one hand, and the quark-gluon plasma (all the matter “after” the Big Bang), on the other hand. The relationship between One and multiple depends, in fact, on the viewpoint of observation/interaction. For instance, in one EW an entity can correspond to an amalgam of other entities (and their relationships). Without the EDWs, inevitably we reach the insurmountable hyperontological contradictions.

¹¹ In science, the trend was that it was meaningless to ask what was there before the Big Bang. In the last several years, a few scientists (for instance, Penrose) started to wonder about the phenomena that existed before the Big Bang. Nevertheless, within the unicorn world, there is no answer to this question.

PART 10

REPRESENTATIONS AND BEING

We already know that being is both an EW and an entity with indeterminate individuality. Besides, being corresponds to an It (or an amalgam of entities) that exists in the macro-EW. We saw that it is irrational to search for a single theory so as explaining everything. Each theory that would explain an EW has to contain certain Kantian “constitutive principles” that represent the “formal conditions of scientific experience” or the conditions of *possibility* of interactions between objects of experience. These principles represent the formality of epistemologically different interactions (the epistemologically different laws) or the “constitutive viewpoints of interactions” constitute or synthesize the epistemologically different entities. Kant mentioned that “space, represented as *object* (as we were required to do in geometry) ... contains a *combination* of the manifold, given according to the form of sensibility, in an intuitive representation, so the *form of intuition* gives only a manifold, the *formal intuition* gives unity of representation.” (B161a) In my terms, the “formal intuition” for any epistemological entity is the *law of interactions* that constitute that entity. These epistemologically different laws represent the epistemologically different interactions being analogue with Kant’s unity of mental representation. The law of interactions needs a certain space (and time). If, for Kant the form of intuition gives only a manifold (the combination of

manifold is space as an object), for me the manifold is the space in which the entities are placed. We cannot judge the entities (except for mental entities) without a given space. The law of interactions contains both the entities and their space. Therefore, the unity of an entity is constituted by the interactions from the same EW.

From another viewpoint within the EDWs perspective, some entities and the space between them can correspond to an object in other EW. Obviously, the formal intuition is nothing else than being, the space is represented by being. The form of intuition refers to the possibility of the relationship between mental representations, but the formal intuition refers to the unity of representation and it is given by the unity of being. Without this unity, there are no unities for each representation (at least in a syntactic form in the explicit knowledge). Therefore, the condition of possibility of syntax is possible because of the unity of being. I quote again an essential paragraph from Kant

Taken together, the analogies thus declare that all appearances lie, and must lie, in *one* nature, because without this *a priori* unity no unity of experience, and therefore no determination of objects in it, would be possible. (A 216/B263)

We can apply the unity of “one nature” in relationship with the “appearances” for the relationship between being and the (mental) representations. Without the unity of being, there are no determinations of any representation “in it” (that is “in being”, or more precisely, the representations are the being). The correspondence that represents the form of intuition refers only to the “manifold”, while being (the “formal intuition” is being) offers the unity of representations, since any representation is being.¹

¹ I draw the attention upon the fact that some researchers in cognitive science support that the representations of the entities of the visual field that are outside the attention do not have any unity. In my words, a representation

Even if the representations are the being that has a unity, the representations (and processes) have a unity without spatial dimension. Being has such a unity without spatial dimension. More exactly, the explicit or implicit representations are determinate or indeterminate being. The determinate means syntax and semantics, the indeterminate means the possibility of syntax and meaning (the corresponding superpositional storage on the neural network) that is being as an indeterminate individuality. However, for Kant the difference between the form of intuition and the formal intuition is a transcendental one! From my perspective, the representations that are being (that correspond to an It) are in more complicated circumstances. All representations are being, but being does not have only a unity but also an identity, so it seems to be a contradiction here. Nonetheless, the inconsistency is solved through the indeterminate individuality of being (the "I"). Even if the sum of all representations is being, being is something beyond this sum.² The representations have no unity without the unity of being; being has no unity without the unity of mental representations.³ The direction of the unity is bidirectional in correspondences with the It (its parts) that evolved during the evolution of species/life. A representation (or a process) is either explicit and becomes implicit knowledge, or it is implicit and remains implicit knowledge. Usually, a representation is acquired during the development of an It that corresponds to being. When acquired, the representation appears spontaneously as explicit (or

gets a unity only when it moves from the implicit knowledge to the explicit knowledge. As we saw above in a footnote, Pippin considers that the spontaneity seems to be the "determination of my existence". (PIPPIN 1997, p. 34) The unity of a representation is a determination of "existence" of being (that is the being of being).

² Again, I draw the attention upon the fact that if the self were something totally different from the sum of all the representations, we would return to the homunculus.

³ It is exactly as any EW has a unity and any entity from that EW has an identity.

implicit) knowledge through the corresponding interactions between the brain, the body and the environment. Again, without the unity of being, the corresponding It would not be able to survive in its environment.

Let me suppose the interaction of two it^s. Each it exists at the surface, so the form of intuition is given by the space and the formal intuition is the “constitutive viewpoints of interactions”. Each surface of an it represents the formal intuition, through which the constitutive interaction furnishes unity to the “representation” in relationship with the other it. The representations are being, i.e. the implicit knowledge, so they have semantics, but *syntactically*, each such entity has its own individuality due to the interactions with other entities. Without syntax, there are no entities that are being. The syntax of Fodorian LOT requires the unity of each representation involved, but we have to take into account the fact that from the EDWs perspective, all the representations are being. At the same time, Searle’s semantics (Chinese Room) is given by the unity of being. Without the unity of being and the unity of representations, thoughts and language would not be possible. If Haugeland writes “If you take care of syntax, the semantics takes care of itself” (in Clark 2001), I can state that being takes care of both the syntax and the semantics: both syntax and semantics are being.

I return to the relationship between perception and thinking. As we already saw, the perceptions are being. What corresponds to a perception within the brain that strongly interacts with the body and the environment? One or more neural patterns of activation? Obviously, this is the *binding problem*⁴:

⁴ About recent research on binding problem in cognitive science and the EDWs perspective, see VACARIU and VACARIU’s future work, “Binding problem and the EDWs”.

how and where does the unification of the features of a representation take place in the brain? From an EDWs perspective, both problems (the relationship between perception and thinking and the binding problem) are pseudo-problems that led to incredible endless debates in cognitive science during the last decades. Generally, in the unicorn world, the only model available was the hybrid alternatives that mean the mixture of “empirical” perceptions with “conceptual” thoughts (or the mixture of empirical with rational elements), the blend of neural with mental entities or the mixture between the “I” and the world. These mixtures imply certain causalities between the entities that belong to the EDWs. The representations of the external space and the binding problem could not be solved within the unicorn world. In the first case, I showed that the being does not interact with the “external world”, only the brain and the body have such interactions. In spite of these interactions, the spatial representations are not in the brain, but all the representations are the mind. As I illustrated above, there are certain elements of an It that correspond to the representations of space, but space is not being, only our representations about space are being.

As I showed in part 5, we can make an analogy between space and color. The representations of space are not spatial “in the mind” exactly as the representations of color are not colors in the brain. The extension of space (from the organization of an It or from the external space) within the mind (being) would be an illicit extension. The amazing thing is that even if nobody thinks the color is in the brain, many researchers from cognitive science believe that the spatial dimension of mental representations can be localized in the brain. In reality, the mind and the brain (body and external world) are or belong to the EDWs, so we do not have to break the Kant-Carnap rule of

extending a feature or dimension from an EW to another one. The mind (that is being) has no spatial dimension. In addition, if being can identify the space in the brain through correspondence, it does not mean that the mind has space dimension. The spatial dimension of neural patterns may perhaps correspond to certain features of mental representations (that are being, anyway), but this does not mean that there is space in our mind! If we watch TV, we do not have a little TV in our brain. We have no color or space in the brain since even for a simple perceptual object (situated in a space), there are more than 30 neural areas involved in their corresponding activity. The main reason for this state of affairs is that the being has no space or color, but being is an entity with an indeterminate unity (indeterminate means that there is no color or space within that unity, but only the representations of space and color).⁵ We can see nothing else than the results of our thinking, but we cannot extrapolate certain external dimensions to our mind.⁶

The unity of being would not be possible if being has spatial dimension! Without this dimension, it is meaningless to look for the spatiality (locality) of our mental representations (that are being), even if being corresponds to the brain and the body (that have spatiality). Correspondence does not involve

⁵ Pylyshyn (and Fodor) makes the same critique on the spatial dimension of mental representations supported by Kosslyn. (PYLYSHYN 1999, 2003)

⁶ BAARS (1988, 2007) underlines the fact that the conscious states are the results of unknown subconscious processes, and Libet tries to prove that we do not have free will, our freedom is the result of subconscious processes. (Libet 2007) We can argue that the conscious results are not at all what they seem to be at the non-conscious “level”. The explicit knowledge is the result of implicit knowledge (the “I”) and without the σ^{th} sense, we have no idea about the format of the “I” (being). On the contrary, the “I” has to have a unity, only the results are parts of that unity consciously manifested. Thus, the dispute image vs. propositional representations is a pseudo-dispute within the unicorn world.

space (or color or any other determination). Because of the EDWs, correspondence is no more or less than correspondence.

Only without the spatial dimension, can we think of being as indeterminate individuality and EW at the same time. If mental representations have spatial dimension, then being would not have unity! However, if an EW (like being) has no spatial dimension, we cannot wonder about the composition, separability or unity of an entity at the same time. Exactly because of this lacking dimension, being can be a paradox: an entity and an EW at the same time. As we have seen throughout the whole work (similarly in Vacariu 2008, Vacariu and Vacariu 2010), the great error of human thinking was the mixture of EDWs through the extension of certain determinations or dimensions from an entity belonging to one EW to an entity and/or processes belonging to another EW (the break of Kant-Carnap rule). I repeat the fact that the being seems to have a paradoxical status only within a spatial framework. There would be an ontological contradiction between the whole and the sum of the parts. We have to remember that the it exists only at the surface and an it is composed of other it^s only from our viewpoint. The same it is available for an It. Nonetheless, being is not composed at all. Being has a unity, but even this unity could not be observed, since we are the unity. The propositions “Being is composed of some entities” and “The entities are being” have a totally different meaning. The first is a contradiction (an entity cannot be “composed”), the second has meaning only if we exclude the space from that “spatial” compositionality and we use only the “supervenience” (quite similar to what happens in a neural network) that explains the unity of being and the entities are being.⁷ Mind

⁷ I reiterate the idea about supervenience: the supervenience of representations is different from the supervenience of a neural network. The network with distributed representations has two levels of interpretation: one

is a kind of superpositional storage, but it is something more than a neural network illustrates to us.

Again more than 30 neural areas need to be activated to correspond to a single simple object representation. Various features of a representation are blended in one representation (that is the being as a whole). This representation has no particular features that can be decomposed and localized within the brain. Moreover, the representations could not be separated from being, since they are being. We have the illusion that we can manipulate somehow the visual representation, i.e. we can decompose it into certain features. However, all features and representations are being, so such decompositions are just our mental illusions. The self is not something different from the visual representations or their features. The self does not manipulate certain elements inside of it, since there are no perceptions inside being.⁸ These elements and the process of manipulating them are simply the “I”. There is no whole-parts distinction in our mind, in the “I”. The sum of all these representations is the “I”, but we have to add the unity of the “I” that represents the

given by the activation of each node through mathematical numbers (would correspond to the activation of each neuron). The other one is just an interpretation at the level of the patterns of activation (subconceptual level). (Smolensky 1988) A neural network lacks exactly the unity of being (the “I”). We have to pay attention to the fact that a neural network is constructed by the human being in a spatio-temporal framework, so the network is, inevitable, spatially. Smolensky’s two levels of interpretation are nothing more than two EDWs in a single network observed by a human observer at the same time! We have to construct the macro-network, but the network has to correspond to being. The macro-network belongs to the macro-EW, while being is an EW.

⁸ I remind the “being-perceiving” contradiction. I believe that this contradiction is quite strongly related to Noë’s *virtual* experiential content of the perceptual experience: “it is rather a matter of sensorimotor accessibility than inner encoding.” (NOË, in Clark 2008, p. 142)

indeterminate individuality, indeterminate meaning something that goes beyond all these entities like representations.

According to the axiomatic-hyperontological propositions, the brain and the *rest of the body* (that interacts with the environment) correspond to being. Instead of many hybrid models (mind, brain and the environment together) that we can find in cognitive science (for instance, embodied cognition or the extended mind) now, we have an opposing trend (a Kantian one) of including the external world (the mental representations of the external world) within the “I”. Another major mistake made by the majority of researchers from the area of cognitive science has been the identification of the mind with the brain, the body being excluded from this equation. (See below Sporns) In this way, there has been an “illicit reduction” of entities that correspond to the mind. Usually, nobody thinks that the body cannot be separated from the brain. The mind is identical only with the brain. The body is “controlled” by the brain, so we can identify the mind only with the brain (even if the brain is within the body!). This movement is very similar with same mistake regarding the binding problem: almost everybody accepts that a mental state is simply correlated only with the most activated neural areas. From my viewpoint, what are the criteria for this dissociation? Using certain tools of observation fabricated by us, we can observe different degrees of activation for various neural areas. Surely, there are other neural areas that correspond to a mental state, but we are not able to observe them yet. I believe that even if we develop tools like PET or fMRI with more and more performances, we will not be able to grasp exactly the correspondence between a mental state and some neural areas. We have to include the whole brain and the rest of the body (with different parameters) for each of these correspondences.

In this context, we return to Kant who tries to reconcile the heterogeneity of the rationalism with the empiricism by introducing his transcendental apperception. The world, that is the mental representations about the world, is the “T”. (Waxman 1995)⁹ Nevertheless, as we know, the problem for Kant was the noumena-phenomena distinction. The heterogeneity is the result of the combination of various elements like the mind, body and the external environment (that belong, in any case, to the EDWs). All these heterogeneities involve the subject-world distinction. As I mentioned above, according to Wheeler (2009, 2005) this distinction is one of the two Cartesian dogmas (the other one is about “representation”) that still dominate cognitive science. Obviously, human thinking within the unicorn world creates the heterogeneity and these dogmas. Some of these heterogeneities are avoided by the Kantian transcendentalism. Nevertheless, the Cartesian dogmas cannot be avoided by anybody, even Kant could not avoid them since he worked within the unicorn world. The subject-world distinction is maintained through the noumenal-phenomenal distinction, the second dogma (“representations”) is central in Kant’s transcendentalism. Through the EDWs perspective, extending Kant’s movement to all the entities that exist, I eliminate the notion of the “world” (so the noumenal-phenomenal distinction

⁹ Computationalism (Fodor, Pylyshyn, etc.) is interested in explaining only the high-level cognition, but not the low-level cognition (perception or the movement of the body). The dynamicists (situated action embodied cognition) extend the explanation from the low-level to the high-level cognition. For instance, CLARK (2008) extends cognition onto the external environment of the subject, while BROOKS (1990) defines the “intelligence” of the robots (or humans) based on the interactions between the subject and the environment. (See VACARIU and VACARIU 2010) Obviously, everything is positioned within the unicorn world. (Against the computationalism and dynamical systems approach, see Vacariu 2008)

is meaningless). Moreover, I push further Kant's idea regarding the strong relationship between representations and the "I", that is the unity of the "I". The mental representations really are being. Through the EDWs perspective, we can avoid many hybrid models and paradoxes (pseudo-problems).

Regarding the mind-brain distinction, Sporns points out that, due to evolution, we cannot separate the brain and the body. (See Sporn 2006; Lungarella and Sporn 2006) Both elements having evolved during an enormous amount of time, the consequence is that we cannot isolate one from the other. From my viewpoint, I really do not understand the criteria according to which the philosophers and later the researchers from cognitive science disclosed the body from the brain in correlating with the mind. Moreover, the researchers pushed further this movement in considering that a mental state is associated only with the most activated neural patterns. What were the criteria to make this decision? Analyzing Putnam's bizarre thought experiments "brain in the vat", can the brain exist (even hypothetically) without a body? Within the context of EDWs, Sporn is perfectly right in rejecting the analyses of brain in isolation from body: during the evolution, brain and body evolved together. (Sporns 2006) However, within the dynamical system approach, the mind strongly interacts with the "body" and the environment. What does the "mind" within the unicorn world mean? Obviously, the mind is equivalent to the brain, a mistake from my viewpoint. The EDWs perspective creates the framework in which the brain, the body and the environment are strongly interrelated, but all these interactions correspond to the mind, since even the world (the representations of the world) is the mind (Waxman about Kant). The axons from the body have the same status as those from the brain, so we cannot separate the brain from the body. Moreover,

if we accept Bickle's framework of identifying cognition not in particular with the neurons but with cells and molecules (Bickle, 2007, 2008), then what would be the criterion to separate the brain from the body? Alternatively, if we push the limit further, how can we differentiate between the microparticles that correspond to the brain from those that correspond to the body? Only the human dictatorial status as unique observer has imposed the unicorn world as the house of knowledge.

PART 11

KNOWLEDGE AND BEING

The relationship between the entities that are or belong to EDWs is only the correspondence, a notion that has no ontological status. It means that correspondence is a theoretical notion created and used only by the humans that have the possibility of changing the conditions of observation to observe EDWs. All the other entities interact only with the entities that belong to the same class that forms an EW. Without the possibility of changing the conditions of observation, even the human being would remain only with theoretical presuppositions about the existence of other entities except for the macroscopic entities and the mental states. In the Ancient period, the Greeks postulated the existence of atoms; nowadays the physicists postulate the existence of “elementary particles” within the unicorn world. However, the elementary particles must include the gravitons (the gravitational force to be reduced to the microscopic “level”) that probably do not exist. From the EDWs perspective, epistemology is identical with ontology, an epistemological threshold becoming an epistemological-ontological one. We have to give up on our dictatorial viewpoint on the external world by attributing the same rights to the other classes of entities for observing their external world. An electron does not observe/interact with the planets, a planet does not observe/interact with the microparticles.

In order to reject the human dictatorial status of observation/interaction that imposed a totalitarian view on epistemology and ontology, we have to do two things: (1) to equalize epistemology with ontology¹ and (2) to equalize “observation” with “interaction”. With these two steps, we can extend the notion of knowledge from humans to all the other entities. More exactly, we can state that “knowledge is being that corresponds to a cell or a human organism”. Having this ability to change the conditions of observations/interactions, we have to focus on the notion of “correspondence”. There are two cases of correspondence: (1) between the external entities, to the observer (2) between one external entity and one internal entity.

(1) The correspondence between the external entities to the observer

The entities (not being) can be localized within a spatial-temporal framework. Using different instruments of observation, the human subject can determine if an entity belongs to one or another EW. For instance, the subject can find the correspondence between a macro-entity (localized in the macro-EW) and an amalgam of micro-entities (localized in the micro-EW). The already classical example is that between a table and an amalgam of microparticles (and their relationships). Obviously, it is not about “emergence” or identity between the table and the microparticles (that have taken place within the unicorn world), but about correspondence. Interestingly, people have used the “correlation” between a mental state and a neural state but not between a table and an amalgam of microparticles. According to the EDWs, various pairs of entities belonging to EDWs have the same status, so we

¹ Obviously, this equalization is in principle. Human perception does not perceive the macro-EW exactly, but I am not interested in such details. Anyway, the EDWs perspective is beyond internalism-externalism debate.

have to extend the notion of “correlation” from cognitive neuroscience to physics. There is no argument to support the identity between any two entities belonging to the EDWs. We have the impression that all the entities are within the same spatio-temporal framework (i.e. the unicorn world). From this position, it has been natural to consider the table being *identical* with the amalgam of microparticles. In reality, from the viewpoints of each class of entities, it is absurd to consider that all entities are in the same EW. The table does not observe/interact with the microparticles, the microparticles do not “observe” any table or planet in the whole “universe”. The perspective of the EDWs embraces the Leibnizian spatio-temporal framework that exists only in relationship with entities. Without the entities, the spatio-temporal framework is meaningless. Within Newton’s approach, how could we conceive an absolute space and time?

In this section, I introduce the last propositions that entail certain limits for the use of concepts that refer to various entities and their relationships that belong to the EDWs. The constraints for using the concepts, the “conceptual containment” that I introduce now is from Kant. For Kant, the conceptual containment means that a judgment is objective with respect to the empirical knowledge “if we add to the concept of the subject of a judgment the limitation under which the judgment is made”. (Kant 1929, p. 72, A27/B43 in Kaiser 1993, pp. 218-219)² For Kaiser, the conceptual containment is the inclusion of the conditions and the limitations within the concept of a judgment. (Kaiser 1992, p. 219) According to Kaiser, “one must include the conditions under which an object is perceived in order for judgments regarding the object to remain meaningful.” (Kaiser 1992, p. 220) The judgments that relate “uncontained concepts” (i.e. those concepts that ignore the conditions and limitations of

² For Kaiser’s view on Kant philosophy and EDWs perspective, see VACARIU 2008.

sensible intuitions) produce no empirical knowledge; this knowledge is beyond our possible experience. In this context I introduce the last propositions:

(12) The set of judgments that describe the phenomena of each epistemological world must follow the rule of conceptual containment that is given by the conditions and limitations within the concepts of the judgments. These conditions and limitations are governed by the properties of external tools of observation or some abilities (introspection, consciousness) that the “I” has.

(13) Since human attention is a serial process, the human being cannot simultaneously observe EDWs.

These two propositions³ about certain limits of human knowledge indicate the conditions of using the concepts that grasp the entities (relationships) that belong to EDWs. The limits are imposed by the human attention that is a serial process. Proposition (13) allows us to understand that the unicorn world was possible just because nobody took into account the fact that attention (maybe consciousness, as well) was a serial process, so we cannot observe two EDWs at the same time. Maybe if our attention were in parallel, then we would think of the EDWs and not of the unicorn world.

I would like to define in more details the notion of “correspondence” between entities belonging to the EDWs. There are some important questions regarding this notion. What happens there with the relationship of correspondence if one entity (or an amalgam of entities) from an EW changes a property? For instance, what can we change from an amalgam of microparticles that corresponds to a table? (We have here the

³ For more details about these two propositions, see VACARIU (2008).

“supervenience” applied to microparticles and macroparticles instead of the mental and neuronal entities/properties). If there are some small changes for some properties of the microparticles (or their distances, etc.), no other changes regarding the properties of the macro-entities could be possible. We can say that such changes take place within an *interval of similarity*⁴ (a hyperontological notion), since no changes take place for the corresponding macro-entities. If the changes of the microparticles surpass a certain threshold, then we can observe certain changes for the macro-entities. The interval of similarity is one of the relationships regarding the correspondence between certain classes of entities that belong to EDWs. The interactions of epistemologically different entities establish this interval of similarity for all other observers (entities). We have to remember that the changes from a particular EW appear from hyper-nothing – “spontaneously” – since there is no causality between the entities that belong to EDWs. Anyway, the interval of similarity is a hyperontological notion not an ontological one (since it presupposes changing the observational conditions for an observer).

A fundamental question is what does *knowledge* mean for human beings? In the unicorn world, the break of Kant-Carnap rule created great illusions of knowledge with many paradoxes or pseudo-problems. Paradoxically, while the human knowledge becomes larger, other paradoxes appear. Since our knowledge was based on the entities belonging to the same world, it was normal for certain paradoxes to appear. Let me grasp this aspect by means of a thought experiment. We can imagine again a Martian having the size of an electron with advanced knowledge about quantum mechanics. The very little Martian has no tools to

⁴ About the notion of “interval of similarity” in Carnap’s *Aufbau*, see TOADER and VACARIU (1997), (1999), VACARIU and TOADER (1998)

observe the macro-objects. Therefore, these entities do not even exist for the little creature. At one moment, the Martian observes two conglomerates of microparticles quite closed situated in a static positions. There are only the electrons moving around the protons. (In fact, these amalgams correspond to a table and a human organism.) The Martian could explain certain phenomena using quantum mechanics without any problem. At one moment, the human organism moves around the table. What does the Martian observe? An amalgam of particles moving around the other amalgam of particles, but the Martian has no idea what forces acted on the first amalgam, since the quantum forces could not produce such movements. Using all its knowledge from the quantum mechanics, the Martian (a genius) has no idea how to explain that movement. Therefore, the Martian feels free to introduce the “dark matter and dark energy”!

(2) *Between an external entity and an internal entity*

I am particularly interested in the relationship between an entity that is being and the corresponding entity, an It (the mixture between the brain and the body). All mental states are being, therefore any mental state corresponds to an It as a whole. Each of us has the illusion of knowing what a mental representation is. What then is a mental state or more exactly a mental representation?

Let me analyze an example. “I imagine a red ball (that is a mental perceptual representation).” Do we have here Kosslyn’s internal eyes that perceive (in a very complicated manner, of course) an internal image of a red ball? Who perceives this ball, the “internal eye”?⁵ Moreover, what does “I” mean? Is the “I” something different from the internal image? Do we have just a

⁵ Obviously, with an internal eye, we have the regression *ad infinitum*.

propositional representation about a red ball (Fodor, Pylyshyn)? Again, who has such propositional representation, the “I”? What does this process mean? All these complicated questions received Ptolemaic epicycles during the last decades.

From an EDWs perspective, I can straightforwardly claim that, in principle, it is not possible to conceive what part of an It (a part of its brain, the whole brain) corresponds to a mental state. It would be an ontological contradiction to stick to the idea that a mental representation is certain neural patterns of activation. Within the EDWs perspective, the identity theory is meaningless. Since there are epistemologically different entities that belong to the EDWs, we cannot get more than a *very approximate correspondence* between a mental state and many neural patterns activated at one moment, but in reality a representation corresponds to the It as a whole. We have to add not only the neural patterns that are not activated as well as the most activated neuronal patterns, but also the rest of the brain and body. The rest of the brain involves the training period for that It; the body means the training period (evolution) of species. A mental state is the “I” that corresponds to the whole It.

Any It spontaneously appears during the species evolution. They interact with the environment (in general, the macro-EW), but each It corresponds to being. During the evolution of species, the genetic mutation and selection (neo-Darwinism) create the conditions of interactions between the It^s and their environment. Each class of species has certain corresponding perceptual features that characterize the environment. These perceptual features are being that corresponds to an It. The external world is brought “inside” the corresponding It. In such cases, we can introduce again the interval of similarity. There are external inputs that create the corresponding perceptual representations for being. These inputs can change outside, even

if some mental representations remain static. The It^s evolved in the macro-EW and each responded to certain external inputs in order to survive in a particular environment. According to K. Lorenz, certain “intuitions”/“categories” were formed through these interactions. From my viewpoint, certain biological mechanisms (that usually belong to the macro-EW) correspond to being. Perceptions are being. As I emphasized above, there is a relationship between the notion of “interval of similarity” and supervenience. Supervenience means that if something is modified at the mental “level”, automatically something changes at the neural “level”, but vice-versa is not true. So, if something is changed at the neural “level”, something can or cannot change at the mental “level”. The interval of similarity is in the same situation: certain mental states could be identical or quite similar for the consciousness of a subject. However, the “interval of similarity” is a hyperontological notion, since it presupposes the access to two EDWs. I strongly emphasize the fact that, without this interval of similarity, there would be neither stability for the mental states of being nor the unity for being.

In this part, I introduce some words about the eternal reductionism-antireductionism debate.⁶ We already know that it is meaningless to explain perceptual states through neurological/psychological mechanisms even if we have certain correspondences between them. Obviously, the EDWs perspective is against any reductionism. In fact, reductionism is available only within the unicorn world. I applied the EDWs perspective to cognitive science/philosophy of mind, physics and biology. (Vacariu and Vacariu 2010, Vacariu 2008) Nevertheless, even within the unicorn world, in a famous article from 1972, Anderson (Nobel Prize for physics) shows that

⁶ Obviously, we can find this debate in philosophy, physics, biology and cognitive science.

reductionism is not appropriate to explain some physical phenomena. That is, the explanations/theories of some macro-physical phenomena cannot be reduced to the quantum mechanics.⁷ If we avoid the Cartesian dualism, within a unique ontological world (the unicorn world), the only alternative against reductionism is the linguistic/epistemological alternative, the so-called physical non-reductionism.⁸ Until now, we have thought that mental can be reduced to (or even eliminate) neural entities/processes just because the last entities/processes could be localized within a spatio-temporal framework. Is this the essential criterion for doing this? The problem is that the mind (and its entities) has no spatial dimension. This is the “nature” of mind (Descartes). According to proposition (5), all the EDWs have the same epistemological-ontological status. Therefore, the mind (as an EW) has the same rights of existing (or better being) as the brain/body (an entity that belongs to the macro-EW). The

⁷ In philosophy, there has always been a tendency against reductionism. In philosophy of mind, we can notice Fodor’s article (two years later than Anderson’s paper). If, for Anderson, we can talk about a kind of organizational non-reductionism, Fodor establishes, somehow, a linguistic non-reductionism. Each special science (for instance, neuroscience or psychology) has its own taxonomy that cannot be reduced to basic science (physics). (FODOR, 1974) Special sciences exist not because “of the nature of our relation to the world, but because of the way the world is put together: not all the kinds (not all the classes of things and events about which there are important, counterfactuals supporting generalizations to make) are, or correspond to, physical kinds.” (FODOR 1974, p. 439)

⁸ I have never understood the physical non-reductionism within the unicorn world! How could so many people accept the fact that something is physical but could not be reduced (at least theoretically) to other physical entities? What does there really exist if we have two linguistic expressions referring to two “physical” entities? It is impossible for both entities to exist at the same place and time.

same thing we can say about the relationship between microscopic and macroscopic entities.

With the EDWs perspective, a new window is open for people from physics, cognitive science and biology in their efforts to solve the pseudo-problems within the unicorn world along centuries or decades. The EDWs perspective is not an anti-reductionism alternative. It is something beyond the distinction reductionism-antireductionism, since we can talk about this distinction only within the unicorn world. The ontological framework of the unicorn world is transformed into an epistemological-ontological framework or better said into a hyperontological framework. Here it is neither about our personal beliefs or our linguistic expressions, nor about the evolution of our knowledge or a dogmatic skepticism, but simply about the “way the world is put together” (Fodor 1974), i.e. not the “world” but the EDWs, neither together nor in parallel, but in an epistemological-ontological framework. Eliminating many paradoxes and ontological contradictions, the eliminative materialism was a better alternative than the identity theory within the unicorn world. Nevertheless, in this framework, even the neural “level” has to be eliminated in favor of the elementary particles. Therefore, within the unicorn world, we have to remain only with one ontological “level”, all the other levels being only linguistic or epistemological “levels”. Obviously, we cannot eliminate either the “I” or the gravity of planets, so we have to reject the unicorn world and to accept the EDWs. We also have to reject any kinds of strong “idealizations”⁹ of various theories

⁹ The majority of the philosophers still support the idea that the scientific theories are just “approximations” or even “idealizations” that never describe “reality”. “To have cognitive access to the world is to represent it. Consequently, ‘direct (that is non-representational) cognitive access’ is a contradiction in terms. So we cannot (logically cannot) get

about the “reality”. Depending on the measurement apparatus, a theory can be a kind of an approximation/idealization but in general a theory has to refer to “reality”, i.e. to EDWs. The conditions of observation grasp, with greater or fewer “approximations”, certain features of a real EW. The human organism, the bat, or a small stone grasp quite different features of a big stone. Nevertheless, all these entities belong to the same EW. There are no absolute features for that stone (or for any entity). It is not only about the EDWs, but also about various features in relationship with different sub-classes of entities from the same EW. The “absolute features” of a stone presuppose a super-being that does not exist.

‘outside’ our representations to ‘see’ what the elephant – the world – is ‘really’ like. In addition, we know that virtually all, if not absolutely all our representations has imperfect in the sense that there will always be aspects with respect to which the representations can be improved, ‘improved’ in turn understood in the sense that there can be alternative representations that we can have good reasons to prefer as giving us better characterizations with respect to the aspects in question.” (TELLER 2004, p. 440) Nevertheless, the EDWs do not reflect a “pluralist ontology to consist of a collection of idealized descriptions” (Teller, p. 441). The EDWs have an epistemological-ontological status given by the epistemologically different interactions that constitute the phenomena that belong to EDWs.

PART 12

OPTIMISM VERSUS SKEPTICISM IN EXPLAINING THE MIND THROUGH THE BRAIN IMAGING

I will apply the axiomatic-hyperontological framework for the EDWs to an actual strong dispute among philosophers and scientists from the cognitive neuroscience regarding the use of fMRI, PET, etc. in localizing the brain activities that are correlated with certain mental states/functions. There is an optimistic group claiming that the mind can be explained through the localization of certain neural areas (the philosopher Bechtel as leader and many researchers from cognitive neuroscience) and a pessimistic group (Uttal, as leader, Piccinini, Hardcastle and Stewart, Prinz, and many others). The outcomes of this dispute are quite important for the future research in cognitive neuroscience for the following years. Through the EDWs perspective, I want to show the role of philosophy for the future of science. This is the reason I dedicate a part for this debate. This application indicates the possibility of the application of the EDWs perspective to the majority of hot topics from cognitive science. Before starting the analyses of the dispute, I write all the 13 propositions of the axiomatic-hyperontological framework for EDWs:

(1) Epistemologically different interactions constitute epistemologically different it^s , and epistemologically different it^s determine epistemologically different interactions.

(2) Any it exists only at "the surface" because of the interactions that constitute it.

(3) Any it exists in a single EW and interacts only with the it^s from the same EW.

(4) Any EW (a set of it^s – and eventually It^s – and their interactions) appears from and disappears in the hyper-nothing.

(5) Any EW is, therefore all EDWs have the same objective reality.

(6) Being corresponds to an It .

(7) Being is an EW. Therefore being is.

(8) Having certain determinations, from our viewpoint an It is composed of an amalgam of It^s/it^s and their relationships.

(9) Certain states and processes form knowledge that is being.

(10) As an entity, being has unity as indeterminate individuality.¹

(11) Being is, therefore EDWs are.

(12) The set of judgments that describe the phenomena of each epistemological world must observe the rule of conceptual containment that is given by the conditions and limitations within the concepts of the judgments. These conditions and limitations are governed by the properties of external tools of observation or some abilities (introspection, consciousness) that the "I" has.

(13) Since human attention is a serial process, the human being cannot simultaneously observe EDWs.

¹ Between propositions (7) and (9) there seems to be a contradiction, but as we will see below, with the help of EDWs, we avoid such contradictions. I emphasize that if in proposition (9) we have "knowledge is being", we cannot write "being has knowledge". Proposition (7) says that "being is", therefore we cannot add something after the predicate "is". "Knowledge" from proposition (9) refers to different types of knowledge: implicit-explicit, declarative-procedural, conscious-unconscious, etc. (See VACARIU 2008)

I emphasize the fact that both fractions of this dispute work within the unicorn world, so both the optimistic and the pessimistic positions are constructed within an erroneous framework. Regarding the usefulness of the brain imaging (mainly, fMRI and PET) in explaining the mind (through localization), I will investigate Bechtel's optimism² and Uttal's skepticism.

Bechtel tries to explain the human mind introducing a new concept: "mental mechanisms".

A mechanism is a structure performing a function in virtue of its components parts, component operations, and their organization. The orchestrated functioning of the mechanism is responsible for one or more phenomena. (Bechtel & Abrahamsen, 2005; Bechtel, 2006) (Bechtel 2009, p. 6; 2008, p. 13)

The notion of mechanism is related to localizations in the brain, i.e. the "correlation" between some mental mechanisms and neuronal areas. Even if he knows that seeing a simple object (vision as a mental function) requires the localization of more than 30 neuronal areas in the brain, Bechtel is convinced that the localization (and the "decomposition") of mental states in the brain will be successful in the future. Being optimistic for localization (and decomposition), Bechtel pleads for the *heuristic theory of identity*. (Bechtel 2008) Interestingly, lately Bechtel attempts to adapt his theory to the latest researches in brain imaging. He considers that the notions of "localization" and "brain areas" need to be re-conceptualized. (Bechtel 2011)

His new alternative is a combination of mechanisms with the dynamical system approach, i.e. the dynamical mechanisms. As we emphasized in Vacariu and Vacariu (2010), Bechtel (2008)

² I will emphasize the minor changes in Bechtel's approach in the last two years. For a detailed investigation of Bechtel's mechanisms in cognitive neuroscience (mainly, his work from 2008), see VACARIU and VACARIU (2010).

already tried to combine reductionism with emergence. Mechanistic reductionism is Janus-faced. “As William Wimsatt (1976a) proposes, it is possible to be both a reductionist and an emergentist.” (Bechtel 2008, p. 129) Moreover, Bechtel wants to preserve not only decomposition, but also the autonomy of a system introducing Bernard’s notion of “internal environment” (Bernard’s expression in Bechtel 2009, p. 12 or Bechtel 2008) or Cannon’s “homeostasis” and its extended notion, Varela’s “autopoiesis”.³ (See Vacariu and Vacariu 2010)

Autonomous systems are mechanistic (dynamical) systems defined as a unity by their organization. We shall say that autonomous systems are organizationally closed. That is, their organization is characterized by processes such that (1) the processes has related as a network, so that they recursively depend on each other in the generation and realization of the processes themselves, and (2) they constitute the system as a unity recognizable in the space (domain) in which the processes exist (p. 55). (Bechtel 2008, p. 217)

In 2009, Bechtel adds that

In fact, living systems has typically highly integrated despite the differentiation of operations between different organs and cell types. The mind/brain seems to be no different on this score – it consists of component processing areas that perform different computations which has nonetheless highly integrated with each other. Such a mechanism does not typically include encapsulated modules, and one is not likely to find them in the mind/brain. (Bechtel 2009)

In a paper in press, Bechtel continues to support that the mental mechanisms with specific functions could be localized, but he emphasizes the *integrations* of the areas in a larger

³ Bechtel continues this picture with Ganti’s chemoton, the simplest system having the basic features of the living system. (BECHTEL 2008, pp. 218-20)

framework of cortex. In order to support these ideas, Bechtel introduces Sporns and Zwi's (2004) "*dual role of cortical connectivity*":

(1) The *functional specificity* of certain cortical areas that manipulates specific information ("functional specificity of small world network from clustering of units into local subsystems") and

(2) The *integration* of this kind of information in a coherent behavior and cognitive states ("integration into coherent global states through oscillations in thalamic neurons play in producing global states such as attentive awakensness, drowsiness, and sleep, which modulate processing in many local circuits"). (Bechtel, in press)

From an EDWs perspective, we can find this idea of integration in the part-counterpart principle⁴ (Vacariu 2005), but we have to filter Bechtel's ideas through all the 13 propositions. Bechtel works within the identity theory, i.e. the mind is the brain. According to proposition (1), the mind and the brain (body) are EDWs. The functional specificity of certain cortical areas is in a hyperontological contradiction with the integration of the whole information into coherent cognitive states within the unicorn world. The specific areas of the brain (and their functions) correspond to some mental functions/states that are the entities of the mind-EW (or the "I"). These mental functions/states are knowledge (proposition 9). Nevertheless, we cannot identify exactly the neuronal areas that correspond to these mental functions because it is about two EDWs. The integration is nothing else than the unity of the "I" as indeterminate individuality (proposition 10). Again, it is impossible for us to identify this *integration* within the brain. In reality, this integration does not exist within the brain. The integration is simply the "I". There is only a correspondence between the integration and some neural entities and processes.

⁴ That principle is: the mind corresponds to the part-counterpart, the part being the most activated neuronal patterns, the counterpart is the rest of the brain and the body.

With the help of fMRI, it has been noticed that the synchronization of neural oscillations requires the communication among the independent oscillators (fcMRI), this communication indicating an integral function of the network of neuronal areas. Using fMRI, some researchers endeavor to show that the long-distance neuronal areas coordinate their functions through synchronization. In Vacariu and Vacariu (2010), we used recent scientific knowledge from the cognitive neuroscience to indicate that synchronization is an alternative not even to the binding problem, let alone other more complicated functions. If we could not solve the binding problem, Bechtel's synchronization has less chance to be a solution to integration. Again, I emphasize the fact that trying to find the "integration" in the brain is a mistake. It is like trying to find the unity of a table at the microscopic "level"!

For Bechtel, the specialized regions of the brain remain integrated with other regions creating a "small-world network" ("local clustering with specialized regions but long-range connections with other parts of brain"). The notion "small world network" is quite close to EDWs. From the viewpoint of neuronal patterns that are activated to fulfill the corresponding mental functions, the number of EDWs are quite large. (See Vacariu and Vacariu 2010) On the other side, fcMRI corresponds to being (an entity with a unity). Closer to proposition (6) (the principle of part-counterpart in Vacariu 2008) is the notion of "default network" that Bechtel borrowed from Raichle (2001): certain areas are more active in *absence* of task and deactivated in task conditions. (Raichle et al. 2001 in Bechtel in press) Related to default network are "*mind-wandering*" and "*self-relevant*" mental explorations⁵ that are not localized in a single brain region, but in a network of regions. Mind-wandering

⁵ The function of mind-wandering is „to facilitate flexible self-relevant mental explorations – simulations – that provide a means to anticipate and evaluate upcoming events before they happen”. (BECHTEL in press)

and self-relevant mental exploration reflect, without doubts, the counterpart that corresponds to being. For Bechtel, localization would be realized by the most activated neuronal areas visible by using fMRI, PET, etc.⁶ In the paper mentioned above (in press), Bechtel insists to combine integration with parallel localization of certain various functions.⁷ I would like to emphasize again that Bechtel omits precisely the EDWs perspective: integration is being, localization is only an approximate process. In this context, according to proposition (13), we should not mix judgments that describe phenomena belonging to EDWs. We can use fMRI and PET to grasp approximate localizations, but it is not the desired identity between mental functions and neural patterns of activation. Moreover, each mental function is the being that corresponds to the intermingled brain and body. We cannot isolate parts of the brain in our attempt to find the above “correlations” (for the identity is even worse). “Integration” is the being and an EW, at the same time. In the future, with the development of imagistic technology, we will be able to localize more and more neuronal areas for certain mental functions, but we have to be aware of the fact that these mental functions are being that has a unity impossible to identify within (parts of) the brain. The “correlation” would be a very approximate notion. Accepting the EDWs perspective, Bechtel would be able to provide an ontological support for his mental mechanisms.⁸

⁶ Bechtel underlies that “functional *specificity* of small world network” takes place through “clustering of units into *local subsystems*”.

⁷ For Bechtel the “integration into coherent global states” takes place due to the “role oscillations in thalamic neurons play in producing global states such as attentive awakensness, drowsiness, and sleep, which modulate processing in many local circuits.”

⁸ As we showed in VACARIU and VACARIU (2010), Bechtel could not offer an ontological status for his mental mechanisms just because he works within the unicorn world.

Emblematic for the contemporary skepticism regarding the localization of certain mental functions through the imagistic procedures is Uttal (who is not a philosopher, but a researcher in cognitive neuroscience). His main book against localization is from 2001, but Uttal pushes further these ideas with the latest researches from the cognitive neuroscience of the last years (in a book in press).⁹ He constructs many arguments against localization under the umbrella of the identity theory. In an ontological postulate, Uttal considers that the mental processes are the results of interactions from the micro-level of the brain. Since fMRI and PET “localize” the mental functions at the “macro-level” (large neural patterns), then the results are completely wrong. (Uttal 2011, p. 11) From an EDWs perspective, I do not really understand the criteria, according to which Uttal makes the difference between micro- and macro-“levels” in explaining the mind. Why is the micro-level more relevant than the macro-“level” in explaining the mind?

Through a corollary of this postulate, Uttal believes that “the neural network approach is computationally intractable” and thus the mind-body problem cannot be solved. (p. 26) Moreover, he undertakes a general view in cognitive neuroscience that the “brain activity associated with mental activity is broadly distributed on and in the brain.”¹⁰ (Uttal, p. 45) From an EDWs perspective, Uttal’s ideas are more feasible than Bechtel’s view. Since the mind is the “I” as an entity and an EW, and the brain exists in the macro-EW, then it is indeed impossible to associate a mental state with some neural areas. We can see now an epistemological-ontological framework that shows us that the

⁹ Special thanks to prof. UTTAL who furnished me the first part of his book (2011).

¹⁰ “... many different cognitive processes can activate the same area or system of areas of the brain.” (UTTAL 2011, p. 55) or “many different regions of the brain has activated during any kind of cognitive task.” (p. 66)

neural networks are indeed “computationally intractable”. We can find no computations within the brain. Computation is a property that is only for the mind. Within the brain, computation is a notion without meaning, an empty notion. Between the mind and the brain (body), there are only very approximate correspondences. Against Uttal, I mention that the mind corresponds to the brain and the body and the distinction between micro-level the macro-level of the brain becomes useless. In order to reject the notion of localization, Uttal needs a new framework of thinking, i.e. the EDWs perspective. Under the identity theory, his arguments become quite empty.

Uttal believes that localization through fMRI and PET is the wrong method of identifying the mental states. He underlies many problems in cognitive neuroscience on certain “relevant technical issues” that are necessary for localization: subtraction, quantification, indirectness of measurement, time scale difference, variability and statistical errors. Uttal mentions other authors from the cognitive neuroscience (for instance, Vul and his colleagues, 2008) that are quite skeptical regarding the localization of mental states/functions in the brain. From an EDWs perspective, I emphasize that Uttal working under the influence of the identity theory, proves a skepticism that is Humean without any ontological status.¹¹ Only through the EDWs perspective, is Uttal’s skepticism transformed into a *hyperontological limit* since the mind is an EW and the brain belongs to the macro-EW.

As a conclusion of this debate, I consider that both alternatives are extreme positions without any ontological framework. From the EDWs perspective, localization seems to be a methodological instrument (with very great approximations); Uttal’s skepticism should be placed within the EDWs framework.

¹¹ This is the reason Uttal appeals to postulates!

PART 13

“THE UNICORN-WORLD IS DEAD. LONG LIVE THE HYPERVERSE!”

For more than two millennia the human being has been thinking within the unicorn world. In the last century, the progress of knowledge was amazing. Nonetheless, great problems from science (special sciences) have not been solved! As we showed in Vacariu (2008) and Vacariu and Vacariu (2010), the fundamental problems from physics and cognitive science could not be solved, since the researches work under the framework of the unicorn world. Many times, these problems entail a mixture of the EDWs and therefore these “deep” problems are pseudo-problems referring to the “fundaments” of the unicorn world.

The consequences of the EDWs perspective will be similar with the effects of Einstein’s theory of relativity on Newton’s theory. In some cases that are closely related to our scale, the EDWs are not absolutely necessary and the unicorn world may survive. However, in certain special cases, the unicorn world leads to absurdities and impossible problems to solve. The people working in science (and philosophy) would have the possibility to change their paradigm of thinking (and obviously the language) of the unicorn world.¹ A new language, a new meta-paradigm, this is the alternative after a century of great disputes in science and philosophy.

¹ In the first section, I kept trying to change the old language as little as possible, even if I changed the paradigm of thinking. Also, I criticize the

In order to fabricate the EDWs perspective, I inserted some ideas (changed more or less) from great thinkers of modern philosophy like Descartes, Spinoza, Locke, Hume and Berkeley. Nonetheless, this perspective is an extension of the Kantian transcendentalism from the human being to other epistemologically different entities. However, all the previous philosophical approaches were constructed in a wrong framework (the one within the unicorn world), and this is the reason why no approach could decisively influence science. The progress of science was “local” within the special sciences. The EDWs perspective identifies epistemology with ontology.² In this work, I tried to construct an axiomatic-hyperontological framework of propositions from which we can deduce the known or unknown EDWs. It is an abstract scheme of the EDWs perspective that guides us towards a *pure philosophy*.³ Depending

analytical philosophy for transforming a tool (the analysis of language) in a goal. However, the academic thinking is strongly related to our language. The efforts of writing this book were incredibly difficult because of the power of an old language developed within the largest (but erroneous) framework, the unicorn world. Our thinking is still incarcerated by this language! The essential notions of this language are just wrong concepts or, at best, very large approximations in grasping certain phenomena that belong to the EDWs. When someone wants to explain in detail certain phenomena (i.e. to get an ontological foundation for certain phenomena, to explain the nature of the causality, etc.), the language becomes the *stumbling block*! Therefore, scientists and philosophers have to change almost all essential notions for converting to the EDWs perspective as the new meta-paradigm of thinking.

² I recall that Berkeley’s “To be means to be perceived” is transformed in “To exist means to interact”!

³ On the covers, I selected Brancusi’s “Bird in space” that perfectly reflects the framework for the Romanian artist, the “pure form”. “All my life I have sought the essence of flight. Don’t look for mysteries. I give you pure joy.” (Brancusi) With the EDWs, you can go beyond the pseudo-problems that produced obtuse disputes in the philosophy of mind/cognitive science (levels, emergence, mental causation, mind-body problem, etc.) and quantum

on the particularization of certain abstract notions, the axiomatic-hyperontological framework is transformed in a particular EW.

The philosophy of the hyperverses is a step forward to pass beyond the eternal and scorching pseudo-disputes of the last century. In order to avoid wasting time working on such pseudo-problems through creating marvelous Ptolemaic epicycles, people now have the opportunity to replace the unicorn world with the EDWs. Obviously, the final decision belongs to each of them. Nevertheless, I would like to mention the fact that, not accidentally, I selected Hawking's words as motto of this work. The domination of the unicorn world was the most general framework that generated the largest umbrella of an illusory knowledge. What kind of knowledge could we have created working within a "world" that does not exist? Only local knowledge explaining local phenomena belonging to EDWs. Smolin wrote about the superstring theory: "If the new dimensions and symmetries do not exist, then we will count string theorists among science's greatest failures, like those who continued to work on Ptolemaic epicycles while Kepler and Galileo forged ahead." (Smolin 2006, p. xvii) Those who continue working within the unicorn world will create new Ptolemaic epicycles, those embracing the EDWs perspective will "forge ahead". The EDWs perspective changes the largest "Weltanschauung" in the history of human thinking trashing the greatest Ptolemaic epicycle, the "world" (the most "tangible", but because of this reason, the most dangerous notion). Therefore, in Nietzsche's style I finally proclaim:

"The world is dead. Long live the hyperverses!"

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