
ARTHUR SCHOPENHAUER AND THE EMBODIED MIND

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ABSTRACT. In this essay, we intend to create a link between the ideas of the German philosopher Arthur Schopenhauer (1788-1860) and the contemporary concept of embodied mind. In 1991, the cognitive scientists Francisco Varela, Evan Thompson & Eleanor Rosch published *The Embodied Mind: Cognitive Science and Human Experience*, where they pursued the project pioneered by Maurice Merleau-Ponty (1908-1961) to develop a method to bridge the living human experience with the standard scientific practice (an *entre-deux* method). After reviewing the development of cognitive science, Varela, et al. described a novel model of cognition defined as 'enaction,' which implies the co-construction of the cognitive experience between subject and object, and the embodiment of the mind, all this outside the foundational premise of a single and unified self within the subject. This enactive method has influenced most fields of knowledge. The authors also claimed that the Buddhism-based mindfulness/awareness meditation practice provides a method to scientifically explore enaction, and also promotes personal growth and compassion as supreme human values. We argue here that in his central work *The World as Will and Representation (idea)*, Schopenhauer acts as a forerunner of this concept of embodied mind. He also pioneered the introduction of Hinduism and Buddhism to Europe and considered compassion (and asceticism) as a path for individual salvation. Schopenhauer thought, however, was deeply influenced by the representational model of cognition that was extensively challenged by Varela, et al. We finally argue that Schopenhauer's work should be taken into consideration when tracing the origins and the current development of cognitive science.

KEY WORDS. Schopenhauer, Varela, Buddhism, cognitive science, embodied mind, enaction, self, subject/object, representation experience.

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I. INTRODUCTION

Jorge Luis Borges (1899-1986) thanked Arthur Schopenhauer (1788-1860) "who perhaps deciphered the universe" (Borges, 1964: 1). He did not explain, though, the reasons for such a commendation, but we speculate that, among other motives, Borges referred to the way Schopenhauer, starting from a single thought, addressed almost every relevant topic involved in human deliberation.

As stated elsewhere (Baptista 2016), we agree with Borges, but not everybody does. For example, the Spanish philosopher Julián Marías Aguilera (1914-2005) stated that "Schopenhauer's metaphysical foundations have scarce solidity and his influence led many to be lost in a farrago of theosophy, literature and Hinduism, where the meaning of philosophy

was the actual loser" (Cardona, 1998: 12; translated by Baptista & Aldana from Spanish).

One hundred and seventy three years after the publication of Schopenhauer's central work, *The World as Will and Representation (Idea)*, Francisco J. Varela (1946-2001), Evan Thompson, and Eleanor Rosch (1991, 2016, from now on Varela et al.) published *The Embodied Mind: Cognitive Science and Human Experience*, a book that, while departing from the cognitive sciences, had a significant impact on most issues addressed by contemporary thinkers and practitioners in the fields of artificial intelligence, philosophy, biology, sociology, and psychology. The philosophers John Dewey (1859-1952) and Maurice Merleau-Ponty (1908-1961) are key precursors of the concept of 'embodied mind'.

In this essay, we aim to show how Schopenhauer and Varela et al. are profoundly interconnected, both in agreements and disagreements. In this sense, we will support the cognitive scientist Jerry Fodor (1935-) who said that "in the intellectual life, everything happens twice: first as philosophy and second as cognitive science" (cited by Varela, et al., 1991, p. 21).

Schopenhauer was a philosopher, whereas Varela, Thompson, and Rosch are contemporary cognitive scientists (unfortunately, Varela died prematurely in 2001). These four thinkers had different intellectual agendas, but their paths converge at several nodal points that represent central issues in current naturalistic and humanistic sciences.

1.They were all scientifically interested in vision physiology and psychology.

2.They all addressed the issue of cognition in depth: Schopenhauer from the concept of representation; Varela et al., from a radically different anti-representational conception entitled 'enaction'. In both models, the physical body plays a central role in setting all aspects of cognition above a postulated transcendent reason. We believe that Schopenhauer anticipated the notion of the embodied mind, and that this concept was fruitfully explored by Varela et al.

3.They were all profoundly influenced by the Buddhist tradition.

4.The final station of their existential journey is the appearance of compassion as a supreme human value.

In this article we will first review the thought of Schopenhauer and that of Varela et al. and we will then discuss the topics they addressed in common. Our main objectives thus are to show: 1) the relevance of these authors' work for the current natural and humanistic sciences, and 2) how Schopenhauer metaphysically anticipated the core concept of embodied mind. From a formal standpoint, throughout this essay, verbatim quotes from Schopenhauer's works are written in *italics* and between double

quotations marks, whereas those from other works are presented between double quotation marks only.

Before getting to the heart of the matter, two concepts are worthwhile reviewing since they are central to this discussion: the concept of 'representation' and that of 'ego'.

I.1. WHAT DOES 'REPRESENTATION' MEAN?

The term 'representation' has a long history, starting in medieval times when it meant the image and/or the idea of an object. More precisely, and as stated by Aquino, it referred to the similarity between the ways one perceives a given object and the object itself. Scholastics also referred to representation as the meaning of words. Descartes summarized previous concepts and posited that representation was the picture or the image of a thing. Later, Leibniz stated that any 'monade' was a representation of the universe and, basing his thoughts on this doctrine, Wolff introduced the Cartesian term into German philosophy as *Vorstellung*. It is in this sense that the term 'representation' was used by Kant first, and later by Schopenhauer (Abagnano, 1997).

From a cognitive and an epistemological perspective, the term representation encompasses the notion that the subject cannot know the object (and the world in general) as it really is, but that she/he has a picture or idea of it. Varela et al. added that, in the representational model, the world is pre-given, and the perceiving subject must somehow decipher such a world (Varela, et al., 1991, p. 3).

According to Varela et al., behind the representational model stand three fundamental assumptions. The first one is that we inhabit a world with particular properties, such as length, color, movement, sound, etc. The second one is that we pick up or recover these properties by internally representing them. The third assumption is that there is a separate subjective 'we' who does these things. "These three assumptions amount to a strong, often tacit and unquestioned, commitment to Realism or objectivism/subjectivism about the way the world is, what we are, and how we come to know the world" (Varela, et al., 1991, p. 9).

I.2. EGO

For the purpose of our discussion, we will consider as equivalents the terms ego and self. However, in specific psychodynamic contexts, there are relevant differences between them.

Most of us are convinced of our identities as single individuals with a unitary and coherent self. However, the reflective traditions in human history, philosophy, science, psychoanalysis, religion, and meditation have challenged the naïve sense of self.

For example, in the psychodynamic field and in his first model of the psyche, Sigmund Freud (1856-1939) described three components of the

mind: conscious, preconscious, and unconscious. He later added a complementary division constituted by the Self, the Id and the Superego (Person, et al., 2005). Carl Jung (1875-1961) proposed the personal and the collective unconscious, and Melanie Klein (1882-1960) suggested that otherwise healthy people oscillate between two psychological states: the paranoid-schizoid and the depressive. Klein also pioneered the so-called object relations theory according to which the mental developmental process is the internalizing process of a rich array of persons and relationships. For his part, Wilfred Bion (1897-1979) described two mental areas: the psychotic and the non-psychotic (Person, et al., 2005). As for Eric Berne (1910-1970), he proposed three ego states: the child, the parent, and the adult, the first two components comprising several subareas (Berne, 2015). Collectively, most psychotherapeutic models consider a rational and an emotional mind. It is thus unavoidable that at some point one wonders about one's real self.

As mentioned above, the absence of a coherent self after a close inspection of mental activity is a central issue in numerous areas of knowledge. In the Buddhist tradition, the concept of a non-unified or decentered cognitive being (egoless or selfless) is a cornerstone, and it specifically refers to the principle that "phenomena lack any inherent and independent being; they are said to be empty of own being" (Varela, et al., 2016, digital position [DP from now on] 229). This widely recognized lack of self is currently addressed as the key research topic of conscious awareness (Varela, et al., 2016, DP 1096).

As for the term self, it is used in two different but related senses. On the one hand, it refers to a series of mental and bodily events and formations that have a certain degree of causal coherence and integrity over time. On the other hand, the capitalized Self exemplifies our sense that, hidden in these transitory formations, there is a real, unchanging essence that is the source of our identity, and that we must protect. Varela et al. assert that cognitive science does not make this distinction and that it has not explored the mechanisms of self-formation as the disciplined Buddhist method has (Varela, et al., 2016, DP 3452).

I.3. SUMMARY

In the above section, we explained that their main objective of our essay was to set a bridge between the thought of Arthur Schopenhauer and the key concept of embodied mind, as described by Varela et al. We will summarize the work of these authors in the next two sections.

II. *THE WORLD AS WILL AND REPRESENTATION* (WWR FROM NOW ON)

This book was edited three times during Schopenhauer's life: in 1818, in 1844, and finally in 1859. An additional volume complemented the 1844

and 1859 editions. Other conspicuous works are his doctoral thesis *On the Fourfold Root of the Principle of Sufficient Reason* (1813), *On Seeing and Colors* (1815), *On Will in Nature* (1835), *On the Freedom of the Will* (1839), *On the Basis of Morality* (1840), and *Parerga and Paralipomena* (1851). A four-volume edition of notes was published post mortem as *Manuscript Remains* (1988). Numerous subsections of these original texts and personal letters have been published as individual essays.

II.1. PHILOSOPHICAL BACKGROUND

Schopenhauer published WWR at the age of thirty, after a four year period of intense and solitary work. The influence of Plato, Kant, and Hinduism is noticeable all over the opus, but it is particularly evinced by his constant referral to 'Platonic Ideas'; to the apriority of the concepts of time, space, and causality, and by his admiration for the *Vedanta* and the *Upanishad* texts respectively.

The philosopher read Hindu literature as early as in 1810 at the age of eighteen. Decock (2016) wonders, however, whether: a) the European translations Schopenhauer studied were faithful to the original Hindu texts; b) to what extent Schopenhauer accommodated the Hindu's literature interpretation in order to justify his own thought, and c) how Schopenhauer may have influenced the development of the so-called 'Neo-Hinduism' (Decock, 2016). In the first edition of WWR the philosopher stated: "I believe that the influence of the Sanskrit literature will penetrate not less deeply than did the revival of Greek literature in the fifteenth century" (Schopenhauer, 1909a, Preface, pp. xiii). Varela et al. made the same statement many years afterwards (Varela, et al., 1991, p. 22).

In his doctoral dissertation (Schopenhauer, 1963), the philosopher first simplified Kant's entire machinery of the faculty of cognition in the following components: a) the senses which organize succession and position as the innate ideas of time and space, respectively; b) the understanding, which provides the also innate conception of causality, and c) reason which allows concepts, that is, the maximal cognitive human capacity. In second place, "Schopenhauer organized the principle of sufficient reason, which expresses the fact that with regard to anything that can enter into our idea we must always ask for reasons, for a connection; we must ask for it not because the external world compels us to do so, but because our perceptual and cognitive faculty compels us to so" (Safransky, 1990:154). For Schopenhauer, the four roots of the principle of sufficient reason are: becoming (causality), cognition (logic), being (existence in space and time), and acting (moral and ethical issues) (Schopenhauer, 1963).

We think that the four roots of the principle of sufficient reason may be considered to be a philosophical construct which is analogue to the above

mentioned Buddhist groundlessness principle according to which phenomena have neither inherent nor independent being.

II.2. SCHOPENHAUER'S SINGLE THOUGHT

The philosopher stated that he “intended to impart a single thought” (Schopenhauer, 1909a, Preface, pp. i). This was summarized by Aramayo as follows: “On the one hand, the whole world is merely a representation of the subject who knows, and on the other hand, the entire universe is the display of a primeval will” (Schopenhauer, 2012, Introduction: 14, translated from Spanish by Baptista & Aldana).

For Schopenhauer, the will is “the inmost nature, the kernel, of every particular thing, and also of the whole. It appears in every blind force of nature and also in the pre-considered action of man; and the great difference between these two is merely in the degree of the manifestation, not in the nature of what manifests itself” (Schopenhauer 1909a, § 21:143). Most important, Schopenhauer asserted that “a will must also be attributed to all that is lifeless and inorganic” (Schopenhauer, 1963, § 4 (Physical astronomy): 309).

Hence, for Schopenhauer, the will is the essence of the universe, the source of organic and inorganic beings, and the imperative to exist. The categories of space, time, and causality do not belong to the primeval will. Schopenhauer initially considered the will as the Kantian *thing-in-itself* (Schopenhauer, 1909a, § 23:145). Later, he posited that since we, human beings, knew the will only in relation to the succession of events (that is, in time, and, therefore, as a representation), “the act of will is indeed only the closest and most distinct manifestation of the thing-in-itself” (Schopenhauer, 1909b, § 18: 407).

For the philosopher, representation is knowledge.

What is knowledge? It is primarily and essentially idea. What is idea? A very complicated physiological process in the brain of an animal, the result of which is the consciousness of a picture there. Clearly the relation between such a picture and something entirely different from the animal in whose brain it exists can only be a very indirect one. This is perhaps the simplest and most comprehensible way of disclosing the deep gulf between the ideal and the real (Schopenhauer, 1909b, § 18: 400).

For the discussion of the embodied mind, it is important to bear in mind that Schopenhauer posited that we have a direct pathway to the primeval will through our body and the realization of the motives that propel us. When referring to the Kantian principle of the impossibility of knowing *the-thing-in-itself*, Schopenhauer stated:

I grant this of everything with the single exception of the knowledge which each of us has of his own willing. We ourselves are the thing in itself. Therefore, a way from within stands open for us to that inner nature belonging to things themselves, to which we cannot penetrate from without, as it were a subterranean passage, a secret alliance, which, as if by treachery, places us at once within the fortress which it was impossible to take by assault from without" (Schopenhauer, 1909b, § 18:405).

II.3. THE DISPLAY OF THE WILL AND ITS PSYCHOLOGICAL IMPLICATIONS*

1. The primeval will is a-rational, independent of space, time, and causality; hence, it is purposeless. Reason is a secondary product of the will at the human level.

2. Prior to individual phenomena, the will displays the Ideas, a concept related to that of "Platonic Ideas", i.e., prototypes of the phenomena. Ideas are also out of space, time, and causality. Either individual phenomena or biological species are thus intended, never fully achieved copies of the ideal prototype.

3. Under the effect of the principle of individuation—"principium individuationis"—the unitary will and Platonic Ideas display as 'phenomena', that is, individual objects, living and/or non-living ones. Representation or knowledge appears in superior phenomena, such as animals and humans, the latter constituting the pinnacle of the *principium individuationis*. All phenomena follow some or all the forms of the principle of sufficient reason.

4. When the unitary will becomes phenomena, selfishness appears since every phenomenon needs the matter, time, and space of other phenomena in order to exist. The alimentary chain may illustrate the concept of selfishness. At the ontological level of beings in general, the will is, thus, insatiable. This is part of the metaphysical foundation of Schopenhauer's pessimism.

5. The insatiability of the will either in ordinary daily life or in the interaction between victims and offenders is an inexhaustible source of dissatisfaction and suffering. However, Schopenhauer describes a path for existential salvation and for escaping from the will's tyranny.

6. As a direct consequence of the will's insatiability, living beings are inherently selfish and insatiable. In the philosopher's words: "The satisfaction of a wish ends it; yet for one wish that is satisfied there remain at least ten which are denied" Schopenhauer, 1909a; § 38: 253.

7. The will is guided by 'motives', which, for Schopenhauer, are mental events related to phenomena. Through searching pleasure or avoiding pain, from a cognitive standpoint, motives become will's goals. As a

*Adapted from Baptista, 2016 and Baptista & Aldana, 2017; Schopenhauer, 1909a, § 23: 145; § 27: 191; § 38: 253; § 55: 373.

consequence, phenomena are always trying to use other phenomena for their own benefit.

8. Following Kant, Schopenhauer describes three character dimensions. a) The intelligible character which “is the will as thing-in-itself so far as it appears in a definite individual in a definite grade, outside time, and therefore indivisible and unchangeable.” b) The empirical character, also unchangeable, is named so because one does not know it *a priori* but *a posteriori* by observing one’s own behavior over time: “the empirical character which is the manifestation of this act of will, developed and broken up in time and space and all the forms of the principle of sufficient reason, as it exhibits itself for experience in the whole conduct and life of this man” (Schopenhauer, 1909a; § 55: 373). c) The acquired character.

9. Self-knowledge is the insight one develops by observing one’s behavior and emotions (the empirical character) over time. This self-knowledge may change behavior by modifying the motives that the will pursues. This is the *acquired character*. Schopenhauer provides the following example. “Thus, for example it is immaterial whether a man plays for nuts or for crown; but whether a man cheats or plays fairly, that is the real matter; the latter is determined by the intelligible character, the former by outward” (Schopenhauer, 1909a; § 28: 207).

10. The following sentence is highly relevant for the self-knowledge issue: “introspection always shows us to ourselves as willing” (Schopenhauer, 1963, § 42:168).

II.4. SCHOPENHAUER’S PATH TO EXISTENTIAL SALVATION

This path has three overlapping experiences:

a. The aesthetic experience, which dissociates willing from knowing, may occur during the contemplative state of art or of nature. It refers to the experience of knowing without desiring. In metaphysical terms, aesthetic contemplation allows the realization of the Platonic Ideas that underlie the perceived artistic object. For Schopenhauer, tragedy and music are art expressions with the particular power to promote contemplation and to appease willing (Schopenhauer, 1909a, § 51: 326; § 52: 330-346).

b. The experience of knowing without desiring opens the door to the ethical experience which consists in perceiving the unity of all phenomena and the ubiquity of suffering; in other words, in overcoming the *principium individuationis*. In Hindu mythical terms, Schopenhauer names this experience ‘raising the Veil of Maya’.

c. The metaphysical experience was envisaged by Schopenhauer as the ‘denial of the will’, which refers to the forceless and spontaneous display of compassion and asceticism [‘renunciation’ in Peter Sloterdijk’s terms (Sloterdijk, 2013, DP: 65)].

The Schopenhauerian path to existential salvation is neither disciplined nor methodic as the Buddhism-based mindfulness/awareness meditation process is. The philosopher rather compared it with the 'grace state' of Christianity, which is often triggered by perceiving suffering, either in fellow creatures or in oneself (Schopenhauer, 1909a, § 68: 506,507; § 70: 523). Schopenhauer described his own experience as follows:

When I was seventeen years old, I was moved by life's calamities, as it happened to Buddha in his youth, when he discovered sickness, old age, pain and death. Human experience proclaims the destiny of suffering; this appears as the purpose of life, as if the world were made by a devil; but that purpose is not the ultimate one, but it's instead a way to achieve the optimal end (translated by the authors from Aramayo, Schopenhauer 1909a, Introduction: 20).

Although Schopenhauer was an atheist, he profoundly admired Jesus and Hinduism. He conceived the will's denial as asceticism and as the maximal expression of the freedom of the will (Schopenhauer, 1909a, § 70: 522), which is different from suicide (Schopenhauer, 1909a, § 69: 514).

In synthesis, Schopenhauer stated that the three fundamental springs of human actions are selfishness (omnipresent), malice (always potentially present), and compassion (exceptional). Given the selfishness and the insatiability of the will, there is no hope for ontological salvation, but, at the individual level, compassion and asceticism are the way for existential salvation.

II.5. SUMMARY

In this section we described Schopenhauer's central philosophical concepts, i.e., will and representation (idea), and his path to existential salvation. His statement that the realization of our body's endless craving for desire satisfaction is a direct path to the primeval will allows us to establish a connection with the embodied mind proposal of Varela et al.

III. THE EMBODIED MIND

Page numbers (indicated into brackets) refer to either verbatim quotes preceded and followed by inverted comas or to the *synthesis* of the thought of Varela et al. In the latter case, the page numbers refer to the pages of the work of Varela et al. we paraphrased.

III.1. TEXT OVERVIEW

Varela et al. appealed for an improved connection between the science of the mind (cognitive science) and the lived human experience. They argued that there was no direct, hands-on pragmatic approach to experience with which to complement the contemporary scientific endeavor (Varela,

et al., 1991, Introduction: xviii). They were particularly concerned with the absence of a unified self, which has relevant consequences for science, technology, individual and collective well-being. Filling this gap was one of the main objectives of the phenomenological tradition in Western philosophy, with relatively little success.

Varela et al. argue that the default reasoning of a phenomenologically inclined cognitive scientist is to consider the world as pre-given. Such a prototypical scientist reflects on a world that is not made, but found, and yet it is also his own structure and cognitive configuration that enables him to reflect upon such world. Thus, when pondering, he finds himself in a circle: he is in a world that seems to be there before reflection begins, but that world does not exist apart from him (Varela, et al., 1991: 3).

These authors expected to show that the Buddhist traditions of meditative practice and pragmatic philosophical exploration (currently defined as mindfulness/awareness meditation) is a path to set the bridge between living experience and science. Finally, they described their 'enactive model' that is based on the insights obtained in both the Buddhist tradition and the cognitive sciences.

Merleau-Ponty's work was a foundational support for their project of filling the gap between science and the lived human experience (an *entre-deux* method). Merleau-Ponty's position on this issue is clearly summarized in his own words: "science gives up living among things, preferring to manipulate them instead" (cited by Varela, et al., 1991: 81).

III.2. PHENOMENOLOGY AND THE EMBODIED MIND

Varela et al. drew a time-line starting with Descartes (1596-1650) who conceived the mind as a subjective consciousness containing ideas that corresponded to, or sometimes failed to correspond to, what was in the world. This view of the mind as representing the world reached its culmination in Franz Brentano's notion of intentionality. According to Brentano (1838-1917), all mental states (perception, memory, etc.) are *of* or *about* something. In his own words, mental states necessarily have a "reference to a content" or a "direction toward an object" (which is not necessarily a thing in the world). Brentano claimed that this directedness or intentionality was the defining characteristic of the mind. This meaning of 'intentional' should not be confused with its use to mean "doing something on purpose" (Varela, et al., 1991: 16).

The time-line continued with Edmund Husserl (1859-1938) who aimed at developing a specific procedure for examining the structure of intentionality, which was the structure of experience itself without any reference to the factual, empirical world. He called this procedure 'bracketing' (*epoché*) for it requires that one puts out of action (as in brackets) one's ordinary judgments about the relation between experience and the world.

Husserl thus claimed to have discovered a new domain that was prior to any empirical science (Varela, et al., 1991: 16).

Husserl's turn toward experience and the thing themselves was entirely theoretical (Varela, et al., 1991: 19). This criticism would hold even for Martin Heidegger's (1889-1976) existential Phenomenology as well as for Merleau-Ponty's Phenomenology of lived experience. Indeed, both stressed the pragmatic, embodied context of human experience, yet in a purely theoretical way. According to Merleau-Ponty, both science and Phenomenology explained our concrete, embodied existence in a manner that was always after the fact (Varela, et al., 1991: 19).

As we will discuss below, Varela et al. posited that the Buddhist-based mindfulness/awareness approach to human experience could provide a disciplined method devoid of the theoretical and after-the-fact features of Phenomenology. Previously, however, the authors extensively discussed the concept and development of cognitive science. This development will be briefly reviewed in the next section in order to set the basis for an integral discussion of the time-line described above.

III.3. COGNITIVE SCIENCE DEVELOPMENT

The term 'cognitive science' refers to the scientific study of the mind (Varela, et al., 1991: 17) and encompasses several disciplines, such as anthropology, artificial intelligence, education, linguistics, neuroscience, philosophy, and psychology.

Varela et al. organized the historical development of cognitive science in three successive steps: Cognitivism, emergence, and enaction (the latter is still undergoing development and refinement).

1. *Cognitivism*: its central tool and guiding metaphor was the digital computer. Cognitivism replaced Behaviorism and was formally established around 1956. This movement directly derived from the field of cybernetics which was set up between 1943 and 1953. The central postulate of Cognitivism was that intelligence—including human intelligence—so resembles computation in its essential characteristics that cognition can actually be defined as the computation of symbolic representations (Varela, et al., 1991: 40).

The cognitivist argument was that intelligent behavior presupposes the ability to represent the world "as being certain ways" (Varela, et al., 1991: 40). This notion of representation is relatively uncontroversial. What is controversial, though, is the next step which is when the cognitivist claims that the only way we can account for intelligence and intentionality is to hypothesize that cognition consists of acting on the basis of representations that are physically realized in the form of a symbolic code in the brain or in a machine.

In the cognitivist model, the cognizing subject is split into two: cognition consists, on the one hand, of unconscious symbolic computation and, on the other, of conscious experience.

Cognitivism faced the following criticisms:

a. If intentionality and consciousness are fundamentally distinct, how does cognition come to be about the world as we consciously experience it? (Varela, et al., 1991: 56).

b. Cognitivism has provided no heuristic insight about how symbolic computation physically occurs in the body.

c. Symbolic information processing is based on sequential rules, applied one at a time. This 'von Neumann bottleneck' constitutes a dramatic limitation when the task at hand requires large numbers of sequential operations. A continued search for parallel processing algorithms has met with little success (Varela, et al., 1991: 86).

d. Symbolic processing is localized: the loss or malfunction of any part of the symbols or rules of the system results in a serious malfunction. In contrast, a distributed operation is highly desirable, so that there is at least a relative equipotentiality and immunity to mutilations (Varela, et al., 1991: 86).

e. Contemporary cognitive science seems to offer a way out of the traditional philosophical impasse between Realism and Idealism. This opposition is based on the traditional notion of representation as a 'veil of ideas' that stands between us and the world (Varela, et al., 1991: 136). On the one hand, the realist naturally thinks that there is a distinction between our ideas or concepts and that which they represent, namely, the world. The ultimate court of appeal for judging the validity of our representations must cohere with many others, but the point of such internal features is to increase the probability that, globally, our representations will have some measure of correspondence or degree of fit with an outer and independent world. The idealist, in contrast, quickly points out that we have no access to such an independent world, except through our representations (Varela, et al., 1991: 137).

f. Largely because of cognitive science, philosophical discussion has shifted from concern with *a priori* representations (representations that might provide some non-contingent foundation for our knowledge of the world) to concern with *a posteriori* representations (representations whose contents are ultimately derived from causal interactions with the environment) (Varela, et al., 1991: 137). Still, the idea of a world or environment with extrinsic, pre-given features that are recovered through a process of representation remains (Varela, et al., 1991: 138).

As a whole, while Cognitivism influenced most fields of epistemology and technology, its limitations and the criticisms it received prompted the search for alternative approaches to cognition.

These approaches (the connectionism/emergence and the enactive models) diverged from Cognitivism along two basic lines of dissent: (1) a critique of symbol processing as the appropriate vehicle for representations, and (2) a critique of the adequacy of the notion of representation as the Archimedes point for cognitive science (Varela, et al., 1991: 8).

2. *Connectionism / emergence / self-organization model*: it derives from the idea that many cognitive tasks seem to be handled best by systems made up of several simple components, which, when connected by the appropriate rules, give rise to a global behavior corresponding to the desired task. Traditional symbolic processing, as stated above, is rather localized (Varela, et al., 1991: 8). Connectionist models generally trade localized, symbolic processing, for distributing operations over an entire network of components; they thus result in the emergence of global properties resilient to local malfunction (Varela, et al., 1991: 8).

When integrated to symbol processing, this model is often referred to as sub-symbolic emergence. In the model it is argued that the formal principles of cognition lie in the sub-symbolic area, a domain hypothesized to lie between the biological and the symbolic levels of Cognitivism. "At this sub-symbolic level, cognitive descriptions are built out of the constituents of what at a higher level would be discrete symbols" (Varela, et al., 1991: 100).

According to Varela et al., the most interesting relation between sub-symbolic emergence and symbolic computation is that of inclusion in which we see symbols as a higher-level description of properties that are ultimately embedded in an underlying distributed system.

The case of the so-called genetic code is paradigmatic. For many years biologists considered protein sequences as being instructions coded in the DNA. It is now clear, however, that DNA triplets are capable of predictably specifying an amino acid in a protein if, and only if, all compounds are embedded in the cell's metabolism, that is, in the thousands of enzymatic regulation in a complex chemical network. It is only because of the emergent regularities of such a network as a whole that we can bracket out his metabolic background and thus treat triplets as codes for amino acids. In other words, the symbolic description is possible at another level. It is of course possible to treat such symbolic regularities in their own right, but their status and interpretation are quite different from those we simply took at face value as independent of the substratum from which they emerge (Varela, et al., 1991: 101).

Varela et al. extensively discuss the work of Marvin Minsky (1927-2016) and Seymour Papert (1928-2016) who envisioned the mind as a society. For this purpose they take the patchwork architecture of cognition as a central element and present a view where minds consist on many 'agents'

whose abilities are quite circumscribed: 'each agent taken individually operates only in a micro-world of small-scale or "toy" problems' (Varela, et al., 1991: 105).

Thus, the mind is not a general problem solver, but rather a set of mechanisms for finding solutions to certain local tasks, solutions that cannot, however, be extended beyond specific domains. The task, then, is to organize the agents who operate at these specific domains into effective larger systems or 'agencies' which turn into higher-level systems: 'in doing so, the mind emerges as a kind of society' (Varela, et al., 1991: 106).

It is important to remember here that, although inspired by a closer look at the brain, this is a model of the mind and not a model of neural networks or societies. It is a model of the cognitive architecture that is abstracted from neurological details: "agencies and agents are not, therefore, entities or material processes; they are abstract processes or functions" (Varela, et al., 1991: 106).

In the connectionist/emergence model, the entire system resembles a patchwork of subnetworks assembled by a complex process of tinkering rather than a system that result from some clean, unified design. This kind of architecture suggests that instead of looking for grand, unified models for all network behaviors, one should study networks whose abilities are restricted to specific cognitive activities, and then look for ways to connect these networks. Hence, cognition is patched (Varela, et al., 1991: 105).

An important extension of the emergence model is the concept of self-organization by which each component operates only in its local environment, so that there is no external agent that, as it were, turns the system's axle. However, due to the system's network constitution, a global cooperation spontaneously emerges when the states of all participating neurons reach a mutually satisfactory state. In such a system, then, there is no need for a central processing unit to guide the entire operation (Varela, et al., 1991: 88).

Varela et al claimed that there is no unified formal theory of emergent properties. It is clear, however, that such emergent properties have been found across all domains—vortices and lasers, chemical oscillations, genetic networks, developmental patterns, population genetics, immune networks, ecology, and geophysics. "What all these diverse phenomena have in common is that, in each case, a network gives rise to new properties which researchers try to understand in all their generality" (Varela, et al., 1991: 88). Here lies the relevance of this work to the fields of evolution and learning, among many others areas, as we will discuss below.

3. *The enactive model* reflects a deeper dissatisfaction than the connectionist search for an alternative to symbolic processing. It questions the

centrality of the notion that cognition is fundamentally representation (Varela, et al., 1991: 9).

The representational model implies that we inhabit a world that is already construed before us, and that we possess a unified inner self that organizes representations. Anyhow, collectively, cognitive science findings do not agree with those assumptions:

— Cognition implies a considerable amount of unconscious activity.

— Basically, any cognitive activity is realized by the interaction of numerous relatively independent and modular brain networks, profoundly interconnected by feedback and feedforward mechanisms that defy the standard symbolic processing model. Such a cognitive activity emerges from the interaction of the above-mentioned modular brain networks.

— As shown in language acquisition research, for a given cognitive function to display, a fine flexible pattern of interaction between the organism and the environment must occur. This interaction does not fit with the model of a creature developing a representation of a fixed, pre-given and preformed world. It rather resembles an effect that derives from the active co-construction of such an effect or function between the organism and the numerous environments that define it. In this sense, cognition is enactive since it implies the active creation, development, and setting up a given function by the coupling between organisms and their environment.

— Cognitive science has not provided evidence for a single centered self that organizes this process. “Ego-self, then, is the historical pattern among moment-to-moment emergent formations” (Varela, et al., 1991: 121).

— A central concept in the enactive model is that cognition is ‘embodied action’, that is, cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context (Varela, et al., 1991: 173). By using the term ‘action’, Varela et al. meant to emphasize once again that sensory and motor processes, perception, and action, are fundamentally inseparable in lived cognition. Indeed, the two are not merely contingently linked in individuals; “they have also evolved together as will be discussed below” (Varela, et al., 1991: 173).

— In summary, “the enactive approach is based on two foundational premises: (1) perception consists in perceptually guided action, and (2) cognitive structures emerge from the recurrent sensorimotor patterns that enable action to be perceptually guided” (Varela, et al., 1991: 173).

Varela et al. explain the following experimental study as an example of enaction (Varela, et al., 1991: 175). Held and Hein (1963) raised kittens in the dark and exposed them to light only under controlled conditions. A

first group of animals was allowed to move around normally, but each one of them was harnessed to a simple carriage and basket that contained a member of the second group of animals. The two groups therefore shared the same visual experience, but the second group was entirely passive. When the animals were released after a few weeks of this treatment, the first group of kittens behaved normally, but those who had been carried around behaved as if they were blind: they bumped into objects and fell over edges. This study supports the enactive view that objects are not seen by the visual extraction of features but rather by the visual guidance of action.

The enactive model had a profound influence on: a) technology, in general, and artificial intelligence, in particular; b) biology, especially on immunology, evolution and the origin of species, and c) the study of human well-being.

a. *Technology*: Early intelligent machine design conceived the product as possessing as pre-established features all the feasible information about the environment and, then, such a machine was expected to solve a wide set of pre-known contingencies (algorithm-based design). The enactive model conceived a modular model that would be able to solve particular issues and develop emergent properties not pre-specified in detail (non-algorithm-based design). According to Varela et al, such a model is closer to the cognition observed in humans and animals than to a pre-designed general problem solver.

The enactive system does not work by inputs and outputs, but through its operational closure, i.e., a model “in which the results of its processes are those processes themselves” (Varela et al., 1991: 139). These systems are defined by internal mechanisms of self-organization (autonomy). “The key point is that such systems do not operate by representation; instead of representing an independent world, they enact a world as a domain of distinctions that is inseparable from the structure embodied by the cognitive system” (Varela, et al., 1991: 140).

b. *Biology and species evolution*: Varela et al. argued that natural selection and its consequences and adaptations as the core or dominant mechanism of evolution, currently encounter severe criticisms.

Specifically, the authors claimed that the conception of a pre-given world plays an important role in the concept of adaptation since it is the environment that sets the limits and determines what is to be expected from living beings. They contend that Neo-Darwinism, with its emphasis on natural selection, is to modern evolutionary theory what Cognitivism is to cognitive science. Besides, natural selection is to evolution what representationism is to cognition (Varela, et al., 1991: 185, 194).

As a consequence, the authors proposed the term ‘natural drift’ as an enactive model of evolution. Evolution, as a natural drift, is also the biological counterpart of cognition as embodied action. It discards the notion of optimality and substitutes it for *viability*. Varela et al. posited that natural selection implies a prescriptive model in which “what is not allowed is forbidden.” They proposed a proscriptive model in which ‘what is not forbidden is allowed’ (Varela, et al., 1991:188). Selection would later discard what is not compatible with survival and reproduction. Under the natural drift concept, the constraints of survival and reproduction are far too weak to provide an account of how structures develop and change (Varela, et al., 1991: 195).

A mechanism underlying natural drift is conceived as ‘tinkering’ or ‘bricolage’, which means putting together parts and items in complicated arrays, not because they fulfill some ideal design, but simply because they are possible (Varela, et al., 1991: 105). This implies the progressive coupling for the design of an organism based on viability, not on optimality. In such a way, the evolutionary process is envisaged as satisfying (taking a suboptimal solution that is satisfactory) rather than optimizing. Here selection operates as a broad survival filter that admits any structure that has sufficient integrity to persist (Varela, et al., 1991: 196).

c. *Human well-being*: Varela et al. described what they called ‘Cartesian anxiety’ as follows: “either we have a fixed and stable foundation for knowledge (a point where knowledge starts, is grounded, and rests) or we cannot escape some sort of darkness, chaos, and confusion; either there is an absolute ground or foundation, or everything falls apart” (Varela, et al., 1991: 140). They added that “when anxiety arises today, we seem unable to avoid the turn toward Nihilism for we have not learned to let go the forms of thinking, behavior, and experience that lead us to desire a ground” (Varela, et al., 1991: 141).

Varela et al. contend that the Buddhist mindfulness/awareness model may overcome the Cartesian anxiety. By progressively learning to let go these tendencies to grasp, one can begin to appreciate that all phenomena are free of any absolute ground, and that such groundlessness (*sunyata*) is the very fabric of dependent co-origination (Varela, et al., 1991: 144). Phenomenologically, we could make a somewhat similar point by arguing that groundlessness is the very condition of the rich textures and interdependent world of human experience (Varela, et al., 1991: 129).

Groundlessness is revealed in cognition as common sense, that is, in knowing how to negotiate our way through a world that is not fixed and pre-given, but that is continually shaped by the types of actions in which we engage (Varela et al., 1991: 144). “Cognitive science resisted this view, preferring to see any form of experience as at best folk psychology, that is,

as a rudimentary form of explanation that can be disciplined by representational theories of the mind" (Varela, et al., 1991: 145). "The greatest ability of living cognition, however, consists in being able to pose, within broad constraints, the relevant issues that need to be addressed at each moment. These issues and concerns are not pre-given but are enacted from a background of action where what counts as relevant is contextually determined by our common sense" (Varela, et al., 1991: 145).

As a result, in this worldview, real freedom comes not from the decisions of an ego-self's will but "from actions without any self whatsoever" (Varela et al., 1991: 129). As a summary, table 1 literally transcribes what Varela, et al. portray as the main features of the developmental steps of cognitive science.

TABLE 1
Main features in the development of cognitive science

	What is cognition?	How does it work?	How do I know when a cognitive system is functioning adequately?
Cognitivism	Information processing as symbolic computation-rule-based manipulation of symbols.	Through any device that can support and manipulate discrete functional elements—the symbols. The system interacts only with the form of the symbols (their physical attributes), not with their meaning.	When the symbols appropriately represent some aspect of the real world and when the information processing leads to a successful solution of the problem given to the system.
Connectionism-emergence-self-organization model	The emergence of global states in a network of simple components.	Through local rules for individual operation and rules for changes in the connectivity among the elements.	When the emergent properties (and resulting structure) can be seen to correspond to a specific cognitive capacity—a successful solution to a required task.
Enactive Model	Enaction: A history of structural coupling that brings forth a world.	Through a network consisting of multiple levels of interconnected sensorimotor subnetworks.	When it becomes part of an ongoing existing world (as the young of every species do) or when it shapes a new one (as happens in evolutionary biology)

Source: Varela et al, 1991: 42, 99, 206.

III.4. ANALYSIS OF EXPERIENCE ACCORDING TO THE BUDDHIST MINDFULNESS/AWARENESS MODEL

Varela et al. wished to bring into contact the living tradition of the mindfulness/awareness meditation with the living tradition of Phenomenology and cognitive science (Varela, et al., 1991: 220).

The authors contented that the rediscovery of Asian philosophy, particularly that of the Buddhist tradition, was a second renaissance in the cultural history of the West, with the potential to be equally important as the rediscovery of Greek in the European Renaissance (Varela, et al., 1991: 22). They hence asserted that the disciplined application of the Buddhism-based mindfulness/awareness meditation method could provide the long-searched method of direct analysis of experience, and of the *entre-deux* space expected to fill the gap between science and direct experience.

The authors used the term ‘codependent arising’ because that definition best expresses the idea, familiar in the context of the Minsky’s society of mind, of “transitory yet recurrent, emergent properties of aggregate elements” (Varela, et al., 1991: 110).

A core step in this meditation tradition is the basic element analysis (*dharma*) or aggregate analysis, where a moment of consciousness is analyzed into subject, object, and the mental factors that bind them together. These mental factors are contact, feeling, discernment, intention, and attention (Varela, et al., 1991: 117). The five-aggregate model of the mind describes subjective conscious experience from a first-person perspective (Karunamuni, 2015).

Closely related to the aggregate process is a construct called the ‘Wheel of Life’ or the ‘Wheel of Karma’ (*Samsara*) (Varela, et al., 1991: 115). With training, the meditator learns to catch a critical moment in this mental cycle when grasping tends to happen and keeps the recurrent (often undesirable) pattern (*Karma*). The Wheel of Karma also may be conceived as an emergent society with some analogy to Minsky’s society of mind (Varela, et al., 1991: 110).

The mindfulness/awareness meditation practice is based on the teaching of emptiness (*Sunyata*) which is the foundation of Mahayana Buddhism (Varela, et al., 1991: 219). By breaking the circle of grasping, the need for a solid and often unique ground dissipates, which leads to existential growth and well-being.

Karma does not mean *fate* or *predestination*, but rather how the understanding of causality is used to break the chains of the conditioning mind (Varela, et al., 1991: 110). The historical formation of various patterns and trends in our lives is what Buddhists usually refer to as *karma*. It is this accumulation that gives continuity to the sense of ego-self, so evident in everyday unreflective life. The main motivating and sustaining factor in

this process is the omnipresent mental factor of intention (Varela, et al., 1991: 116).

In the Buddhist spirit, thus, the disciplined practice of mindfulness/awareness meditation is a path with overlapping stations comprising calming the mind, relaxing the need of external/internal permanent grounds and automatic grasping, and, notably, allowing the development of the highly valued virtue of compassion.

III.5. CONCLUSION

In the *Embodied Mind*, Francisco Varela, Evan Thompson and Eleanor Rosch stated the need of a feasible method that, in the spirit of the phenomenological tradition, could bridge the living, moment to moment, human experience with cognitive science. They proposed a ‘middle way’ model that rests, on the one hand, on the embodied, enactive mechanism of co-construction between subject and object, that is, between living beings and their environment. This model allows a heuristic approach to technology, artificial intelligence, astrobiology, social sciences, psychology, and species evolution (Razeto, 2012). On the other hand, that model rests on the Buddhism-based, mindfulness/awareness meditation method that, in conjunction with the methods of contemporary cognitive science compose a comprehensive strategy for analyzing living experience.

In an updated introduction to the text, Thompson emphasized that in Buddhist philosophy, groundlessness means that phenomena lack any inherent and independent being; they are said to be “empty” of “own being.” In Western philosophy, groundlessness means that knowledge and meaning lack absolute foundation. Cognition, as the enaction of a world, means that cognition has no ground or foundation beyond its own history, which amounts to a kind of “groundless ground” (Varela, et al., 2016, DP: 229). This is pertinent for the following analysis of Schopenhauer’s thought.

IV. IN AN IMAGINARY DIALOGUE, HOW WOULD SCHOPENHAUER HAVE ADDRESSED SOME OF THE CHALLENGES STATED IN THE *EMBODIED MIND*?

IV.1. AN *AD HOC* SUMMARY OF SCHOPENHAUER’S THOUGHT

a. The subject is separated from the object by the Veil of Maya which is the metaphysical mechanism underlying representation.

b. Yet both, subject and object, are individual expressions of the same primeval will.

c. Schopenhauer describes the lifting up of the Veil of Maya as follows:

...the direct exposition we find in the *Vedas*, the fruit of the highest human knowledge and wisdom, the kernel of which has at last reached us in the *Upanishads* as the greatest gift of this century. It is expressed in various ways,

but especially by making all the beings in the world, living and lifeless, pass successively before the view of the student, and pronouncing over every one of them that word which has become a formula, and as such has been called the *Mahavakya: Tatoumes*, more correctly, *Tat twam asi*, which means, "This thou art" (you are that) (Schopenhauer, 1909a, § 63: 458-459).

IV.2. DOES SCHOPENHAUER'S THOUGHT COMPRISE A PRE-GIVEN WORLD? Yes, it is a world filled with 'motives' that the representational system displays to the will. What follows is a list of expected motives, expressed in contemporary terms that the pre-given world would offer to the subject along his/her life cycle.

a) A care-giver; a food-giver; a warm-giver; b) A guide and tutor for the sensory-motor learning; c) Peers; d) Sex; e) Reproduction; f) Culturally-prescribed institutions for surviving; g) Objects from the intellectual world; h) Illness relievers; i) Culturally-related sources of life meaning.

IV.3. HOW IS THE REPRESENTATION THE SCHOPENHAUERIAN SUBJECT HAS OF SUCH A PRE-GIVEN WORLD?

The out-world is an inexhaustible source of motives that are separate from the subject and are placed for his/her profit or disgust.

IV.4. IN THIS SCHOPENHAUERIAN WORLD, HOW IS THE SUBJECT AND HOW IS THE OBJECT?

The subject imposes the notions of time (change), space (position), and causality to the pre-given world (objects).

The *willing subject* perceives the object as a motive and as a separate phenomenon.

The *aesthetic subject* perceives the Platonic Idea underlying that object.

The *ethical subject* equates him/herself with the object and considers the two of them as individual parts of the unitary will. In mythical terms, this requires the lifting up of the Veil of Maya.

The *metaphysical subject* clearly knows the will when perceiving his/her and others' desires. Accordingly, she/he may feel *compassion* and behave *ascetically*.

IV.5. IS THERE A UNITARY SELF?

No. The self is dissociated into will (desire) and representation (contemplation), willing and boredom, selfishness, malice, and rarely, compassion.

In Schopenhauer's words:

According to all this, when the will is enlightened by knowledge, it always knows what it wills now and here, never what it wills in general; every particular act of will has its end, the whole will has none; just as every particular phenomenon of nature is determined by a sufficient cause so far as concerns its appearance in this place at this time, but the force which manifests itself in

it has no general cause, for it belongs to the thing-in-itself, to the groundless will (Schopenhauer, 1909a, § 29: 215).

IV.6. IS THERE AN *ENTRE-DEUX* IN SCHOPENHAUER'S THOUGHT?

We propose here that it could be the 'illuminated' realization of the *moment-to-moment* insatiable desire and the inherent selfishness. Could it be an analogue construct of the phenomenological *entre-deux* that Merleau-Ponty was looking for?

IV.7. HOW IS THE CO-CONSTRUCTION?

Again, by apprehending desire: “

In fact, our willing is the one opportunity which we have of understanding from within (an event) which exhibits itself from (outside), consequently the one thing which is known to us immediately, and not, like all the rest, merely given in the idea. Here, then, lies the datum which alone is able to become the key to everything else, or, as I have said, the single narrow door to the truth. Accordingly we must learn to understand nature from ourselves, not conversely ourselves from nature. What is known to us immediately must give us the explanation of what we only know indirectly, not conversely (Schopenhauer, 1909b, § 18: 406).

Therefore, “we ourselves are the thing-in-itself” (Schopenhauer, 1909b, § 18: 405). The search for any analogy for the co-construction in Schopenhauer's thought must take into consideration that the philosopher envisaged every class of phenomenon as an 'Idea'; therefore, as a preconceived, never fully achieved, prototype. Accordingly, living beings constantly defend and reestablish their specific Idea. This metaphysical proposal resembles the concept of *autopoiesis* or self-organization as a constituting feature of life, a term coined by Varela and Maturana (1980). The enactive model of cognition may be considered as an extension of the 'autopoiesis concept' (Razeto, 2012).

IV.8. HOW DOES SCHOPENHAUER'S PATH TO SALVATION RELATE TO THE MINDFULNESS/AWARENESS MEDITATION METHOD?

Realization of the desire insatiability and of the omnipresence of suffering and selfishness may be an existential/experiential analogue to the lack of a single self, the disciplined and lived experience of which may also lead to personal growth and compassion

V. GENERAL DISCUSSION

Varela, Thompson & Rosch, and Schopenhauer describe models of cognition, of being and of interacting within the world. The former three authors, who are contemporary scientists, propose a non-representational model in which the world is not pre-given but arises and is constructed in

a co-dependent way with living beings. They think that Western thought has not developed a proper path to connect science with living experience.

Cognitive models in current Western culture tend to search for a unique organizing center, either in the subject (as a centered and unique *self*, a model often named as *Idealism*) or in the object (as an ultimate reality, named *Realism*). Representation is a central cognitive mechanism in both models: in the former, the subject (and each living being) represents the world according to his/her own cognitive system; hence, there is no real and unique world outside. In the second model, there is a real world outside and every creature has a more or less approximate representation of it.

Schopenhauer, thus, is a conspicuous example of a representational thinker. He conceived ordinary cognition as a *representation* of the will, which is the closest waylay to the Kantian *thing-in-itself*. Inspired by Hindu mythology, Schopenhauer described such a representation as the 'Veil of Maya' that precludes the perception of the ultimate reality. This is a core issue in the divergence between the philosopher and Varela et al.

We discussed how, according to Varela et al., a strict representational model does not properly account for the complex interactions detected in processes, such as human language acquisition, species evolution, and artificial intelligence development, among many other issues.

For the purposes of the present discussion, Idealism is identified with *living experience* and Realism with *science*. A central goal of Phenomenology was to fill this gap (an *entre-deux*). Varela et al. proposed the mindful/awareness meditation disciplined practice derived from the Buddhist tradition that frees its practitioner from the search of a single inner self or of an external ultimate basement. Moreover, by acting on our permanent tendency to grasp, the mindful/awareness meditation practice may improve the quality of personal life and open a way for developing compassion. Besides, such a disciplined practice may be one of the bases for a heuristic method with wide technological and scientific applications. This novel cognitive model was called 'enactive' and, as stated above, it has been applied in biology, artificial intelligence, sociology, astrobiology, psychology, art, and so forth.

Schopenhauer and Varela et al. converge in having been profoundly influenced by Hinduism/Buddhism and in positing that the display of compassion is the highest human value. Besides, we speculated (see section IV above) how Schopenhauer might have anticipated—with his metaphysical method and within the representational model—some of the key issues addressed by Varela et al.

Even more important, we contend that Schopenhauer is a genuine forerunner of the concept of embodied mind since he stated that the realization of the physical wishful body is a royal path in the way of

knowing the will. The following text illustrates the strong embodiment of Schopenhauer's philosophy when he commented the work of Lamarck: "*and the ox does not butt because it happens to have horns: it has horns because it intends to butt*" (Schopenhauer, 1903, EP. 261).

VI. THE PRESENT

VI.1. VARELA, THOMPSON, & ROSCH

a. The embodiment of the mind and the enactive cognition (grounded cognition in contemporary terms, Varela, et al., 2016, DP 380) are epistemological models influencing most contemporary fields of knowledge (Razeto, 2012; Mendez Viana de Oliveira, 2016). Both are core concepts of novel psychotherapeutic techniques that, based on additional developments of the enaction concept (Thompson, 2007) consider the whole body, and not only the brain as the focus for therapy (Dryson, 2009, Fuchs, 2009, 2011). In the same spirit, Schopenhauer asserted that "the nature of the will, on the contrary, is dependent upon no organ, and can be prognosticated from none" (Schopenhauer, 1909b, §20, 469).

b. The representational model of cognition is still used as a standard method by many cognitive scientists (Steve Pinker, 1997, as an example). More research and technological development are warranted to further delineate the strengths, limitations, and interactions of representational and non-representational models.

c. The mindful/awareness meditation method is now a standard procedure in psychotherapy and is finding its way in cognitive-neuroscience research (Karunamuni, 2015). However, Thompson (DP. 441, see item [d] immediately below) cautioned about equaling that neuroscientific project with the dialogue between Buddhism and cognitive science as they originally proposed in Varela et al. (1991).

d. In a lucid introduction to the revised edition of their text (2016), Evan Thompson stated that "he no longer accepts three of the rhetorical and argumentative strategies on which they originally relied" (DP, 307): a) their portrayal of Western Phenomenology as a broken philosophical project and now considered as a vital and relevant movement for philosophy and cognitive science. Moreover, Evans refers to one of his texts where he corrected their mischaracterization of Husserl in *The Embodied Mind*. b) Their depiction of Buddhist philosophy as (*mainly*) based on meditation or as deriving from meditative experience. In this important sub-section, Evans discusses the recently acknowledged complex roots of Buddhism (*besides meditation*) and its current position as an actual philosophical movement. He added: "...so the idea that Buddhist philosophy is somehow closer to direct experience and thereby more immediately phenomenological—as we state at certain points in the text—is misguided" (DP,

348), and c) Evans critically ponders about “(their) tendency to depict ‘mindful awareness’ or ‘mindfulness’ as a special kind of inner observation of a mental stream whose phenomenal character is supposed to be somehow independent of such observation” (DP 354). He concluded that “*The Embodied Mind* also contains another, better conception of mindfulness meditation. According to this conception, mindfulness practices should be understood as skillful ways of enacting certain kinds of embodied states and behaviors in the world, not as inner observation of an observer-independent mental stream” (DP, 367). We think that these reflections, while being of fundamental interest for the cognitive endeavor, do not affect our project of linking Schopenhauer with Varela et al. We refer the reader to this illuminating update of *The Embodied Mind*.

VI.2. SCHOPENHAUER

a. Schopenhauer has been neglected in contemporary literature, perhaps because of his pessimistic view of life, his misogyny, and the lack of a social project in his thought. This last issue stands in sharp contrast with, for example, the emphasis placed by Confucius on family values, or by Hegel on the role of the State as the basis of society. .

b. Schopenhauer was one of the first Western thinkers who introduced Hinduism and Buddhism into Europe and who built a complete philosophical system partially based on those ideas. It is thus worthwhile discussing briefly the widely acknowledged Four Noble Truths of Buddhism (Smith, 1991: 99) in the light of Schopenhauer’s thinking.

- b.1. Life is suffering or dislocation (*dukkha*).
- b.2. The cause of life dislocation is ‘desire’ (*Tanha*).
- b.3. The cure of life’s dislocation is overcoming craving.
- b.4. There is a path to achieve this cure, the ‘eightfold path’: right views, right intent, right speech, right conduct, right livelihood, right effort, right mindfulness, and right concentration.

The first three Truths (b1-b3) are clearly expressed throughout Schopenhauer’s writings. Here are a few examples:

The striving we see everywhere hindered in many ways, everywhere in conflict, and therefore always under the form of suffering. Thus, if there is no final end of striving, there is no measure and end of suffering (Schopenhauer, 1909a, § 56: 399).

Accordingly existence is certainly to be regarded as an earring, to return from which is salvation (Schopenhauer, 2005c, § 48: 423).

The desire lasts long, the demands are infinite; the satisfaction is short and scantily measured out. But even the final satisfaction is itself only apparent; every satisfied wish at once makes room for a new one; both are illusions; the one is known to be so, the other not yet. Therefore, so long as our consciousness

is filled by our will, so long as we are given up to the throng of desires with their constant hopes and fears, so long as we are the subject of willing, we can never have lasting happiness nor peace" (Schopenhauer 1909a, § 38: 253-254).

c. Schopenhauer was a pessimist because he did not envisage a collective suffering-free existence for living beings, due to the inherent insatiability of the will and the subsequent selfishness of individual creatures.

d. Even so, the philosopher offered an individual salvation, through the aesthetic contemplation which dissociates willing from knowing. This is the Schopenhauerian analogue of the Third Noble Truth (b.3 above). The ideal pure-knowing subject is better able to perceive the Unity of the phenomena and the omnipresent suffering, and thus, to develop compassion and asceticism.

e. His path to salvation is not as disciplined and methodic as the Buddhist Eightfold Path of the fourth Noble Truth. Its core tool is 'contemplation' either of nature or art. While general and unmethodical, it is directed to appease desire, this being a central issue in existential practices, such as stoicism, and psychological treatments, such as contemporary cognitive therapy. After Schopenhauer, Sigmund Freud considered that sublimation through labor, intellectual work, and play was a socially accepted way to appease sexual impulses, these being central forces of the individualized will (Bittencourt, 2015).

f. Compassion is a common theme in Buddhist and Schopenhauerian thought, but asceticism is not. Compassion is now the subject of standard scientific investigation (Gilbert, 2014). As we argued elsewhere (Baptista, 2016), compassion and asceticism could be paraphrased as 'cooperation' and 'healthy austerity' to make these issues more accessible to current scientific research (Ridley, 1996). Sloterdijk (2013, 64) eloquently summarized this issue as follows:

It may be that his doctrine of the resignation of the Will must sound even stranger to the hunger for life among the inhabitants of the First World today than it would have to Schopenhauer's contemporaries, the progressive positivists and the world revolutionaries with their faith in humanity; yet today, as well, it reminds us that the unbounded hunger for life will not be able to solve the problems created by its free exercise by intensifying itself even more.

g. Schopenhauer would have appreciated and enjoyed the linguistic and epistemological analysis conducted by the contemporary so-called 'third generation cognitive science' who state that key philosophical concepts—such as time, the self, morality, events and causes—are profoundly embodied (Lakoff and Johnson, 1999). We strongly believe that reading Schopenhauer's work with universal-contemporary eyes could enrich humanistic and natural sciences.

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