

Qualiomics: The metaphysics of consciousness

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ABSTRACT: Assuming that conscious experience happens in the first-person perspective the study of its contents cannot be made by using the methods of empirical and formal quantitative sciences, since singular qualitative personal experiences remain outside their scope. Departing from the concept of Sentient Consciousness advanced in the ontology of Triple-Aspect Monism, I propose that lived experiences of qualitative states ('qualia') are subject to a new, non-scientific field of study, Qualiomics, corresponding to the Metaphysics of Consciousness. The main thesis of Qualiomics is that personal direct experiences of 'qualia' are experiences of the being of reality, not epiphenomena. The method of Qualiomics is knowing by means of lived experiences of feeling, instead of learning from revealed truth or from representations of experiences. In this paper I review some philosophical precursors, arguing that it has an affinity with Post-Modern Metaphysics, to be distinguished from Pre-Modern (Onto-Teo-Logical) and Modern (apriori thinking, focused on representations and clarification of concepts) Metaphysics. The being of reality is conceived as the Aristotelian *Katholou* that makes itself present when we have direct experiences of the Form of individual substances. Qualiomics is close to Existential Phenomenology, but not a revival of Heidegger and Merleau-Ponty, because it is necessary to take into consideration that scientific and technological achievements impact on our lives and expand the repertoire of 'qualia' that we can experience. It is also close to J. J. Gibson's Theory of Direct Perception, as well as Pragmatist and Enactivist approaches to consciousness.

KEYWORDS: consciousness; sentience; qualia; Aristotelian forms; first-person perspective; being of reality

1. Introduction

Departing from the concept of consciousness^[1-6], I propose that lived experiences of qualitative states ('qualia') are subject to a new, non-scientific field of study, *Qualiomics*, corresponding to the Metaphysics of Consciousness. The assumed concept of consciousness takes into consideration that Sentience, defined as 'the capacity of feeling', is a necessary requisite for the existence of conscious experience, together with the material body and the capacity of information processing. The three aspects (matter, information and feeling) were claimed to be conjointly sufficient to account for conscious experiences; this is the Triple-Aspect Monist thesis (TAM; see the investigations of Pereira Jr.^[2,5] and a bit of history of the thesis^[7]).

The main thesis of Qualiomics is that personal direct experiences of qualia are experiences of the Being of reality, not epiphenomena. ‘Qualia’ are the contents of lived experiences, or “what it is like to be”^[8]. “To be”, here, means both a lived experience and an ontological status. In the first case (a lived experience), the lived content corresponds to the concept of “secondary quality” in the framework of modern Physics and Metaphysics (see discussion in Pereira Jr. et al.^[9]). Since Galileo, these qualities are not allowed in the scientific domain, except as linguistic registers in ‘qualitative’ approaches, but can find their place in Metaphysics.

This paper is structured to show that Qualiomics underlies the whole history of occidental philosophy, beginning with Aristotle. In the tradition of Metaphysics, Aristotle’s work (specially Book Z; see the studies of Gill^[10], and Segalerba^[11]) is the main reference for the connection between perceived Forms and the Being of reality that composes individual substances. However, this approach has been misinterpreted since the Thomist fusion of Aristotelian philosophy with Neoplatonism and Catholic theology, fooling most of the interpreters, including Nietzsche and Heidegger, to think that Greek metaphysics was compromised with the ‘forgetting of being’.

We possibly cannot find in the history of occidental philosophy a single author who has put together all the pieces of the puzzle—as I understand it. For this reason, I present Qualiomics, the Metaphysics of Consciousness, as a new philosophical, non-scientific discipline, which surely can build on many contributions of the classics and contemporaries, as I hope to make clear in the following sections. Further investigation on the connection of this proposal with philosophical works in the fields of ethics and esthetics, and specific proposals by, e.g., Ernest Cassirer, Susanne K. Langer, Nicolai Hartmann and Edgar Morin, among others, is needed, in order to build the new discipline. The reader is invited to comment and criticize the proposal in the Forum for Philosophical Studies.

The sections of this paper are:

- 1) Epistemological notes on the Metaphysics of Consciousness.
- 2) Metaphysics of Consciousness as a philosophical discipline.
- 3) The concept of consciousness in Triple Aspect Monism and its Metaphysics.
- 4) Three phases in the history of Metaphysics.
- 5) From modernism to Post-Modern Metaphysics.
- 6) A post-modern view of Aristotelian Metaphysics.
- 7) The method of Qualiomics.
- 8) Related approaches.
- 9) Final remarks.

2. Epistemological notes on the Metaphysics of Consciousness

An important explanation of the epistemological status of Qualiomics should be given from the start, to avoid any anti-scientific interpretation. The “hard problem”^[12,13] of consciousness can be treated both scientifically and metaphysically. The scientific part, covered in my previous work^[14–17] belongs to the scientific domain I have called “Sentiomics”^[18–20], covering all types of biophysical and cultural correlates of personal conscious experiences, and results obtained by the sciences, e.g., Neuroscience, Biophysics, Psychology, Anthropology, etc., and, more recently, the interdisciplinary area of Neuro-Endocrine-Immuno-Physiology. Any result in this regard, empirical or formal, obtained from the third-person perspective, belongs to Sentiomics.

Heidegger^[21], anticipating Chalmers^[12,13], gave a detailed account of why causal explanations of

science do not explain ‘qualia’ (in his example, the smell of a flower). Agreeing with him, and other authors, I note that scientific experiments assume the existence of natural forms and their effects on the mind of the human observer, but do not causally explain the qualities of the Forms. As famously argued by Hume^[22], science establishes temporal connections between events on the basis of their regularities, but (I add) science does not enter the domain of the “what it is like to be”, ontologically, or perceiving something, e.g., ‘what it is like to be’ a rose, or ‘what it is like to be smelling a rose’.

Of course, asking ‘what it is like to be a rose?’ is nonsense, since we are not flowers, but asking ‘what it is like to be smelling a rose?’ is relevant to science, at least since Aristotle, who organized biological knowledge on the basis of the Form of beings, e.g., defining the natural kinds (species) to which organisms belong on the basis of their perceived Forms (i.e., their Morphology). All human sensory perception modalities are relevant to science, although the qualities of the Forms they capture from the world is assumed, but not explained, by their scientific descriptions and causal connections.

Even in the Aristotelian theory of four causes the quality intrinsic to Forms is assumed, but not explained. The Forms are expressions of the Being as Being (*Katholou*) in individual substances. The efficient causation is about how a substance can change another substance. The material causation is about how matter can individuate substances and induce movements (including transformations as “generation” and “corruption”). The formal causation is about how the Form dynamically determines the qualities of substances; the activity of the Form is called “energeia”. The final causation is about the direction of the whole process of the *physis*, aiming to the perfection of the First Mover, which is pure Form, without the need of matter, and, therefore, without movement (Aristotle^[23,24], comments in Guthrie^[25] and Aubenque^[26]). In all these modalities of causation, the qualities of the Forms are not described or explained, but assumed.

Qualiomics covers conscious contents in the first-person perspective, the lived experience of Forms, which are not within the scope of any scientific method, but can be treated in Metaphysics. For instance, we can scientifically study the factors, internal and external to the living body, that determine the taste of wine, but not the singular taste itself, for each person tasting each sample of each wine at each time and place. In other words, experienced personal contents of conscious experiences are singular. My claim is that qualitative conscious contents—considered to be not epiphenomena, but instances of elements of an ultimate reality—can be treated metaphysically, by means of analogies, symbolic forms (in the sense of Cassirer^[27] and Langer^[28]) and other compatible approaches (as Hartmann^[29] Morin^[30,31]), and also, tangentially, by investigations in Ethics and Esthetics and Philosophies of Art and Religion, aiming to grasp features of singular qualitative experiences and communicate it to other persons. Of course, if, in the future, scientists find a method to study qualia scientifically, then the distinction between Sentiomics and Qualiomics will collapse, because it is based on the fact that today we cannot study qualia scientifically.

In the development of Heidegger’s philosophy, the concept of *Erlebniz* (the lived experience of the temporal Being) is central to his metaphysical approach. It refers to “the ‘taking place’, unfolding, enacting, as being”^[32] of human experience. It is not about qualia as sensory data, as the term was used in the context of Logical Empiricism^[33], but about the ‘qualia’ of lived experiences, in the first-person perspective. According to Lepadatu:

“Heidegger has only one thing in mind: to take the lived experience precisely in the same way in which it itself presents from itself. To understand it in this way is by no means the same thing as finding causes, conditions, or preconditions for such an experience. To find causes for lived

experiences would amount to reifying them, to explicating them as ‘things’. Heidegger, by contrast, wants to understand the ‘pure motives of the sense of pure lived experiences’^[32].

“The lived experience is not ‘a mere entitative natural occurrence’. The lived experience is not a thing that ‘exists brutally’ a thing that comes into and later out of being. My lived experience is ‘something new, not of the kind of thing-like, object-like entities’; It is not a process in the usual sense...but the event of coming into its own [*Er-eignis*]”^[32].

This focus contrasts with the scientific approach, elaborated from the third-person perspective. The scientific approach to consciousness is dynamic and complex (see, for instance, the work of Pereira Jr. et al.^[34]), involving the physiological concepts of homeostasis, allostasis and homeorhesis^[35] and patterns of interaction with the environment (as feeling dizzy in a virtual roller coaster^[36]). However, all these factors, although determining the quality of conscious experience, are not contents of experience themselves; neither Ideas—as in Husserl^[37]—nor representations of experience are the lived contents of ordinary conscious experiences. They are, instead, further elaborations on experiences, made by philosophers and sages. Sensations, feelings, affective states in general, including social emotions, are the central features of conscious experience, according to Damásio^[38,39] and my own approach^[3-5].

3. Metaphysics of Consciousness as a philosophical discipline

What would be the place of a Theory of Consciousness in contemporary culture? Is it strictly scientific? Is it religious? Or is it a branch of philosophy? The need to consider experience from a first-person perspective places the study of consciousness one step beyond the modern scientific method, without contradicting it. Understanding consciousness requires feeling, and learning from what we feel to build knowledge, understood as justified belief. This belief is distinguished from religious belief. Religion is mainly based on faith, as Saint Augustine told us. Theology is often an attempt to give a rational justification for faith, but it does not replace faith. In philosophy, we do not make use of religious faith. The philosopher may have religious faith, but he/she does not bring it to philosophical argumentation.

Although the Theory of Consciousness is close to philosophy, there is no subject with this name in the undergraduate and postgraduate philosophy curriculum. There are disciplines—such as Theory of Knowledge, Esthetics, Ethics and General Metaphysics—that discuss the functions of consciousness, but do not approach consciousness in a systematic way. The Metaphysics of Consciousness subject, in this curricular context, would be an expansion of the Theory of Knowledge, because cognition is only a part of conscious activity; conscious activity also necessarily involves feeling and acting, which are based on experiences that may not be strictly cognitive. Perceptual ‘qualia’ (e.g., the sensation of color), basic sensations (such as hunger, thirst, heat, pain and pleasure), emotional feelings (such as joy, sadness, anger, hate, love) and the will to act are experiential contents in which explicitly formulated knowledge—verbally or by other means—is not a necessary component, at least for non-human animals.

In search for an adequate academic approach to lived qualitative contents, I propose the discipline Metaphysics of Consciousness, focusing on the contents themselves, which have been called ‘qualia’ in the literature. The term ‘qualia’ is also used to refer to sensory data^[33], but in the Qualiomics discipline the usage is restricted to the contents of singular lived experiences. This discipline, if successful, would take place of current nihilist and relativist views of the theory of consciousness, which have not contributed to the progress of knowledge, because they consider that ‘qualia’ are ineffable—qualities to

be just experienced, but not theorized about. In a way similar to Kant's distinction between scientific reason and practical reason, I suggest the distinction between Sentiomics, the scientific study of the capacity of feeling necessary for conscious experience, and Qualiomics, the metaphysical speculation and knowledge construction about the elements (the Forms) of being that manifest themselves in our lived conscious experiences.

4. The concept of consciousness in Triple Aspect Monism and its Metaphysics

My research in philosophy of neuroscience gave rise to TAM, in which I identified, from personal experience (in the first-person perspective^[8]), combined with an extensive review of scientific results (in the third-person perspective), the three fundamental and jointly necessary aspects for conscious experience: the materiality of the living body, the dynamic patterns of information that signal events in the world, and sentience (the ability to feel, generating sensations, affective states, emotions and meaning of life), through which people respond to the events they experience and direct their behavior^[3-5]. The search for unity in diversity leads to the metaphysics of TAM, focusing on the Being that generates the three aspects and is effective in the social actions of embodied and situated consciousnesses.

The path followed in the Philosophy of Neuroscience led me to investigate species-specific universals, which are the biological Forms that enable life and the ability to feel, historically referred to in the origin of biological science itself from Aristotle's empirical morphological studies. As in the study of Yannaros^[40], a connection was established between research in biology and metaphysics in the post-modern era (Post-Modern Metaphysics, abbreviated PMM), as the so-called "neural correlates of consciousness" would be dynamic patterns of the nervous system, or that is, aristotelian Forms, composing the encompassing (from the Greek *Katholou*, see <https://www.britannica.com/topic/katholou>): the being that constitutes the qualitative principle of all hylomorphic substances.

According to Yannaros, "A metaphysical interpretation and understanding of the world is not scientifically accessible, nor does it exclude science. It is a new way of cognitive approach to the world, a transition from a (as far as possible) neutral observation of the world to a personal relationship with the world"^[40]. The difference between PMM and Aristotle would be this "personal relationship", which is identified with the "first person perspective", while in Aristotle the search for the first principle and/or the causes of changes would be done through an impersonal process of abstraction, which is close to what we currently call "third person perspective".

The concept of consciousness here assumed, based on Velmans' Reflexive Monism^[41,42] concerns the reflexivity of the Being of reality, through which certain finite, spatio-temporally located individual substances (here called "persons", a concept includes human and non-human beings, that is, all systems that have the capacity to feel what happens around them) (self-)organize within themselves, perceive, respond affectively, re-elaborate cognitively and guide their actions based on their own constitutive elements of being.

Conscious experience is conceived as the process of the Being of reality reflected in itself, from the perspectives of spatio-temporal individual substances (instead of the Aristotelian term "substance", in contemporary thought we use "system" or "agent"). In this theoretical context, perception is a process in which a person, who is in the being, perceives other entities that are also located in the being. When

we become perceptively aware of an object (for example, we are seeing a giraffe), there is no giraffe in miniature inside our brain, but just a pattern of information, which generates the perception of a giraffe, with all its qualitative properties.

According to Velmans' Projective Theory, expanded by Pereira Jr.^[4], this "mental image" is projected to the referent, when we interact with the environment. The phenomenal image of the giraffe is projected to the noumenal giraffe, which is located outside the nervous system of the conscious person, so that we attribute to the referent the qualities of the mental image constructed in our nervous system, from the signals captured from the noumenal giraffe itself. This is a reflexive process, but not a 'self-referential' one, since the concept of self-reference belongs to the domain of the philosophy of (representational) language, and, therefore, is compromised with modern metaphysics. Velmans' Reflexive Monism is about a process that involves the lived experience of modes of the being by a person who also belongs to the Being. The result of a successful projective process is a partial isomorphism between the Form of the perceived system and the Form of the lived experience of the perceiving person.

The Metaphysics of Triple-Aspect Monism derives from the problem of the unity of aspects: which principle could manifest itself as matter, information and feeling? This is a speculative investigation, in which we seek to go back in the process of reality to a founding principle. Reality is unitary, even from the perspective of natural sciences, in which it is experimentally noted that physical processes are "entangled"; that is, there is a non-local and non-causal interaction of particles at a distance (see, for instance, Ursin et al.^[43]). For TAM this unit was conceived as the Aristotelian *physis*^[2] and later attributed to a neutral primitive state of being, Energy—with a capital E^[6]. "Neutral" here means that the principle is not Idealist or Materialist, but consists of an indeterminate Being, like Lao-Tsé's "Tao" or Anaximander's "Apeiron", having the potentiality to generate the three necessary aspects of consciousness: matter, information and sentience.

The primitive state of the Being of reality, from which everything is derived, was called Energy with capital E^[6] to distinguish it from the purely physical energy. Its manifestations are trifurcated into 3 aspects, matter, information and sentience (the capacity of feeling). From the conjunction of the 3 aspects, conscious experience emerges. When conscious experience is effective, the sentient capacity is actualized in lived experiences of feeling. The derivation of the 3 aspects from Energy is done according to the following steps^[6]:

- 1) Matter = Condensed energy, according to Einstein's equation;
- 2) Information = Energy distributed in space, negative entropy;
- 3) Feeling = Energy distributed over time, according to certain parameters of frequency, amplitude and phase (psychophysical waves).

Non-conscious biological processes, such as those that make up metabolism, and also the mental processes that we call "pre-conscious", contain dynamic patterns of Energy ('drives') that motivate human behavior. They occur in living tissue, more specifically in the nervous system, generating contents, the Forms, which are experienced consciously. The non-conscious biological processes are subjects for Sentiomics, while the contents of conscious lived experiences are subjects for Qualiomics.

Modern Vitalism assumes that life is engendered through a force that acts as the final cause, directing the conduct of living systems, including in terms of Ethics. Against this possible interpretation, I defend the concept of Self-Organization of Life, in which purposes (and ethical commitments) are emergent, and not pre-existing, that is, they are established by the people themselves.

Living systems, through the free interaction of their most elementary components^[44], and not through a force acting on them, generate their own emergent goals. The three aspects—which exist in a more fundamental way than life or the mind, as they derive directly from primitive state of reality (Energy)—are the basic components of the processes of life and mind (conscious and unconscious).

5. Three phases in the history of Metaphysics

Metaphysics, as a philosophical discipline, is based on the distinction between Being and phenomena. Being is the founding principle of reality, the generator of the phenomena that manifest themselves in our experience. Metaphysical speculation seeks for principles that makes possible an understanding of the process of becoming of this reality, and phenomenal manifestations. Phenomena are lived experiences, within the Being, from a human perspective. Entities are expressions of the being in the phenomenal domain.

Roughly speaking, we can identify metaphysics, *latu sensu*, with the study of being, which includes three subareas:

a) Ontology, which studies the entities that manifest themselves in human experience, composing our concept of reality. This concept of ontology has currently been widely used in computational languages, to designate the domain of objects that a program maps, and in this case it is a representational usage. Triple Aspect Monism (TAM), in its original formulation, is an ontology, seeking - based on our experience (which includes the world formatted by techno-science) - to identify aspects of the Being of reality that are necessary and jointly sufficient to characterize conscious experience. For this reason, TAM did not focus on the Being as being, but only on its modes of actualization in experience;

b) *Stricto Sensu* metaphysics, which studies the principles that determine such reality. Epistemologically, a Realist and Monist approach corresponds to the investigation of the Being that appears in experience as the Being of reality itself, not as a mere appearance. Therefore, a Realist Monism assumes that ‘phenomena’ and ‘noumena’ are expressions of the same principle(s). Although we use symbolic language to refer to such principles, it does not follow that they are representations of reality; on the contrary, the intention is that they refer to the very Being of reality. The Metaphysics of Consciousness, in the Realist Monist perspective, focuses precisely on the temporal being (in its temporal process of becoming) that generates ‘qualia’ in the first person conscious perspective (that Nagel^[8] called “what it is like to be”). This investigation may lead to three paths: Idealist Monism, for which the principles are ideal; Materialist Monism, for which the principles are material, and Neutral Monism, the view I adopt here, for which the principles are neutral, generating both aspects of reality, ideal and material, and something more: sentience, the capacity of feeling;

c) Existential Phenomenology, which studies how entities manifest themselves in phenomenal experience, from the first-person perspective, corresponding, in my interpretation, to the perspective of the Heideggerian ‘Da-Sein’. The original formulation of TAM, as well as Velmans’ Reflexive Monism, include the phenomenological approach, focusing on the contents of consciousness in lived experiences, but not on the singularity of personal experience.

The modes of effecting contents in qualitative personal experiences cannot be categorized, due to the absence of forms of comparison and generalization of individual singularities (although they are intersubjectively evocable through symbols, as occurs in art and religion). Therefore, the singular conscious experiences of persons are not studied in Phenomenology, but in Metaphysics.

There are different concepts of Metaphysics in the History of Philosophy, which I mention briefly, with the aim of guiding the reader to the issues addressed here.

Aristotelian Hylemorphism can be understood as constituting a double-aspect Monist Ontology: Form is the aspect that determines the quality of substances, while matter establishes their individuality. The third aspect necessary for consciousness in TAM, sentience, is not made explicit in Aristotle, but is implicit in the function he attributes to the heart. Unity in diversity (“‘to be’ is said in many ways”) would be achieved through the all-encompassing (*Katholou*), a principle that is revealed in the experience of the form of individual substances. The First Engine is ‘Form without matter’ which directs (establishes a goal for) the becoming process of the Being. According to Aubenque^[26], the Engine would be designed by (human) consciousness; it would be motivated by the desire for perfection.

The confluence of the Philosophy of Neuroscience with Metaphysics, within the framework of Aristotelian Hylemorphic monism, assumes Aubenque’s^[26] interpretation of the “Problem of Being” in Aristotle, relating it to what is experienced, to the detriment of the transcendent Being assumed in the Thomist interpretation. PMM, in this context, consists of a rescue of Aristotle’s metaphysics, which was altered by Thomist philosophy, and thus criticized in the modern period. Heidegger, when criticizing the “forgetfulness of being” in Aristotle, targets the Thomistic interpretation, not the original Aristotelian philosophy, which was focused on the multiple instantiations of the Forms of a unitary being, in individual self-subsistent substances.

The three historical stages of Western metaphysics, after the Greek classical period, would be:

First stage: Pre-modern metaphysics, or Onto-Theo-Logy: God as the foundation of being and knowing;

Second stage: Modern metaphysics, focused on the representation of being, via the cartesian analytical method and scientific theorizing based on the “Principle of Reason”^[21];

Third stage: Post-Modern Metaphysics, focusing on the qualitative experiences of Being, from the first-person perspective, historically departing from Existential Phenomenology^[45–47].

6. From Modernism to Post-Modern Metaphysics

In Kant, the modernist inspiration is very subtle, as in the distinction between, in the one hand, ‘a priori’ transcendental forms, such as space and time, the categories of understanding, and, on the other hand, the “matter” originating from sensitive experience, which would come to fill such forms in the cognitive act. At this moment, transcendental philosophy emerged, which would inspire—and be surpassed by—Husserl’s Phenomenology of temporal consciousness, which leads to the existential philosophy of Heidegger and Merleau-Ponty, in which the subject-world and mind-body dichotomies are, respectively, overcome.

The first systematic approaches to PMM are from Hegel and Husserl, but still within Idealist frameworks, assuming that the manifestation of Being for the human person would occur within the cognitive process. In the Phenomenology of Spirit, Hegel starts from a reconstruction of the paths of the mind in Western history, which would lead us to place rationality as the foundation of reality. Hegel identifies historical figures to conceive a dialectical reason, addressing both the Ideas themselves and their historical implementation, passing through their negation in Nature and resuming themselves as Spirit. The dialectical process, in his Encyclopedia, follows an order consistent with the philosopher’s

idealistic assumptions, starting with the Ideas, possibly located in a platonic world, which are externalized in Nature, and then, by “negation of negation” constitute the Spirit, the moment in which self-awareness is established, completing the process through which the ideal being becomes effective.

Before Existential Philosophy, the critique of a transcendent foundation of reality had already been carried out in German Idealism by, among others, Hegel himself; however, their alternative foundation is based on Idealist Monism. Their philosophical theorizing is based on an ideal Being, conceived in different ways by the different philosophers of that movement. The underlying idealist assumption is that *such a Being* would be, in the last analysis, composed of Ideas or Thoughts, even when it manifests itself as brute Nature. These variations of Idealism are compatible with contemporary Panpsychism, but not with TAM, which requires an undifferentiated and “neutral” primitive being, as we will see in the next section.

The progression from ideas was objected by Marx and Engels, who reinterpreted Hegelian dialectics in a Materialist way, identifying natural and historical processes as determinants of Ideas (forms of consciousness) developed by individuals and social classes. The Marxist conception of the “Dialectics of Nature”, by assuming the continuity between Nature and History, would be an interesting interdisciplinary project; however, it is known that efforts in this direction, by Engels, due to several limiting factors at the time, did not do justice to the complexity of the theme, remaining as an indicator of the work yet to be done.

Darwin’s evolutionary theory inspired a biological concept of the human mind, developed by the author in his book on emotions. Baldwin^[48] stood out for integrating Darwinian evolutionism with empirical research in Developmental Psychology, enabling a better understanding of the interrelationships of phylogenetic and ontogenetic processes (‘phylogeny determines ontogeny’, which in turn influences phylogeny through the “Baldwinian effect”—see Deacon^[49]). Whitehead^[50], assuming the process of reality, in a similar way to the evolutionary approach, dealt with important issues pertinent to a scientific-based Ontology, seeking to encompass concepts from the Theory of Relativity and Quantum theory. He conceived of reality as a process composed of singular “occasions of experience”, in which elementary “feelings” become manifest. The “occasions of experience” are possibly close to Heidegger’s concept of *Er-eignis*; an approximation of Whitehead and Heidegger in this regard (as developed by Cooper^[51]) is relevant to the proposal of the paper.

Husserl, in turn, conceives a method based on the imagination of the variations that Forms (conceived as Ideas) can appear, in order to determine their “essences”. In this method, phenomenal experience has epistemic value, as it enables flights of imagination, but the non-cognitive dimensions of human experiences remain outside the focus of philosophical interest, at least until his consideration of the “world of life” in the book “Cartesian Meditations”^[52].

The consolidation of PMM is due to Heidegger. In the book “Being and Time”, the philosopher deals with concrete human existence, describing experiences as anguish, work and care, which are intrinsically temporal phenomena, experienced by all people. The ‘Being as being’ (not ‘essences’ in the Thomist sense of the word) would not be a transcendent entity, but is “un-veiled” in phenomenal experiences. In the book “Time and Being”, the philosopher adopts a more radical stance, starting to conceive the Being as temporality itself, not as a collection of entities that would present themselves to the living person, and/or objects of representations, and/or causal explanations in the sciences, aiming to a technical or technological domain.

With the spectacular scientific and technological progress of the 20th and 21st centuries, a new

field opens up for philosophy, the analysis of concepts implicit in science and technology, and, more important, the human experiences they provide. This context requires the search for interdisciplinary links between philosophy, science, technology, common sense and other forms of cognition, with the aim of understanding the principles that govern the evolving reality and the lived experiences of people. The scientist develops concepts and the technologist applies them to the development of new products for human use, but these professionals are not dedicated to a systematic analysis of them. This task belongs to interdisciplinary philosophers.

7. A post-modern view of Aristotelian Metaphysics

The roots of PMM are found in Aristotle. With Hylomorphism, Aristotle^[23–25] introduces the conception that all beings in Nature (i.e., the “sublunary world”) would be composed of Form and matter. This is the root of the Monist ontological principle of double aspect, which enabled him to overcome the dilemma between the Materialism of pre-Socratics and the Idealism of Socrates-Plato.

To conceive movement and transformation in nature, Aristotle synthesized the main—and opposing—central ideas of Parmenides and Heraclitus, in his Theory of Potency and Act. The Stagirite’s central thesis, in this regard, would be that the potential states of nature constitute a necessary presupposition to understand the movement and transformations of natural beings. In other words, there are aspects of Being that may, at one time, not manifest themselves phenomenally in the entities to which we have access, but may manifest themselves at another time. This ‘showing and hiding’ of being can be interpreted both ontologically, as a characteristic of the Being itself, and epistemologically, as a limitation of human knowledge. In Parmenides’ Ontology, the first interpretation is blocked a priori, contradicting PMM, which is based on a posteriori interpretations.

However, as pointed out by Tricot (in his comment^[23] to Aristotle’s *Metaphysics*), for Aristotle potential states constitute a fixed repertoire. This conception of ‘closure’ of natural processes, which would reach its extreme in Laplacian determinism, was criticized by Hume. In Leibniz, an alternative view was made clear, that there are possible worlds that are not actualized—since the world we experience would correspond to the best of those possible. In this way, a modal aspect opens up in the history of philosophy, already in Spinoza’s view of the God/Totality. Modalities become central in PMM, to interpret the dynamic relationship (the “game”, as interpreted by Axelos^[53]) between the Being and its phenomenally experienced entities.

In Spinoza, Cartesianism in a certain sense flows back to Aristotelian Hylemorphic Monism, by conceiving mind and body as modes of the same substance. The concept of nature as Totality, adopted by Spinoza, is broad enough to contain not only the physical domain, but also the mental and divine. We can consider Spinoza’s philosophy an anticipation of the proposal systematized here; however, without the necessary detail for its contemporary use, which requires an interpretation and integration of results from scientific theories, covering branches of physics, brain and mind sciences.

In the PMM proposal adopted here, the starting point of philosophical reflection ceases to be thought as representation (the activity of the cartesian ‘thinking substance’), moving to the ‘here and now’ of personal conscious experience, that is, to the existential dimension of the human person, which, in Merleau-Ponty’s version of phenomenology^[47], focuses on the experiences of a corporeal being. In the last phase of his philosophical work, Husserl^[52] had already conceived alterity—that is, the relationship with the other—as more fundamental than the thought a person thinks about herself, along cartesian lines.

In PMM, as the Being remains effective in its manifestations, there would not be a complete split between (in Kantian terms) the ‘phenomenal’ and the ‘noumenal’, that is, we cannot know the Being of reality directly, but we can know it as it manifests itself in the phenomena that we experience. A possible metaphysical paradox may arise here^[2], since the phenomenal domain seems to be contained in the noumenal and at the same time it seems to be different from the noumenal. A solution for the apparent paradox comes from process philosophy^[50] in which the being of reality is conceived as a process of becoming, in the line of the Aristotelian Theory of Potency and Act. In this view, the ‘phenomenal’ domain is conceived as an actualization of potentialities present in the ‘noumenal’ domain. The difference between them is a difference within the Being of reality in the becoming process, that is, the being does not obey Parmenides’ ‘Principle of Identity’; it is not identical to itself in two temporal occasions.

We then start from the phenomenal domain to investigate the Being, but this is not done with ‘a priori’ procedures, as in the Kant of the critique of pure reason. It is an investigation of being based on phenomenal experiences, that is, ‘a posteriori’. Using Kantian terms, without sharing his apriorism, we can say that Being would be the “condition of possibility” of ‘phenomena’. In other words, the PMM philosopher asks himself: what aspects of being would be necessary for the experienced ‘phenomena’ to be as they are? Rather than looking for principles in a “transcendental subject”, PMM looks for them in the lived experience of conscious persons.

PMM is not concerned with representing entities, but with offering interpretations of lived phenomena that reveal their conditions of possibility within a unitary being. In this way, PMM approaches Existential Hermeneutics (for example, Hans-Georg Gadamer’s work in the Philosophy of Medicine), without, however, identifying itself with this approach, which is dependent on methods of analytical philosophy that still circulate in the universe of representations. The aspects of being studied by PMM are concrete existential ones, which are also of interest to psychoanalytic practice. In this way, Psychoanalysis would be a theoretical-practical domain par excellence of PMM (as suggested by Manuel Moreira da Silva, private communication), which does not exclude the existence of other domains, such as, in our case, the Theory of Consciousness, in which TAM is inserted. As the unitary Being in its active principle encompasses everything that exists (that is, everything that manifests itself in phenomena), then every phenomenal aspect relevant to human experiences must have its generating principle within the scope of the Being.

If the Being is temporal, or identifies with time itself, then it cannot be represented as totally actual, in the style of Parmenides. It is necessary to conceive the Being as a process in which ‘expansions’ and ‘contractions’ occur, that is, certain aspects manifest themselves with greater intensity and others remain recessive, on different “occasions of experience”^[50]. We can also rescue the Aristotelian conception that “‘to be’ is said in different ways”; in the Organon, the Stagirite would be referring to the uses of the verb “to be”^[26], but in any case he was already placing a position closer to Heraclitus than to Parmenides, attributing dynamism and variety to the Being.

I propose that the study of Aristotelian Forms can be done both from a scientific perspective, within the scope of Biophysics, composing the science entitled Sentiomics, and from the perspective of first-person experiences, composing the Metaphysics of qualities, entitled Qualiomics. The latter would be a non-scientific area, typical of PMM, resuming Aristotle’s original approach, to investigate the unity of Being within the diversity of entities. The unveiling of the being and the constitution of the vital sense would take place in the personal experience of ‘qualia’, which makes it possible to move from the current philosophies of mind and consciousness to metaphysics.

8. The method of Qualiomics

While in Onto-Theo-Logical pre-modern Metaphysics knowledge is constructed on the basis of God's revealed truths, and in modern Metaphysics knowledge is based on the clarification and analysis of mental representations and related concepts, in Post-Modern Metaphysics knowledge is based on lived experiences of feeling, addressing the being of reality from the first-person perspective. The method of Qualiomics is knowing by means of lived experiences of feeling, instead of learning from revealed truth or from representations of experiences.

Learning from experience, or, in Aristotelian terms, the 'aposteriori' investigation of modalities of natural kinds that underlie conscious experiences, partially corresponds to the proposal of Existential Phenomenology. While in Husserlian Phenomenology eidetic variations search for ideal "essences", in Existential Phenomenology 'aposteriori' investigations look for kinds of lived contents. Qualiomics moves beyond the identification of types or categories of lived experiences, and advances into the identification of modalities of Forms present in singular experiences. For this reason it is not appropriate to refer to "essences" or "categories" in Qualiomics, but to *singular modes* of Forms of Being (as suggested by Manuel Moreira da Silva, private communication).

This method overcomes nominalist ('substratum' theories) and empiricist (Humean 'bundle' theories) approaches to Metaphysics, and their contemporary outcomes (Nihilism and Post-Modernist Relativism). According to Loux^[54],

"Aristotelians agree with bundle theorists in thinking that we must look to the universals associated with a concrete object in giving an account of its being...(but) they distinguish between the core being or essence determined by the kind that marks out the particular as what it is and the universals that lie outside that core being. But Aristotelians also find an important insight in the substratum theory. They agree that the attributes associated with a concrete particular require a subject, but they take the substratum theorist to be wrong, first, in constructing that object as constituent of the concrete particular and, second, in characterizing it as bare. Aristotelians insist that it is the concrete particular itself that is the subject of all the universals associated with it; it is what literally exemplifies those universals".

In the Aristotelian approach, self-subsistent individual substances are the concrete basis of all qualities^[25]. There is no determination from universals hierarchically placed "above" individual substances, as in Platonism or Thomism. This metaphysical position is relevant to the method of Qualiomics, since knowledge of conscious contents can only be constructed within the first-person perspective of living individuals (as claimed by Pereira Jr. and Ricke^[1]).

As the types of lived experiences are multiple in everyday life, the sources of knowledge relevant to Qualiomics are varied. The various ways of feeling, from basic sensations (image, sound, taste, smell, touch) to affect, emotion and finding the meaning of life, are constitutive of Qualiomics. Theoretical work is required to build a systematic knowledge on the basis of modalities of Forms present in singular conscious experiences, since Qualiomics is not irrational. Besides the work that individuals can do alone, there is also an extra effort to build a philosophical academic discipline on the Metaphysics of Consciousness. Conscious contents are, of course, present in all forms of lived experiences, including introspective states, meditation, elaboration and fruition of works of art, practices in sport, traditions and religions. These personal experiences cannot be fully communicated to other persons, but there are some strategies to share this type of knowledge in contexts in which people become intimate of each other. This intimacy, absent from scientific communication, is a requisite for successful sharing of lived

experiences, composing a consistent body of metaphysical knowledge.

In religious and mystical practices, the word ‘spirituality’ is used to refer to a domain of human experience, usually connected to a transcendent God by the practitioners. In the context of Qualiomics, the ‘spirituality’ domain is closer to the approach of Harris^[55], for whom spirituality can be separated from the faith in a transcendent God or ‘intelligent designer’ of nature. This is possible because the focus is not on an external entity, but on the lived experience of human persons. The reality of an external God or intelligent designer is not necessary for people having spiritual experiences, e.g., listening or playing music.

Heidegger famously identified one way to communicate the unveilings of the bring by means of poetry. This connotative use of language that requires the reader to fill the content with his/her own personal experiences. The same strategy is used for instance in religion, when the practicing person is asked to fill the cognitive gaps with personal faith. In contemporary arts, the creators of e.g., paintings make them without any intentional explicit meaning, forcing the viewers to project their own qualia into the artwork. This may be considered as an indirect way of communicating qualia.

9. Related approaches

In the history of philosophy, Qualiomics possibly has a first achievement in Goethe’s circle of colors, an image that represents visible colors by means of an analogy. Although this type of image is a representation, it is a representation that displays an isomorphism with the form of the phenomenon. This type of analog information has been an issue of debate since the 1980, within the connectionist paradigm in information sciences, leading to contemporary neural network technologies such as “deep learning”. In these learning strategies, the information technology moves beyond the “digital” linguistic representation typical of modern metaphysics, to incorporate a knowledge of Form, in a way that is not completely different from Post-Modern Metaphysics. However, as machines are not able to “feel what happens” (in reference to Damásio’s view of consciousness as “the feeling of what happens”^[39]), the knowledge of Forms in the machine’s perspective is severely limited to pure information processing, without lived felt meanings. As I have recalled before in this paper, Aristotelian Forms can be approached both from first and third-person perspectives; machines are limited to the machine equivalent of the (human) third-person perspective.

While the proposed PMM requires a new synthesis to be recognized as a field of knowledge, I acknowledge previous efforts, as in the Anthroposophy of Rudolf Steiner, based on Goethe’s philosophy, extending it to encompass Christian, Theosophical and Astrological insights into educational, agricultural, ‘sociocratic’ and religious practices. Another relevant field is Psychoanalysis, building on Freud’s hypotheses about the processes of Id and the Ego, into Jung’s theory of archetypes and symbols, generating lived singular conscious contents to be analyzed in clinical interactions, in semi-personal relations that take special care with the phenomenon of transference.

The closest approach to Qualiomics in the history of science is, possibly, Wilhelm Wundt’s effort to introduce the third-person perspective in introspective investigations, making ‘observations’ of mental states, followed by the ‘structuralism’ of Edward Titchener^[56], with the purpose of carrying a taxonomy of basic types of conscious contents, focusing on clear and distinct elements and their combinatorial laws. While Qualiomics—as the other omics from the biological field of knowledge, such as Genomics and Proteomics—aims to unveil kinds of patterns (genes in the case of Genomics, proteins in the case of Proteomics), there are some important differences between Qualiomics and the

‘structuralist’ school of introspection in Psychology:

1) Methodological: While Wundt had a formation in Experimental Psychology and Physiology, and tried to bring their methods to the study of consciousness, Qualiomics builds from the first-person perspective. Of course, the first-person perspective was not inoperative in Wundt’s work, since any scientist departs from his/her own first-person perspective to construct an “objective” description and explanation of processes; however, these scientist did not recognize the roots of the knowledge they obtained and tried to fit it in the framework of modern science. Titchener changed part of Wundt’s method, emphasizing the use analytical procedures to interpret reports of trained introspection practitioners in his lab^[56], but this change is also within the third-person perspective, since the analysis is based on the reports, instead of the conscious experiences themselves;

2) Conceptual: While structuralists investigated sensations and simple feelings, understood as the “atoms of the mind”, the elements or ‘units’ that combine according to psychological laws to generate conscious states^[57], Qualiomics studies lived experiences in the sense of Heidegger (*Erlebniz*) to unveil dynamical Forms in singular lived experiences of a person interacting with her physical, social and cultural environment;

3) Metaphysical: While Introspective Psychology investigates mental states, Qualiomics seeks for natural kinds, the Forms of expression (Er-eignis) of the Being of reality in singular human conscious experience.

Several practical approaches in philosophy and science also cover issues relevant to Qualiomics. The most interesting is possibly J. J. Gibson concept of “affordances”, the practical patterns that emerge in the relation of agents and their environment. Although affordances are not completely conscious, there should be a component of it that reaches the agent’s consciousness as a qualitative state that guides action in the environment. In Peircean Pragmatism, the ‘Thirdness’ domain seems to include signs that guide action, eliciting qualitative states from the Firstness domain to guide the agent in the practical arena. Also, in the neurosciences of action, the Enactivist paradigm assumes that conscious meanings are shaped by the interaction with the environment, involving feedback signals (‘corollary discharges’) in the nervous system; these meanings are singular for each person in context, since they are functions of the ‘here’ and ‘now’ of the person and her contingencies.

Interpreting my own (first-person) experience of becoming dizzy on a virtual reality roller coaster ride, I proposed that the interplay of endogenous and exogenous factors can be summarized in three phases:

1) The affective drive motivates the person to conceive and anticipate events that fulfill her expectation of getting satisfaction;

2) The frontal-limbic system, including the anterior cingulate and the insula, use ‘interoceptive predictive coding’ to promote dynamical adaptation. The adaptive process operates with homeostatic ‘set points’ or ‘attractor regions’, determined in the epigenetic process of each individual;

3) The temporal process of tuning the prediction with the direct perception of affordances (incoming perceptual and motor dynamic information patterns), combined with cortical inhibitory cognitive control, generates conscious feeling patterns”^[36].

In previous publications, I have discussed with colleagues, among other issues relevant to Qualiomics, the topics below (see <https://www.researchgate.net/profile/Alfredo-Pereira-Junior/research>):

- How meditation is related to consciousness studies;
- How the concept of Self emerges in introspective states;
- How the lived experience of time was plotted in a diagram by Husserl;
- How “feeling what we eat” influences our feeding behavior;
- The use of diagrams, drawings and symbols to communicate lived experiences;
- The similarity of musical and conscious temporal patterns.

All these efforts can be summed and integrated to make a synthesis of the metaphysical, non-scientific—but rational—cognitive method of Qualiomics. However, the Forms of lived singular conscious experiences may be elusive to a purely rational mind, requiring extra ingredients to be successfully communicated; this may be why the subject of Qualiomics has been approached mostly by art and religion, in the history of humanity. How to bring it to a properly metaphysical discourse is a challenge for the philosophical discipline here proposed—the Metaphysics of Consciousness.

Besides academic studies, Qualiomics may be useful to critically approach the mass media and social networks culture. Besides the ‘Modernist’ analysis of correspondence between representations and facts (the issue of ‘fake news’ against ‘true information’), in an interdisciplinary setting—when combined with Sociology, History, Anthropology, Political Science—Qualiomics can afford an analysis of the authenticity of the perspective assumed by people in regard to what they really are. An authentic life was also the preoccupation of Heidegger when contrasting the ‘re-veiling’ with the ‘un-veiling’ of the Being. An authentic life would be based on ‘un-veiling’, while unauthentic lives would be based on ‘re-veiling’.

Post-Modernist ‘Relativistic Perspectivism’ may be worse than modernist ‘fake news’. We have today urban people assuming the perspective of native peoples, “transhumanists” assuming the perspective of super-humans, and even people (of the human species) assuming the perspective of non-human animals (not on fiction, as the spiderman and batman, but in real life). Philosophically, this is possibly a type of self-deception. As Nagel argued in “what is it like to be a bat?”^[8], the first-person perspective is the perspective of what the person is. Since we’re not bats, we can’t have the perspective of bats.

10. Final remarks

Departing from the concept of Sentient Consciousness advanced in Triple-Aspect Monism, I propose that feeling experiences of qualitative states (‘qualia’) are subject to a new, non-scientific field of study, Qualiomics, corresponding to the Metaphysics of Consciousness. The main thesis of Qualiomics is that personal direct experiences of qualia are experiences of the Being of reality, not epiphenomena.

Metaphysical issues arise in consciousness theory from two sources of investigation:

- Qualitative subjective experiences and related contents, called “qualia”;
- The capacity, found in living systems, of having lived experiences of these qualities, or, in other words, the capacity to feel the qualities. This capacity has been called “*Sentience*”. Feeling leads to a type of knowledge that has not been properly treated in pre-Modern and Modern Metaphysics, but becomes a central issue of Post-Modern Metaphysics.

In the Metaphysics derived from TAM, Energy (with a capital E) corresponds to the primitive state of the Being of reality, from which the three aspects, matter, information and sentience, emerge in biological individuals, in time and space. Conscious experience is considered to be the integration of

the three aspects in biological individuals, forming persons.

Implicit in the above reasoning is a partial distinction between three concepts:

- 1) The intrinsic qualities of the Being of reality, which correspond to the Forms of individual systems, in the 'noumenal' domain of reality, composing the 'Being as being' addressed by Metaphysics;
- 2) The feeling experience of the qualities, corresponding to singular modalities of the Forms in the 'phenomenal' domain of reality. Assuming that conscious experience happens in the first-person perspective, the study of its qualities cannot be made by using the methods of empirical or formal quantitative sciences, since these singular, qualitative, personal experiences of Forms ("secondary qualities") are not allowed in them (except as linguistic registers, in the so-called 'qualitative' approaches, but the analysis of the registers is made from the third-person perspective);
- 3) The knowledge generated from the feeling experience that can be expressed in a variety of ways, including the elaboration of mental representations. The method of Qualiomics is knowing by means of lived experiences of feeling, instead of learning from revealed truth or from representations of experiences.

On the 'qualia' issues, I arose possible relations with the Aristotelian concept of Form. Are qualia Aristotelian Forms viewed from the first person perspective of conscious systems? What is the relation between the experience of 'qualia' and connecting with the Being of reality?

Heidegger^[21] stated very clearly that the connection of the 'Da-Sein' with the temporal Being of reality happens when we have qualitative experiences, as smelling a flower, but does not happen in scientific and technical (causal and manipulative) approaches. This conception contradicts Epiphenomenalism, the thesis that 'qualia' are not related to the Being of reality. However, as this Being is a temporal one, each 'quale' is limited to the "here and now" singular experiences of individual persons.

On the sentience issues, I elsewhere^[16-20] proposed to investigate the relation between this capacity and biological processes. Now, taking into consideration the recently discovered varieties of neural systems (glial networks, cardiac and enteric neural subsystems) and their endosymbiotic interactions with the body's microbiota, we can speculate on the contribution of each of the components of the biota for the formation of singular qualia in each person. These interactions have been found to be at the genesis of several mental disorders, but our focus is on their contribution to conscious qualitative experiences, requiring both scientific investigations and metaphysical speculations (at least, as heuristic thinking) about the connection between human and other ways of biological sentience that maintain a symbiotic interaction. Bacteria and fungi, which appeared before our species in the evolution of the cosmos, may be at the origin of the conscious minds of macrobiological systems as human persons. While Darwin called our attention to the primate origin of our species, now is the time to call attention for our micro endosymbiotic components.

Both issues of qualia and sentience lead to the controversial thesis that the access to the Being of reality is afforded by qualitative first-person experiences based on biological functional structures. The access to the metaphysical Being as being, in this case, is neither by means of scientific theories or other modalities of representation of the being of reality (metaphors, models, symbols), nor by means of their technical implementation in artifacts.

A final question should be raised about technologies that expand our ways of perception and action, such as the computer, the cell phone and the Internet, resulting on a new domain of 'virtual realities'. How do these technologies impact on sentience? How do actions based on these technologies

reformat our insertion in the Being of reality? Should we correct Heidegger on his denial of technical improvements as a pathway to reconnect ourselves with the (temporal) Being of reality? And, finally, should we consider artificial “improvements” of human bodies and minds (as, typically, with the advances of artificial intelligence) as cases of self-deception, or new ways of living an authentic life?

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Conflict of interest

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