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Reinaldo J. Bernal Velásquez

E-Physicalism

A Physicalist Theory of Phenomenal Consciousness



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To my parents, Reinaldo and Olga María, my sisters, Mariacatalina and Andrea, and Arianna.

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INTRODUCTION

The so-called "mind/body problem" has occupied a central place throughout the history of philosophy. On one hand, human beings are biological organisms. Their bodies are material entities, thereby subject to the laws of nature. But on the other hand, human beings have a mind: They are "rational", they have feelings and emotions, and they have subjective perspectives on the world. They have a mental life that seems to evade the rigidity of the physical world. The mind/body problem concerns the relation between minds and bodies. *Prima facie*, these seem to have different metaphysical natures. But then, how it is possible for the mind to interact with the body? And if the mind is something physical, or the physical is something mental, why they seem to be so different?

Most modern philosophers were "dualists": They considered that the mind and the body belong to different metaphysical categories. Some were "monists"—they claimed that mind and body belong to the same category—but usually they took the body to be some kind of mental entity, and not the other way around—they were "idealists". Unfortunately, from a contemporary perspective, these philosophers were not able to support their convictions through a compelling solution of the mind/body problem.

It was especially during the 20th century that "physicalist" monism (or "materialism"), i.e., the idea that everything that exists has a physical nature, acquired many adherents. Physicalists are confident that the existence of the mind and its activity is, somehow, a natural phenomenon, and explore this possibility to its last consequences. Certainly, interesting and enlightening proposals have been put forward about how to "naturalise" mental phenomena, i.e., about how to account for them in a physicalist framework. Moreover, scientific research has provided useful empirical data and relevant theories in the areas of brain sciences and psychology. However, physicalism has received some compelling criticisms. It still faces the challenge of providing a persuasive solution for the mind/body problem.

"The problem of consciousness" is one of the aspects of the mind/body problem. It concerns the question of the nature of subjective experience and its relation with objective phenomena. Human beings happen to be such that there is something it is like to be one of them (Nagel 1974). Experiences like tasting wine, listening to music, looking to a painting, feeling cold, and feeling anxious, have a distinctive "what-it-is-like-ness" or "phenomenal character". In this sense, a subject that is experiencing is said to be in a "phenomenally conscious" mental state. The problem of consciousness is about this type of states.

Until the seventies, most of the work in the analytic philosophy of mind was focused on "the problem of intentionality": The fact that thoughts and words are *about* something else (Brentano 1874). Intentionality was taken as the distinctive characteristic of the mental, and thus as the core of the mind/body problem. The main questions were to determine what mental states are, what they represent, how they come about to represent something and, in general, how intentionality is possible. Subjective experience and, in particular, its phenomenal character, was not a primary topic. Certainly, a distinction between "conscious" and "unconscious" (or subpersonal) mental states was in place. Some mental states of a subject-the unconscious ones-were considered to be inaccessible, in one sense or another, to the subject himself. But there was no clear distinction between phenomenal consciousness and other notions of consciousness. And, more important, a comprehensive account of the contrast between conscious and unconscious mental states was not considered to be crucial for an understanding of the nature of the mind.

Behaviourism, in particular, dismissed the question of consciousness. Within this view, which until the late fifties provided the main theoretical framework in psychology, it was common to consider a discussion about subjective experience as close to nonsense. The realm of "the subjective" was taken, if not as fiction, as a pseudo-scientific category. Science was only concerned with what is directly "observable". Everything "mental" had to be reduced in terms of behaviour.

During the sixties, with the advent of computationalism, the idea that mental states can be reduced in terms of behaviour was abandoned. In some sense or to some extent, mental states were considered to be internal states. But even though there was, consequently, a place for subjective experience in a theory of the mind, consciousness continued to be a secondary topic. The central question was to determine how mental representations are codified and processed in cognitive systems. Certainly, computationalism had to account for the distinction between conscious and unconscious mental states. But, firstly (and not surprisingly), this distinction was considered to be mainly functional, i.e., a question of access among different mental states or modules. The property of a mental state being *phenomenally* conscious was not clearly distinguished from its functional properties or role. Secondly, if a mental state had a phenomenal content, this characteristic was considered to be irrelevant for the functional role it could play.

But principally during the last three decades the interest in subjective experience and phenomenal consciousness increased. The fact that some mental states are phenomenally conscious is now taken as primordial for the understanding of the mind. The problem of intentionality continues to be central, and there is no general agreement about how to naturalise it. But it seems that the "hard problem" (Chalmers 1996) *par excellence* is to account for phenomenal consciousness. Indeed, some philosophers claim that consciousness is required for intentionality (e.g., Searle 2002), and others that it plays an essential role for the fixation of the reference of perceptual states (e.g., Campbell 2002). Much philosophical work, with contributions by many of the most prominent philosophers of mind, is been done nowadays on the question of the nature of phenomenal consciousness and the relation between subjective experience and objective reality.

This work advances a theory in the metaphysics of phenomenal consciousness that I label "e-physicalism". It is grounded on the convictions that subjective conscious experience—in the sense of Nagel (1974)—is a real phenomenon, and that some variant of physicalism *ought* to be true.

In *Chapter 1*, firstly, I elaborate the notion of phenomenal consciousness following Block's (2007) distinction between access consciousness and phenomenal consciousness. Secondly, I argue for realism about consciousness by contrast with eliminativism. It is not

possible to *prove* that consciousness is a real phenomenon, but neither can eliminativists prove that it is not. For the realist, consciousness is given as a brute fact. Thirdly, I argue that given the mind-body problem, and despite our dualist intuitions, a physicalist monism is the most reasonable metaphysics. Accordingly, I claim that there is a property X, which is a physical property or a supervenient (on the physical) property, such that for an entity S to be conscious is for S to instantiate X. Finally, I criticise panpsychism and conclude that consciousness is a property of some *complex* physical entities.

Chapter 2 concerns Strong AI and computational (or "machine") functionalism about consciousness. Both take consciousness to be a supervenient property and thus are compatible with physicalism. But I argue, firstly, that the behaviour of an entity S supervenes on a base that includes not only S but also physical systems other than S, and secondly, that a function realised by some hardware H is not an intrinsic property of H. By contrast, consciousness has an "internal character": It is an intrinsic property of the conscious entity. Therefore, I conclude that consciousness is neither a behavioural nor a functional property and thus I reject both Strong AI and functionalist views.

In Chapter 3, firstly, I argue that higher-order representation theories of consciousness (HOR) fall short as accounts of the existence of phenomenal consciousness. The occurrence or possibility of a higherorder mental state M' representing a mental state M is not sufficient to account for the fact that there is something it is like to be in M. Secondly, I discuss the unity of consciousness (Bayne 2010) and, primarily, "phenomenal unity". I claim that any theory, and in particular higher-order thought (HOT) theories, must account for this unity; it stands for one of the essential characteristics of subjective experience. Finally, I discuss the "explanatory gap" (Levine 1983). I suggest that the gap appears, at least in part, when we take the subjectivity of consciousness as an ontological condition and not as an epistemological one. The exclusively subjective access there is to phenomenal contents can be explained by the very particular nature of the epistemological relation holding between a subject and his own mental states. Thus, the property of having phenomenal content can be objective despite the subjectivity of phenomenal experience.

Chapter 4 is the core of the work. I argue that consciousness does not supervene on physical items, but is a physical property of the conscious entity that emerges from its fundamental constituents. The emergence of properties is conceived as resulting with nomological necessity from the emergence base, and emergent properties are thought as not reducible to fundamental items and endowed with causal powers of their own. This thesis-the "e-physicalism" view-is in conflict with "microphysicalism", i.e., with the idea that every property of a complex physical system supervenes on fundamental items. Therefore, I argue against microphysicalist metaphysics, and show the plausibility of the emergentist view I advance, through the elaboration of two examplesone in classical physics and one in quantum mechanics. My argument does not *show* that consciousness is an emergent property, but opens this possibility. The metaphysics of e-physicalism gives a plausible framework for a realist and physicalist view on consciousness that avoids a commitment to panpsychism.

In Chapter 5, firstly, I criticise the strategy of using the "conceivability" of a metaphysical world to drive metaphysical conclusions. To determine whether a "world" is metaphysically or physically possible is a nontrivial and uncertain matter. Secondly, I reject-on the base of e-physicalism-Chalmers' (1996) "zombie argument". I conclude that an exact physical replica of the actual world cannot be "a zombie world", and throw doubts about its very Thirdly, *metaphysical* possibility. Ι show that Kim's (2005)"supervenience argument" does not threaten the thesis that consciousness has "original causal powers", i.e., causal powers that are not reducible to the ones of the fundamental constituents of its emergence base. The e-physicalism view avoids, in particular, the tension between vertical determination and horizontal causation.

Chapter 6 concerns phenomenal character and *qualia*. Its purpose is not to advance a thoroughly elaborated account of phenomenology, but just to make explicit the commitments and consequences of e-physicalism for this difficult question, and to provide the grounds for a further development of the theory. I try to make plausible the idea that *qualia*, which I define as the ingredients of phenomenal contents, are physical properties. First, I argue that phenomenal content is different

from representational content. It *can* have the function of representing, and in this case the representational content it conveys is nonconceptual. But it can also comply with nonrepresentational functions. Secondly, I suggest that consciousness has biological functions that result from natural selection, and I sketch a model of "phenomenal space", i.e., of the structure of the phenomenal character of conscious experiences, in order to illustrate in what sense phenomenal properties could be physical properties. Thirdly, I address Jackson's (1982) "knowledge argument". I agree that the what-it-is-like-ness of having a given experience can only be known by having the experience, as the argument assumes. However, I argue that this does not prove physicalism to be false. Physicalism is compatible with the idea that not everything that can be known about natural phenomena can be captured in scientific theories. In particular, scientific theories cannot capture phenomenal contents since these are not propositional contents, but nonconceptual ones.

The objectives of this work do not include a historical synthesis of the discussion about consciousness, or a recapitulation of the totality of influential arguments that have been given in different directions. I discuss some views, many of them in the most general form, some of them more in detail, as they become relevant as I advance, step by step, in the discussion and elaboration of e-physicalism. I expect some of the arguments I present to be original to some extent and, even though I advance some controversial conclusions, I hope that the view put forward is at least coherent.

CHAPTER 1: A PHYSICALIST APPROACH TO CONSCIOUSNESS

1.0 Introduction

I will start with an attempt to clarify the concept "phenomenal consciousness", and provide a definition based on the "what it is like" notion introduced by T. Nagel (1974). Secondly, I will discuss what reasons we have to believe that some entities are phenomenally conscious. I shall discuss the eliminativist approach, and endorse a realist stance on consciousness. Thirdly, I will introduce a form of physicalism, and defend a physicalist conception of the mental and, in particular, of consciousness. I will argue that the acknowledgement of the existence of mind-body causal relations gives good reasons to believe that mental states (including conscious mental states) are physical states or supervene on physical states. I will reject dualist and panpsychist views of consciousness.

1.1 Consciousness and "what it is like"

The terms "conscious" and "consciousness" are used in several ways. Someone can be conscious in the sense of being awake, or being aware of something. In the present work I will focus on one particular sense of "consciousness", which was introduced by Nagel in his seminal paper "what is it like to be a bat?" He wrote:

But fundamentally an organism has conscious mental states if and only if there is something it is like to *be* that organism—something it is like *for* the organism. We may call this the subjective character of experience. (1974, p. 436. Italics in the original)

N. Block labelled this notion of consciousness "phenomenal" (P-consciousness), by contrast with "access consciousness" (A-consciousness). He says:

The paradigm P-conscious states are sensations, whereas the paradigm A-conscious states are "propositional attitude" states like

thoughts, beliefs, and desires, states with representational content expressed by *that*-clauses. (2007, p. 281. Italics in the original)

For Block, there are three main differences between P-consciousness and A-consciousness. Briefly:

(1) [...] P-conscious content is phenomenal, whereas A-conscious content is representational.

(2) [...] A-consciousness is a functional notion, and so A-conscious content is system-relative: what makes a state A-conscious is what a representation of its content does in a system. P-consciousness is not a functional notion.

(3) [...] there is such a thing as a P-conscious *type* or *kind* of state. For example, the feel of pain is a P-conscious type—every pain must have that feel. But any particular token thought that is A-conscious at a given time could fail to be accessible at some other time [...]. (2007, pp. 280-281. Italics in the original)

There are important and controversial questions about the relations between P-consciousness and A-consciousness. But the major point to highlight is that, while A-consciousness is a *functional* notion, and thus the property of a mental state being A-conscious is relative to some cognitive architecture, P-consciousness refers to a constitutive property of some mental states.

Besides the distinction between phenomenal consciousness and access consciousness, D. Rosenthal proposes a further one between "mental state consciousness" and "*creature* consciousness". He says:

In one use, we speak of mental states as being conscious or not conscious. Mental states, such as thoughts, desires, emotions, and sensations, are conscious if we are aware of them in some intuitively immediate way. But we also apply the term 'conscious' to the creatures that are in those mental states. A creature's being conscious consists, roughly, of its being awake and being mentally responsive. (2005, p. 46)

Incorporating Rosenthal's distinction, I will say that:

(*Def*) An entity (or "creature") is P-conscious if and only if she is in some P-conscious mental state. A mental state is P-conscious if and only if there is something it is like to be in that mental state for the corresponding entity.

I will label "the consciousness property" the property a P-conscious entity or mental state has *in virtue of which* it is P-conscious. When necessary, I will talk of the "c-consciousness" property to refer to the consciousness property of an *entity* (or creature), and of the "m-consciousness" property to refer to the consciousness property of a *mental state*.

The conception of phenomenal consciousness advanced by Nagel has been widely accepted in contemporary analytic philosophy. I propose to contract *Def*, keeping in the background the distinctions between "P-consciousness" and "A-consciousness", and between "mental state consciousness" and "creature consciousness", into the following shorter version:

(D) An entity is (phenomenally) conscious if and only if there is something it is like to be that entity.

Now, let us define "phenomenal content" and "phenomenal character" as follows:¹

(*PC1*) The phenomenal content of a (P-conscious) mental state M of a subject S is the what-it-is-like-ness of being S *in virtue of S's being in M*.

(*PC2*) The phenomenal character of the experience of a (P-conscious) subject S is the what-it-is-like-ness of being S.

¹ Usually the expressions "phenomenal content" and "phenomenal character" are used interchangeably, and irrespective of whether one refers to (1) the what-it-is-like-ness of being in a mental state M or to (2) the what-it-is-like-ness of undergoing a given experience.

Thus, phenomenal contents and phenomenal characters are taken to be the members of the class of the possible what-it-is-like-ness of being a P-conscious entity. Note that, given *Def*, the phenomenal character of the experience of a P-conscious subject S results from the phenomenal content of her P-conscious mental states.

By "*qualia*" I will refer to the constituents of phenomenal contents and characters. *Qualia* are *types*, which individuate phenomenal contents and phenomenal characters. Thus, differences in the what-it-is-like-ness of being in two (conscious) mental states M and M', are due to differences in the *qualia* that constitute the phenomenal contents of M and M'; analogously for phenomenal characters.²

Intuitively, the idea expressed by D seems clear enough. Statement D says that to be a conscious³ entity is to be an entity that has experiences, e.g., of pain, colour sensations, and fear. But what kind of statement—*a priori* or *a posteriori*—is D? I will argue that it is *a priori*. In fact, I think D is a *definition* that captures the meaning of the expression "phenomenal consciousness": The property of a subject being phenomenally conscious *is* the property of there being something it is like to be that subject.

According to S. Kripke $(1972)^4$ if a statement is not informative, i.e., if it has no epistemological import, it is *a priori*.⁵ I will claim, thereby, that *D* is *a priori* because it is not informative. In fact, I will argue that *D* gives no empirical *test* to classify entities between conscious and unconscious ones. To be sure, if I believe there is something it is like to be me, *D* enables me to judge that I am conscious;

² I will elaborate on *qualia* in Chapter 6.

³ Hereafter when using "conscious" or "consciousness" without qualification I shall be referring to the phenomenal notion.

⁴ Kripke (1972) argues that the dichotomy "*a priori/a posteriori*" corresponds to epistemological conditions, whereas the dichotomy "necessity/contingency" corresponds to metaphysical ones. The epistemological distinction is orthogonal to the metaphysical. The statement "a triangle has three sides" is *a priori* and necessary, but the statement "I am here" is contingent despite being also *a priori*.

⁵ But the converse is not true, because a statement can be *a priori* and nevertheless informative. For instance "the standard meter stick is one meter long" is *a priori* but informative, since it gives an empirical criterion for classifying objects by length (by comparison with the meter stick).