

PHILOSOPHY CANNOT GROUND SCIENCE: THE UNJUSTIFIED USE OF ‘CONSCIOUSNESS’ IN THE SCIENTIFIC FIELD

La filosofía no puede fundamentar la ciencia: el uso injustificado de “consciencia” en el campo científico

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ABSTRACT

For many, putting in doubt the existence of phenomenal consciousness is absurd since the distinction between appearance and reality does not apply to it. Many cognitive scientists and neuroscientists accept the existence of consciousness in virtue of such reasoning. The present work questions that justification. Consciousness is a concept whose scientific meaning comes from philosophy or colloquial language. From this, it concludes that the “self-evident nature of consciousness” is not a scientifically valid statement. This philosophical assumption rests on a category mistake in scientific language use.

KEYWORDS: *phenomenal consciousness, category mistake, meaning as use, Wittgenstein, eliminativism.*

RESUMEN

Para muchos, la puesta en cuestión de la consciencia fenoménica es absurdo puesto que la distinción entre apariencia y realidad no se aplica a ella. Muchos científicos cognitivos y neurocientíficos aceptan la existencia de la consciencia en virtud de tal razonamiento. El presente trabajo cuestiona la justificación de este hecho. La consciencia es un concepto cuyo significado científico proviene de la filosofía o del lenguaje coloquial. A partir de ello, concluye que la “naturaleza autoevidente de la consciencia” no es una afirmación científica válida. Esta asunción filosófica descansa en un error categorial en el uso científico del lenguaje.

PALABRAS CLAVE: *consciencia fenoménica, error categorial, significado como uso, Wittgenstein, eliminativismo.*

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INTRODUCTION

In the debate about the ontological status of consciousness, two extreme blocks can be distinguished. First, there is that according to which consciousness is a phenomenon present in our universe and distinct from the physical. This position has been defended through a wide diversity of arguments, among which epistemic arguments are salient (see, e.g. Jackson, 1982, Chalmers, 1996). Other more skeptical researchers (e.g. Churchland, 1989) are at the opposite end. They argue that the concept of consciousness is dispensable in scientific discourse. In these positions, the appeal to the cases of the phlogiston, caloric fluid, or vital forces by way of analogy is common (Churchland, 1989, p. 284). Take the example of the ether. This was an entity postulated to explain the motion of electromagnetic waves in the vacuum. Since Einstein, the concept of ether was abandoned as playing no role in the causal explanation of the cosmos. For Patricia Churchland and others, the same will happen with consciousness.

Consciousness skeptics have been accused of defending an absurd (Koch, 2019, p. 4) or irrational (Strawson, 1994, p. 53) position. The motivation for these ad hominem attacks lies in the apparent fragility of the skeptical doubt. When we speak about consciousness, we are speaking precisely of “that which is most familiar to us” (Chalmers, 1996, p. 3). That of which doubt is not possible. I cannot deny the existence of my subjective, phenomenal sensation (for example, of the color blue), without presupposing that which I want to deny. Consciousness is a self-evident phenomenon that cannot be confused with an illusion. The appearance of the chromatic feeling of blue color implies the reality of such appearance of “blueness”, which is what is intended to be demonstrated. The science of consciousness, or consciousness studies, thus emerges as the interdisciplinary attempt to deal scientifically with this pheno-

menon. In this work, we will refer exclusively to scientific research related to the study of phenomenal consciousness. Phenomenal consciousness will be understood as the subjective experience about something. The taste of a beer or the softness of a fabric are examples of such experiences. For brevity, I will hereafter refer to phenomenal consciousness simply as ‘consciousness’.

Although I disagree with many elements of Wittgenstein, the basis of my critique comes from his later work. I will hold that the anti-skeptical position is confusing different language games. In other words, they are making a category mistake by failing to distinguish between the scientific game from other games, such as colloquial language or philosophy.¹ To this extent, paraphrasing Gilbert Ryle, this paper will not provide “new information about minds”, but rather attempts “to rectify the logical geography of the knowledge which we already possess” (Ryle, 2009, LIX).

In what follows, section 2 introduces the “self-evidence argument” as a paradigmatic case of a philosophical argument for the existence of consciousness. In section 3, a conception of meaning as use is briefly traced. This is followed in section 4 by the introduction of a pragmatic understanding of the concept of category mistake. In section 5 I defend that the use of the self-evidence is illegitimate, because it incurs in a category mistake. In addition, two subsections present some practical benefits that would follow from the distinction between philosophical/colloquial and scientific use of “consciousness”. Several possible objections are also answered.

I. SELF-EVIDENCE ARGUMENT

In an interview conducted by Susan Blackmore, John Searle said: “The marvellous thing about consciousness is that if you have the illusion that you’re conscious then you’re conscious” (Searle, 2006, p. 203). This statement surprises no one. In earlier work,

¹ With Wittgenstein, I also maintain that the work of philosophy is exclusively descriptive.

Searle had already denied that the distinction between appearance and reality applies to consciousness: “Where consciousness is concerned the existence of the appearance is the reality. If it seems to me exactly as if I am having conscious experiences, then I am having conscious experiences” (Searle, 1997, p. 112). Even those words of Searle could not surprise anyone, since similar statements are present in many texts on consciousness by philosophers (e.g. Kripke, 1980, p. 154) and neuroscientists (e.g. Koch, 2019). These statements are usually employed with a twofold aim: first, to introduce the problem of consciousness or, more generally, the classical mind-body problem. Second, to delegitimize eliminativist positions on consciousness.

This simple reasoning, which I elaborate as an argument (self-evidence argument) can be structured in multiple ways. Example:

P1. By definition, the appearance of consciousness implies its existence.²

P2. Consciousness has an appearance.

C1. Consciousness exists.

The conjunction of premises 1 and 2 gives consciousness its character of self-evident entity or property. According to the argument, it is just needed to understand the concept of ‘consciousness’ to prove its existence. Hence, skeptics who reject the existence of consciousness, insofar as they accept that there is an appearance to reject, are self-defeating, self-evidently wrong, etc. The persuasive strength of the argument seems to come from premise 2. It is enough to enumerate a list of phenomenal sensations for the reader to recognize that there is a set of experiences

² The concept of “existence” is highly ambiguous. It can be employed in both a strong and a weak or deflationary sense. For the latter, whatever we refer to with words, such as “Sherlock Holmes” or “beauty”, exists. For the former, “exist” is used to denote entities that occupy some physical region of our universe. The present paper uses the word “existence” in a strong sense. Consequently, the word “beauty” exists just as a written sign or pronounced sound. Ultimately, it is a matter of fundamental physics to determine what exists. I am grateful for the suggestion to clarify this concept to an anonymous reviewer.

that have as a common denominator the fact that they involve an appearance, a “what-is-it-like-ness” or subjective feel. The success of the argument, however, is philosophically objectionable. Premise 1 unjustifiably assumes that appearances entail the existence of consciousness. For instance, if I think I am seeing a wolf, then, no matter if what I see is a wolf or not, I am having a conscious mental state. This premise would be true if there were no other way to explain such appearance without appeal to the special property that is consciousness. But in fact, it is possible to explain appearances scientifically without appealing to an abstract property such as consciousness. It is enough to study the physical perceptive system, in this case, vision.

The self-evidence argument is particularly interesting given that it works as the basis for the philosophical and scientific use of the concept of “consciousness”. Reputable consciousness scientists, such as Christof Koch (2019), do so. In the absence of third-person direct scientific evidence for the existence of consciousness, any acceptance of the concept requires some philosophical or colloquial justification. The colloquial justification consists simply in assuming that from the use of the word “consciousness” some reference must be accepted. Philosophical justification, on the other hand, may take the form, for example, of an epistemic argument or the more basic self-evidence argument. Even Francis Crick, a scientist especially critical of philosophy, would be forced to presuppose some kind of philosophical justification for the scientific study of consciousness. In his famous *The Astonishing Hypothesis*, he evaded the problem of recognizing his philosophical dependence to accept the scientific use of consciousness. To this end, he made two assumptions. According to the first, there are conscious and unconscious processes. The second asserts that underlying conscious processes there is “a basic common mechanism or perhaps a few such mechanisms” (Crick, 1994, p. 20). Nevertheless, by incorporating in his assumptions the concept of consciousness, Crick left unexplained the basic assumption: Why does he assume that there are conscious processes?

II. LANGUAGE AS USE³

Like many other philosophical debates, the discussion about the existence of consciousness is not based on empirical information. The playing field is purely conceptual. Especially after Chalmers's arguments (1996), no traditional scientific explanation can serve as an argument for or against either position in the debate. In other words, as it was highlighted, to demonstrate the existence of consciousness itself, the scientist needs to appeal to common sense ("folk-psychology") or philosophical arguments. Thus, contaminated by philosophical and colloquial presuppositions, the scientist can accept the existence of an entity called "consciousness" whose accommodation in the brain depends on the identification of the NCC.⁴ But we are dealing with different language games. To the end to make this last statement clear, I will make use of a conception of meaning as use.

Ludwig Wittgenstein, in his late period (especially, 1986, 1953), rejected an essentialist view of language according to which words would contain predefined meanings that we must ascertain. Words are, on the contrary, conventional, empty signs, which we use in one or more ways in different contexts. Beyond how a word, or an expression, is used, the question of meaning is meaningless. In consequence, this conception denies that the attribution of meaning lies in the relation of language to mental representations or a referential relationship with the world.

The main Wittgenstenian criticisms against the various representationalist conceptions of meaning comes from the normative and social nature of language, together with the impossibility of

³ This section attempts to support the critique of the scientific use of the self-evidence argument from an understanding of meaning as use. However, the illegitimacy of the use of a philosophical argument for a scientific purpose would be consistent with other theories of meaning.

⁴ Conversely, the neuroscientist can also accept that such an entity is nothing but an "illusion" or a "caricature" (see Graziano, 2019, p. 100) or something similar and continue her scientific investigations protected from philosophical disturbances.

private language. Much has been written on these issues, so it is not the business of the present work to analyze the most faithful interpretation of what Wittgenstein meant, for example, by following a rule. It is enough to accept that:

If language is a social phenomenon that requires following rules, then a mental representation cannot determine the meaning of a word.

The truth of this implication derives from the fact that mental representation, by itself, can be neither a necessary nor a sufficient condition since it does not account for the normativity of language. The antecedent implies that language is an exclusively social phenomenon. One person on his own lacks reliable criteria of correctness. The normative nature of language is justifiable because linguistic errors exist. If I say, out of context, “Water qwert is” I am not communicating anything since the basic social rules of language are not being respected.

Regarding the relation of language to the world, Wittgenstein states in the *Philosophical Investigations*:

Let us first discuss this point of the argument: that a word has no meaning if nothing corresponds to it. –It is important to note that the word “meaning” is being used illicitly if it is used to signify the thing that “corresponds” to the word. That is to confound the meaning; of a name with the bearer of the name. When Mr. N. N. dies one says that the bearer of the name dies, not that the meaning dies. (Wittgenstein, 1986, 1953, p. 20, §40)

When Wittgenstein speaks of language, in reality, he is referring to a heterogeneous set of disparate usages. The use of words and sentences depends on the context in which they are uttered or written (Wittgenstein, 1986, 1953, p. 24, §49). The sentence “You’re making me angry!” does not mean the same thing when it is part of a joke at a party as it does in an argument with a student. The concept of “language game” refers to the different ways of using words that have their own (albeit modifiable) rules, juxta-

pose each other, and can appear or disappear. Wittgenstein first refers to “language games” in the *Blue Book* (2007, 1958), where he also gives a list of examples: “Giving and obeying orders; asking questions and answering them; describing an event; telling a fictitious story; telling a joke; describing an immediate experience; making conjectures about events in the physical world; making scientific hypotheses and theories...” (Wittgenstein, 2007, 1958, p. 68). Among other reasons, given the absence of fixed rules or meanings in language, it is not possible to give a finite and definite list of “language games”. Moreover, any similarity between them is due to “family resemblances” (Wittgenstein, 1986, 1953, p. 32, §67) that can be interpreted as an intuitive similarity.

The ontological independence between language, world, and thought is a picture that follows from the understanding of meaning as use. There is no a priori relation between these three entities. Even though, in certain games, we use language to refer to the empirical world. As Rush Rhees pointed out in his preface to *The Blue and Brown Books*:

So that, for instance, certain grammatical functions in one language would not have any counterpart in another at all. And ‘agreement or disagreement with reality’ would be something different in the different languages—so that the study of it in that language might not show you much about what it is in this one. (Wittgenstein, 2007, 1958, p. VII)

Although some words may be the same, a physicist uses language in a technical paper in a different way than a comedian. The latter could invent concepts such as “qwert” in her monologue without making any mistakes in the way she uses language. As much as the monologue may make her laugh, a scientist in the audience would be unjustified in using “qwert” when adopting the discourse of science. At least when it lacks direct or indirect empirical evidence, or mathematical necessity, for a “qwert”.

Let us focus on the peculiar way in which philosophers have played with language. Wittgenstein was explicit in this respect in

paragraph 38 of his *Philosophical Investigations*: “For philosophical problems arise when language goes on holiday. And here we may indeed fancy naming to be some remarkable act of mind, as it were a baptism of an object” (Wittgenstein, 1986, 1953, p. 19, §38). Philosophy is the language game where the plastic nature of language is most evident. It tries to imitate the game of the scientist by posing questions and trying to answer them in a similar vein (Wittgenstein, 2007, 1958, p. 18). However, in doing so, the philosopher often ignores several differences in relation to the scientist in his use of language.

The most relevant lies in the scientific demand to contrast, experimentally, the existence of the postulated entities or properties. As a consequence of a theoretical requirement, for instance, a physicist may postulate entities or properties whose existence has not yet been verified. Nevertheless, this is a temporary situation that, ideally, should be remedied. A successful case of this type corresponds to the Higgs boson, proposed in 1964 and detected in 2011. In the case of philosophy, an armchair discipline,⁵ it is important to keep in mind that the possibility of enunciating a word does not entail the existence of an empirical counterpart of that word in the world. According to this paper, ‘consciousness’ is a case of this type of philosophical word. Wittgenstein pointed out that the “craving for generality” is the source of some philosophical confusion. For him, there is a “tendency to look for something common to all entities which we usually include under a general term” (Wittgenstein, 2007, 1958, p. 17), which “is comparable to the idea that properties are ingredients of the things which have the properties; e.g. that beauty is an ingredient

⁵ Williamson (2008) has defended a metaphilosophical view according to which the a priori/a posteriori binomial must be replaced by a distinction between armchair knowledge and non-armchair knowledge. For him, philosophy forms a continuum together with the rest of the sciences (as well as ordinary knowledge). If this relation between philosophy and the natural sciences is right, the position of this work could be called into question. This issue will not be dealt with for lack of space.

of all beautiful things as alcohol is of beer and wine” (Wittgenstein, 2007, 1958, p. 17). When he tries to imitate the scientific game, the philosopher commits the same ridicule as a Spanish pythoness named Aramis Fuster who claims that she will refute Einstein’s theory of general relativity. Neither the philosopher nor the pythoness understands that their games, with their rules and criteria, are different from the scientific one. Although they may use the same words and understand each other, the philosopher’s game, from the scientist’s point of view, consists of nothing more than, as Hamlet says: words, words, words...

For the sake of brevity and clarity, it is not possible to develop here a NeoWittgensteinian theory of meaning as use.⁶ Nonetheless, for the aim of the article, it is not necessary either. It is enough to accept the basic idea, as formulated by the NeoWittgensteinian Paul Horwich, according to which: “[T]he phenomenon of meaning is grounded in non-semantic aspects of use” (Horwich, 2005, p. 126). And, subsequently, the idea that the scientist, the philosopher, and the ordinary citizen use language with different rules. Those who are not convinced by the paucity of arguments offered might claim that the article is incomplete. However, we reiterate that the goal is to show how a theory of meaning as use could cope with the scientist’s use of the “self-evidence argument”. For which it is not necessary to accept a theory of meaning as use.⁷

III. CATEGORY MISTAKE

⁶ This would involve addressing the various problems that any theory of meaning must deal with: accounting for truth-value, specifying the normative nature of language, and so on.

⁷ Chomskyans would have no reason to reject this proposal given the characterization of language as use. The acceptance of the distinction between a normative conception of language as use and an explanatory conception of language acquisition (see, e.g., Rey, 2020, pp. 139-143) is sufficient to avoid the problem. The study of the normativity of some different uses of an “E-language” does not affect the core theory of Chomsky (Chomsky, 1975, p. 18).

Although scientists who accept the existence of an entity called “consciousness” commonly appeal to philosophy, the same mistake would be made if they were to appeal to colloquial language. Various language games of our everyday life contain the word “consciousness”. Imagine a neuroscientist accepting the existence of “consciousness” because it is a useful concept for many people in their everyday use of language. She accepts that this is a sufficient condition for it to be included in scientific discourse. Presumably, no one in their right mind would accept as a criterion for inclusion in the scientific game the fact of “being employed in everyday language” or “being a useful concept in everyday language”. Rather, this neuroscientist would be reproached that, to be accepted in scientific discourse, a concept must meet certain requirements, independently of the folk uses of language. This neuroscientist commits a category mistake consisting in mixing the acceptance criteria of colloquial language games with the scientific one.

The concept of category mistake comes from Gilbert Ryle, who in his *The Concept of Mind* says that “[i]t represents the facts as if they belonged to one logical type or category (or range of types or categories), when they actually belong to another” (Ryle, 2009, 1949, p. 6). Ryle understood that the category mistake is produced by the existence of an ontological misunderstanding (Ryle, 1938, p. 203). Let us betray a little the meaning that Ryle gave to this mistake. As used here, a given language game, with all its ambiguities, could be identified with a category.⁸ In virtue of its use, a language category has its own rules and ways of proceeding within a given form of life. For example, telling jokes requires an appropriate context. Attendees at a funeral would

⁸ Despite this, there are many examples of category mistakes that would coincide in both. In the absence of a context clarifying their use, “15+12=coffee” or “even numbers are vegetarian” are both category mistakes. While for Ryle the mistake would be made by mixing abstract entities with physical properties, pragmatically the mistake is made by not respecting the rules of language as it is actually used.

rebuke any joke told at that time. In that case, the language is not being used properly; at least, according to current standards. Thus, category mistakes happen when someone mistakenly plays a language game.⁹ As illustrated in the previous example, some misfortunes are produced due to pragmatic errors by not adapting the language to the rules of its use.

There are many issues related to “category mistakes” that would deserve some attention. Can “category mistakes” be defined exhaustively? What is required to belong to the set of “category mistakes”?¹⁰ However, to address these questions would be to divert attention from the topic of consciousness. Given the nature of a “category mistake”, I think it is sufficient to appeal to an intuitive understanding of it. The concepts of philosophy, science and colloquial language are employed in completely different senses. Each language game involved requires the satisfaction of certain criteria. Consequently, the introduction of a philosophical concept into scientific discourse, while lacking scientific evidence, incurs the same error as playing chess with checkers’ rules. Of course, the philosophical term can be successful for the scientist, but this will only be the case when the latter successfully applies the rules of her field of language (see the origins of the concept of “atom”).

A category mistake entails problems. The most important one leads to dead-end research. Imagine that a huge number of physicists accepted some version of the ontological argument that purports to prove the existence of a god. Let us imagine that a “science of god” would be created, which would imply the creation of a multitude of academic journals, large economic investments, or the organization of multiple events and conferences. Undoubtedly, this category mistake would yield enormous benefits along

⁹ Instead of using Ryle’s concept in this sense, we could have used “grammatical confusion” or “linguistic confusion”. However, I believe that “category mistake” is a better way of expressing the idea.

¹⁰ Ofra Magidor offers in her *Category Mistakes* (2013) a clarifying treatment of these issues.

the way. It is possible that these efforts would allow great scientific advances to be made, but indeed the final objective will never be achieved. The problem of god is not scientifically solvable, because as it is used colloquially, religiously, or philosophically, the concept is not manipulable with scientific rules. As with the self-evidence argument, it is questionable whether the ontological argument proves the existence of a god. But again, that is another discussion of no interest here.

The category mistake was a critique used by dualists to criticize the reductionist program (Crick, 1994, p. 9). For them, the solution to this problem consists in recognizing the gap between the physical and consciousness. According to the understanding of the category mistake of this work, there would be a methodological error in accepting that philosophers decide which entities and properties populate the universe. Thus, the category mistake leaves the philosophical concept of ‘consciousness’ in a situation unacceptable for any scientific understanding of the world.

IV. THE CATEGORY MISTAKE OF CONSCIOUSNESS

Let us return to the problem of consciousness. Many philosophers believe that their game allows them to explain something about the world in the scientific framework. For instance, “there exists an entity x with such properties M , called consciousness, in the physical world”. If this statement, with its respective criticisms, did not leave the realm of philosophy, we would simply be dealing with another philosophical debate. However, some scientists of consciousness pick up the word “consciousness” as it is used by some philosophers, as well as by many people in colloquial language, to employ it in the scientific game. It should be noted that, as stated above, this is a necessity for the scientist. The exotic nature of consciousness would prevent its use as it does not pass the filter of scientific criteria.¹¹ They accept that the concept of

¹¹ Specifically, some mathematical demonstration or experimental proof. Since

“consciousness” must be incorporated into the neuroscientific agenda because there is something that requires explanation (e.g. Crick y Koch, 1990). But no use of philosophical language, with exclusively conceptual rules, can demonstrate the existence of any empirical object. This goes against the rules of the modern scientific game, since its appearance in Modernity. It is not my intention to deny that the philosopher’s game cannot be inspiring for the scientist, as it can be for the artist. Rather, I present as a matter of fact that the self-evidence argument is a philosophical one. And so, its acceptance by a scientist can only affect his web of philosophical convictions, but not of scientific evidence.

The success of this distinction between philosophical and scientific language does not demand to set up any precise demarcation criteria. From a NeoWittgensteinian approach to language, this is not rigorously possible either. It is sufficient to recognize that, given its purely conceptual nature, the self-evidence argument is philosophical and, relatedly, that “consciousness” is a word that lacks a direct or indirect empirical designation according to traditional scientific criteria. In the latter case, Chalmers (1996) has even demanded the need to establish a new scientific language game that includes psychophysical laws to solve the “hard problem”. However, a science freed from philosophical biases could

by definition consciousness is subjective, and experimental proof requires a third-person criterion, the latter case is not possible. Someone might object that there seems to be a relation between phenomenal consciousness and empirical observation. In certain way, science tries to explain the apparent world. Or put in another words, science begins its work with the apparent world and tries to go beyond it. This would be hard to understand if one denies the existence of consciousness (I thank one of the anonymous reviewers for this objection). Yet, since the work of Galileo, modern science has been built on the use of mathematics and third-person evidence. Given that consciousness is an alleged first-person phenomenon, it has no place in this picture of modern science. On the other hand, rejecting the existence of consciousness would leave nothing out. It is true that science tries to explain the appearances of the world. But I think these appearances can be perfectly well explained without recourse to philosophical concepts, such as consciousness or qualia. It is enough to study all appearances scientifically. Which includes, for example, our perceptual system or central nervous system (CNS).

leave aside the philosophical “hard problem of consciousness”. Instead of it, science would focus on the “easy problems”, such as “the ability to discriminate, categorize, and react to environmental stimuli”, “the focus of attention”, or “the difference between wakefulness and sleep” (Chalmers, 2007, p. 225).

Based on *On Certainty* (1969), someone might argue that, according to the later Wittgenstein, there are also common-sense propositions or, as he calls them, “hinge-propositions” that serve to ground our many different language games. These basic propositions or certainties seem rather banal when we utter them but they are unique in that they offer the foundation upon which all other language games turns. Thus, consciousness is something we simply accept, without thought. This criticism forces us to move away from Wittgenstein to a certain extent, for it is true that Wittgenstein accepted some basic sentences against the skeptics. However, the scientific language game, in spite of Wittgenstein, cannot accept in its ontology the use of a concept for the simple reason that we accept it as a matter of fact.

To justify the existence of consciousness, the scientist is drawn into the philosophical field. Beyond other philosophical arguments, such as epistemic ones, the intuitive self-evidence argument is usually the first one. However, a cognitive scientist accepting that this argument is relevant to her research is analogous to the theoretical physicist who undertakes the scientific search for god after accepting the ontological argument. It is irrelevant whether the ontological argument or the self-evidence argument are philosophically objectionable. The crux is that the scientist is not acting as a scientist by postulating philosophical concepts as if they were scientific. She is committing a category mistake by allowing herself to be persuaded by the conjurers of words who are the philosophers.

This view must be reinforced with some argument in its favor. To this end, we will list some benefits that would follow from the elimination of the philosophical concept of consciousness from the scientific conceptual framework. More importantly, in the

next subsection, I will respond to several possible objections to what has been said.

Benefits

These are some examples of gains that would support the elimination of the concept of “consciousness” from scientific discourse:

1. Despite the enormous amount of economic and intellectual effort invested, the science of consciousness does not seem to have made major advances. While there has been significant scientific progress concerning the “easy problems” of consciousness, the search for the neural correlates of consciousness (NCC) remains unadvanced. The myriad of theories of consciousness and methods for measuring consciousness reveals the philosophical rather than scientific nature of the debate. The disappearance of the concept of consciousness would mean that the dedicated investment could be diverted to other more fruitful cognitive science and neuroscience goals.
2. Both in philosophy and science, physicalism would be reinforced. This is an important point since it follows that this position, which is giving such good results, would not be disturbed. In the same vein, the application of the scientific methods would remain the correct way to understand reality.
3. In evolutionary biology, the scientific acceptance of the philosophical use of consciousness brings with it the problem of why, all things being identical, this property arises in the course of evolution. Functionally, the philosophical zombie is equivalent to the conscious being, so that natural selection could hardly have benefited the latter to the detriment of the former. Accepting with Dobzhansky that “nothing in biology makes sense except in the light of evolution” (Dobzhansky, 1973), the philosophical use of consciousness can hardly be accommodated. The exclusion of this term from the scientific terminology would provide a solution to this problem.

4. Philosophy would also benefit from the dissolution of the entanglement of consciousness. If we accept the consequences of the scientific use of language, philosophical problems such as the other minds, the inverted spectrum, or the absent qualia would have a solution. I can know whether the content of my neighbor's consciousness is equivalent to mine by eliminating the concept of consciousness. Instead, I should just accept behavioral and neurophysiological criteria. By analogy, if an individual's pain perceptual system and behavioral responses are identical or very similar to mine, doubt about the possibility that he or she "experiences" something different is misplaced. The possibility of reversed qualia would be a mere philosophical pastime. How could one explain to a person blind from birth, because of certain damage to his perceptual system, what it is like to see red? By curing the damage to her perceptual system. Scientifically, seeing red is not something different from the neurophysiological and behavioral process that occurs upon the exposure of our visual system to light with x wavelength.

Some objections

Undoubtedly, the brevity and certain ambiguity of this presentation could lead to the formulation of some objections, such as the following:

- 1. The central thesis of the paper is based on the distinction between philosophical and scientific language. If this boundary is not accepted, the whole paper collapses.*

This objection would be right. If it is accepted that the criteria of philosophical and scientific validity are not separable, then the scientist can accept an argument such as the self-evidence one without committing a category mistake. For instance, the theoretical physicist Carlo Rovelli (2018) and the philosopher Sebastian de Haro (2020) made different proposals that aim to highlight the relevance of the communication between science and philosophy.

This idea is no problem. Brief attention to the history of philosophy and science makes it clear that these two fields of knowledge share the same origin. However, it is one thing to accept the usefulness of the scientist being inspired by philosophy and vice versa. It is quite another for the scientist to supplant her method of work with that of the philosopher. While the former is acceptable, the latter is extremely problematic.

Philosophy does not employ the scientific method, otherwise, it would not be philosophy, but science. In the same way, the scientist who does not apply the method of his field does not do science. Within philosophy itself, there are different uses of language. For analytic philosophy, for example, scientific conclusions are incorporated into its knowledge.¹² Consequently, for example, the elimination of the concept of consciousness from science would have philosophical implications: "Naturalistic philosophical theories of consciousness that are based on, or derive support from, empirical work, are clearly directly affected by eliminativist claims. If "consciousness" is not a viable scientific concept, then it cannot figure in empirically informed theories of consciousness" (Irvine, 2013, p. 167). The opposite is not true, however, of any scientific procedure. The scientist who accepts a philosophical conclusion, camouflaging it as scientific, does commit a category mistake in his use of the language of science.

2. The comparison of the self-evidence argument with the ontological argument is defective. The former is a special case since it refers to a fact that, precisely, and unlike god, is self-evident by its very nature.

This objection begs the question by assuming in its premises what it tries to prove. Moreover, the fact that one argument seems more self-evident, or sound, than another argument does not

¹² A well-known example of the impact of science on philosophy is shown in (Reichenbach, 1949, p. 290). That is, the theory of relativity made the Kantian conception of space and time "untenable".

make it qualitatively different. In other words, it does not make it a scientific argument.

On the other hand, the concept of appearance present in the self-evidence argument does not necessarily require the concept of consciousness to be explained. It is enough to substitute the philosophical concept of consciousness, without scientific evidence, for a multitude of concepts that can be scientifically studied. Actually, as Irvine said: “In practice, “consciousness” is used to refer to a vast number of very different phenomena that often have little in common with each other, or with philosophical and phenomenological descriptions of consciousness” (Irvine, 2013, p. 160).

3. Even if we accept that the concept of consciousness is not scientific, it remains to explain how our illusion of appearances is possible. In other words, even if we reject the hard problem, we still have to answer the illusion problem of consciousness (Frankish, 2016). That is: “How can one have experiences that appear to have phenomenal properties without any phenomenal properties existing?”. (Sprevak & Irvine, 2020, p. 363)

For scientific purposes, the alleged phenomenal appearances are reducible to certain physical substrates of the nervous system. The various cases of neuronal injuries serve to reinforce this thesis. Let us look at two examples. Damage in V1 (primary visual cortex) can lead to blindsight (e.g. Koenig & Ro, 2019). According to the philosophical framework of consciousness, we could say that damage in V1 produces a loss of vision qualia. The subject is not aware of what she sees although she can respond to visual stimuli. Another example, COVID-19 can produce anosmia (e.g. Brand et al., 2020). In the philosophical conceptual framework, we could say that COVID-19 can cause loss of olfactory qualia, of awareness of what it is smelled. Appellations to philosophical concepts such as “qualia” or “consciousness” contaminate the scientific language in both examples. Although it is understandable what they refer to philosophically or colloquially, the scientist, when employing these concepts, must bear in mind that the justification for their use

is not scientific. Therefore, the scientific use of language dispenses with allusions to “first-person” realities in favor of “third-person” language. Colloquially, I can say that I am experiencing a mild pain in my arm. However, from this colloquial use of the verb “experiencing” or the noun “pain”, the scientist cannot accept the existence of a property called “consciousness”. In his use of language, there are only behaviors and neurophysiological states, which are the only facts verifiable in the third-person.

The case of Michel Graziano is paradigmatic. In the development of his attention schema theory (2019), he holds that consciousness is an empty concept. His use of the word consciousness, as he acknowledges (Graziano, 2019, p. 100), is more rhetorical than scientific. This example shows how phenomena that instantiate instances of conscious states can be replaced by terms that do not go beyond the rules of scientific language. Even if, as Graziano does, for purposes of communicative convenience, it is necessary to resort rhetorically to colloquial or philosophical concepts. Another renowned scientist, Michael Gazzaniga, maintains that “phenomenal consciousness may be the result of multiple modular illusions” (Marinsek & Gazzaniga, 2016, p. 158).

Many will not be satisfied with this explanation. If so, science would be leaving aside a fact of reality because it cannot fit it into its current method. In particular, that there is a “what-is-it-likeness” of being a bat different from that of being an ant. However, this reveals a misunderstanding of what is said. In the scientific language about what is in the world, there is no “what-is-it-likeness”, but different behavioral and neurophysiological processes in ants and bats. Thus, I share Wilkes’ sentence when she says:

To sum up: sciences don’t and needn’t explain every phenomenon under every description. No science, for example, explains what it is to be an ornament. Thus there seems no particular reason to suppose that science has, or fails to grapple with, the question of “what it is like for an X to be an X” —especially if this is said to be inexpressible and ineffable even within the far richer conceptual resources of the vernacular. (Wilkes, 1984, p. 241)

Wittgensteinianly, consciousness, or its illusion, as a philosophical problem might have arisen due to the craving for philosophical generalization (Wittgenstein, 2007, 1958, p. 17). The distinction between supposed instances of consciousness (tasting x, smelling x, being afraid of x...) from negative instances (the growth of fingernails, the spider crawling up my pants while watching a movie...) allows us to infer the existence of a common denominator to the former. This inference may be philosophically plausible, but not scientifically.

4. The idea that consciousness can be scientifically eliminated in favor of behavioral analysis and neurophysiology is easily refuted. It is a fact that people with virtually identical perceptual systems manifest different tendencies towards food or beverages. In colloquial terms, why do some people enjoy drinking beer whereas others detest it? In these cases, it is necessary to appeal to the qualia of taste.

Again, this possible objection presupposes the existence of qualia or, more generally, of phenomenal consciousness. Indeed, it is an observable fact that people with very similar nervous systems, manifest different attitudes towards the same foods. The appeal to such a scientifically questionable entity as qualia reveals ignorance of the underlying physically observable processes. Numerous scientific papers provide environmental, genetic, and neural explanations for different attitudes toward the same product, such as beer (e.g., Diószegi, Llanaj, & Ádány, 2019). For example, the TAS2R38 gene is involved in the preference for certain vegetables, such as broccoli (e.g. Smith *et. al.*, 2016).

5. If we dispense with the concept of “consciousness” it is not possible to distinguish conscious from unconscious states.

This possible objection would again beg the question by presupposing the existence of conscious and unconscious states. Intuitively, it may seem that they designate something empirically verifiable. But this is not true. Only the behavior of subjects and

their neurophysiological states are empirically verifiable. There is no such difference beyond the functioning or non-functioning of certain cognitive and/or neural mechanisms. Scientifically, there is no consciousness of vision beyond the neurophysiological and behavioral processes of vision.

*6. eporting that certain kinds of states are special in the same way (the phenomenal consciousness way) is empirically verifiable. So is the fact that most people (if not all) agree on which kinds of states are those (perception, pains, emotions, etc.). And it is not out of place to scientifically look for something in common between them. In other words, the claim that those states have something special can be the subject of scientific research and cannot be so easily dismissed.*¹³

Indeed, reporting that there are a number of special states is empirically verifiable. The difficulty with this replication is that the consequent does not follow from the antecedent. Namely, that “it is not out of place to scientifically look for something in common between them”. Many subjects can claim that there is something special about a phenomenon. But this does not imply that the phenomenon exists. Following folk physics, many subjects (all of them even) may report that they perceive the Earth to be flat. But it would be out of place to say anything about the world from such folk statements.

In general, it seems misleading to derive the existence of an entity or property of the world from the colloquial language of subjects. Even if the subjects' statements are highly intuitive.

7. Eliminating concepts related to consciousness from the colloquial discourse is not communicatively viable. It would complicate things more than simplify them.

In its colloquial uses, language is important because it makes it possible to communicate sensitive stimuli, to make people

¹³ This objection was raised by one of the anonymous reviewers.

laugh, to ask for help, and so on. If the heterogeneous uses of the concept of “consciousness” are employed in these contexts, no category mistake is occurring. The same happens, for example, with concepts such as “god” or “qwert”. The mistake arises when a physicist accepts that “god” is a concept that follows the rules of scientific language rather than being considered a word belonging to religion or philosophy. Consciousness is only a problem for those who philosophize (Wittgenstein, 1969), not for the rest of the people.

8. The rejection of the scientist’s use of “consciousness” implies that, in scientific terms, neither a stone nor a cat is conscious or non-conscious. This is absurd.

From the fact that neither a stone nor a cat can be said to be conscious, it cannot be inferred that both are not physically very dissimilar beings with different capacities. For example, the cat possesses a perceptive system that allows it to see the environment, something that a stone lacks. Now, the differences between a cat and a stone are exclusively physical, not mental (at least in the philosophical use of “mental”). This new conceptual framework would eliminate a distinction between certain animals, traditionally the human being, and the rest of the cosmos. The human being only differs physically, and not in the most fundamental physical terms, from the rest of the entities of the universe.

V. CONCLUSIONS

This paper defends the idea that philosophical arguments, in particular the self-evidence argument, cannot support science. The acceptance of a hard problem of consciousness that must be explained scientifically incurs the category mistake of not distinguishing between philosophy and science. The existence of consciousness cannot be verified by traditional third-person scientific canons. Therefore, its acceptance is a philosophical presupposition without scientific basis. Derivationally, it has been suggested that

the elimination of the use of this philosophical¹⁴ and colloquial concept would not only avoid a category mistake but would entail some scientific and philosophic benefits.

The main idea must be differentiated from the various eliminativist approaches, including illusionism, proposed so far. The paper does not need to commit itself to this philosophical position. Scientific use of the concept of consciousness is possible and would not commit a category mistake. Yet its meaning would be extremely different from the current philosophical or colloquial one. As long as they maintain their philosophical meaning, the science of consciousness accepts a challenge that lacks a scientific solution. Of course, this is not a philosophical critique of cognitive science or neuroscience. To begin with, such a critique would be highly suspect of committing a category mistake, which is precisely what is meant to be denounced. As Wittgenstein emphasized, and Ryle picks up on in the quoted fragment, the role of the philosopher is descriptive. I accept the principle that scientific theories can only be fundamentally criticized by other scientific theories. What I criticize of certain theories of consciousness is their surreptitious philosophical component, not their valuable scientific content. In sum, the self-evidence argument cannot serve as a basis for the acceptance of consciousness as a scientific kind.

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¹⁴ Another interesting debate would consist in analyzing the use made in different scientific researches of suspiciously philosophical and/or colloquial concepts such as "love", "personal identity", "justice" or "beauty".

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