

# The Unmysteriousness of Consciousness: A Case Study in Naturalistic Philosophy

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## 1. INTRODUCTION

Naturalism in philosophy of mind is commonly associated with a materialistic or physicalistic conception of reality. This association is often made because prominent physicalists, like David Armstrong and Willard Van Orman Quine, assume a naturalistic perspective in defending their metaphysical views. Both Armstrong and Quine acknowledge, however, that these doctrines are independent of each other at least in the following sense: if physicalism should turn out to be an untenable position, this would not force one to give up one's naturalistic outlook in philosophy in general (Armstrong 1980, 156ff; Quine 1995, 257).

In this paper, I want to make an even stronger claim. I think that there is a tension between the spirit of a naturalistic philosophy and the metaphysical commitments made by a physicalist. Associating these views means ignoring this tension and can mislead one into thinking that a monistic view is more congenial to naturalism than a dualistic metaphysics. In fact, however, it is hard to find good reasons for such an asymmetry. If this is so, as I shall argue, naturalists should adopt a stance that is metaphysically neutral in this respect.

To make this point, I will use the problem of consciousness as a case study. David Chalmers has urged that in explaining consciousness we must distinguish between comparatively 'easy problems' connected with a functionalist conception of the mind, and a 'hard problem' that arises in explaining phenomenal consciousness (Chalmers 1995, 1996). This distinction has provided new support for the claim that consciousness is in

some sense a deeply mysterious phenomenon (McGinn 1989, 1999).<sup>1</sup> According to this view, consciousness is a mystery that is in no way reduced by the advances of psychology and the neurosciences. Du Bois Reymond may have been right, when he proclaimed his famous *Ignorabimus* about consciousness in a lecture on the limits of natural science in 1872 (reprinted in Du Bois Reymond, 1974).

Naturalism, as I understand it, is strictly opposed to such skepticism because naturalism does not allow philosophy to pass judgment on what the sciences can or cannot achieve. Declaring consciousness a mystery is just as mistaken as believing in unlimited scientific progress. Naturalists can accept neither of these claims. Their view has to be that the sciences determine their own path without being constrained by *a priori* philosophical reasoning.<sup>2</sup>

As one can see, the topic of this paper is huge and has many ramifications. In dealing with it here, I will have to set aside many issues for further treatment. The brevity of my remarks, I hope, will help in grasping the larger picture that I try to paint here. The paper is organized as follows. In section 1, I first consider briefly the historical roots on which a mysterian conception of consciousness relies, then I set out a contemporary argument that supports this view, and I consider several ways how one can resist its conclusion. The naturalistic reaction to this argument, I suggest, should be to question the alleged metaphysical implications contained in scientific theories of the mind. In section 2, I will develop this idea further by tracing it back to the anti-metaphysical stance of logical empiricism. At this point, the question will arise how this stance can be squared with the fact that the members of the Vienna Circle were drawn towards a

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<sup>1</sup> Chalmers himself draws a different conclusion. He thinks that a scientific explanation of phenomenal consciousness may well be possible, but it will require theories of a quite different kind than those currently on offer. The task of philosophy is to pave our way to a kind of ‘conceptual breakthrough’ that would enable us to take experiences as basic features of reality alongside mass and gravity.

<sup>2</sup> Although Du Bois Reymond was a physiologist, his argument that consciousness will remain forever a mystery was not an empirical prediction, but a philosophical point based on *a priori* reflections “on the nature of things” (Du Bois Reymond, 1974, 65). For a detailed study of his lecture and the impact it had in the 19<sup>th</sup> century, see Vidoni 1991.

physicalistic ontology. This move finds its completion in Quine's philosophy, as I will explain in section 3. Whereas Quine seems inclined to sacrifice the metaphysical neutrality of his predecessors, I will suggest that this neutrality should be retained. In section 4, I sketch a modest version of naturalism that is built on this idea. In section 5, I show how this modest approach helps to overcome the sense of mystery surrounding the problem of consciousness; and in section 6, I try to meet two objections that this modest naturalistic approach has to face.

## 2. THE MYSTERY OF CONSCIOUSNESS

The fact that we experience the world in a subjective manner can seem very puzzling. Philosophy articulates this puzzlement in a systematic form and tries to come to terms with it. Within this tradition, from Plato onward, it was widely assumed that the source of this puzzlement is a metaphysical one. The problem is to understand the relation between mind and body: between the subjective experiences that fill our minds when we are conscious and the physical powers that move our bodies. But the mind-body problem is not the only reason why the occurrence of subjective experiences seems such a curious fact.

Experiences are also peculiar because we cannot perceive them in the way in which we can perceive bodily things. How, then, can we use the same methods in psychology that we use in the natural sciences? This became an urgent question in the 19<sup>th</sup> century when psychology developed into an experimental science. Philosophers like Brentano and Husserl reacted to this new situation by distinguishing two kinds of psychological research: there is psychology as a natural science, and there is psychology as a philosophical or phenomenological discipline (Brentano 1982, Husserl 1950). The former requires the study of physiological processes and behavioral reactions causally connected with conscious experiences; the latter requires inner perception or a phenomenological epoché.

The idea of splitting psychology in two halves opened up a gap that troubles philosophy until today. The first problem here is to understand the nature of this gap. Is it just a methodological distinction between disciplines that use different methods in studying the same subject matter? Or is there also a deeper ontological difference involved here? The

distinction between a functionalist and a phenomenological conception of mind has made this problem virulent again (Chalmers 1996). Most agree that this is a valuable *conceptual* distinction that reflects the important difference between a first-personal and a third-personal access to our mental states. Whether there is also a more fundamental metaphysical difference to be drawn here between functional and phenomenal *states* or *properties*, as Levine and others have suggested, remains a matter of dispute (Levine 1983).

This was a short summary of what lies behind the skeptical views about explaining consciousness that I want to consider now. In setting out the problem, I will adopt the jargon of speaking about qualia and qualia differences. However, I do not think that much depends on this terminology and consider it merely a convenient device for shortening the argument. As I use the term here, qualia are properties of experiences, and I assume that experiences must have qualia if they are instances of phenomenal consciousness. Sensory experiences are the prime examples of mental events instantiating qualia. For instance, when one sees some ripe strawberries, smells them and then tastes them, one perceives the same object in three different ways. These perceptual experiences differ qualitatively from each other, which means that they carry different qualia.

The qualia problem can be phrased in two different ways: (1) How, if at all, can the fact that experiences have different qualia be explained within a physicalistic conception of the world? (2) And how, if at all, can this fact be explained within empirical science? The first question is a metaphysical, the second a methodological one. Thus we see that both of the traditional concerns about experience continue to play a role here. How they interact with each other and thereby get merged into a single problem, is a complex question that I cannot pursue here any further (van Gulick 1996).

Let me turn directly to the argument in support of the view that consciousness is a mysterious and inexplicable property of mental states.

The argument can be summarized in five steps:

- (1) Qualia are real properties of conscious experiences.
- (2) The existence of qualia is compatible with a physicalistic conception of reality only if qualia differences can be fully explained in terms of physical (primarily neurophysiological) differences.
- (3) Qualia differences cannot be fully explained in terms of physical differences.
- (4) Science is committed to a physicalist conception of reality.
- (5) If science cannot fully explain the existence of qualia, their existence is mysterious.

This is a sophisticated argument that combines both methodological and metaphysical considerations. The two aspects are linked in premise (2), which introduces the requirement of a ‘full’ explanation as being an explanation that satisfies a physicalist. Step 4 makes this notion of explanation the goal of science, from which it follows – together with premise 3 – that qualia differences cannot be explained within science. With premise 5, and *modus ponens*, the skeptic can derive his conclusion that the existence of qualia is mysterious, and with premise 1 he can finally conclude that conscious experience is mysterious too.

Each step in this complex argument provides an opportunity for resisting the skeptical conclusion. Which of its premises one rejects, depends on what kind of solution to the mind-body problem one prefers. Let me briefly review the three options that recently have been debated most widely.<sup>3</sup>

One option is to reject the very first premise of the argument by denying that qualia are real properties of experiences. This would require one to argue that there is a fundamental problem in the conceptual framework employed in distinguishing between a functional and a phenomenal conception of the mind. The claim would have to be that we do not need this distinction or any similar distinction between different kinds of

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<sup>3</sup> For a more comprehensive survey of some recent attempts at providing reductive and non-reductive solutions for the mind-body problem, see Van Gulick 2001.

consciousness, if we want to explain our cognitive engagement with the world. This line is taken, for instance, in (Rey 1983) and in (Wilkes 1984).

A second option is to argue that qualia may find a place within a physicalistic worldview even though they are not reducible to physical properties. They may not even be strongly supervenient on physical properties and hence it may be impossible to trace qualitative differences to physical differences. Non-reductive physicalists who advocate this view have to come up with some other explanation of how qualia fit into the physicalist's conception of the world. Alternative explanations that should also satisfy a physicalist have been proposed, for instance, in (Tetens 1996) and (Van Gulick 2002).

A third option is to claim that qualia differences can be traced back to physical differences and fully explained in terms of them. Only a lack of empirical knowledge has prevented us so far from seeing the right connections here. As more of this knowledge becomes available, we will gradually be able to work out a theory of psychophysical supervenience, or psychophysical reduction. A project of this kind that pays close attention to the empirical progress made by the neurosciences, has been suggested for instance in (Bickle 1998).

All these proposals have one thing in common, which is also their common weakness: they are all extremely demanding replies to the skeptical argument. None of these envisaged projects has been carried out so far, and it is not clear which of them is the most promising one. This is, of course, water on the mills of the skeptic. He will take this fact to be further evidence for his claim that the problem of explaining phenomenal consciousness is simply too hard for the human mind to solve.

But we are not quite finished with listing all the available options. A further option would be to deny premise (4).<sup>4</sup> That this option is often overlooked is not surprising, since physicalists share this premise with their opponents. They also assume that science is committed to such a metaphysical position, they only draw different conclusions from this premise. This is an unfortunate agreement, I think. It deprives us of an easy

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<sup>4</sup> Denying premise (5) would be another option that I set aside here. Those who believe in transcendental explanations may want to take this route. In the final section of this paper, I will briefly indicate why this possibility must be dismissed from a naturalistic point of view.

way to bring the skeptical argument to a halt, namely by invoking the difference between advocating naturalism and advocating physicalism. Before we can count on this move, however, we must see what this difference comes to.

### 3. NATURALISM, PHYSICALISM, AND LOGICAL EMPIRICISM

Naturalism in philosophy<sup>5</sup> is a broad movement with many different currents in ethics, epistemology and metaphysics. This makes it difficult to say in general what this view includes and what it denies. Definitions of naturalism therefore tend to be rather uninformative. An example is Roy Wood Sellars' statement that naturalism is the

recognition of the impressive implications of the physical and biological sciences. (Sellars, 1922, i)

This is an unsatisfactory explanation for two reasons: first, it describes naturalism as an attitude without saying on which principles this attitude is based; and secondly, it describes an attitude that almost everyone shares. There is hardly a philosopher since the enlightenment who would not recognize the important contributions of the physical and biological sciences. Naturalism in this sense ceases to be a controversial and interesting philosophical position.<sup>6</sup>

The situation changes, however, when we consider the historical context of Sellars' statement: the rise of logical empiricism, which soon became one of the most controversial movements in 20<sup>th</sup> century philosophy. Although the term 'naturalism' was not widely used by the members of this school, they clearly embraced the attitude that Sellars advocates. There are two principles of logical empiricism that deserve special attention here: the rejection of metaphysics and the proposal of a common language for all sciences.

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<sup>5</sup> Throughout this paper I use the term "naturalism" as short for "philosophical naturalism", i.e. a movement within philosophy, not the arts.

<sup>6</sup> This is a problem not only for Sellars' characterization, but affects many of the slogans which are often taken to be expressions of a naturalistic point of view. See Keil/Schnädelbach 2000.

When Carnap and other members of the Vienna Circle first put forward these claims, they chose to give them a most dramatic formulation. They declared all metaphysical statements to be “senseless pseudo-statements” (Carnap 1931a), and they claimed that all scientific statements could be “translated” into a physicalistic language (Carnap 1931b). On closer examination, however, the real content of these provocative claims turns out to be far less radical. We might capture it in the following way:

- (P1) Metaphysical statements that transcend science have no explanatory value.
- (P2) A unifying bond for all scientific theories will be the use of a quantitative language in describing their evidential base.

I will restrict my discussion of these principles here to the role they play in dealing with the mind-body problem. This problem was of major concern to many logical empiricists, and they approached it on the basis of the two principles stated above.

The first thing to note about their approach is that it was not original (Heidelberger 2003). It followed a popular trend in *Naturphilosophie* in the 19<sup>th</sup> century, one of whose main representatives was the physiologist Gustav Theodor Fechner. In his widely acclaimed book *Elements of Psychophysics* (1860) Fechner advocated a position called “psychophysical parallelism”. This is a view that admits of different interpretations. One reading of it leads to Fechner’s panpsychism, another interpretation leads to a mind-brain identity thesis. Underlying these metaphysical claims, and supporting them, is an empirical thesis that Heidelberger states as follows:

The primary form of psychophysical parallelism is an empirical postulate – a methodological rule for researching the mind-body relation, claiming that there is a consistent correlation between mental and physical phenomena. [...] This type of psychophysical parallelism refrains from all causal interpretation of the mind-body relation. Fechner said that it is neutral regarding every “metaphysical closure” compatible with it. (Heidelberger 2003, 237)

As Heidelberger notes, there is a remarkable similarity here to what William James says 30 years later:

William James [...] confined himself – as he said – to ‘empirical parallelism’ [...]. ‘By keeping to it’, he wrote in *Principles of Psychology*, ‘our psychology will remain positivistic and non-metaphysical; and although this is certainly only a provisional halting-place, and things must some day be more thoroughly thought out, we shall abide there in this book (James 1891, 182). (Ibid, 238)

Both Fechner and James believed that the empirical sciences could provide at least a partial solution to the mind-body problem. They can do this by tracing qualia-differences back to physiological differences, even if they do not thereby provide a ‘full’ explanation of this connection. A ‘full’ explanation would be – in accordance with premise 2 of the skeptical argument considered in the previous section – an explanation that satisfies the demands of a physicalist.

Logical empiricism gave this idea a different twist by taking a critical stance with respect to metaphysical explanations in general. From their point of view, the only interesting aspect of the parallelism thesis is that mental events co-occur with physiological events in the brain. No further interpretation of this parallelism is needed, as Fechner thought; and no further insights are to be expected, when “things are thoroughly thought out”. This is the point of the anti-metaphysical principle (P1).

A letter to Cassirer that Schlick wrote in 1927, quoted by Heidelberger, shows where their opinions deviated here:

The psychophysical parallelism in which I firmly believe is not a parallelism of two ‘sides’ or indeed ‘ways of appearing’ of what is real, rather, it is a harmless parallelism of two differently generated concepts. Many oral discussions on this point have convinced me (and others) that in this way we can really get rid of the psychophysical problem once and for all. (Ibid. 250)

It may seem, however, that James was right after all and that the ‘harmless parallelism’ that Schlick adopts here was just a ‘provisional halting-place’. A few years after this letter was written, physicalism became the official doctrine of the Vienna Circle. Did the logical empiricists finally realize that the psychophysical problem required a more profound solution? This depends on what their move to ‘physicalism’ involved.

The usual way to understand this move is to classify it as a ‘linguistic’ or ‘semantic physicalism’ whose goal is to eliminate problematic non-physical entities from psychological theories by expressing them (or

‘translating’ them) into the language used in the physiological and behavioral sciences. But this is a highly questionable reading of the view embraced by logical empiricism at this time. A very different reading has been suggested by Stubenberg who interprets this view as a form of “non-materialistic physicalism” (Stubenberg 1997, 144). This sounds more paradoxical than it actually is. The crucial point, I think, is that the move to physicalism was – at least initially – a response to a methodological question: what is the evidential basis of scientific theories? Following Ernst Mach, Schlick and Carnap had felt comfortable with assuming that the evidence of scientific theories consists in experiences that directly verify statements like ‘there is a red spot’, and ‘it is cold now’. This assumption was challenged by Otto Neurath who claimed that these qualitative statements can, and should, be replaced by reports using only quantitative terms like ‘light of length L is reflected there’ and ‘the kinetic energy reaches level L now’. Neurath’s point was not a metaphysical, but a pragmatic one: statements of the first kind carry no additional *evidential weight*, whereas statements of the latter kind have the advantage of introducing quantitative methods into all sciences. They can therefore serve as a unifying bond between the natural and the social sciences, including psychology and the humanities. This is the point of the unity principle (P2).

Thus conceived, the move to ‘physicalism’ within logical empiricism has not much to do with the mind-body problem. It was a move within epistemology, not within metaphysics. This may also explain another puzzling fact that Jaegwon Kim noticed recently. He pointed out that even in classical texts from this period, like Hempel’s paper “The Logical Analysis of Psychology” (1935), one does not find a clear commitment to a physicalist position:

This means that Hempel’s translatability thesis – the claim that all psychological statements are translatable into physical statements – is fully consistent with the Spinozistic or Leibnizian dualism. [...] The conclusion seems inescapable that the notion of translation used by Hempel [...] cannot serve as a basis for formulating a robust and significant form of physicalism. (Kim 2003, 268)

Logical empiricists could therefore still reject metaphysical solutions of the mind-body problem as nonsense. This caused no tension for them, because

their physicalism was not a metaphysical position in the first place. It was just a methodological rule about how to formulate the evidential base on which scientific theories rest. But the tension did arise eventually. There is no doubt that logical empiricism was driven towards a physicalistic position worth this name, even if their metaphysical commitments remained unclear and changed between a functionalist theory and a psycho-neural identity theory. The anti-metaphysical stance that characterized their view initially thereby went over board.

In Kim's view, this was a salutary move in the right direction (*ibid*, 275 and 277). However, when one takes into account the qualia problem, this judgment may have to be reconsidered. Neither functionalist theories nor identity theories are very successful strategies in answering the skeptical argument explained earlier. Perhaps logical empiricism took a wrong turn here, when it eventually followed Fechner in adopting a more robust physicalistic theory of the mind. In the next section, I shall provide further evidence for this hypothesis by turning to Quine's naturalism.

#### 4. QUINE'S NATURALISM

The prominent role that Quine has played in promoting naturalism in contemporary philosophy cannot be missed. He is widely recognized as the main representative and the spearhead of a naturalized epistemology and a naturalized metaphysics (Kitcher 1992, Craig/Moreland 2000, DeCaro/Macarthur 2004). In the same way in which logical empiricism built on the ideas of the 19<sup>th</sup> century, Quine's naturalism was derived from his predecessors. Although this fact has been widely acknowledged in the literature, it has not been fully appreciated how selective Quine was in continuing the tradition of logical empiricism. For Quine, naturalism consists in

the recognition that it is within science itself, and not in some prior philosophy, that reality is to be identified and described. (Quine 1981, 21)

This echoes not only Roy Wood Sellars' statement quoted earlier, but also the denial that metaphysics can (or must) go beyond science. If one recognizes the importance of the natural sciences, Quine says here, one

must also acknowledge that science takes care of the most general questions we can ask about reality. That is to say, it also takes care of our metaphysical problems, like the mind-body problem. Philosophical views on these matters are legitimate only to the extent that they stay within the boundaries set by the empirical sciences.

How tight are these boundaries, and how are these boundaries fixed? Quine's answer to this question is complex, and it is beyond the scope of this paper to deal with it in detail. The following remarks can only provide a rough sketch of Quine's position.<sup>7</sup>

The claim that experience limits metaphysics is an old claim of empiricism. However, as Quine argues, both the classical version that we find in British empiricism and the version we find in logical empiricism have to be updated in order to bring this claim in line with contemporary science. Two assumptions have become untenable for Quine: the assumption that sensory evidence consists in impressions that give rise to ideas; and the assumption that sensory evidence is distributed and associated with single sentences or even single ideas. Quine's project is to develop a form of empiricism that is purified of mental concepts, like the concept of an idea, and holistic in taking science as a whole to face the tribunal of sensory evidence (Quine 1981b, 67ff).

Where does naturalism come into play here? It enters the scene in the way in which Quine tries to get rid of the mentalistic vocabulary:

[...] my stance is naturalistic. By sensory evidence I mean stimulation of sensory receptors. I accept our prevailing physical theory and therewith the physiology of my receptors, and then proceed to speculate on how this sensory input supports the very physical theory that I am accepting. (Quine 1981, 24)

But, does Quine really speak as a naturalist here, as he claims, or as a physicalist? This depends on what one means by 'physicalism'. If one uses this term in the way in which logical empiricists used it when they requested that the evidence supporting scientific theories should be described in a quantitative language, then the question makes no difference. Quine's physiological account of sensory experience is clearly in line with this request and therefore both naturalistic and physicalistic in

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<sup>7</sup> A fuller treatment of Quine's position can be found, for instance, in (Hylton, 1994).

this wider sense. But why isn't it also physicalistic in the stronger sense in which physicalism is a doctrine about the mind-body relation? And if it is, why does Quine not say so instead of describing his position as merely 'naturalistic'?

The answer, I suspect, has to do with Quine's view that his claim about the nature of sensory evidence can be derived from empirical science and needs no extra metaphysical foundation. It is supposed to follow from the "prevailing physiological theory of our sense receptors". But is this appeal justified? Even if neurophysiology has much to say about the processes by which we pick up information via our senses, this does not show that there is nothing more to sensory experience than neurophysiological processing. This is something that Quine tacitly assumes here, and in assuming it he smuggles a metaphysical premise into his empiricism.

I should make clear that I am *not* criticizing here Quine's commitment to a physicalist theory of the mind. Whether physicalism provides a correct account of mental states is not the issue here. I am concerned with Quine's claim that he is speaking as a *naturalist*, not as a physicalist, when he identifies sensory experiences with stimulations of sensory receptors. He thereby suggests that his naturalism is something more fundamental and independent of his physicalistic commitments. In fact, however, his naturalism seems to have absorbed his physicalist commitment.

We can now also understand why Quine requests that the language of science should be purified from any mentalistic idiom. In making this request, Quine is not merely modernizing empiricism; he is confronting a Cartesian epistemology and metaphysics. This becomes most vivid when Quine replaces Descartes' description of himself as a reflecting *res cogitans* with his own physicalistic self-description:

I am a physical object sitting in a physical world. Some of the forces of this physical world impinge on my surface. Light rays strike my retinas; molecules bombard my eardrums and fingertips. I strike back, emanating concentric airwaves. These waves take the form of a torrent of discourse [...]. (Quine 1966, 228)

This is a *philosophical* statement. There is no need in science to adopt such a point of view, as one can see from the fact that mentalistic terms are used all over in psychology and the social sciences. Quine criticizes this practice

and offers a rational reconstruction of science that shows how mentalistic expressions may be eliminated. But such criticism needs an extra-scientific basis. It has to be grounded in a metaphysical doctrine that is not contained in science itself.

Quine's naturalism, I said earlier, absorbed his physicalism and thereby lost its metaphysical innocence. It is not content with the demand, originally introduced by Neurath, that the evidential base of science should be described in a quantitative (i.e. 'physicalist') language that may serve as unifying bond for science. It demands in addition that the evidence should be *exhaustively* described in such a language. No qualitative or intentional terms for marking qualitative differences among experiences are allowed. This stronger claim rests on a full-blown physicalism, not just a "non-materialistic" variant of it.

## 5. FROM PHYSICALISM TO MODEST NATURALISM

As the previous section has shown, the difference between naturalism and physicalism that Quine officially recognizes becomes very thin when one takes into account his anti-mentalistic stance. But the distinction is still worth drawing. In this section, I therefore suggest a change of course. I think we should leave behind the anti-mentalistic stance of Quine and instead return to the goal of metaphysical neutrality initially pursued by logical empiricism. This will make room for a modest form of naturalism and a broader notion of evidence that does not reduce to informational processes taking place at the sensory and neurophysiological level.

Modest naturalism, as I understand it, is a pluralistic doctrine according to which knowledge can arise from many different sources. There are the sources that can be explained in terms of chemical or biological processes, but there are other sources as well that are therefore no less 'natural'. The first task for a modest naturalist, therefore, is to introduce a broader notion of what it means to be 'natural' that is not tied to the perspective of the natural sciences. I suggest that we understand this notion in the following way:

A property  $F$  is natural in a broad sense if a reasonable explanation can be given as to why objects exemplify  $F$ .

Reasonable explanations come in many different forms. There is a reasonable explanation why objects have a certain mass, why they are soluble, and why they function as kidneys or hearts. These explanations are given by physics, chemistry, and biology respectively. But there is also a reasonable explanation why certain objects are linguistic symbols, presidents, or pieces of art. These explanations are given in linguistics, in social studies, and in aesthetics. This distinguishes them from all non-natural properties, like being an angel or a work of witchcraft, which cannot be explained in this way. Even if one can tell stories about such things, they remain a mystery to us and therefore do not count as ‘natural’ even in a broad sense. Using this wider notion, we can now say more generally what a natural source of knowledge is:

A source of knowledge is natural in a broad sense if a reasonable explanation can be given as to how someone can acquire knowledge from this source.

One possible explanation for acquiring knowledge starts at the sensory level and explains how we pick up information from stimulations on the surfaces of our body. But much of what we know cannot be explained in this way. When we read something in the newspaper, the source of our knowledge is much richer than just a pattern of sensory stimulations: it consists of the entire set of practices and institutions that is needed for a newspaper to function properly. There has to be a written language and a tradition of spreading reliable information via such media.

The basic principle of modest naturalism can now be stated as follows:<sup>8</sup>

(N) All knowledge about the empirical world is derived from natural sources of knowledge, i.e. from sources whose functioning can be reasonably explained.

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<sup>8</sup> Different versions of a modest (or harmless) naturalism have been proposed by John McDowell (McDowell 1996, 2004), Jennifer Hornsby (Hornsby 1997), Robert Almeder (Almeder 1998) and Hans Fink (Fink 2006). A comparison of these views with the one developed here is beyond the scope of this paper.

Is there anything controversial about this principle? This is a tricky question that one can answer both with “Yes” and “No”. Since the present view agrees with the basic idea of logical empiricism that metaphysical statements have no explanatory value when they transcend science, it has to be controversial. But, on the other hand, it seems to express a conceptual truth. It merely tells us that an epistemic state of belief can count as an instance of knowledge only if it is justified in terms of a source that can be reasonably explained. How could this be denied?

We must therefore conclude that conceptual truths can also have controversial consequences. I think this is as it should be. Conceptual analysis, after all, is not a tedious enterprise of merely making explicit what everyone knows and no one doubts. As a conceptual truth, (N) does not need support from an extra metaphysical premise. It therefore also preserves the goal of remaining metaphysically neutral. I now want to show how this feature of modest naturalism can help us to diffuse skepticism about explaining phenomenal consciousness.

## 6. DEMYSTIFYING CONSCIOUSNESS

In section 1, I distinguished between different forms of puzzlement to which consciousness can give rise. There are mysteries that originate from the traditional mind-body problem, and there are mysteries that result from the diverging methodologies of phenomenology and empirical psychology. A mixture of both sources provides the background for a radical skepticism that agrees with Du Bois Reymond’s *Ignorabimus* claim. The argument leading to this conclusion was that there is no hope that the qualia of experience can be integrated into a physicalistic world-view, nor is there hope that they could be explained without such integration or that they could be successfully eliminated from a psychological description of mental reality. This leaves phenomenal consciousness as a ‘riddle’ that cannot be explained away.

But there is a loophole in the argument, as I pointed out. In fact there are *two* loopholes in the assumption that a ‘full’ explanation of consciousness has to be both physicalistic and scientific. The modest naturalism I am advocating here accepts the latter part of this assumption: an explanation of consciousness that does not meet the standards of a

scientific explanation could not count as a ‘full’ explanation. This does not force us to accept also the first part of this assumption. An explanation could count as a ‘full’ explanation even if it does not meet the requirements set up by a physicalist. Using the broader notion of what it means to be a natural phenomenon, a naturalist will claim no more – and no less – than the following:

- (CN) Consciousness is a natural property in the sense that there is a reasonable explanation how living creatures come to have conscious experiences.

The term ‘conscious experiences’, as I use it here, covers all types of conscious mental states, be they sensory experiences resulting from perception and memory, experiences of desire or emotion, or experiences we have in problem solving or in forming abstract thought. A distinction between functionalist and phenomenal types of consciousness plays no role at this level, although it may be introduced later when different explanations are given for mental states instantiating these different kinds of consciousness. The distinction then presupposes that *both* types of consciousness can be explained. It therefore cannot be used for distinguishing between a form of consciousness that can, and another that cannot be reasonably explained.

Although (CN) is a very modest claim, it needs to be defended against the view that consciousness is mysterious and therefore not a natural phenomenon. There are two possible routes a modest naturalist can take here: he may choose a ‘deflationary’ defense or a ‘dialectical’ defense of his position.

Taking the deflationary route, he could point out that fragments of a theory of consciousness are already available. Neurophysiology has shown which parts of the brain are active when certain experiences occur; cognitive psychology has developed models that may explain how informational states become conscious when they are globally broadcast in the brain; and social studies have shown how social interaction and cultural activities influence the development of advanced forms of self-consciousness. These fragments give us already a partial understanding of

he emergence of consciousness in human and nonhuman animals. Future research will make this picture more and more complete.<sup>9</sup>

This line of defense shows how much a skeptic has to set aside when he declares consciousness to be an irresolvable mystery. But pointing this out will not be enough to win the battle. A skeptic can respond here that the partial understanding provided by our current scientific theories creates an illusion. It is the illusion that we only need better theories of the same kind to complete the job. But theories of the same kind will not be able to dissolve the mystery, the skeptic may insist, and therefore the glass will always remain half empty.

In order to overcome a skeptical challenge of this sort a dialectical response is needed, and I think that a modest naturalist is in the best position to offer such a response. He can point out, as we have seen, that his position is neutral and involves no commitment to a form of physicalism or dualism. Therefore, he need not solve the difficulties that physicalists and dualists confront in dealing with the mind-body problem. He can thus set aside the problem how qualia could be integrated into a physicalistic conception of the world, and how mental states can cause physical states, and vice versa, on a dualistic theory. The skeptic may be right that *these* are intractable problems. But the problem how consciousness arises in living creatures is not to be identified with any of these problems and therefore can be solved. In sticking to his metaphysically neutral position, the naturalist can thus turn the tables against the skeptic.

## 7. TWO OBJECTIONS

Can a naturalist get away with this reply to the skeptic? In concluding this paper I want to consider two objections that a modest naturalism has to face here. The first objection is that his position is *unstable*; the second that it is philosophically *self-destructive*.

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<sup>9</sup> This seems to be the view proposed in (Mills, 1996), and it may even be a view that McGinn finds attractive (see McGinn 1989 and 1999).

The objection that a modest naturalism, as I have described it here, is an unstable position has been voiced by Barry Stroud. He puts the objection in the form of a dilemma:

There is pressure on the one hand to include more and more within our conception of 'nature': so it loses its definiteness and restrictiveness. Or, if the conception is kept fixed and restrictive, there is pressure on the other hand to distort or even to deny the very phenomena that a naturalistic study is supposed to explain. (Stroud 1996, 44)

Stroud thinks that some compromise has to be found here. A naturalist must accept some restrictions on what counts as natural and what not:

Some determinate conception of what the natural world is like is needed to give substance to the claim that one's epistemology, or one's study of any other aspect of the world, is naturalistic. (Ibid, 45)

If anything whatsoever counts as 'natural', one has simply deprived naturalism of its content.

My response to this objection is that metaphysical neutrality does not mean 'anything goes'. It is quite plausible that *some* constraints will have to be made to sustain the claim that consciousness is a natural phenomenon. For instance, we have to assume that conscious experiences are datable occurrences in order to correlate them with neurophysiological activities in the brain. But this is a claim that does not go beyond a weak empirical parallelism, as explained in section 1. It still allows us to deny that angels or ghosts could also be conscious beings, something that we could not reasonably explain.

The metaphysical neutrality of naturalism that I am advocating here is a neutrality about how we interpret mental predicates like 'tasting ripe strawberries'. We can interpret them as denoting an irreducible mental property, like a property dualist does, or we can take them to denote some physical state – we do not know which – of our sensory system. But we need not commit ourselves one way or the other, since an *explanation* of how this experience arises does not depend on this decision. If the dualist interpretation is right, any explanation will be too weak for reducing qualitative differences to physical differences; if the physicalist is right, these explanations will finally add up to full-blown reduction of mental to

physical properties. Thus, the instability objection that Stroud raises seems to be a red herring. It just repeats the pattern of reasoning that, in section 2, we found in Fechner and James: the empirical parallelism between mental and physical phenomena needs some ‘deeper’ metaphysical explanation. This also seems to be the motivation when it is said that a Kantian question needs to be addressed here. It is not enough, it is argued, to explain how consciousness emerges; one also needs to explain *how such an explanation is possible* (Bieri 1996; Birnbacher 2002). But are we, as philosophers, really in a position to request such a further explanation? When scientists explain why some phenomenon occurs, they also show how such an explanation is possible: simply by providing this explanation. To claim that this could not be a ‘complete’ or ‘full’ explanation means to fall into the trap set up by the skeptic.

This brings me to the second objection that modest naturalism is a self-destructive philosophical position because it asks us to hand over all problems to the empirical sciences. There would then nothing left for philosophy to do. Clearly, anti-naturalists are here in a more comfortable position. If philosophy can pass judgment on what science can or cannot achieve, it can also carve out for itself a domain of problems that are its exclusive domain. The problem of ‘fully’ explaining consciousness would be a prime example of such a genuine philosophical problem.

My response to this second objection is similar to the first one. We cannot assume, without losing the debate against the skeptic, that philosophy is able to solve deep metaphysical puzzles. This is what advocates of physicalism and dualism hope for. Naturalism suggests that these puzzles should be ‘translated’ into problems of the empirical sciences. This requires someone to do the translation. It is not obvious how these problems should be addressed by the different methods and conceptual frameworks used in different sciences. Philosophy can contribute to this project by showing how these differences in method and concepts may be bridged.

Compared with the tasks that metaphysically inspired philosophers set themselves, this goal of methodological and conceptual clarification seems a very minor one. In some sense this is true, and it is part of the modesty of naturalism. In another sense, however, naturalism is not a modest view at all. It claims that the skeptics are mistaken and that consciousness is not

something deeply mysterious. Without the naturalist, we would not be able to uncover the erroneous moves from which skeptical arguments receive their alleged power.\*

## 8. REFERENCES

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