The Hard Problem of Consciousness and the Perspectivalness of Phenomenal Properties

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1. Introduction: Phenomenal Properties and the Hard Problem of Consciousness

For some mental states there is something *it is like* to be in that state. This is called their 'phenomenal character', and mental states that have such a phenomenal character are called 'phenomenally conscious states'. Phenomenal consciousness is usually thought to be (at least partially) explained by phenomenal or qualitative properties that are typically included in perceptual experiences and that are – or at least seem to be – presented to the subjects of those experiences. That is, phenomenal properties are thought to (at least partially) determine the phenomenal character of mental states. Typical examples of such phenomenal properties are a distinctive quality of redness that appears when you see a red apple, a distinctive quality of sourness that appears when you taste a sour soup, a distinctive quality of painfulness that appears when you have sore shoulders, and so on. In this paper, I will focus on phenomenal properties and address the so-called 'hard problem of consciousness', the problem of how phenomenal properties can be located in the world portrayed by the natural

sciences, especially physics. (I will call this world the 'natural world' in the following.)

Phenomenal properties could be called 'qualia', but the term 'qualia' is also often used in a narrower sense, namely, that of the intrinsic properties of experiences (Dennett[1990] p. 523; Block[1997] p. 677; Crane[2001] p. 76). There is some disagreement about the relation between qualia in this sense of intrinsic properties of experiences and the phenomenal character of mental states. According to one view, qualia (partly) determine phenomenal character (cf. Block[1997]), while other views hold that that character (in part) depends on intentional properties of experiences (cf. Crane[2001]), or that phenomenal character (partially) rests on properties of things in the external world (cf. Fish[2009]). I myself agree with this last view, and therefore, with the theory of perception called the 'direct perception theory' or 'naïve realism'. According to this theory, perceptual experiences are direct relations called 'acquaintances' between properties of things in the external world and perceivers. However, I will not present arguments in favor of this theory in this paper. Furthermore, given the above characterization of phenomenal properties, it is an open question whether phenomenal properties are intrinsic or intentional properties of experiences, or properties of things in the external world. For this reason, I will not use the term 'qualia' hereafter.

My goal in this paper is to clarify what can be said about the hard problem insofar as phenomenal properties are understood as (partially) determining the phenomenal character of mental states. In Section 2, I will first briefly introduce two representative views on the hard problem – that is, physicalism and anti-physicalism. After that, I will sketch the variety of anti-physicalism that I advocate, which is a form of pluralistic realism that could be called 'multi-aspectistic realism'. Although it is not my main aim in this paper to present arguments for this kind of anti-physicalism, I believe that the 'knowledge argument' is the most appropriate argument for this kind of anti-physicalist view on phenomenal properties, and therefore, I will attempt to show that this is a valid argument in the following sections. In Section 3, I will present the knowledge argument, and in section 4, I will try to refute some objections to this argument.

2. Physicalism and Anti-physicalism

Physicalism is a form of metaphysical naturalism, which is the view that all entities

including substances, properties, and facts can be located in the natural world. This raises the question what it means for something to be located in the natural world. It is generally thought that natural phenomena, such as typhoons, and creatures, such as dogs and cats, are all located in the natural world, but what exactly does this mean? One way of answering this question might be the following: 'Natural phenomena, such as typhoons, and creatures, such as dogs and cats, are all believed to consist of various physical particles at the microscopic level, and the behavior of all of these particles is governed by the laws of physics. It is for this reason that they are all considered to be located in the natural world. In other words, being located in the natural world means being based on physics at the microscopic level in these ways.' Physicalism builds on this answer by interpreting the 'based on' relation as 'being necessitated by' as follows:

Physicalism: any fact is necessitated by the conjunction of all micro-physical facts.(1)

Therefore, according to physicalism, any fact about phenomenal properties is also necessitated by the conjunction of all micro-physical facts, and consequently, phenomenal properties are located in the natural world. I use the term 'facts' here to refer to entities that are objects of propositional knowledge and that at least partially consist of some substances having some properties.(2) (It may be possible that not all facts can be expressed in languages that we can understand, but let's set this aside.)

The physicalist solution to the hard problem, then, locates phenomenal properties in the natural world by appealing to the concept of 'necessitation'. In contrast, anti-physicalism rejects (the applicability of) the necessitation relation and holds that some facts are not necessitated by the conjunction of all micro-physical facts. Consequently, the anti-physicalist response to the hard problem is negative: phenomenal properties *cannot* be located in the natural world.

Varieties of anti-physicalism differ with regards to how they characterize such facts. Cartesian dualism, for example, holds that facts that are not necessitated by the conjunction of micro-physical facts are constituted by a non-material substance whose essential property is thought rather than spatial extension. While I side with anti-physicalism, I do not accept Cartesian dualism, but (as mentioned above) because it is not my main aim in this paper to propose arguments for the kind of anti-physicalism

that I accept, a brief sketch of my view should suffice here.

The view that I advocate could be called 'multi-aspectistic realism'. According to this view, the real world is multifaceted and consists of various perspectival and aperspectival (or perspective-lacking) aspects. The distinction between the perspectival and the aperspectival in this view is influenced by Thomas Nagel's contrast between the subjective and the objective in *The View from Nowhere* (Nagel[1986]).(3) The natural world is the world that is grasped or explained by physics (or the natural sciences in general), and which, therefore, lacks perspectives. The picture of the world provided by physics (or the natural sciences) is the so-called 'view from nowhere'. Typical examples of this are coordinate systems and maps that just represent the structural relations between various things. Hence, according to multi-aspectistic realism, the real world is not the same as the natural world, because, while the natural world is aperspectival, the real world also includes various perspectival aspects that can only be grasped from their own specific points of view. Entities that can only be grasped from their own specific points of view include phenomenal properties, propositional attitudes, values (*i.e.* moral values, aesthetic values), and so on. Differences in 'points of view' here include differences in spatial positions and directions,(4) in situational aspects and circumstances such as lighting conditions,(5) in the organs and faculties of perception between species (*e.g.* bats and humans) or between different members of the same species,(6) in the possession or lack of various practical abilities such as relevant virtues, an aesthetic eye, or the ability to interpret others rationally, and so forth. These perspectival entities (and the aspects that consist of these entities) are not private, but public, because anyone who takes the appropriate points of view can be(come) acquainted with these entities (or aspects).

As mentioned, I will not attempt to present arguments for the view that phenomenal properties should be understood as properties of things themselves in the external world, nor for the kind of anti-physicalism that I advocate. Instead, in this paper I want to defend the view that phenomenal properties are perspectival entities and, therefore, cannot be located in the natural world. Because it seems to me that the 'knowledge argument' is the most appropriate argument in support of this view, my main aim in the following sections is to show that this argument is valid, and thereby to confirm the anti-physicalist rejection of the hard problem.

3. The Knowledge Argument

Frank Jackson's famous 'knowledge argument' is based on a thought-experiment about a color scientist who has never seen color (Jackson[1982]). Imagine that Mary is a brilliant scientist who has made an intensive study of the science of color in all of its aspects, namely, physics, physiology, psychology, and so on. Suppose, therefore, that she has all scientific knowledge of color, including not only all micro-physical knowledge of color but also all other knowledge that is entailed by the conjunction of all this micro-physical knowledge. However, she has never seen any colors other than black and white because she has spent all her life in a black-and-white room, or perhaps, because she is color-blind. Imagine next that Mary sees a red apple for the first time because she has left her room, or because she has had an operation that restored her color-vision (and undergone rehabilitation). Spontaneously she shouts out: 'This is what it is like for a thing to appear red! Now I know.'

It is natural to think that Mary now knows something she didn't previously know about the world (that is, not only about the external world but also about our visual experience), namely, phenomenal properties. The new knowledge, however, is not scientific knowledge of color, because she already had all scientific knowledge of color. Hence, the new knowledge isn't entailed by the conjunction of all pieces of micro-physical knowledge. What she now knows, then, isn't necessitated by the conjunction of all micro-physical facts. Therefore, physicalism is false. This is the 'knowledge argument' – it can be rephrased as follows:

(1) Phenomenal knowledge (i.e. knowledge of phenomenal properties) isn't entailed by the conjunction of all micro-physical knowledge.
(2) If phenomenal knowledge isn't entailed by the conjunction of all micro-physical knowledge, then there are phenomenal facts (i.e. facts about phenomenal properties) that aren't necessitated by the conjunction of all micro-physical facts.
(3) If there are phenomenal facts that aren't necessitated by the conjunction of all micro-physical facts, then physicalism is false.
(4) Therefore, physicalism is false.

Along with the conceivability argument (Kripke[1980]; Chalmers[1996]) and the explanatory gap argument (Levine[1983]), the knowledge argument is one of the most famous and extensively discussed arguments in favor of anti-physicalism. Furthermore, I think that this argument provides the most appropriate support for my view that phenomenal properties are perspectival entities, and therefore, cannot be located in the natural world. The thought-experiment about Mary illustrates the difference between perspectival and aperspectival aspects of the world. Scientific knowledge, which consists not only of all micro-physical knowledge, but also of all other knowledge that is entailed thereby, can only cover aperspectival aspects of the world, while phenomenal facts concern perspectival aspects of the world. Thus, Mary can only grasp a phenomenal fact about redness if she takes the appropriate specific point of view, namely, if she actually has the appropriate bodily state and is in the appropriate situation herself. This thought-experiment suggests that something can be located in the natural world only if it is aperspectival like micro-physical entities. Phenomenal properties fundamentally differ from such entities with respect to their (a)perspectival nature, and therefore, cannot be located in the natural world.

While I believe that the knowledge argument reveals an important and true insight, many objections against it have been put forward. In the next section, I will attempt to refute some of those objections.

4. An Examination of the Validity of the Knowledge Argument

4.1 The New Knowledge/Old Fact View

The most common kind of objection to the knowledge argument takes issue with the second premise. According to one objection belonging to this kind, which is often called the 'new knowledge/old fact view', Mary doesn't learn any new fact. Rather, she encounters the facts she already knew in a new way (Churchland[1985]). This objection can be clarified easily by means of an appeal to the notion of modes of presentation. Suppose that an alien, Harry, already knew that H_2O molecules break apart at 100 degrees Celsius, but didn't know yet that water (or to be precise, a substance called 'water' on Earth) boils at 100 degrees Celsius. Then, one day, he learns that water boils

at 100 degrees Celsius. However, he doesn't thereby learn any new fact – he just encounters a fact he already knew in a new way. To be more specific, the fact that was already known to him in the mode of 'H_2O molecules break apart at 100 degrees Celsius' is now presented to him in the mode of 'water boils at 100 degrees Celsius'. The same facts can be known in different ways, that is, in different modes of presentation. Therefore, even though we acquire some knowledge that isn't entailed by knowledge we already had, it cannot be concluded that the fact that is the object of the new knowledge isn't necessitated by the conjunction of all the facts that are objects of prior knowledge. Similarly, it cannot be concluded either that the new phenomenal facts learned by Mary aren't necessitated by the conjunction of all micro-physical facts, because the object of the newly learned knowledge might be the same as already known facts that are necessitated by the conjunction of micro-physical facts.

However, this objection is based on the premise that the relation between micro-physical knowledge and phenomenal knowledge is analogous to the relation between knowledge of H_2O and knowledge of water, but it is by no means obvious that these two relations are really analogous. Considering that the thought-experiment about Mary illustrates the difference between the aperspectival and the perspectival, and that the case of H_2O and water is not a case of aperspectival versus perspectival ways of knowing, there is a significant disanalogy. The case of H_2O and water involves two ways of knowing that are both aperspectival, which suggests that if you trace the object of knowledge in one mode of presentation, you will automatically find that it is the same as the object of knowledge in the other. The same isn't necessarily true in case of a contrast between aperspectival and perspectival ways of knowing, however. Furthermore, it can be argued that what corresponds to the first premise of the knowledge argument doesn't hold in the case of H_2O and water either. The knowledge that water boils at 100 degrees Celsius is entailed by the conjunction of relevant micro-physical knowledge about H_2O (cf. Chalmers[2010] chs. 5, 7), but an analogous entailment doesn't hold in case of the red apple.[(7)] Given these disanalogies, it should be concluded that the 'new knowledge/old fact view' is not a valid objection to the knowledge argument.

4.2 The Phenomenal Concepts Strategy

That conclusion may be premature, however, as there is a variant of the new knowledge/old fact view that maintains that these disanalogies are irrelevant. This variant is often called the 'phenomenal concepts strategy' (Loar[1997]). It concedes that there is something special about the difference in ways of knowing in the case of Mary, but argues that that difference itself can be explained physicalistically.

According to the phenomenal concepts strategy, we can understand a phenomenal property as an intentional property of a perceptual experience, and we can understand an intentional property of a perceptual experience indirectly through understanding that experience as standing in some particular relation to stimuli, behavior, and other mental states. Following this strategy, we can understand a phenomenal property through the *functional* concept of that phenomenal property. On the other hand, when you actually have a perceptual experience that has that phenomenal property, then you understand the phenomenal property through its *phenomenal* concept. Hence, the difference in ways of knowing in the case of Mary is a difference in kinds of concepts used, but the same isn't true in the case of water and H_2O, because in that case we use different concepts belonging to the same functional kind.

This strategy concedes, then, that the difference in the case of Mary is special, but it maintains that that difference itself is explainable physicalistically because the particularity of phenomenal concepts can be explained in physicalist terms. While functional concepts refer to their referents by picking out characteristics thereof that are true to their descriptions in terms of these concepts, phenomenal concepts refer to their referents – that is, phenomenal properties – simply by picking them out directly without any mediating descriptions. As mentioned above, the relevant two concepts in the case of water and H_2O are both functional concepts and have interrelated descriptions. According to the phenomenal concepts strategy, the knowledge in terms of one concept is entailed by the knowledge in terms of the other concept. Furthermore, while concepts from the natural sciences are commonly assumed to involve relevant descriptions, phenomenal concepts refer directly (as mentioned), and thus, do *not* involve any relevant descriptions. It follows that phenomenal knowledge is *not* entailed by the conjunction of all micro-physical knowledge. Rather, the particularity of phenomenal knowledge can be explained as this particularity of phenomenal concepts.

The strategy maintains, however, that the *cognitive role* of phenomenal concepts itself can be explained in terms of its function. Thus, the particularity of phenomenal concepts itself is thought to be explainable physicalistically. The phenomenal concepts strategy can be understood as further claiming that the particularity of the perspectival that I emphasized above consists in the particularity of phenomenal concepts, and thus, that the particularity of the perspectival can also be explained in physicalistic terms. That is, the perspectivalness itself doesn't involve anything that suggests that the perspectival cannot be located in the natural world.

One may wonder, however, whether this is true. The phenomenal concepts strategy claims that phenomenal concepts refer to phenomenal properties directly without any mediating descriptions, but what exactly is the relation between phenomenal concepts and phenomenal properties? Are phenomenal concepts effectively identical to, or constituted by what we call 'phenomenal properties'? If that is the case, it isn't obvious at all that the cognitive roles of phenomenal concepts can be explained in terms of function, because asking this question is no different from asking whether phenomenal properties can be explained in terms of function, and that amounts to asking whether phenomenal properties can be located in the natural world. On the other hand, if phenomenal concepts are different from phenomenal properties (and aren't constituted by them either) and are just something we use in understanding the latter, then the fact that the cognitive role of phenomenal concepts can be explained in terms of function has no implications with regards to the metaphysical status of phenomenal properties – that is, with regards to the question whether phenomenal properties can be located in the natural world. Consequently, the phenomenal concepts strategy does not succeed in refuting the knowledge argument.

4.3 The Analogy with Indexical Knowledge

According to a further kind of objection, the concepts of 'fact' and 'knowledge' are inappropriate in the definition and refutation of physicalism, respectively, and therefore, the conclusion of the knowledge argument doesn't follow even if its first premise is true. One example of this objection appeals to an analogy with indexical knowledge (cf. Crane[2001][2003]). Suppose that a man named 'Perry' is lost in a city. He looks for his position on a map, and when he finally finds it, he proclaims: 'I am here!' (or 'Here is this

place'), while pointing at a place on the map. It is natural to think that he now knows something that he didn't previously know, namely, the knowledge he expresses by saying 'I am here!'. This is an example of indexical knowledge. Like phenomenal knowledge, indexical knowledge depends on a specific point of view. Therefore, indexical knowledge isn't entailed by the conjunction of all micro-physical knowledge. And for this reason, the way of knowing in the case of Perry is special in the same way as in the case of Mary. However, according to this objection, this does not imply an incompatibility with physicalism. Perry learns a new fact, but only if the term 'fact' just refers to the object of knowledge; and the fact that he learns a new fact in this sense does not have any metaphysical implications, and thus, does not refute physicalism, because every substance and property included in the indexical fact expressed by his saying 'I am here!' is aperspectival, and thus, can be the subject matter of physics (or the natural sciences in general). Therefore, the perspectivalness of knowledge itself doesn't have any implications that suggest that something cannot be located in the natural world.

Indeed, the perspectivalness of knowledge as understood here does not imply that something cannot be located in the natural world, but the perspectivalness of *indexical* knowledge is different from the perspectivalness of *phenomenal* knowledge. You can acquire phenomenal knowledge directly once you take the required point of view, because encountering phenomenal properties amounts to nothing but taking a point of view specific to each property. On the other hand, you can get indexical knowledge only indirectly, even if you take the required point of view, because indexical knowledge is only available by derivation from phenomenal knowledge (*i.e.* knowledge of phenomenal properties), which can be gained only from the relevant specific point(s) of view and the knowledge of relations between various non-indexical facts and various phenomenal properties relevant to each non-indexical fact. For example, Perry can acquire the indexical knowledge that he expresses by saying 'I am here!' only if he derives it from the knowledge of phenomenal properties that appear to his point(s) of view and his knowledge of relations between positions of various points of view on the map and phenomenal properties that would appear to each such point of view.[(8)] Perhaps, no aperspectival substances and properties are included in the relevant indexical fact itself, but it is not necessarily true that Perry doesn't encounter any

perspectival entity that cannot be located in the natural world when he acquires the phenomenal knowledge that is necessary in deriving that indexical knowledge. Therefore, like the previous two objections, this is not a valid objection to the knowledge argument either.

5. Conclusion

The refutation of some objections to the knowledge argument in section 4 above is by no means exhaustive.(9) However, I think that if we take the knowledge argument to be valid, it reveals something important about the structure of reality. That is, the thought-experiment about Mary illustrates the difference between perspectival and aperspectival aspects of the world, and the knowledge argument suggests that phenomenal properties cannot be located in the natural world because they are perspectival entities.(10) By implication, the hard problem of consciousness cannot be solved. In asking *how*, the hard problem assumes *that* phenomenal properties can be located in the natural world, but because of the perspectival and multifaceted structure of the world (as revealed by the knowledge argument) this assumption is false.(11)

Notes

（1）Alternatively, physicalism could be defined in terms of 'supervenience', which is similar to the concept of 'necessitation'.

（2）It could be objected that defining physicalism in terms of 'facts' is inappropriate. I will consider this kind of objection in Section 4.

（3）As far as I can see, it is unclear whether Nagel understands phenomenal properties as properties of things in the external world or as properties of experience itself.

（4）For example, coins can appear elliptic when they are viewed obliquely. Such appearances of shape can be called '*Abschattung(en)*' using Husserlian terminology.

（5）For instance, yellow objects can appear orange under certain lighting conditions.

（6）For example, the bat's sonar system and the insect's visual system capable of recognizing ultraviolet light.

（7）To be more precise, it should be said that the fact that water boils at 100 degrees Celsius is entailed by the conjunction of relevant micro-physical knowledge plus the knowledge that water

is identical to H_2O and that boiling at 100 degrees Celsius can be defined functionally in some particular way. However, even if we were told that a certain type of perceptual experience is identical to a certain type of brain state and that having a relevant phenomenal property can be defined functionally in some particular way, we still wouldn't be able to acquire the relevant phenomenal knowledge.

（8）The same can be said of other examples of indexical knowledge. For example, the indexical knowledge that a woman who has been wanting to know the current time expresses by saying 'It's 5 o'clock now!' is derived from the knowledge of phenomenal properties that appear to her at that time and the knowledge of phenomenal properties that would appear to her at various points of time. And the same can be said of the indexical knowledge that a man who has been wanting to know who is making a mess in the supermarket expresses by saying 'It's me! I am making a mess!' It is only available by derivation from the knowledge of phenomenal properties that appear to him and the knowledge of relations between various people's characteristics and various phenomenal properties that would appear to each person.

（9）There are also other types of objection against the knowledge argument. One of the best known is the 'ability hypothesis", but I think that this objection has already been decisively refuted (cf. Crane [2001] chap. 3, sec. 28; Crane [2003] sec. 3), so I didn't consider it necessary to address it in this paper.

（10）It might be objected that it is insufficient to refute objections to the knowledge argument in order to conclude that phenomenal properties cannot be located in the natural world, and that a positive argument for that conclusion is needed. This would be a misunderstanding, however, as I showed in these refutations that there is a fundamental epistemological difference between the perspectival and the aperspectival, and that fundamental difference is sufficient to suggest that there is an ontological difference as well. For that reason, the burden of proof is on my opponents.

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