

# Hard, Harder, Hardest

Katalin Balog

In this paper, I will discuss three problems concerning consciousness<sup>1</sup>. The first two problems have been dubbed “The Hard Problem”<sup>2</sup> and “The Harder Problem”<sup>3</sup>. The third problem has received less attention and I will call it “The Hardest Problem”. However, I do not really mean to indicate a competition among these problems as to which is the most difficult. They are all hard (perhaps equally so) and I think that they cannot really be solved separately. Their solution has to come in a piece, and that’s part of what makes all of them so hard.

Together the three problems present, I suggest, a particularly difficult challenge to those philosophers who are, like me, both physicalists<sup>4</sup> and phenomenal realists,<sup>5</sup> and agree with dualists

---

<sup>1</sup> Throughout the paper, when I talk about conscious states, I mean phenomenally conscious states, states for which there is, in Thomas Nagel’s expression (1974), “something it is like” to have them. I will also use “phenomenal state” in the same sense.

<sup>2</sup> See Chalmers 1996, pp. xii-xiii.

<sup>3</sup> See Block 2002.

<sup>4</sup> By physicalism I mean the metaphysical view that the world’s fundamental ontology is physical and the best account of that ontology is provided by fundamental physics. According to contemporary physics, this ontology consists of particles, strings and fields of various types that occupy space-time (or bear spatio-temporal relations to one another) and possess a limited number of quantitative states (mass, charge, electromagnetic potential and so on). Physics also claims that there are only a few fundamental dynamical and perhaps non-dynamical laws that govern the structure of space-time and evolution of its occupants. Physicalism asserts that everything else, whatever other entities and states there are, is composed out of and realized by configurations of this fundamental physical ontology. Physicalism also asserts that all macroscopic or special science laws, causal relations, probabilities are ultimately derived from the laws of fundamental physics and the arrangement of fundamental physical entities.

<sup>5</sup> By “phenomenal realism” I mean that there are phenomenal states and states and that there are concepts of these – phenomenal concepts – that possess both first person and third person applications. First person applications have a cognitive immediacy while third person applications are mediated by perception (typically of behavior). I take it for granted that I know in my own case that consciousness (and various phenomenal states) exists but for other people and creatures there is room for various degrees of skepticism.

that there is an explanatory gap involving phenomenal consciousness.<sup>6</sup> This is not to say that dualists and Russellian monists<sup>7</sup> don't have their own problems – it is just that these problems don't arise in the same form for them. The problems that beset dualism and Russellian monism are at least as hard as these but I will confine myself here to the way these problems arise within a physicalist metaphysics.<sup>8</sup> My aim here is to spell out the relations between these three problems and then to explore how they appear from the perspective of an approach that has been quite fruitful in so far as the first two problems are concerned.<sup>9</sup>

The approach I have in mind attempts to explain the various special and puzzling features of phenomenal consciousness in terms of what Stoljar has called “the phenomenal concept strategy.”<sup>10</sup> The basic idea of the phenomenal concept<sup>11</sup> strategy is that dualism seems plausible not because it is true but merely because of structural features of the concepts we apply to conscious states from a

---

<sup>6</sup> I assume that most readers are familiar with Levine's observation (Levine 2001) that there is an explanatory gap between phenomenally and physically characterized facts. I explain the gap in Section 1. Those who think there is a gap reject (as I do) analytic functionalist accounts of phenomenal concepts and hold that zombies are conceivable.

<sup>7</sup> A version of Russellian monism that has recently been revived (Chalmers 1996, 2002, and 2017; Lockwood 1998; Stoljar 2001; and Strawson 2003, and 2006) is the view that the most fundamental states are both mental or “proto-mental” and physical in that they possess a physical dispositional nature and a mental categorical nature. It is an interesting issue how this view fares with regard to the three problems but that is a topic for another paper.

<sup>8</sup> For a discussion of the problems for dualism see Balog 2005.

<sup>9</sup> Balog 2012a, 2012b, Block 2002.

<sup>10</sup> Stoljar 2005. The idea originates in Loar 1990, 1997. The idea that the mind-body problem is a product of the special ways in which we conceive (in the first person) of our phenomenal states is first formulated in this paper. A similar proposal by Scott Sturgeon 1994 appeals to the special epistemology of phenomenal states.

<sup>11</sup> Phenomenal concepts are special, subjective concepts we apply to experience. Phenomenal concepts are widely thought to be special and unique among concepts in that they refer – in some further specifiable way – directly yet substantially to conscious experience.

subjective point of view. Recently some philosophers – among them David Papineau<sup>12</sup> – who advocate a physicalist approach to both the Hard and the Harder problem have called into question whether what I call the Hardest Problem – the problem of making sense, within the bounds of physicalism, of the possibility of sharing phenomenal states between different species – can be similarly solved. In this paper, I explore how these three problems appear from the perspective of the “phenomenal concept strategy”. My contention is that this approach can go quite far in handling not just the first two problems but the Hardest Problem as well. Here is a first pass at stating the three problems.

The *Hard Problem* is a *metaphysical*, and *explanatory problem* concerning the nature of conscious states. There is an expectation that if physicalism is true then there ought to be an account of how physical states and processes give rise to consciousness, e.g., how brain processes result in exemplifying phenomenal qualities. Failing that, there ought to be a physicalistically acceptable explanation of why it is *not* possible to give such an explanation.

The *Harder Problem* is *epistemological*. The problem is that if physicalism is true then all facts supervene on physical facts including facts about consciousness and so it is natural to expect that, given enough physical information, I can know whether another being is conscious and, if he/she/it is conscious, the character of her phenomenal states. But it seems that I cannot know this. The concern is especially acute with respect to beings that are physically not much like us. How do I know if a physically different creature, say, a dog, a fish, a Martian, or very sophisticated robot, who nevertheless has important functional similarities to me overlaps with me phenomenally one way rather than another way or not at all?<sup>13</sup> If physicalism is true then one ought to be able to explain in physical terms why one’s knowledge of others’ conscious states is limited in this way even though they involve perfectly objective physical facts. This problem is closely connected with the Hard Problem and I will propose an account of phenomenal concepts that goes some distance in handling

---

<sup>12</sup> Papineau 2002, 2003.

<sup>13</sup> Block 2002 uses the label ‘Harder Problem’ for a whole cluster of issues concerning the epistemology of consciousness that goes beyond the scope of this paper. I am going to use the label only for the issue outlined above; consequently, my usage is slightly different from Block’s.

both.

The *Hardest Problem* is a problem about *reference*. Both the Hard and the Harder Problems presuppose that one's subjective phenomenal concepts refer determinately – modulo vagueness – to real, objective states that can be instantiated in minds other than one's own. It follows that there will be a matter of fact – even if I can never find it out – about whether a phenomenal concept of mine applies to another creature. The Hardest Problem is the problem of explaining how, given physicalism, this could be so. It seems very hard to provide an account of how a phenomenal concept can refer to a determinate physical or functional state – but if reference were indeterminate in this way then in certain cases there won't be a matter of fact whether a creature that is physically different but functionally similar will share my phenomenal state.

The problem is especially difficult given two facts about phenomenal concepts. One is that they are neither physical concepts and nor any kind of functional concepts<sup>14</sup>; they have a special direct way of referring. And the other is that it is quite plausible that there will be *several distinct* physical and functional states that are correlated with any given phenomenal state. What would determine that a phenomenal concept refers to one of these to the exclusion of others?

The difference between these alternatives is vast. Take a sensation *s* that is correlated with the neurophysiological state *N* and functional state *F*<sub>1</sub> and *F*<sub>2</sub>.<sup>15</sup> *N* might be only instantiated by humans, whereas *F*<sub>1</sub> might be instantiated by fish as well and *F*<sub>2</sub> might be instantiated by humans, fish *and* robots. So if our phenomenal concept *C* refers to *N* then *s* only occurs in humans but not in fish or robots. If *C* refers to *F*<sub>1</sub> then *s* occurs in both humans and fish but not in robots. And finally, if *C* refers to *F*<sub>2</sub> then *s* occurs in humans, fish *and* robots. It seems to be a perfectly factual matter which one of these scenarios occurs. But this fact is intimately bound up with the issue of reference for phenomenal concepts. Some philosophers have suggested that physicalists have a hard time giving

---

<sup>14</sup> By 'physical concept' I mean a concept that is definable in terms of concepts that appear in the vocabulary of the physical sciences; e.g., the concept of temperature that is definable as average molecular kinetic energy. By 'functional concept' I mean concepts definable in terms of functional role.

<sup>15</sup> *P*, of course, realizes both *F*<sub>1</sub> and *F*<sub>2</sub>.

an account that settles this question, given an otherwise plausible and physicalistically respectable account of phenomenal concepts.

This was a first, rough pass at formulating these three interlocking problems for physicalism. I will now proceed as follows. In Section 1, I go into more detail about them. In Section 2, I take a look at them in the light of a certain account of phenomenal concepts. This approach is promising for physicalism in that it provides a plausible account of how conscious states can be physical even though there is an irremediable explanatory gap (Hard Problem), why it might be impossible to find out whether other creatures are conscious even if consciousness is purely physical (Harder Problem); and it can also deal with many other philosophically perplexing features of consciousness, like privileged access, infallibility, etc. Given this promise, I want to see whether, from a physicalist point of view, we are at the point where all of the pieces of the puzzle fall into place. In Section 3, I canvass the ramifications of the Hardest Problem for the physicalist project. As it turns out, the account in question shows that the supposed referential indeterminacy of phenomenal concepts is a misconception and in doing so it rules out some very counterintuitive consequences for physicalism. This, I contend, is a big boost for physicalism.

## 1. Three problems

### *The Hard Problem*

The Hard Problem is a metaphysical and explanatory problem concerning the nature of conscious states. On the assumption that physicalism is true, the question arises how physical states of the brain give rise to consciousness. Block 2002 (p. 423) puts it like this: “Why is the scientific basis of a phenomenal state the scientific basis for that state rather than another or rather than a nonphenomenal state?”

There are various challenges to physicalism, based on the apparent lack of perspicuous explanations

of the sort called for in the question above. One is the Zombie Argument. David Chalmers<sup>16</sup> has argued that if consciousness were physical, phenomenal propositions would have to be *a priori derivable* from the complete physical truth about the world.<sup>17</sup> However, he argues that consciousness propositions are not so derivable. This is made evident by the fact that zombies<sup>18</sup> are conceivable. The conclusion is that physicalism is false. In my opinion, this argument is not sound,<sup>19</sup> but it challenges physicalists to explain why zombies are conceivable.

Another argument against physicalism is based on explanatory considerations. As Levine observes<sup>20</sup>, there is an explanatory gap between neuro-physiological (or functional) and phenomenal descriptions. Discovering what neuro-physiological (or functional) states are correlated with a given kind of phenomenal experience (say, experiencing red) doesn't explain why or how phenomenal states arise at all. Once there was also an explanatory gap between, for example, ordinary talk of transmission of traits of parents to their offspring, and physical and biochemical descriptions. But that gap has mostly been bridged by genetic theory and molecular genetics. We, or at least molecular geneticists, have a pretty good understanding of how biochemical processes can provide the mechanisms that underlie the transmission of traits from parents to children. Once we understood the molecular biology of genes, we would understand why a particular gene codes for such and such proteins and, given further knowledge about the organism, we would understand why that in an organism codes for eye color. The case of consciousness is different. Those scientific theories that might come forth are utterly unexplanatory.

---

<sup>16</sup> See Chalmers 1996.

<sup>17</sup> The claim is a little more complicated. It is that every non-indexical truth is derivable *a priori* from the full physical description of the world and the laws and a proposition to the effect that this is the full physical description and laws.

<sup>18</sup> Zombies are (conceivable) creatures that are physically exactly like us but have no consciousness at all.

<sup>19</sup> See Balog 1999.

<sup>20</sup> Levine 2001, pp. 76-80.

Take the simpler example of H<sub>2</sub>O and water. Even if you deny (*pave* advocates of the conceivability arguments) that the statement ‘H<sub>2</sub>O=water’ is a priori derivable from the full physical description of the world, the hypothesis that, for example, H<sub>2</sub>O is not water is hard to make sense of.<sup>21</sup> Once we have all the micro-physical information about H<sub>2</sub>O and understood and gathered all relevant macroscopic information about water, we can close the explanatory gap between water and H<sub>2</sub>O, no matter whether this is construed as a priori derivation or as posteriori theorizing. On the other hand, the hypothesis that neurophysiological state N, or functional state F is not identical to phenomenally conscious state C is clearly intelligible, and an open question, for *any* N or F, no matter how much we know about the actual neurophysiology. And so, even if the failure of some physicalist account of consciousness is *not* possible, in some sense we will never be able to understand why.

This lack of understanding notwithstanding, the scientific project of determining the “neural correlates” of consciousness is still crucial to the physicalist project. This is the term that became widely used for the (posited) neurophysiological or functional basis of phenomenal experience. The correlation in question is supposed to be at least nomological: we will have found the “neural correlate” of consciousness if we have found a physical or functional state that is coextensive with a phenomenal state in all creatures both natural and artificial in (at least) all nomologically possible worlds.<sup>22</sup>

The physicalist claims that instantiations of neurophysiological state N or functional state F provide

---

<sup>21</sup> (Block and Stalnaker (1999) discuss the possibility of ‘ghost water’ – a non-physical kind that exists side by side with being composed of hydrogen and oxygen atoms and has all the same causal roles as the latter. Even if that is a coherent possibility, it would be the case that “water” refers to both H<sub>2</sub>O and ghost water and *not* that water refers to ghost water alone. So even in that possibility it wouldn’t be the case that H<sub>2</sub>O is merely nomologically connected to water.

<sup>22</sup> If the phenomenal state and the correlated physical state are the same state then the correlation holds in all metaphysically possible worlds but if dualism is true the correlation may hold only in worlds in which there are laws linking the distinct phenomenal and physical states. The term “correlation” is neutral between metaphysical and nomological connection. If a correlation is found, i.e., if we have inductive evidence that a certain neuro-physiological or functional state is coextensive with a conscious state in humans, the physicalist will posit the relationship to be metaphysical, while the dualist will posit a nomological connection. In either case, these correlations are supposed to be exceptionless, i.e., non-statistical in nature.

the metaphysical basis of phenomenal state C. But the physicalist needs something more to make that claim plausible: an explanation of the “gap”, that is, an explanation of why it is not possible to provide a perspicuous account of consciousness, despite the truth of physicalism.

We will talk more about the second part of this project in Section 2. Let’s now focus on the first part of the project. Is science likely to discover the neural correlates of consciousness? There is an underlying assumption that guides the scientific study of the mind, namely that phenomenal states will turn out to be – or to be nomologically connected to – genuine, unitary physical (neurophysiological) or functional states<sup>23</sup>. This assumption is embodied in the search for a neural correlate of consciousness. I have been presupposing, along with most philosophers who address these issues, that it is clear exactly what a physical state is and that not every predicate that is physically definable – e.g., by disjoining physical predicates – denotes a genuine unitary physical state. Similarly, I have been presupposing that not every specification of a causal role or disjunction of causal roles characterizes a genuine functional state. The usual thought is that genuine states (functional, physical or otherwise) in some way “cut nature at the joints”; that they are the states that figure in laws of nature.

Though at the moment it is still an open question if this assumption will turn out to be correct, the alternative, i.e., that consciousness states are correlated with no unitary physical (neurophysiological) or functional state in all creatures that share the state, or even in all humans, (or, most disconcertingly, even within one human) but rather with a disjunction of physical or functional states, seems to some<sup>24</sup> tantamount to eliminativism unless one posits a genuine non-physical state that unifies all these instances. It is an interesting question whether this is correct, but for the rest of the paper I would like to put the whole issue aside and I will assume that the search for a neural correlate of consciousness is a viable project. This will simplify matters; and in any case, the Hard,

---

<sup>23</sup> It is usually (but not universally) thought that the functional states that are candidates for identification with phenomenal states lie somewhere between the neurophysiological correlates of consciousness states and the superficial functional roles associated with them cashed out in terms of stimuli and behavior associated; i.e., they are thought to be some “deep” functional roles that our brain states have in terms of information processing.

<sup>24</sup> Loar 1997.

Harder, and Hardest Problem arise regardless of one's position on this question.

*The Harder Problem*<sup>25</sup>

There is a further issue that complicates the physicalist position which goes beyond the Hard Problem. At first, it seems that once the neural correlates of consciousness are found, physicalism will be in a good position to identify conscious organisms and the kinds of conscious state they have – since if physicalism is true then consciousness facts are objective physical or functional facts and so we should be able to tell whether they obtain (and whether our usual methods of attributing them on the basis of behavioral evidence are accurate). But even we assume, as I will for the moment, that this can be done with respect to other humans, the physicalist may still not be in a position to determine whether other beings – dogs, fish, Martians, robots, etc., are phenomenally conscious or what the character of their phenomenal states are. The trouble is that even if the neural correlates of consciousness are identified in humans, we still would not necessarily know just *what* neurophysiological or functional state is identical to any given phenomenal state and so not be in a position to tell whether it is instantiated in other beings.

Here is why. As I will argue in more detail shortly, evidence for the neural correlates of consciousness is inescapably ambiguous. Our canonical evidence is from the human case. But quite plausibly, for every neurophysiological state that is nomologically correlated with a phenomenal state in humans, there are one or more functional states that are also nomologically correlated with that phenomenal state. And since phenomenal concepts refer to phenomenal states directly, reflection on them – no matter how thorough or scientific – is not sufficient to identify which of these is the actual referent. This is related to the Hard Problem: to the lack of an explanatory physicalist metaphysics of consciousness. Consequently, even if we find neural correlates for every single conscious state in humans, we still won't know whether phenomenal states are identical to neurophysiological or functional states or some mix of them. That means that we also won't know which features of our conscious makeup are to be projected beyond ourselves, to animals, Martians, robots, and so on. If the search for the neural correlate of consciousness in humans proves fruitful,

---

<sup>25</sup> I am not following very closely Block's exposition of the Harder Problem in Block 2002. Rather, I set up the Harder Problem in a way that helps connect it to what I call the Hardest Problem.

brain research can narrow down the range of states that might be identified with consciousness considerably. But in all likelihood, we can't narrow it down enough to a single candidate.

You might wonder why it should be the case that conscious states are nomologically correlated in humans with a range of neurophysiological and functional states. Let me explain. It may turn out that we have inductive evidence to the claim that a certain conscious state *C* is coextensive in humans with a certain neuro-physiological state *N*. The problem is this: if *N* is coextensive with *C*, then it follows *with logical necessity* that there are multiple functional states  $F_1, F_2 \dots F_n$  (one of whose realization is *N*) that are also instantiated when *N*, and so *C* is instantiated. And while it is possible in principle that some (or all) of these functional states are *not* coextensive with *C* in humans – that, e.g.,  $F_i$  can be instantiated in the absence of *N* (and so *C*) – it seems very plausible that, as a matter of fact, *at least some* of these functional states *are* coextensive with *N* (and so *C*), i.e., that they, as a matter of fact, don't have realizations in humans other than *N*. If that is the case, *C* has *multiple correlates* in humans. Though this is ultimately an empirical matter, I find the thesis of multiple correlates overwhelmingly plausible. I also find it plausible that some of these functional states are shared by other species even when they don't share with us the exact neurophysiological realization of them.

This means that as far as we know – assuming physicalism, and the existence of these correlations – phenomenal states might be neurophysiological, or they might be functional. If what I said is correct then it is impossible to know what (if any) phenomenal states might be realized in other creatures that share with us the relevant functional organization but not the particular neurobiology or physical make-up. This is not quite the skeptical problem of Other Minds (though it is related to it). Even if you dismiss skepticism about whether other humans are conscious, you are still in no position to know about the consciousness of these other creatures, and you don't even have a conception of how to remedy this situation. Even if you knew, on the basis of inductive evidence, all the neural correlates of consciousness you still wouldn't know what it's like – if it's like anything at all – for a fish, a Martian or robot to taste a lemon.

This ignorance seems to be both undefeatable and rich in consequences. Because of the lack of an explanatory metaphysics, *and* the existence of multiple neural correlates of consciousness, these functional duplicates are inscrutable to us. Their neurophysiological and functional characteristics

will always seem compatible with the presence or absence of the relevant phenomenal state. We think cats might share certain kinds of visual experience with us, but again, they might not. There is enough physical difference between us and cats to suppose that they can only share these experiences with us if phenomenal states are functional. But even if future brain science finds that we are functionally (but not neurophysiologically) identical with them in the relevant respects, we won't know if we really share these experiences: the evidence will, of necessity, be compatible with both. It is not simply that humans are not clever enough to find these things out. It's that we don't even have any conception of *what could* give us grounds for believing one way or the other.

This is disconcerting. The situation with regard to consciousness doesn't seem at all like the situation with respect to, for example, concepts like *game* that can be extended in various ways to cover new situations. It doesn't seem like a matter of linguistic convention whether one should count a cat as having the same type of visual experience as I am having; or whether one counts a fish or a snail conscious. It seems as much a matter of hard fact as anything is. The concept of consciousness leaves no room for linguistic convention; it seems to refer determinately to a monumentally important state in the world; and consequently, there seems to be a matter of fact whether or not a given creature is conscious. Similarly, what kinds of conscious state are enjoyed by any given creature seems to be a determinate fact – modulo the usual kinds of vagueness – and not a terminological issue that can go either way. The paradox for physicalism is that all these conscious states described in phenomenal vocabulary are supposed to be straightforwardly physical or functional – on the assumption that there are unitary physical or functional neural correlates of consciousness – and so it would be expected that once one knows all the relevant physical/functional information one would be in a position to know everything about consciousness as well. But it seems plausible that ignorance about the distribution of phenomenal states over creatures different from us is irremediable, even if physicalism is true. There is a sinking feeling that this is wrong. That if physicalism is true then someone knowledgeable about the physical facts should be knowledgeable about all the facts. A satisfactory physicalist account, at a minimum, should explain why this is not so.<sup>26</sup>

---

<sup>26</sup> Of course, the dualist is no better off when she tries to divine whether cats or fish or robots that are functionally, but not physically, identical with us are conscious. On the other hand, she has a ready explanation of this lack of knowledge: there is more in the world than physical facts, and

*The Hardest Problem*

The previous discussion presupposed that phenomenal concepts refer determinately to objective states – modulo the vagueness exhibited by most general concepts. Take, e.g., the concept REDISH.<sup>27</sup> It is presupposed in our understanding of the Harder Problem that, though there are indeterminate cases, e.g., it might be indeterminate whether a chimpanzee on a given occasion is having a reddish experience, or a bluish experience often there *is* a determinate fact of the matter about experience, in other words, it very well *might be* a determinate fact on some other occasion that she is undergoing a reddish experience. We hold it as a central piece of folk wisdom, and I have presupposed it in my discussion of the Hard and Harder Problems, that there is *generally* a matter of fact – even if, as the Harder Problem indicates, we can never find it out – about whether this or that creature has this or that phenomenal state. But further reflection on the Harder Problem casts this assumption into doubt. This is the Hardest Problem. The Hardest Problem is a problem of reference: how do phenomenal concepts that, in their canonical applications, refer directly to the thinker's own phenomenal states succeed in referring *determinately* to objective states of the thinker? The Hardest Problem arises with special force for physicalists.

The worry arises from the same issue we have discussed before: it is plausible that there are multiple distinct – neurophysiological and/or functional – correlates of consciousness in humans. The epistemological consequence of this is the Harder Problem, that is, the problem that we cannot know if other species or even sophisticated robots share our conscious states. But the Harder Problem was predicated on the assumption that, modulo vagueness, there generally *is* a matter of fact about these questions. In the usual case, a member of another species, or a sophisticated robot, either does or doesn't share our phenomenal states. The Hardest Problem is, it is hard to see how that can be true, given physicalism. In other words, it is hard to see how phenomenal concepts can

---

mental facts are only directly accessible from the first person point of view.

<sup>27</sup> REDISH refers to a *kind of phenomenology* – as opposed to the color red itself – normally had by looking at red colored objects.

refer determinately to one of these co-instantiated brain states to the exclusion of others.<sup>28</sup> What, if anything, determines which of these neurophysiological or functional states are the referents of phenomenal concepts?<sup>29</sup>

The “phenomenal concept strategy”, first deployed by Brian Loar (1990, 1997) provides a plausible physicalist solution of the Hard and Harder Problems. I propose that it also holds the key to the Hardest Problem. Let us now look at the general account of phenomenal concepts that underlies the phenomenal concept strategy.

## **2. Three problems in light of an account of phenomenal concepts**

One of the ways physicalists have tried to deal with the Hard and Harder Problem is to deny the special status of consciousness.<sup>30</sup> This route is predicated on the belief that the conceivability of zombies and the existence of the explanatory gap are not compatible with physicalism. It has been proposed that phenomenal concepts can be analyzed in non-phenomenal terms, e.g., in terms of functional role<sup>31</sup> or representation<sup>32</sup>. If these analyses were successful, the explanatory gap could be bridged, and the conceivability of zombies denied. All we would need to do is find the neurophysiological states that realize the functional or representational states figuring in the analysis

---

<sup>28</sup> See Papineau 2003 for a discussion of all three problems. Papineau in the end embraces the view – which he thinks is a consequence of physicalism – that phenomenal concepts don’t have determinate reference and consequently that there is no matter of fact about application of phenomenal concepts to creatures physically different but functionally similar to us. In Section 3 I will take up whether this view entails eliminativism about consciousness.

<sup>29</sup> The Hardest Problem doesn’t arise for dualism – on that view, phenomenal states are unitary non-physical states, and they are the unique referents of phenomenal concepts.

<sup>30</sup> There are also those who, having lost hope in a physicalist solution to the Hard Problem, deny that consciousness is real. See, e.g., Dennett (1991), Rey (1988).

<sup>31</sup> Lewis 1966, e.g., is a clear example.

<sup>32</sup> See, e.g., Jackson 2003.

of phenomenal concepts.<sup>33</sup> I find this position very unintuitive. I think that phenomenal concepts refer to conscious states directly and they are not functionally analyzable.

Others have tried to close the gap by proposing scientific accounts of consciousness that are explanatory in the way the genetic theory of the transmission of traits is explanatory. It has been suggested, e.g., that being a phenomenal state is being processed in a global workspace,<sup>34</sup> that phenomenal states are representational,<sup>35</sup> that they involve higher order thought,<sup>36</sup> that there are "dynamic sensory-motor contingencies" associated with each sensory modality and these sensory-motor contingencies are somehow explanatory of the qualitative character of the particular sensory modality.<sup>37</sup> In my view these suggestions, too, miss the mark. These theories are no more explanatory than neuro-physiological accounts. The question still remains unanswered: why couldn't it be that different (or no) phenomenal states arise, e.g., from those particular sensory motor contingencies? None of these theories can give an explanatorily satisfying answer for this question.

On the other hand, those who think that physicalism is compatible with the conceivability of zombies and the explanatory gap (Hard Problem), and the lack of epistemic access to the phenomenal states of creatures with different neurophysiology (Harder Problem) have to come up with a convincing story about why this is so – how it is that consciousness is physical yet it is impossible to produce an explanatorily satisfying theory about its scientific nature that would enable us to detect if snails, or any other creatures, are conscious, and would reveal the illusoriness of the zombie-scenarios right from the start. This story cannot evoke the special nature of consciousness itself. Consciousness, after all, in this view is just another physical or functional state, 40 Hz oscillations, or being processed in a global workspace or what have you. The most promising story –

---

<sup>33</sup>This latter is predicated on the assumption that representational states can in turn be analyzed in terms of functional/causal relations.

<sup>34</sup> Baars 1988.

<sup>35</sup> See, e.g., Harman 1990, Tye 2000.

<sup>36</sup> See Rosenthal 2002.

<sup>37</sup> See, e.g., Hurley and Noë 2003.

the only promising story, in my view – has to do with the special way phenomenal concepts operate. I suggest that there already exist the broad outlines of such an account.

It can be shown that this account not only provides a physicalist resolution to the Hard and the Harder Problem but also explains the other perplexing epistemic features of consciousness as well.<sup>38</sup> Here, however, I am going to focus exclusively on those three problems.

*The constitutional account of phenomenal concepts*<sup>39</sup>

The key idea of the phenomenal concept strategy is to give a physicalistic account of how phenomenal concepts can refer to conscious states *directly* and yet in a *substantive* manner. To spell this out I need to cover some background on the nature of concepts in general.

I take concepts to be constituents of thoughts and I take concepts and thoughts to be representations. I will also assume that concepts are mental representations that are language like – words of *Mentalese*.<sup>40</sup> The important point for the following is that since tokening concepts and having experiences are occurrent entities (events, states, processes) they can be constituents of one another and bear causal relations to one another.<sup>41</sup>

Concepts are the words of Mentalese. A particular token of a concept, e.g., DOG possesses a number of different kinds of states and relations that are relevant to this discussion: i) a realization state, ii) conceptual role, and iii) a semantic state.

---

<sup>38</sup> For a discussion see Balog 2012a.

<sup>39</sup> This section loosely follows my discussion of the same topic in Balog 2012.

<sup>40</sup> There may well be non-conceptual mental representations – image-like, map-like representations as well. It is plausible that tokens of phenomenal experience are non-conceptual representations.

<sup>41</sup> There are philosophers who would like to avoid Mentalese or avoid representations altogether. It may be that my account can be made compatible with their ontologies but that is not something that I can do here.

i) When one tokens an instance of DOG, say in thinking the thought DOGS BARK, that token is realized by some neural state or process. The neural states that are relevant to the token's being a token of DOG are its *realization states*. A concept's realization states are analogous to the particular physical type that realizes this (written, or electronic) token of "dog" or the particular sounds that realize a particular utterance of "dog."

ii) A concept's *conceptual role* is the totality of causal relations (and dispositions) that tokens of thoughts containing the concept bear to each other and to perceptual inputs and behavioral outputs. Certain aspects of a concept's conceptual role may be essential to or even individuating of that concept while others are merely accidental; e.g., it is essential to the concept OR that one be inclined to make certain inferences, such as the inference from  $P$  to  $P \vee Q$ . It might also be essential to perceptual concepts, e.g., RED, that they be caused by certain perceptual inputs. Presumably, however, it is not essential to RED that one be caused to believe RED IS MY FAVORITE COLOR by the same perceptual inputs. How exactly to draw the distinction (which may be vague) between a concept's essential and non-essential roles is controversial.<sup>42</sup>

iii) A concept's *semantic features* concern what, if anything, the concept refers to. For example, the concept DOG, refers to the property of being a dog. Exactly what determines the reference of a Mentalese word (with particular realization and role states) is a difficult and controversial matter.<sup>43</sup> It is widely (though not universally) held that a concept's role (or the part of it essential to the concept) at least plays a part in determining the concept's reference. This part is the concept's *mode of presentation*. It often, but not always, has the form of a description - i.e., the thinker is disposed to infer the description from the tokening of the concept - i.e., from ARISTOTLE one is disposed to infer THE TEACHER OF ALEXANDER, etc. One can think of these descriptions as contents of a file attached to the concept. It is also widely accepted that reference is determined at least partly by external – causal, informational, or teleosemantic – relations of the concept to its environment.

---

<sup>42</sup> This is as difficult a problem as the others I am discussing but there is no space here to discuss it.

<sup>43</sup> Another hard problem not to be addressed here.

A thinker typically has only partial epistemic access to features i-iii by introspection. When I attend to my thoughts I typically can obtain introspective knowledge of their semantic contents, e.g., that I am thinking about dogs. It is also plausible, though controversial that one can obtain information about the conceptual roles of one's concepts – and which of these are essential – by intuitions based on thought experiments, e.g., by asking oneself questions like “could one know p if p were false?”. But the realization states of one's Mentalese words – the “shapes”, or “mental ink” they are written in, so to speak – are almost always completely opaque. Almost always, with the exception – I propose – of *phenomenal concepts*.

I would like to propose an approach to phenomenal concepts that fits into this general framework but that also showcases the special nature of phenomenal concepts. An examination of phenomenal concepts suggests that a successful account of them will posit an intimate connection between conscious states and the concepts we form of them. Loar (1990, 1997) suggested the idea that phenomenal concepts are *direct recognitional* concepts. Abstracting from some of the details, the core idea that I take him to express is that when a person is having a particular experience she can deploy a concept that refers directly to the experience and that in some way involves in its mode of presentation the very experience it refers to. How is one to understand the idea of these direct, non-descriptive modes of presentation that involve the referent?

There is an ambiguity in Loar's account that points the way towards an answer to this question. Loar thinks of phenomenal concepts as in some way “tracking” their referents. This indicates that – despite his suggestion that the mode of presentation in some way involves the referent itself – he is thinking of a phenomenal concept and its referent as distinct entities related by causation. But this leaves too much of a distance between a phenomenal concept and its referent; it allows, for example, for the seemingly absurd possibility that when the causal mechanism connecting phenomenal states and phenomenal concepts breaks down for any reason you might introspect having a certain kind of phenomenal experience when in reality you are having none of the sort. The way to avoid this problem, and at the same time account for the sense that the referent is somehow “present” in the mode of presentation of the concept is to posit a constitutive relationship between phenomenal concepts and the phenomenal states they refer to: to hold that phenomenal concepts are partly

constituted by tokens of the phenomenal experiences they refer to.<sup>44</sup> On this view, a token phenomenal experience is *part* of the token concept referring to it, and the experience plays a crucial role determining that the concept refers to the type of experience it contains a token of. Of course, by “part” I do not mean “spatial part” but rather part in the sense that it is *metaphysically* impossible to token the concept without tokening an instance of its referent.

If this account is right, phenomenal concepts have very special *realization states*: the neural states realizing these concepts are instances of the very same neural states the concepts refer to. What is so special about phenomenal concepts, on this account, is not only that their *realization states* are instances of their *referents*, but that this very fact is crucially involved in determining their *semantic properties*. In other words, not only are these concepts realized by instances of their referents, but they refer to what they do at least in part *in virtue* of this fact. This is, of course, very different from any other concept. Most concepts are not realized by tokens of their referents at all; but even those, like the concept ATOM, that are, mean what they do completely independently of this fact about their realization.<sup>45</sup>

There are many details about this account that need to be worked out.<sup>46</sup> What I propose here is to see what light this account can shed – assuming all those details can be hammered out – on the three problems of consciousness we have been talking about.

a) *The conceivability of zombies* is explained by the *directness* of our phenomenal concepts. Phenomenal concepts are supposed to be different in this way from concepts like WATER and even name concepts like CICERO. Chalmers and Jackson (2001) claim that these concepts are associated *a*

---

<sup>44</sup> Similar ideas are proposed in Papineau 2002, David Chalmers 2003, Block 2006, and Balog 2012a.

<sup>45</sup> This account of phenomenal concepts is not intended to apply to all concepts that refer to phenomenal states but only to “direct phenomenal concepts”. Of course, most of our reference to phenomenal states do not contain the phenomenal states themselves. Clearly, a person can token a concept that refers to pain without her literally experiencing pain – these can be called “indirect phenomenal concepts” – as when she replies to her dentist’s question by “I am not in pain” or when one sees another person stub her toe and thinks THAT HURTS. For the rest of the paper I will focus exclusively on direct phenomenal concepts.

<sup>46</sup> I have done some of this in Balog 2012a.

*priori* with descriptions (e.g. “the transparent potable liquid...”, “the Roman orator who is at the origin of a causal chain culminating in this token”) and these connections are *sufficient* to rule out a priori a scenario where, e.g., everything is physically the same but yet there is no water. One doesn’t have to commit to this to see that zombies are conceivable; however, the conceivability of zombies is only really significant if this is the case. So the point is that even if one allows that this is true with respect to WATER, or CICERO, one *still* has to admit that it is not so with respect to phenomenal concepts; that the existence of zombies cannot be ruled out a priori.<sup>47</sup> The directness of phenomenal concepts, on the constitutional account, is explained by the fact that their reference (at least in their canonical, introspective uses) is determined by how they are constituted and *not* by any description that is associated *a priori* with them. The significance of the constitutional account with respect to this issue is that it is an account fully compatible with physicalism; in other words, one can hold the constitutional account whether one is a physicalist or a dualist.<sup>48</sup> This means that the conceivability of zombies can be explained solely by the special cognitive architecture involved in phenomenal concepts which is orthogonal to the issue of the metaphysical nature of consciousness.

b) *The explanatory gap*. Recall that the problem of the explanatory gap is that no amount of knowledge about the physical facts (brain functioning and so on) is able to explain why a particular brain state has a particular feel, e.g., feels giddy. This contrasts with the way the fact that water is composed of H<sub>2</sub>O molecules together with physical and chemical laws explains why water is potable, transparent and so on. Once we have an explanation of why H<sub>2</sub>O behaves in watery ways (and that it is the only substance that does so) we have an explanation of identity statement. Since we can’t explain why a brain state feels giddy in neurophysiological terms, we can’t close the physical-phenomenal gap. You can see why this is in the following way. In the case of water and H<sub>2</sub>O, the hypothesis that water=H<sub>2</sub>O is quite natural in the light of all we know about H<sub>2</sub>O and water and the laws that govern the behavior of H<sub>2</sub>O<sup>49</sup> – indeed, the opposite hypothesis strikes one as borderline

---

<sup>47</sup> As I pointed out earlier there are dissenters who think phenomenal concepts have descriptive analyses; see e.g., Lewis 1966, Jackson 2003. I will ignore this possibility and proceed on the assumption that, as Chalmers suggests, zombies are conceivable.

<sup>48</sup> Chalmers 2003, e.g., proposes a dualist version of the account.

<sup>49</sup> This is true even if one doesn’t believe that the identity statement can be a priori derived from

incomprehensible. The hypothesis that the processes involving  $H_2O$  molecules are only nomologically correlated to the non-physical and non-chemical processes involving water is a non-starter. On the other hand, the hypothesis that a phenomenal state is *identical* with a certain neurophysiological/functional state of the brain is just as compatible with our evidence as the opposing view. The hypothesis – endorsed by certain dualists – that phenomenal states and brain states are merely nomologically correlated makes perfect sense.

The difference is that while in the case of water we do not have any special access to its nature and states that is not based on physical or functional information, that is, information cashed out in terms of physical or functional concepts, in the case of phenomenality we do. We do seem to have a *substantial* insight into the ultimate nature of phenomenal experience; and that nature doesn't seem captured or exhausted by any physical or functional description. As far as we know, that nature might elude any physical understanding. However, the constitutional account can explain why the explanatory gap arises, and it does so again in a way that is compatible with physicalism.

The constitutional account explains the gap by appealing to the *direct* and *substantial* grasp phenomenal concepts afford of their referent. When I focus on the phenomenal state, I have a “substantial” grasp of its nature. I grasp it in terms of *what it's like* to be in that state. Because this grasp is substantive but at the same time independent of any causal or functional information (unlike in the case of WATER), information about the functioning of the brain simply won't explain *what it's like to be* in that state.

What exactly is this *substantial* insight into the nature of phenomenal states? If phenomenal concepts are partly constituted by phenomenal states, our knowledge of the presence of these states (when we apply these direct phenomenal concepts) is not mediated by something distinct from these states. Rather the state itself serves as its own mode of presentation. When I focus on the phenomenal quality of that visual perception – not on what it represents but on the qualitative character of the visual experience – my representation contains that very experience. Thinking about it and simply having the experience will then share something very substantial, very spectacular: namely the

---

information about  $H_2O$  and conceptual truths involving ' $H_2O$ ' and 'water'.

phenomenal character of the experience. Being aware of our phenomenal states – being *acquainted* with them<sup>50</sup> – is the special, intimate epistemic relation we have to our phenomenal experience through the *shared phenomenality* of experience and thought. Shared phenomenality produces the sense that one has a direct insight into the nature of the experience. Hence the unique epistemic standing of acquaintance with conscious experience.

This last observation is connected with the explanatory gap. The important point is that this kind of direct insight (via shared phenomenality of thought and experience) into the nature of conscious experience does not reveal anything about the metaphysical nature of phenomenality. It is not the same sense as of “insight into the nature of X” as a scientific analysis of a brain state would provide. The one involves *having* the state, the other, analyzing it into its components. Those are very different activities.

*c) The Harder Problem.* Physicalists need to provide an account of why – even if physicalism is true – it is impossible to know if any creature physically different from us shares conscious states with us. This problem is connected to the Hard Problem. If we understood how consciousness arises from brain processes in the way we understand digestion to arise from chemical processes in the digestive system – that is, if we could close the explanatory gap for consciousness – we would be able to tell if a particular physical or functional state is a conscious state. And so we could tell – in principle at least – for any creature what conscious states they have in common with us, if any. But we can’t.

How does the constitutional account help reconcile us to such ignorance? It does by giving an explanation why such ignorance is what we, in fact, *should expect* on a materialist assumption, given the way phenomenal concepts work. We are ignorant about the phenomenal states of others because we know our own conscious states in a very special way when we conceive of them from the inside – when our thoughts literally contain their own subject. It is the nature of these concepts, i.e., the fact that we directly apply them to phenomenal states that explains why no perspicuous physical explanation of phenomenal states can be found, and why, consequently, we can’t know if creatures different from us share conscious states with us. This is an epistemological problem that has no

---

<sup>50</sup> Russell 1910.

metaphysical ramifications. There is no need to suppose that physicalism is false in order to explain the explanatory gap, and so to settle one's unease with the Hard and Harder Problems; physicalism itself has the resources to do so.

### *The Hardest Problem*

The Hardest Problem is a semantic problem: how do my phenomenal concepts succeed in referring to objective states that can be shared by me and others? The assumption of shared phenomenal experience - at least shared with other humans and perhaps higher mammals - underlies much of our thinking about our world. But even deeper than that is the belief that phenomenal states are – at least in the metaphysical sense of the word – real, objective states in the world, and that the question whether we share some of our phenomenal repertoire with other creatures has a determinate answer; even if one that we can never find out. But this can only be true if our phenomenal concepts refer *determinately* – modulo the familiar issue of vagueness and borderline cases – to objective states in the world; on a physicalist view, to physical or functional states of our brains.

The problem, as we have seen before, is that if there are, as I argued before, many distinct physical or functional states that are nomologically coextensive with phenomenal states in humans, then it is very hard to see how there could be a matter of fact about which of these states our phenomenal concepts refer to, *especially* given the theory of phenomenal concepts we discussed above. To explain this we will have to go into a little more detail about the constitutional account.

Direct phenomenal concepts pick out their reference – in their canonical, first person present tense applications – from the subject's point of view. In this way consciousness concepts are like the indexicals 'I', 'now', 'here'. But while we understand perfectly well how 'here' picks out an objective, determinate spatial location (since the thinker has an objective spatial location at any time and 'here' picks it out), things are much less straightforward for phenomenal concepts. The constitutional account claims that a phenomenal concept picks out its reference via an instance of *that very state*, e.g., phenomenal redness. We conceptualize phenomenal redness via introspectively attending to an experience of phenomenal redness thereby incorporating it in a phenomenal concept. But what is

the cognitive machinery that determines the proper extension of the concept thus based in an instance of the referent?

To focus on the crucial issue, I will consider the case of singular phenomenal concepts, e.g., the concept REDDISH<sub>singular</sub> that refers to a particular reddish experience (whereas the general concept REDDISH refers to the phenomenal quality reddish, as opposed to a particular instance of it). REDDISH<sub>singular</sub> can be understood on the constitutional account as the concept \*this particular reddish experience\* where ‘\*’ stands for whatever concept forming mental mechanism is involved in turning an experience currently attended to by the subject into a concept that represent that very experience. The issue of referential determinacy arises equally for singular and general phenomenal concepts in the light of multiple states nomologically coextensive with phenomenal states. But general phenomenal concepts raise the additional question – which I don’t have the space to discuss here – of what determines which exact state is being referred to given that the experience partly constitutive of the concept is an instance of many different states, e.g., reddish, dark reddish, crimsonish, etc.<sup>51</sup>

How could a singular phenomenal concept pick out a state nomologically coextensive with a particular phenomenal experience to the exclusion of others equally nomologically coextensive with it? Suppose the phenomenal state is identical with, or realized by a functional state, but *not* with a neurophysiological state that nevertheless is nomologically coextensive with that phenomenal state. How could phenomenal concepts track *that* fact? It is hard to see how; phenomenal concepts do not seem to have the right kind of built in complexity to disambiguate between these different but coextensive states.

David Papineau (2003) argues, on the basis of these considerations that phenomenal concepts refer indeterminately; and that consequently, that there is no matter of fact of whether other species, or

---

<sup>51</sup> Clearly, this has to do with *phenomenal similarity*. One idea is that, however phenomenal similarity itself is constituted, my concept’s extension is determined either by an associated disposition to make the relevant similarity judgments, or by a comparator that uses a stored template or the like. So, for example, my concept “phenomenal red” refers to the experience that constitutes the concept and any other experience that I would judge phenomenally similar to it, were I confronted with them. For more discussion of this, see Balog 2012a.

certain kinds of merely functional replicas share our phenomenal states. In my view, this is very disconcerting for the prospects of physicalism.<sup>52</sup>

The constitutional account of phenomenal concepts is very promising in dealing with the Hard and the Harder Problem. It provides the tools needed to explain the mysteries of consciousness from a physicalist point of view even if it doesn't dispel the illusion of mystery – a sort of metaphysical Müller-Lyer illusion. On the constitutional account, the puzzling features of consciousness will come to be seen not only fully compatible with physicalism, but as a matter of fact, to be *expected* on the assumption that physicalism is true. This account, however, according to Papineau, will leave the Hardest Problem untouched. Papineau, attempting to make it sound like this is not a big problem for physicalism, summarizes the situation in the following way:

But I do not want to argue that there is something less than definite in the doppelganger's [a functional but not physical duplicate of a human being] experience itself. The doppelganger definitely feels as it does, however that is. My thesis is only that it is indeterminate whether it is *pain*, where I take this indeterminacy to arise from vagueness in our human term 'pain'. The indeterminacy doesn't lie in the doppelganger's experience itself, but in whether that experience is similar enough to cases of human pain to fall under our term 'pain', a term whose content derives from exemplars provided by human pain. (2003, p. 218)

This strikes me as not a stable position with respect to the metaphysical status of consciousness and the semantics of phenomenal concepts.

First, I would like to point out that phenomenal concepts are very different from other concepts that science has discovered to lack a determinate reference. Take the case of the concept MASS as used before Einstein's discovery of the Theory of Relativity. It is thought that that concept actually referred indeterminately to either of two states: rest mass and relativistic mass. But while in this case progress in science pointed to a disambiguation of the concept and to two distinct concepts instead of the old unitary concept MASS (i.e., REST MASS and RELATIVISTIC MASS), no such possibility exists for the phenomenal concept PAIN. One couldn't refine the concept PAIN to refer securely to either  $N_{\text{pain}}$  or  $F_{\text{pain}}$  (the neurophysiological and functional states that are each

---

<sup>52</sup> Notice that dualism, whatever other unattractive consequences it might have, does not face the Hardest Problem in the same way. A dualist can merely posit phenomenal states to be the unambiguous referent of phenomenal concepts.

nomologically coextensive with pain judgments in humans) and still have a *phenomenal concept*. Phenomenal concepts refer through the *phenomenal character* embodied in the experience.

More importantly, though, if, as Papineau seems to suggest, there isn't something "less than definite in the doppelganger's experience itself" then there is a matter of fact about the doppelganger's experience, i.e., its phenomenal character and a fortiori, there is something definite about my experience and its phenomenal character. That is a central assumption of qualia realists – also called, less flatteringly, "qualia freaks" – among whom I count myself. However, Papineau is not entitled to hold both that our concept PAIN refers indeterminately to  $N_{\text{pain}}$  and  $F_{\text{pain}}$  and also that, at least in our own case, it refers to phenomenal pain which is, in his words, a "definite" state. If pain is a definite state then it is either identical with  $N_{\text{pain}}$  or with  $F_{\text{pain}}$  (since  $N_{\text{pain}}$  and  $F_{\text{pain}}$  are not identical); being a "definite" state it cannot be indeterminate between them. It follows then that accepting the indeterminacy of phenomenal concepts as a response to the Hardest Problem leads to eliminativism about phenomenal states as definite states that characterize our being.

But it is hard to be an eliminativist about phenomenal states. The *raison d'être* for the Hard problem, the explanatory gap, and all the other mysteries of consciousness is the fact that we not only refer to phenomenal states directly, without phenomenal or functional modes of presentation, but we refer to them in a *substantive* way. We are acquainted with their referent and from the point of view of that first person acquaintance – as opposed to the third person point of view of understanding how consciousness and phenomenal states fit in a "scientific image" of the world – it seems to make little sense to suppose that there is no such state.

There seems to be only one choice for the physicalist friend of qualia and that is that, the above difficulties notwithstanding, reference *does* get determined unambiguously to one or another of these co-instantiated states. I think such a position is actually quite plausible. To see why we need to remind ourselves of how the phenomenal concept strategy works to resolve – without "solving", in the usual sense – the Hard Problem. The idea is to show that third person constitutive explanations (in terms of physical concepts) of our conscious states are incomprehensible, operating seemingly "behind our backs" *not* because conscious states are not identical, or realized by purely physical states, but because of the nature and architecture of our first person, subjective *concepts* of these

states. Similarly, the problem of indeterminacy arises only because of a demand for a perspicuous understanding of how reference gets disambiguated from the third person point of view. Nothing from that point of view reveals how  $N_{\text{pain}}$  but not  $F_{\text{pain}}$  could be constitutive of a phenomenal concept. Disambiguation, however, is clearly revealed in the first person perspective as the upshot of the fact that only phenomenal states can be *attended*, and therefore quoted in the mind – and non-phenomenal brain states cannot. Of course, if physicalism is true, all this is true due to physical facts about the brain – however these facts will not illuminate either the identity of pain with, say  $N_{\text{pain}}$  rather than  $F_{\text{pain}}$ , nor the subjective nature of attention to phenomenal states; nor, for that matter, why non-mental, non-phenomenal states cannot be attended. The Hardest Problem, exactly like the Hard Problem, and the Harder Problem, proves to be another artifact of an irreducible conceptual dualism with regard to phenomenal experience. This is another way of saying that phenomenal experience make sense – in a certain way – only from the subject’s point of view.

## References:

- Baars, Bernard J, 1988. *A cognitive theory of consciousness*. Cambridge University Press, New York.
- Balog, Katalin, 1999. "Conceivability, Possibility, and the Mind-Body Problem", *The Philosophical Review*, Vol 108, No 4 (October 1999). Reprinted in Volume XXIII of *The Philosopher's Annual*.
- Balog, Katalin. 2005. "Ontological Novelty, Emergence, and the Mind-Body Problem", in (Günter Abel, ed.) *Kreativität*, Hamburg: Meiner Verlag.
- Balog, Katalin, 2009. "Phenomenal Concepts". In Brian McLaughlin, Ansgar Beckermann, and Sven Walter (Eds.), *The Oxford Handbook of Philosophy of Mind* (pp. 292-312). Oxford: Oxford UP.
- Balog, Katalin, 2012a. "Acquaintance and the Mind-Body Problem". In Christopher Hill and Simone Gozzano (Eds.), *The Mental, the Physical* (pp. 16-43). Cambridge: Cambridge University Press.
- Balog, Katalin 2012b. "In Defense of the Phenomenal Concept Strategy". *Philosophy and Phenomenological Research*, 84(1), 1-23.

- Block, Ned, 2002. "The harder problem of consciousness", *The Journal of Philosophy*, Vol. XCIX, No 8, pp. 391-425.
- Block, N. 2006. Max Black's objection to mind-body identity. in *Oxford Studies in Metaphysics*, II, edited by Dean Zimmerman, Oxford University Press, 3-78.
- Braddon-Mitchell, D. and Jackson, F., 1996. *The Philosophy of Mind and Cognition*. Blackwell.
- Burge, Tyler, 1988. "Individualism and Self-Knowledge." *Journal of Philosophy* 85.
- Chalmers, David, 1996. *The Conscious Mind*, Oxford UP.
- Jackson, F. and Chalmers, D. 2001. "Conceptual Analysis and Reductive Explanation", *The Philosophical Review*, 110:315-61.
- Chalmers, David, 2002. "Consciousness and its Place in Nature", in (S. Stich and F. Warfield, eds) *Blackwell Guide to the Philosophy of Mind*, Blackwell.
- Chalmers, David, 2003. "The Content and Epistemology of Phenomenal Belief", in Q. Smith and A. Jolic (Eds), *Consciousness: New Philosophical Perspectives*, Oxford.
- Chalmers, D, 2017. Panpsychism and panprotopsychism, in *Panpsychism: Contemporary Perspectives*, Oxford University Press.
- Dennett, Daniel, 1991. *Consciousness Explained*, Little, Brown and Company.
- Fodor, Jerry, 1998. *Concepts: where cognitive science went wrong*, Oxford; New York: Clarendon Press.
- Harman, Gilbert 1990. "The intrinsic quality of experience", *Phil Perspectives* 4, Action Theory and Philosophy of Mind, pp. 31-52.
- Hurley, Susan and Noë, Alva, 2003, "Neural Plasticity and Consciousness", *Biology and Philosophy* 18: 131-168.
- Jackson, Frank, 1982. "Epiphenomenal Qualia", *Philosophical Quarterly* 32, pp. 127-36.
- Jackson, F. 2003. "Mind and illusion". In (A. O'Hear, ed) *Minds and Persons*. Cambridge University Press.
- James, Williams, 1950. *The Principles of Psychology*, New York: Dover Publications.
- Levine, Joseph, 2001. *Purple Haze*, Oxford UP.
- Lewis, David, 1966. "An argument for the Identity Theory", *Journal of Philosophy*, LXIII. 1 (January 6, 1966): 17-25.

- Loar, Brian 1990. "Phenomenal states", *Philosophical Perspectives* 4, Action Theory and Philosophy of Mind, pp. 81-108.
- Loar, Brian, 1997. "Phenomenal states", in *The Nature of Consciousness*, (Block, Flanagan, Güzeldere, eds.), MIT Press, pp. 597-616 (revised version of Loar 1990).
- Lockwood, Michael, 1998. "The Enigma of Sentience", in Hameroff, S.R. et al, *Toward a Science of Consciousness II*, Cambridge, MA: MIT Press.
- Maudlin, Tim, 1989. "Computation and consciousness", *The Journal of Philosophy* 86:407-432.
- McLaughlin, Brian, 2006. "Identity, Explanation, and Consciousness: A Reply to Kim", forthcoming.
- Nagel, Thomas, 1979. *Mortal Questions*, Cambridge UP.
- Papineau, David, 2002. *Thinking about consciousness*, Oxford UP.
- Papineau, David, 2003. "Could there be a science of consciousness?", *Philosophical Issues*, 13(1):205-220.
- Rey, Georges, 1988. "A Question about Consciousness", in *Perspectives on Mind*, ed. H. Otto and J. Tueidio. Dordrecht: Kluwer.
- Rosenthal, David, 2002. "Explaining Consciousness". In (Chalmers, ed.) *Philosophy of Mind*, Oxford University Press.
- Stoljar, Daniel, 2001. "Two Conceptions of the Physical", *Philosophy and Phenomenological Research* 62: 253-281.
- Stoljar, Daniel, 2005. "Physicalism and phenomenal concepts", *Mind and Language*, Vol. 20, Issue 5, 469-495.
- Galen Strawson, 2003. "Realistic materialism", In Louise M. Antony & Norbert Hornstein (eds.), *Chomsky and His Critics*. Blackwell.
- Strawson, G., 2006. Realistic monism: why physicalism entails panpsychism, in *Consciousness and Its Place in Nature: Does Physicalism Entail Panpsychism?*, A. Freeman (ed.), Exeter: Imprint Academic.
- Tye, Michael, 2000. *Consciousness, Color and Content*, ch. 3., MIT Press.