

## Towards a Scientific Account of Experience

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### 1. Introduction

I defend the thesis that the physicalist two perspectives position on qualia described below merits further examination and debate – that it has potential as a possible basis for a correct account of the relationship of qualia<sup>1</sup> to our physical world view. The idea that what is a quale to one observer is a brain state to another – that each is simply a different perspective on a single reality – is not new, of course, but the position considered here has a number of interesting features. First, it is a position in which the single reality in question is wholly physical, so that reductionist physicalism is true, but the unique “like something” qualities of experience identified by Chalmers (1995, pp. 200–202) with the hard problem of consciousness<sup>2</sup> are nonetheless irreducible and required parts of our physical world view. Second, it is a position in which it is true of a quale that it is a physical state like any other, able to be studied and accounted for using the standard scientific approach applied to all physical things – a position that, in consequence, provides a possible basis for a scientific account of human experience. Finally, it is a position in which the notion of an unbridgeable gap between the mental and the physical is dispelled, and challenges to physicalism associated with Leibniz's Law, Jackson's knowledge argument, and Chalmers' hard problem of consciousness are successfully countered.

### 2. The position in outline.

What we have immediately available to us as external observers of brain states cannot be the physical realities of those states “in the raw”. The physical states themselves and the senses we perceive them through are physically separate things, so what we see and otherwise sense when observing (say) electrochemical activity in a particular group of solid-seeming neurons can only be a sensory impression, physically separate from the thing itself. It is not the actual physical state, which is part of another organism, but an external observer's experiential perspective on the actual physical state – the reality as known as distinct from the reality as such (cf. Hodgson, 2005, pp. 85–87).

Suppose that a quale such as a blue flash or a tinkling sound is an *internal* observer's experiential perspective on an underlying physical state – that it, too, is the reality as known as distinct from the reality as such. Suppose that, in this case, the experiential perspective is integral to, and materially co-extensive with, the physical state<sup>3</sup> itself; that the quale, perspective included, is really nothing over and above that physical state – an entirely physical thing. Suppose, finally, that the physical state in question is known to an external observer as a particular kind of brain state. This, in initial outline, is the two perspectives position on qualia. In what follows, I shall substantiate the various claims made for it in the introductory section, developing the position and clarifying various points of detail as I proceed.

### 3. Clarification 1: a perspective and a reality but one thing?

A key element of the position under consideration is the assertion that a quale such as a blue flash or a tinkling sound is both an experiential perspective on the reality of a physical state in the organism (the reality as known) and integral to, and really nothing over and above the reality as such. An apparent problem with this is that, on first consideration, it may appear contradictory, seeming to claim, both that there are two distinct things – perspective and reality – and that there is only one (that the perspective is integral to, and really nothing over and above, the physical state itself). There is no contradiction, however. What is claimed is that, in physical terms, there is only one thing – physically speaking, experienced blueness is the physical state and the physical state is experienced blueness – but that, seen in terms of knowledge content, there is a distinction that can and must be made between the two. The position taken is that the physical state embodies a perspective (the internal observer's perspective) that provides only a limited view of the nature of the physical state; one that encompasses key knowledge about the physical state available only to an internal observer, but that omits the wider, more detailed knowledge accessible, through scientific scrutiny, to the external observer. If the position presented is correct, therefore, there is no more to the perspective than the physical state – the perspective *just is* the physical state and vice versa –

but there *is* more to the physical state than is evident via the perspective. In terms of physical substance, the perspective is nothing over and above the reality of the physical state, but it is also a limited view of that reality – the reality of the physical state known in a particular limited way, rather than the reality as such.

Seen in this light, it is entirely correct to distinguish between the perspective and the physical state, even if they are one and the same thing, physically speaking. Indeed, it is misleading not to. It is correct to make the distinction because, as the external observer's perspective on the physical state affirms, there is more to the reality of the physical state than experienced blueness. It is misleading not to because, in failing to explicitly recognize that there is more to the reality than experienced blueness, we implicitly assume that the opposite is true – that experienced blueness is more than a limited perspective on the physical state; that it is all there is to know about it (that it *is* the physical state, period). Thus, there is no contradiction. The position taken – that the inside observer's inner perspective is both the reality of a physical state in the organism as known and really nothing over and above the reality as such – is an entirely reasonable one in the circumstances described. The position is that the perspective has no substance over and above that embodied within the reality of the physical state – that the perspective is the reality, physically speaking, and vice versa – but that, considered in terms of knowledge content, it is nevertheless a limited view of that reality that can and must be distinguished as the reality of the physical state as known as distinct from the reality as such.

#### **4. Qualia: reducible physical substance; irreducible knowledge content**

This brings me to the first of the claims made in the introductory paragraph of this paper – the assertion that the two perspectives position is one in which the single reality claimed to underlie a quale and a corresponding brain state is wholly physical, so that reductionist physicalism is true, but the unique “like something” qualities of experience are nonetheless irreducible and required parts of our physical world view.

The position taken has three elements. The first is that the inner perspective that allows us to know the physical state as a quale is reducible as physical substance, but entails experiential knowledge irreducible to other knowledge forms. This is in line with the clarification presented above, which shows how the inner perspective claimed to entail irreducible knowledge content can be a distinct knowledge-bearing perspective on the physical state that underlies it, yet have no physical substance over and above that of the physical state itself. It is also in line with what we know of experiential knowledge. We cannot know what a blue flash or a tinkling sound or a sour taste is like except by experiencing it (cf. Tye, 1999, pp. 708; Deutsch, 1999, pp. 5). Other forms of knowledge – those expressible in verbal or diagrammatic terms – cannot encompass or impart the “like something” quality entailed in the actual experience of a sour taste or a blue flash (cf. Gertler, 1999, pp. 320). Their knowledge content is irreducible in that it cannot be acquired, retained, expressed, or presented to consciousness in anything other than experiential form (cf. Flanagan, 1992, pp. 98–101).

The second is that, in the position presented, the inner perspective that gives us a blue flash or a tinkling sound is both a knowledge-bearing perspective on the physical state that is the quale, and really nothing over and above the physical substance of that state. It is, in short, knowledge of the physical – physical knowledge – that is itself (made of something) physical, and so, is part of our physical world view both in the sense of being an element of the physical world and in the sense of being part of our physical knowledge of something in that world.

The third element follows from the other two. If the unique “like something” qualities of the inner perspective entail irreducible physical knowledge – knowledge of the physical states that are qualia that cannot be acquired, retained, expressed, or presented to consciousness in anything other than experiential form – then a physical account of qualia<sup>4</sup> must include these qualities and their knowledge content if it is to be complete. The case for the first of the assertions made in the introduction is made. The position is one in which reductionist physicalism is true, but the unique “like something” qualities of experience – irreducible physical knowledge in this perspective – are nonetheless required parts of our physical world view.

#### **5. Clarification 2: irreducible knowledge of what?**

The above case will be strengthened later, but various other points must be tackled first, beginning with a further clarification. Given that, in the position presented, the inner experiential perspective that is a blue flash or a tinkling sound is really nothing over and above the physical state known and, perforce, any information content it embodies, it is reasonable to ask what the irreducible knowledge content of experience can possibly be knowledge of. The answer to this is implicit in the position outlined, but has yet to be explicitly stated. It cannot simply be knowledge of the substance of the physical state as such, or of any information it embodies. Physical reducibility means that an external observer can know these completely in entirely different terms<sup>5</sup>, so the knowledge could not be held to be irreducible. What it is held to be – the only thing it can be in the position described – is knowledge of how this substance and information content *presents itself* to an internal observer – how the state and its information content “seems” when experienced directly by the organism in which it occurs rather than indirectly via the outward looking senses of an external observer of that organism. Trivial knowledge, on the face of it, but – as will presently become clear – significant nonetheless.

## **6. No transformation problem: a physical state susceptible to a standard scientific approach.**

I now turn to the claim that, if the two perspectives position is true, then a quale is a physical state like any other, able to be studied and accounted for using the standard scientific approach applied to all physical things.

### *6.1 No transformation problem: qualia*

Notice, first of all, that there is no question of brain states or events changing into, or “giving rise to” (Chalmers, 1996, pp. 5; 2003, pp. 103), mental states or events (or of the reverse of this happening). In the two perspectives position, a quale and a corresponding brain state are the same physical state – a single physical state that seems like experienced blue to an inside observer who knows it as a direct experience, but like electrochemical activity in a solid fleshy brain to an outside observer who knows it externally via a sensory construct comprising (sometimes instrument-mediated) experiences from various outward looking senses. This is a significant point. It means that, in seeking to give a scientific account of human experience, we need not attempt to explain how electrochemical activity in the brain somehow becomes or gives rise to experienced blue or a tinkling sound – the so-called hard problem of consciousness (Chalmers, 1995). This does not happen. In this perspective they are one thing – they don’t change into one another because they already are each other (cf. § 6 of Papineau 1997 on “Identities Need No Explanation”). They simply seem like different things because in one case we experience them directly, in the other indirectly. The one does not cause or give rise to the other; they are one and the same thing experienced differently (An electrical discharge, say, that seems blue when experienced directly, but seems quite different when experienced indirectly via outward looking senses and scientific instrumentation.). There is a causal relationship between mental events and brain states, but only in the sense that there is a single causal system of physical states that can each be known either as a quale or as a brain state. A brain state does not become the corresponding quale, nor does a quale become the corresponding brain state. There is a single physical state that seems like either a quale or a brain state depending on the observational mode employed, and, as such, no transformation problem.

### *6.2 No transformation problem: base feels and baseline experience*

The same may also be taken to apply to the discernible elements of qualia – “baseline experience” (experience “in the raw” – the element all qualia have in common), and “base feels” (experiential qualities like blueness or sweetness – the elements that distinguish qualia from each other). There will be externally observable counterparts of each of these experiential elements, but there will be no need to explain how the one gives rise to the other – how the external counterpart of baseline experience gives rise to the inner experience of it, or the external counterpart of a base feel like blueness gives rise to the experience as known to an internal observer. These things do not happen – there is no transformation problem in this view. Blueness as an inner experience and blueness as an outer experience are different perspectives on a single physical state<sup>6</sup> that seems different depending on whether we experience it directly or indirectly – and the same is true of baseline experience as known internally and externally. In the two perspectives

position, it makes no sense to ask how an experience in one human (the external observer) gives rise to an experience in another (the internal observer). The connection between the two perspectives is the physical state that underlies the outer perspective and underlies and subsumes the inner perspective. It is this that is the root cause of baseline experience or a base feel like blueness in an internal observer and the external counterparts of baseline experience and base feels in an external observer. In this perspective, the requirement is not to explain how the external counterpart of baseline experience or a base feel like blueness “gives rise to” our inner experiences of these things – the transformation or hard problem – but to explain both our inner experiences and their external counterparts in terms of the physical state they both reflect and are both characteristic of<sup>7</sup>.

### 6.3 *The same problem in different guises*

In the absence of a transformation problem, doing this turns out to be a relatively straightforward matter. The fact that any given experience and its external counterpart are simply different perspectives on the single physical state that underlies the external counterpart and underlies and subsumes the inner experience itself not only means that there is no transformation problem to be dealt with, but also that any given one of our inner experiences and its external counterpart are one and the same scientific problem. The two seem different because they are known from different perspectives, but they are actually the same thing experienced differently. They are, if you like, the same physical and scientific problem in different guises, and have (perforce) the same solution or explanation – one that is to be found by applying standard external–observer–based scientific methods to the study of the single physical state that underlies one guise and subsumes and underlies the other<sup>8</sup>.

### 6.4 *A physical state like any other: base feels*

Let me be clear about what is implied here. The claim is that once we have given a full scientific account of the external counterparts of baseline experience and the various base feels, we have done all we can and need do to explain their inner versions – baseline experience and the various base feels as inner experiences. Take base feels like blueness and sweetness first of all. In the two perspectives position, the external counterpart of blueness and the inner experience of blueness are different representations – different “seemings” – of a single physical reality. The two not only have exactly the same referent, in that the physical state that underlies the external counterpart is the same physical state that underlies experienced blueness itself, but, since the inner experience is entirely subsumed within that physical state, it actually refers to itself – which means that its external counterpart also refers to it. It is encompassed within the physical state that underlies its external counterpart and, indeed, *just is* that underlying physical state. In real or physical terms, that physical state *just is* (both forms of) blueness. It is both the physical state that underlies the external counterpart of blueness and the physical state that subsumes – indeed, *is* – the inner experience of blueness. Looked at another way, the external counterpart of blueness *is* the inner experience of blueness as the external observer knows it – it is the external observer’s view of the physical state that *just is* the inner experience of blueness. The two are different versions of exactly the same thing – exactly the same physical and scientific problem. To ask about and explain the external counterpart of blueness is to ask about and explain blueness as an inner experience. The question asked is why is this physical state like blueness/the external counterpart of blueness rather than like (say) redness/the external counterpart of redness, and the answer is to be found in the physical detail of the underlying state itself. We can only study this detail externally, but this does not matter. What we are studying is the physical state that *just is* blueness from the only perspective in which study and explanation is possible, and what we are explaining is the inner perspective *as it is known to the external observer* – that is, *both forms of the one physical state that just is blueness*. Once we have an explanation of why the physical state exhibits the external counterpart of blueness, we have an explanation of why the quale exhibits the inner experience of blueness – we have explained why the physical state that just is blueness is (both forms of) blue. In this perspective, this inner experience is not an additional problem over and above that addressed via the external counterpart of blueness, it is simply a different perspective on that same problem, a perspective that, since it is entirely subsumed in the physical state that underlies the external counterpart, has already been addressed and explained in its other guise as an external counterpart. Once we have explained it as an external counterpart, we have explained it as a reality – we have explained why the physical state that *just is* blueness is blue. All we need do in addition is to note that the external counterpart of blueness seems like

experienced blueness to an internal observer, and that the difference is due to the different perspectival modes employed in their observation.

### 6.5 *A physical state like any other: baseline experience*

The position with baseline experience is similar, if more complex. In this perspective, to ask “Why is experiential consciousness like anything – why does experience exist at all?” (cf. Chalmers, 1996, pp. 4–5) and “Why are the physical states that exhibit the external counterpart of baseline experience different from physical states that exhibit the external counterparts of unconsciousness or (in stone or metal) non-consciousness?” is to ask the same thing in different forms. Chalmers claims (see, e.g., 2003, pp. 104–7), in essence, that the kind of standard physical account that answers the latter question leaves the first unanswered and experience itself unexplained, but, in this perspective, he is wrong. The “like anything” perspective has no substance over and above the physical state that underlies its external counterpart. It *just is* that physical state, which means that the external counterpart is simply the like anything perspective as it is known to an external observer – the external observer’s “label” for both forms of the like anything experience. In the two perspectives position, the inner like anything perspective is not an additional problem over and above that addressed through its external counterpart, simply a different perspective on that problem – and since the perspective is subsumed in the physical state itself, it too is explained as a physical problem when its external counterpart is explained. With baseline experience, we may feel the need to take the matter further and ask why the like anything experience is so startlingly different from what we find in physical reality as a whole, but even this makes no substantial difference. If the like anything experience is subsumed in the physical state, then so is the startling difference – it will be reflected in the external counterpart and dealt with by the external observer’s explanation of that external counterpart. Even a question like: “Why is this startling difference like what it is like and not like something entirely different but equally startling?” poses no difficulty. If we can specify what “something entirely different but equally startling” means in terms of differences in external counterparts, we will have our answer. In this perspective, a quale is a physical state like any other able to be dealt with using the same scientific methods as any other physical state. Once we have explained what we can observe about the external counterpart of baseline experience – and mapped our experiential knowledge of baseline experience itself to its external counterpart – we have done all we need do in terms of explanation. We have explained why the physical state that *just is* baseline experience is (both forms of) like anything.

### **7. Clarification 3: experiential knowledge still a required part of our physical world view.**

I shall consider whether such an explanation can be (and feel) satisfactory presently. First, however, a further clarification. The claim is not that an *account* of these elements of inner experience can be given purely in terms of their external counterparts. Such an account would be incomplete and misleading. It would be incomplete because, although the explanation given for the physical phenomenon being explained would be correct and complete, the account given would omit vital information about the phenomenon itself. An account of baseline experience or a base feel like blueness or sweetness given purely in terms of their external counterparts might include a verbally expressed recognition of the fact that it was like something internally, but it would fail to encompass what it was like to *experience* this inner perspective and its like anything experience – how it *seemed* to an internal observer. It would entail the fact that the physical states that are qualia differ from inert things like sand or stone in these unique ways, but would fail to include the representations of these facts that make this uniqueness most evident – the additional experiential facts without which the full significance of the difference between the physical states that are qualia and inert things like sand or stone is lost. It would be incomplete in that it would explain experience but fail to fully express what it was explaining. By extension, it would be misleading in that it would seem to be explaining a phenomenon that only had the characteristics evident to an external observer, when in fact it was actually explaining a phenomenon that also had the one characteristic that makes its uniqueness most evident – the internal observer’s experiential knowledge of baseline experience itself and of base feels like blueness or sweetness. In the two perspectives position, the unique like something qualities of experience are a required part of our physical world view, not just because they entail irreducible physical knowledge that cannot be included *except* as experiential knowledge as indicated earlier – although this is important in itself – but also because, without them, our accounts of the physical states that are qualia would be incomplete and misleading. An account of experienced blueness given solely in terms of its external

counterpart would, in this perspective, provide a correct *explanation* of experienced blueness, but would be incomplete and misleading in failing to encompass what is arguably the key characteristic of the phenomenon being explained – experienced blueness *as* experienced blueness. To be correct and complete, the account must not only include the explanation associated with the external counterpart of experienced blueness, it must also note that experienced blueness itself is a characteristic of the physical thing being explained. Experienced blueness is irrelevant to a physical account of a blue cube; it expresses a fact about how humans experience the cube, not about the cube itself. In the two perspectives position, however, experienced blueness is integral to – really nothing over and above – the physical state that is the blue quale. This means that it is characteristic of the physical state *itself*. Experienced blueness is, if you like, something the physical state *does* – something intrinsic, the facts about which must be encompassed in any complete view (and can only be encompassed experientially).

## **8. A basis for a scientific account of human experience.**

### *8.1 Experiential knowledge as part of the solution*

The upshot of this is that, in the two perspectives position, providing a scientific account of the various distinguishable elements of the experiential world – which is to say, of human experience – is a simple matter of mapping the internal observer's experiential knowledge of these elements into an otherwise standard scientific account of their external counterparts. It may appear, on first consideration, that this does not provide an account of the qualities themselves, but only of their external counterparts, but this is a misunderstanding of the position. In this perspective, these inner experiential qualities are physically subsumed in the physical states underlying their external counterparts, and a scientific account of these physical states given in terms of their external counterparts is a scientific account of the physical things that *just are* these inner experiences. Only how these qualities seem to an internal observer is not encompassed in such an account, but the inner perspectives that encompass how they seem have no physical substance over and above the physical states themselves. Accordingly, they are not additional problems over and above those already addressed through their external counterparts, only additional knowledge about the underlying physical state that subsumes them – additional experiential knowledge of how problems the external observer knows and addresses seem to an internal observer, rather than additional problems in their own right. The experiential elements that are the essence of what experience is to us have ceased to be part of the problem and become instead part of the solution. They have moved to the knowledge side of the equation. If the two perspectives position is true, they are simply additional experientially expressed facts about the physical states that are qualia, not additional problems over and above those addressed in an explanation of their external counterparts.

The only barrier to regarding an account along these lines as scientific would appear to be the need for it to include experiential knowledge. Whether this is a problem or not will require deeper consideration than is possible here. Arguably, however, including this experiential knowledge is not only both necessary and scientifically justifiable (it is experiential physical knowledge without which the account is incomplete and misleading), it is also innocuous<sup>9</sup> (on the one hand, the information is non-verbal and cannot add to or contradict the assertions entailed in the external observer's view; on the other, the experiential knowledge in question is physically subsumed within, and fully explained by, the physical state that is the focus of these assertions). In consequence, it is, I submit, reasonable to suggest that the two perspectives position offers a possible basis for a scientific account of human experience.

### *8.2 Accounts that will be and feel satisfactory*

Will the accounts that emerge from this perspective be (and feel) satisfactory? I believe they will. Certainly, there is reason to be hopeful as far as the base feels (the *why* like this as opposed to that questions) are concerned. An account that gives a satisfactory explanation of why the external counterpart of red is characteristic of one physical state and the external counterpart of blue is characteristic of another in terms of the more basic subordinate elements of the states should be equally satisfactory as an explanation of why actual experienced red is characteristic of one state and actual experienced blue of another. We are simply exchanging one experiential label for another, with each having the same physical state as referent. Experienced blue will be like it is experientially – as opposed to being like experienced red or a tinkling

sound – because the physical element that underlies it and its external counterpart differs in discoverable physical ways from that underlying experienced red or a tinkling sound.

Dealing with the difference between baseline experience and non-conscious states in things like stone or metal – the “Why like anything” question – may seem more difficult, because of the startling nature of the difference, but it does not seem insurmountable. The fact of *a* difference seems readily explicable in terms of some kind of on–off phenomenon – with baseline experience evident when it is “on” but not evident otherwise – but explaining the startling nature of the difference may seem to require more. Two possibilities present themselves here. The first is that it may simply be a fact of physics that our on–off phenomenon seems like inner baseline experience. Perhaps some unique, equally startling, type of physical phenomenon simply exhibits the characteristic and we will have to be satisfied with that<sup>10</sup>. This does not seem to me to be so inadequate. We have the unique, equally startling, physical phenomenon and its differences from physical states that do not exhibit baseline experience to explain the startling nature of the difference, and the associated inner experience to encompass the fact of the startling inner characteristic it is associated with and explains. Since there is no transformation problem in this perspective, nothing is left unaccounted for. The second, perhaps more interesting, possibility is that the on–off state consists of physical substance<sup>11</sup> in a particular functional configuration. Baseline experience gives the organism cognisance of conditions within itself and this arguably entails functional characteristics. It may be that the “Why like anything?” question needs to be expressed in functional terms, and that once it is, the answer to this functional question will satisfy us on the startling nature of the difference. The: “Why like this startling difference as opposed to some other?” question will then be answered in terms of the nature of the physical substance of the functional configuration, and the explanation for baseline experience as an inner perspective will be found in the combination of this and the functional question. Interestingly, this alternative explanation allows for the multiple realizability of baseline experience and even for the non-conscious performance of the self-cognisance function – via differences in the physical substance of the on–off state.

This completes the account of the two perspectives position as such. In the remainder of the paper, I address the final claim made in the introductory section – that the position is able to deal with various significant challenges to physicalism. This will also help clarify various elements of the position itself.

## **9. Bridging the gap and Leibniz's Law**

### *9.1 The gap*

If we reject the two perspectives position presented above and adopt instead what might be called the two realities position – the view that both quale and brain state are realities “in the raw” rather than perspectives on realities as proposed above – the differences between the two presumed realities of quale and brain state appear fundamental and irresolvable. Qualia – experiences like blue flashes and tinkling sounds – appear so very different to solid bundles of electrochemically-active neurons that we find it close to impossible to envisage that they might have any inter-relationship at all. It is difficult to imagine either that one can arise from the other, or that they can causally influence each other, or indeed that they can possibly be one thing. There is an apparently unbridgeable gap between what we think of as “mental” in this perspective (an insubstantial-seeming world of experiential realities or qualia), and what we think of as “physical” (the solid-seeming realities of the fleshy, material brain) – so much so, that we find it hard to see how we can fit “the mental” into the physical world (as seen in this two realities perspective) at all. With McGinn (1991), we cannot readily envisage how “technicolour phenomenology” can arise from “soggy grey matter”. The gulf between them appears too great.

### *9.2 The gap bridged*

These difficulties fall away, however, if we reject this two realities position in favor of the two perspectives position. In this, a quale and a corresponding brain state are held to be one physical thing, and it is not difficult to see how this can be possible. In consequence, there is no need to explain how a brain state arises from a quale or vice versa, and no difficulty with physical relationships.

The position's starting point is the observation that the soggy grey matter of the brain with its solid bundles of electrochemically active neurons evident to an external observer of another human cannot be a reality "in the raw". Given the physical separation between the observer and the human observed, it can only be a sensory construct in the experience of one human (the external observer) that, whilst it may accurately reflect the nature of a real physical reality in another (physically distinct) human, must nevertheless be something that is itself materially distinct from that reality – the reality as known as distinct from the reality as such. It is convincingly solid, partly because of the complexity of the sensory construct involved, and partly because it is an accurate reflection of an underlying reality that *is* substantial and solid, and that confirms that solidity to the external observer via the sense of touch as well as vision, as well as via its ability to interact with other real objects in the world. Taking this as its starting point, the position then proposes that qualia are similar to brain states in this respect – that the "technicolour phenomenology" of experienced blue or red (or indeed a tinkling sound or a sour taste) is an inner observer's perspective on the reality of an underlying physical state in the organism that has no physical substance over and above that reality. There is then no great difficulty in proposing, as the two perspectives position does, that the two are one thing; that a particular quale and a corresponding brain state are each different perspectives on a single underlying physical reality; that they simply seem very different because of how they are experienced by the internal and external observer respectively. And if they are one thing known from different perspectives, then there is no need to deal with "the transformation problem" as I called it earlier. The soggy grey matter of the brain does not give rise to technicolor phenomenology in this perspective; they are one and the same thing experienced differently. Nor is there any difficulty with causality in the scenario presented – the only causal relations are between one physical state that is a quale to one observer and a brain state to another and another such physical state, either following or preceding.

In this position, there is no barrier to a brain state and a quale being a single physical state. The fact that they each appear too different to be the same thing is not a problem. The differences are in our perspectives (the reality as known), not in the underlying reality (the reality "in the raw"). Nor is there a need to explain how a brain state (an external observer's experience of a physical state in another organism) gives rise to a quale (the other organism's own experience of it). An experience in one organism cannot reasonably be thought to cause or give rise to an experience in another. In the two perspectives position, the two are different experiential reflections on the same physical state, and the need is to explain what it is about the underlying physical state that causes one observer to experience it as neuronal electrochemical activity and another to experience it as blueness, or a tinkling sound. We must account for two apparently very different sets of observed characteristics in terms of the physical state that is the underlying cause of each, rather than explain how one set gives rise to the other. The unbridgeable gap disappears<sup>12</sup>, replaced by a form of identity theory<sup>13</sup> consistent with Leibniz's Law.

### 9.3 Leibniz's law

Leibniz's Law states that if x is (identical with) y, then any property of x is a property of y. This is a difficulty if we begin from the perspective of the two realities position, for a quale and a brain state are then so unlike that it is hard to see how they could possibly be one thing with a single common set of properties. The difficulty disappears if the two perspectives position is adopted, however. The fact that it is true of a quale that it is non–extended, non–solid, non–located in space, private, and is "like" something (pain, for example) – and that a brain state is none of these things (cf. Himma, 2005, pp. 83) – is not a problem in this position. If, as is claimed, the inner (quale) perspective is integral to, and materially co–extensive with, a physical state known to an external observer as a brain state, we have a single reality with one set of properties. As a physical state underlying a brain state, the reality is a publicly–observable, material, spatially–locatable, physical thing with a discoverable functional role (a tendency to avoid, say). As a state that, physically, wholly encompasses the inner perspective, it is *also* a privately–observable sensation (pain, say). Contradictions fall away, attributable to limitations in the perspectives. If it is private and painful in one perspective and public and spatially–locatable in the other then, as required by Leibniz's law, it is all of these. Earlier identity theories associated with Place, Smart and others had to combat claims of conflict with Leibniz's Law in just these areas<sup>14</sup>, but the two perspectives position is entirely compatible with it. There is one reality with a single set of properties at the heart of the identity claim – a reality that, physically, wholly subsumes experience, bringing it entirely within the bounds of scientific investigation.

## 10. Jackson's knowledge argument refuted

### 10.1 *The argument*

The position is also able to counter Jackson's knowledge argument, the best known form of which is the “grey Mary” thought experiment (Jackson, 1982, 1986). Mary lives in a black and white room and acquires all of the physical information there is to obtain about the world and all of our visual experiences of it through a black and white television. She must be able to do this, claims Jackson, otherwise the Open University would, of necessity, need to use color television. However, it seems “just obvious” that Mary will learn something new on leaving the room – she will learn what colors like red or blue are really like. But she had all of the physical information already, so this new information – knowledge of qualia – must be non-physical information. Physicalism – the idea that the world comprises only physical things – is false.

### 10.2 *The argument refuted*

Widely regarded as a significant challenge to physicalism<sup>15</sup>, the argument has inspired significant debate over the years<sup>16</sup>, and, indeed, continues to do so<sup>17</sup>, despite Jackson's own recent conversion (Jackson, 2003). However, its claim that physicalism *must* be false is refuted by the two perspectives position which shows that, on the contrary, it *can* be true – that there are circumstances in which Mary's new knowledge will not refute physicalism; that it will not do so if the two perspectives position is true. If our inner experiences are, as this proposes, perspectives on physical states that are integral to, and materially co-extensive with, the physical states themselves, two things follow. First, that they are knowledge of something physical – experiential physical knowledge (cf. Deutsch, 1999); second, that they are perspectives that are themselves (made of) something physical. If the two perspectives position is true – and I believe I have shown it to be a coherent position with a reasonable chance of being correct<sup>18</sup> – the knowledge Mary acquires on leaving her room is physical knowledge that is itself physical; it cannot reasonably be held to refute physicalism. Of course, it, like the knowledge argument, is only a thought experiment. We cannot say that either is true; only that each is plausible. But a plausible thought experiment that shows how physicalism *can* be true seriously undermines one that supports the conclusion that physicalism *must* be false. Not only is a contrary case presented, effectively refuting the knowledge argument by showing how physicalism can plausibly be true, but the basis of the argument itself is called into question. If physicalism can be true – and the two perspectives position shows that it can – then an argument that supports the conclusion that it *must* be false, must be flawed.

### 10.3 *The flaw*

Obvious questions arise. Where is the flaw? Why does the argument appear plausible regardless? But the two perspectives position has answers. If it is true, Jackson's first premise (that Mary acquires all the physical knowledge in her room) can be false, yet appear true. In this position, the inner perspective that gives us experienced blueness is really nothing over and above some physical element in the organism known to an outside observer as some identifiable element of a corresponding brain state. This means that experienced blueness and its external counterpart are different perspectives on the same physical problem, and have, in consequence, the same solution – which means, in turn, that it is possible to have both a perspective on the problem via the external counterpart of experienced blueness *and* a complete physical explanation for the problem *without* having known experienced blueness itself.

The resulting *account* of the physical problem – which is to say, the explanation plus the external observers' perspective on the problem – will be a close-to-comprehensive account of this aspect of human experience (experienced blueness). It will be as complete an account as we can ever have of any other physical state we study, and will be sufficiently so to fulfill any manipulative or explanatory purpose evident to an external observer – even to the extent of being able to bring about the occurrence of the element of the physical world that is experienced blueness, inner perspective and all. A person holding such an account will have an account of experienced blueness sufficiently complete as to appear, for most intents

and purposes (including any intent or purposes that normally apply to the physical states we study), to be comprehensive. It will entail both a full explanation of the physical phenomenon being studied, and an external observer's perspective on the problem it represents, and will be as close to comprehensive as it is possible to be if the perspective of the external observer is the only perspective available. In the two perspectives position, however, it will not be wholly comprehensive; without the irreducible experiential knowledge encompassed within experienced blueness itself, it will be incomplete and misleading. It will be incomplete because it will fail to encompass a fact about what is being explained, a fact that can only be included in the account as experiential knowledge – the fact that the physical state being explained seems like experienced blue to an internal observer. It will be misleading because, it will seem to be an explanation of a phenomenon that has only those characteristics evident to an external observer when, in fact, it is explaining one that also has those characteristics evident to an internal observer.

If Mary can acquire an external observer's account of the various elements of experience in her black and white room – and by Jackson's lights she can – she will have a scientific account of human experience that is sufficiently complete as to appear to her (and to any scientist outside the room studying her behavior or testing her knowledge or her related abilities) to be comprehensive. She will have knowledge of qualia sufficient to fulfil any manipulative or explanatory purpose evident to an external observer – even to the extent of being able to bring about the occurrence of a given physical state that is a quale, inner perspective and all. It will thus appear possible for the Open University to impart all of the physical knowledge about qualia to Mary. Mary will end up with as complete a knowledge of the physical states that are qualia as she (or anyone) can have of any other thing studied by science. From the two perspectives position, however, she will still have something physical to learn – she will lack experiential physical knowledge of the qualia of experience without which her view of the phenomena she is studying and, hence, of what she is explaining, is incomplete and misleading. Jackson's first premise (that Mary acquires all of the physical knowledge there is to acquire inside her room) – and, hence, his conclusion (that physicalism is refuted because she acquires new knowledge on leaving it) – will be false<sup>19</sup>.

#### *10.4 Jackson's conversion*

Of course, Jackson himself now argues (Jackson, 2003, pp. 14–26), in defence of his own conversion to physicalism, that Mary acquires no new knowledge, only a new found ability to represent knowledge she already had in a new way, echoing the anti-knowledge argument position of Nemirov (1980<sup>20</sup>, 1990), Lewis (1988), and others. Two points are worth making about this. First, in the two perspectives position, such a defence is unnecessary – Mary's new knowledge, physical knowledge that is itself physical, being no threat to physicalism in this view. Second, it does not *seem* to be true that she learns nothing new. Mary may well acquire an ability to represent knowledge she already had in a new way<sup>21</sup>, but she still seems to acquire additional knowledge content – new knowledge – by learning what the physical states that occur in herself and others exercising this ability are *like*<sup>22</sup>. Before, she may have known the knowledge content now represented as blueness, but she did not know blueness *itself* (cf. Chalmers (1996, pp. 144–45) and Conee (1994)). She could not have done. The knowledge content that is expressed as blueness, redness, and so on, cannot be acquired by someone in Mary's circumstances. It cannot be expressed or acquired verbally or via diagrams or models, and any attempt to provide illustrative examples will fail; Mary will see only grayscale versions. The Open University will be able to give Mary accurate accounts of qualia sufficient for most purposes – physical control, intelligent discussion, even explanatory understanding up to a point. However, she will still have something physical to learn – something shown earlier<sup>23</sup> to be a key element in a scientific account of human experience.

### **11. The hard problem resolved**

#### *11.1 A fundamental property?*

For Chalmers (Chalmers, 1995, 1996, 2003) the problem of consciousness – the problem of explaining why blueness or redness is like it is or, indeed, why experience exists at all (why it is “like” anything) – is (almost) uniquely hard. So much so, that we must take experience itself as a fundamental property<sup>24</sup> of the world alongside mass, charge, and space-time to encompass it in our world-view. He reaches this

conclusion by way of three arguments, which he summarizes (Chalmers, 2003, pp. 104–7) as *The Explanation Argument* (§ 5.3.1 and the preceding paragraph), *The Conceivability Argument* (5.3.2), and *The Knowledge Argument* (5.3.3). The claim, in essence, is that reductionist physicalism is false; that experiential consciousness cannot be reducibly physical, and so, can only be encompassed in our world view by adding it as an additional fundamental property of the physical world.

### 11.2 Against Chalmers

The two perspectives position shows that an alternative and less controversial position is possible. It counters Chalmers' conclusion by showing that there are circumstances in which it can be false; that it can be false if the two perspectives position is true. If, as this proposes, the perspectives that give us baseline experience and the various base feels as internally experienced have no physical substance over and above that of the physical states that both underlie and subsume them and underlie their external counterparts – if they are simply how these physical states *seem* when known directly rather than indirectly – three things follow. First – and self-evidently – conscious experiences *are* reducibly physical. Second, we need not explain how the external counterparts of baseline experience and the various base feels “give rise to” our inner experiences of these things. This does not happen – there is no transformation or hard problem in this perspective. If the two perspectives position is true, each inner experience and its external counterpart are one and the same physical state known directly and indirectly. The one does not give rise to the other; they are simply different (directly and indirectly experienced) versions of the same physical state. Third, a standard scientific account based on the external counterpart of an inner experience is sufficient to explain both versions of the physical phenomenon that *just is* that inner experience. A physical state will be red/ the external counterpart of red because it differs in discoverable physical ways from physical states that exhibit (say) a blue inner experience and its external counterpart, or a sweet one – and a similar equation holds for baseline experience itself. In this position, the internal and external perspectives are simply different experiential labels for a single physical state – the single physical state that *just is* both forms of blue or red or baseline experience. All that an account based on external counterparts lacks is the additional experiential knowledge of what the physical state is like for an internal observer, but this is easily resolved by mapping that experiential knowledge to its external counterpart. In this position, nothing else is needed. The inner perspective is not an additional problem over and above that already addressed via its external counterpart, simply an additional perspective on that problem – an additional perspective that has no physical substance over and above that of the physical state underlying the external counterpart, and so, is encompassed in, and explained by, the standard external observer's scientific account. If the two perspectives position is true, there is no hard problem, and no need to encompass conscious experience in our world view as a new fundamental property<sup>25</sup>. A scientific account of consciousness need only comprise a standard physical account of the external counterparts of baseline experience and the various base feels, mapped to our experiential knowledge of how the states that underlie these external counterparts seem to an internal observer.

### 11.3 Against Chalmers' explanation argument

Chalmers' arguments in favor of his position are also successfully countered. The claim in the explanation argument is that physical accounts explain only structure and function, and do not account for experience. As was just argued above, however – and in more detail in earlier sections (6–8) – Chalmers is wrong if the two perspectives position is true. Physical accounts do explain experience in this position – by explaining the physical states that subsume/*just are* experience and mapping in experience itself.

### 11.4 Against Chalmers' conceivability argument

The conceivability argument is the argument from the conceivability of zombies. In essence, Chalmers argues (following Kripke, 1980) that, since we can conceive of a possible world in which zombies, physically identical to us but lacking inner experiences, exist, conscious experience must be something over and above our physical make-up – it is not reducible to the physical world as we know it. The counter to this is that, if the two perspectives position is true, then, whilst it may appear that zombies are possible, because we can observe either an experience or a corresponding brain state in isolation, this is illusory. The two necessarily occur together – like water and H<sub>2</sub>O (cf Chalmers, 1996, pp. 146–9). We would always –

technical barriers aside – be able to make both observations if we attempted it. There is a possible world in which zombies are not conceivable – and so, a possible world in which reductionist physicalism is true. They are not conceivable if the two perspectives position is true, because then the two perspectives are inextricably linked to the same physical state. It seems that we can conceive of this physical state occurring without entailing the inner perspective, but we are mistaken to think so. We are actually conceiving of something that only seems like that physical state to an external observer, but that is, in fact, another quite different (zombie) state, a mistake that is possible because, when acting as purely external observers, we can observe the outer perspective without also observing its inner counterpart<sup>26</sup>.

### 11.5 Against Chalmers' knowledge argument

The knowledge argument is the same basic position argued by Jackson. In essence, it is that, since the facts about experience as experienced are not deducible from the physical facts (about structure and function) experience is not reducible to the physical world as we know it. Again, though, the two perspectives position shows us a circumstance in which this does not hold. If it is true, it remains true that the facts about experience as experienced – how it feels or seems to an inside observer – are not deducible from the physical facts about structure and function, but it is not true that experience is not reducible to the physical world as we know it. In this perspective, it is reducible. If the two perspectives position is true, Chalmers' arguments – like his conclusion – all fail. We need not add experience itself as a fundamental property of the world. All we need do to provide a scientific account of conscious experience is add our experiential knowledge of baseline experience and the various base feels to an otherwise standard scientific account of their external counterparts.

#### Notes

- [1] Sensory states are my focus here, but I take qualia to include all mental states, including (with Strawson, 1994) thoughts.
- [2] See also Nagel, 1974
- [3] Assumed here to encompass further physical detail
- [4] And, hence, of the physical world generally.
- [5] Verbal, mathematical, diagrammatic
- [6] Clearly, this is a more basic physical state than that associated with a whole quale, which also encompasses the more basic physical state associated with baseline experience. I see no value in laboring this point, however, and shall henceforth simply refer to these more basic physical states as physical states.
- [7] Note, incidentally, that there is no question either of the underlying physical state itself giving rise to the corresponding inner perspective. In this position, the inner perspective is not something the physical state becomes, it *just is* that physical state as known when experienced directly.
- [8] Note that this does not rule out employing introspective methods to help clarify what we are seeking to explain.
- [9] cf Conee 1994; Deutsch 1999
- [10] It may even turn out to be associated with a fundamental property as Chalmers (1995) suggests. However, in the two perspectives position, our route to this conclusion would be based on the externally observed counterpart and follow the accepted scientific path.
- [11] This is meant in the widest sense of some identifiable aspect of the physical world.
- [12] Its existence has, of course, been challenged by others – see e.g. Papineau (1997); Tye (1999).
- [13] The position is compatible with token identity, but type identity seems the better “fit”. Anti-type arguments based on multiple-realizability (Putnam, 1975) seem to me to be challengeable. A quale-type could have a common basis at some physical level, yet still occur in different organismic contexts (experienced blue in two people, pain in different species). Indeed, experiential (as opposed to just functional) identity might arguably require it.
- [14] Borst (1970) is illustrative and has the original papers
- [15] Even by those who themselves espouse physicalism – see, e.g., Graham and Horgan, 2003 and McDonald, 2004
- [16] Alter (2006) has a useful summary.
- [17] See, for example, Horowitz and Jacobson–Horowitz (2005).

- [18] See Sections 1–8 above.
- [19] For other first premise based counter–arguments see Flanagan 1992, Conee 1994, Deutsch 1998, Sommers 2002
- [20] Its first statement predates Jackson’s Knowledge Argument as such, and was a response to Nagel’s “What is it Like to be a Bat?” (Nagel, 1974), an influential paper to which Jackson (1982) acknowledges a debt.
- [21] Indeed, this is what the two perspectives position claims
- [22] In Jackson’s terms (2003: 26) *they* (the physical states) are the referent of the demonstrative.
- [23] See sections 6–8
- [24] This is an oversimplification (see 2003:123–4), but it will suffice for present purposes.
- [25] But see note 9
- [26] This not only counters the conceivability of zombies story, it gives it a new twist. We can say that it shows reductionist physicalism to be false *unless* the two perspectives position is true – arguably strengthening the case for this particular brand of physicalism.

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