Relationalism, Berkeley's puzzle, and Phenomenological Externalism

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According to John Campbell, Berkeley's puzzle is to understand how perceptual or sensory experience can form the justificatory basis of our knowledge and conception of mind-independent things (Campbell 2002a). While Campbell does not sympathize with Berkeley's idealism, he does think he bequeathed us an important insight, namely that 'concepts of individual objects, and concepts of the observable characteristics of such objects, are made available by our experience of the world' (ibid., 128). Thus: 'The puzzle that Berkeley is addressing is that it is hard to see how our concepts of mind-independent objects could be made available by our experience of them' (ibid.). The resolution of this puzzle that Campbell proposes, consistent with the insight, involves what he calls the relational view of experience (also known, and referred to hereafter, as relationalism). According to relationalism, a sensory experience, such as a visual experience of a red apple in front of one, essentially involves the object the experience is about, and has its phenomenal character in large part constituted by this object and its qualities. Moreover, a sensory experience does not, as many have recently averred, involve representing the object and its qualities as being certain ways; rather, it is a more basic kind of epistemic relation to the world akin to the kind of acquaintance Russell took us to bear to non-physical objects like sense data and universals. For Campbell

relationalism provides a way of respecting Berkeley's insight in a way representationalist accounts of perceptual experience cannot.

Though Campbell's work has attracted critical attention from a variety of quarters, he has had a particularly sustained debate with Quassim Cassam. Cassam argues, contra Campbell, that a representationalist view can be defended as a solution to Berkeley's puzzle, whereas relationalism fails to deliver on this front. He also has some doubts about the terms of the puzzle itself. Their exchanges can be found in Cassam (2011), Campbell (2011a) and most recently a jointly authored book which presents their to-date most considered views and points of disagreement (Campbell & Cassam 2014).

In this paper, I will be critically considering Campbell's relationalism, both as an answer to Berkeley's puzzle and as an adequate account of the nature of experience, aiming instead to develop a somewhat similar but alternative account of this. I take as my point of departure Cassam's critiques, and thus to an extent the paper can be viewed as a critical discussion of their joint contributions to the relationalism-representationalism debate. However, my objections to relationalism go beyond what Cassam has to say; moreover, I have no interest in defending any of his representationalist alternatives, nor any kind of compromise position between relationalism and representationalism.

With respect to the resolution of Berkeley's puzzle, I will argue that consideration of this does not provide any strong argument in favour of relationalism in view of the possibility of explaining our concept of mindindependence by reference to (something like) *innate ideas*. The underlying aim

here is deflationary, suggesting, as Cassam himself does, that the alleged puzzle is less of a pressing concern than Campbell takes it to be.

With respect to the issue of the nature of experience, I will argue that relationalism is challenged by a somewhat similar view I call 'phenomenological externalism'. While acknowledging ordinary objects and their qualities as constitutive of phenomenal character, phenomenal externalism lays more emphasis on the experiencing subject in our understanding of what such objects and qualities amount to, viewing them as part of something like a 'world-for-me' or 'world-for-us' rather than the fully objective world that fundamental physics describes. Phenomenological externalism shares many of the core motivations of relationalism, but it seeks to develop these in closer relation to ideas that can be identified with (and hence the name) the phenomenological tradition in philosophy: that originating in Kant and pursued most famously by Husserl, Heidegger and Merleau-Ponty, whose ideas in turn inform contemporary work in so-called 'embodied' and 'enactivist' cognitive science by figures such as Francisco Varela, Hubert Dreyfus, and Alva Noë. Phenomenological externalism *per se* is not meant to coincide with any particular extant view; rather, it is aimed at being a general position in the debate on perceptual experience that many of these individual approaches could be seen as exemplifying.² I will not be offering anything like a

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¹ See Chemero & Kaufer (2014) for a recent introductory text on phenomenology structured along these lines.

² The term 'phenomenological externalism' is used by several other authors. One is Dan Zahavi, who employs it in a sense very similar to that I will be assuming here (cf. Zahavi 2008). For him it is a variety of externalism which whilst stressing the constitutive dependence of experience on non-mental objects also sees the latter as constitutively dependent on subjectivity, in the manner first suggested by Kant.

knock-down argument for phenomenological externalism over relationalism, but rather suggesting ways it can seem to provide a more satisfactory externalist view of experience, and how some of its apparent drawbacks might not be so serious after all. Further, I will suggest it fits naturally with the kind of deflationary perspective on Berkeley's puzzle that I argue for. Insofar as it is a view that divorces questions about experience from epistemology, as well as mitigating the sense in which objects contribute to phenomenal character simply by our being related to them, phenomenological externalism can also be seen as rejecting the centrality of the idea of acquaintance to the theory of experience.

The paper is structured as follows. In section 1 I give a brief overview of relationalism and Berkeley's puzzle, based on Campbell's contribution to Campbell & Cassam (op. cit.). Section 2 then critically discusses relationalism as a response to Berkeley's puzzle, building out from Cassam's objections. Section 3 also starts with Cassam's objections to relationalism as an adequate account of experience, but goes considerably beyond these in its attempt to motivate phenomenological

Zahavi also sees the notion as applicable to all the main thinkers of the phenomenological tradition, their disagreements notwithstanding. Max Velmans' also uses the expression – see his (2017, 147) – again in a way that, at least as I understand it, is very similar to mine. A slightly different use of the term is Gregory McCullouch's in his *The Mind and its World* (McCulloch 1995), where it designates something closer to what I here mean by externalism about experience.

At this juncture it is also appropriate to stress that my understanding of phenomenology is a (non-reductive) naturalistic one, seeing phenomenological study both as a theoretical one concerning a particular 'phenomenon' (*viz*. experience), and as at least potentially responsive to and in engagement with studies from neuroscience, cognitive science and so on – and hence not as a (at least purely) transcendental, *a priori* study of the conditions of all meaningful thought and enquiry. This will become apparent in section 3. For defence of this conception of phenomenology and its significance see e.g. Wheeler (2011), Knowles (2013), and Reynolds (2016).

externalism. The conclusion reflects on how phenomenological externalism relates to the issue of mind-independence we find in Berkeley's puzzle.³

1. Relationalism

For Campbell, confusion about the role of experience began with the scientific revolution. On Newton's view of nature there is in the physical world nothing like the colours, smells, even the familiar solid objects of ordinary experience. The reaction was to 'push sensory experience inside the head' (p. 2). But 'now we have the problem of explaining how this stuff inside the head can be playing any privileged or distinctive role in generating our knowledge of the world around us.' (ibid.). Some people have concluded that it can't, indeed that this whole way of thinking is wrong-headed. One of these was Berkeley. But while Campbell thinks it reasonable to hold that knowledge of the world derives from sensory experience, he takes Berkeley's idealism to be an overreaction to the modern problematic. Berkeley's significant legacy is rather this puzzle: we have at least a *prima facie* commitment to both i) the idea that sensory experience is crucial to our conception and knowledge of mind-independent things and properties, and ii) the idea that sensory experience only gives us a conception and knowledge of such experience itself; and these ideas seem to be in serious tension.⁴ Cassam labels i) 'experientialism' and ii) 'sensationism' (p. 101), and I will follow him in this.

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³ In view of the centrality of Campbell & Cassam's book to my presentation, otherwise unreferenced page numbers refer to it hereafter.

⁴ Saying Berkeley bequeathed us this puzzle might be misleading. Being more precise we could perhaps say that he had an insight (cf. the introduction) that on the

Campbell thinks a solution to Berkeley's puzzle (henceforth BP) can be had by rejecting sensationism, but that this requires one embraces relationalism about experience. Relationalism however can also be independently motivated, and Campbell emphasizes two points in this regard. The first is that reality can be described at many different *levels*, which allows us to say that the mind-independent world is literally – at some level – populated by solid, moving objects that are, in themselves, coloured, smelly, noisy and so on (p. 3). The rise of the special sciences as well as the so-called 'hard problem of consciousness' (Chalmers 1996) – finding a place for qualitative experience in a physical world – in turn motivate this levels talk (ibid.).⁵ The second is G. E. Moore's notion of the 'diaphanousness' or transparency of experience (p. 18 ff.): when we introspect on what our experience is like, we find essentially nothing (i.e. no qualia), 6 and so must recoil to the worldly objects and properties of which we are aware. But since now, by the first point, there is nothing in the way of thinking of the world as having these properties, we can uphold a 'naïve' view of experience, as a mere relation of consciousness or awareness of this world, or better, of its multitudinous objects and qualities (pp. 22-3). Moreover, in the same blow, we can explain, or at least start to explain, how sensory experience grounds our conception of mind-independent objects, since such experience is

assumption of a non-idealist picture leads to a puzzle. For of course Berkeley didn't think his own view puzzling at all, but mere common sense.

⁵ I return to the idea of levels of reality and the motivation it provides for relationalism in section 3.

⁶ Campbell has a good deal to say by way of critique of qualia theories of consciousness, much of which I think could also be related to Cassam's defence of a phenomenal intentionalist version of representationalism (p. 172 ff.). I find what Campbell says on these matters largely convincing, and note Cassam also concedes quite a lot to Campbell on this score (see e.g. pp. 200-201). Neither kind of view will be discussed further here.

nothing other than our being cognitively 'in touch' with them – 'acquainted', to use Russell's term.⁷

If one doesn't opt for relationalism (and eschews Berkeley's idealism), Campbell thinks one is forced into accepting 'epiphenomenalism', according to which sensory experience plays no role *per se* in our understanding of the concepts of things around us (p. 27). He sees representationalist views of experience as committed to epiphenomenalism since they involve a notion of content that is understood in terms of causal covariation (plus a few twirls) between neural structures and environmental conditions, and as such is a proprietarily subpersonal phenomenon (p. 43). So on this view a 'super blindsighter', who has learned that her responses to stimuli that are not registered consciously are nevertheless reliable (cf. Block 1997), could gain a conception of mind-independent objects; whilst Mary (cf. Jackson 1986) could have a conception of mindindependent colour just by studying the physics and physiology underlying colour and colour vision. But these are consequences Campbell takes to be deeply counterintuitive, and hence he rejects representationalism. Cassam calls this the *redundancy problem* for representationlism (p. 107) – i.e. the problem that representational views fail to find any explanatory role for conscious experience as such to play in giving us knowledge of the world – a useage I will again follow.8

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⁷ Campbell does not in fact use this concept in the 2014 book, by contrast with earlier publications (see e.g. Campbell 2002a, 2002b, 2011b) but I take it this indicates no substantive change in position.

⁸ Campbell has another main objection to representationalism, namely, that in invoking a notion of content it presupposes that we already grasp concepts of mindindependent things, as constituents of the contents of sensory experiences (p. 45). Though this issue was central in earlier work by Campbell and Cassam (see

Just what is a mind-independent object for Campbell, and how does relationalism help to explain our grasp of the concept of this? His examples are everyday objects like a table, tree or knife, which Campbell theorizes as 'causal unities' involving 'internal causal connectedness, which is independent of its relation to a mind' (p. 26). Another way of saying this is that mind-independent objects constitute a kind of *mechanism* underlying familiar, causally interconnected series of events – such as sharpening a knife at point A, taking it to point B, and it cutting tomatoes more efficiently at B (p. 31) (here the mechanism is the knife and its movement from A to B). Relationalism, say Campbell, explains how perceptual experience might play a role in our having this conception of objects as mindindependent by allowing us to think of ourselves as in direct contact with them and their functioning as such mechanisms. Representationalism by contrast only secures contact with them via the idea of an essentially non-experiential, sub-personal system of representation; or perhaps ourselves utilizing theoretical, descriptive knowledge – neither of which secures the required *first-personal contact* with worldly objects, nor the intuitive sense in which experience is necessary to have knowledge of, say, colour.

Thus, in briefest outline, is Campbell's case for relationalism. However, in order to be acceptable relationalism needs to be refined beyond the intuitive idea

Campbell 2002a and Cassam 2011), it would seem to have a subordinate status in their book and will not figure in my discussion here.

⁹ Campbell in fact gives a further argument for relationalism from the structure of the acquisition of propositional knowledge, which also forms part of BP as he defines it (cf. ch. 4). Following J. L. Austin (1962), he claims that under certain conditions sensory encounters are decisive in our making up our minds on certain

that sensory experience is a relation between a subject and mind-independent reality. After all, we don't experience everything in the world, and those things we do experience are not experienced in their entirety or always in the same way. To account for this, Campbell first says we must think of sensory experience in terms of 'a three-place relation holding between: (i) the observer, (ii) the point of view from which the scene is observed, and (iii) the scene observed' (p. 27). Further, the experience 'may itself be adverbially modified' (p. 28). What exactly Campbell puts in the latter idea is left somewhat unclear at the point it is introduced; it is exemplified there by the idea of 'experiencing watchfully' (ibid.). In the following chapter (chapter 3), Campbell fills out the idea of adverbial modification by drawing on empirical work by Huang & Pashler (2007) on the distinction between selection and access in visual attention.

2. Berkeley's puzzle

In this section I will try to show that consideration of BP (restricted in the way just indicated) does not mandate relationalism. My reasons build on those Cassam adduces, but also go beyond these.

Cassam thinks that relationalism doesn't give a good or the only resolution to BP, and also that the very terms of BP are questionable in relying on both the thesis

matters, but that this explanatory role only makes sense on a relationalist view of experience since representationalism, again, can give no essential role to conscious nature of such encounters. Though again of inherent interest, I do not pursue the

issue here, firstly, because the Austinian datum is not obviously compelling (cf. Cassam's comments on pp. 132-3) and secondly because it does not seem to have any impact on how Campbell otherwise uses BP to argue for relationalism (as detailed above), which moreover seems to constitute its main source of support.

of experientialism, and on a certain, in his view faulty conception of 'mindindependence'. Starting with experientialism, Cassam argues that while it seems reasonable to think that experience plays an important role in grounding at least some of our concepts of things and properties in the world, Campbell grants it too large a role (p. 124-6). Experience of colours seems necessary for our grasp of colour concepts; but what about concepts like 'hexagon', 'gold' or 'apple'? For these and many others it seems a purely theoretical (i.e. non-experiential) understanding is possible: one could grasp them without having experienced the corresponding things. Cassam admits that for at least some of these concepts a full understanding might require experience, if not of the object types themselves, then something they can be understood as being composed of, e.g. simpler spatial qualities in the case of hexagons. But the dialectical situation leaves it at least far less clear than Campbell would want it to be that sensory experience is essential to concepts of mindindependent things and their properties. Indeed, Cassam also notes, the distinction between partial and full understanding might allow one to argue that one could have a partial understanding even of colours purely through theoretical knowledge (p. 126).

Cassam's next group of arguments focus on Campbell's specific conception of a mind-independent object and the role experience plays in our grasp of this (p. 126 ff.). As we have seen, for Campbell our concept of a mind-independent object is the concept of an underlying causal unity or mechanism; further, to grasp such a concept, we have to experience some of its instances. Cassam objects that the reasoning here is unclear since we can have concepts of underlying mechanisms

that we do not and even cannot experience (pp. 127-8). Campbell must of course be assuming that the experiential cases are basic, and somehow provide a model for the others; but, as with the general thesis of experientialism, it is not totally clear why this should be so.

Cassam continues with a potentially deeper worry. As he sees things

Campbell's notion of a mind-independent object is one which even a Berkeleyan idealist could accept, for the property of being an underlying causal unity could it seems be attributed to objects viewed as constituted by sensations, i.e. things that there are necessarily perceived or mind-dependent (p. 128). Building on work by Gareth Evans' (Evans 1980), Cassam then develops a more robust notion of a mind-independent object, a discussion which issues in the idea of this both as something there to be perceived – thereby something that can exist unperceived – and material, i.e. a bearer of primary and not merely secondary qualities (pp. 150-2). Though Cassam acknowledges the role that experience might play in explaining our grasp of the idea of perception, which is central to this definition, he also raises questions about whether we could claim it impossible for us to attain such a conception independently of experience, at least in part (pp. 129, 153).

Finally, Cassam argues that however precisely one views the concept of a mind-independent object, relationalism does not explain how this property could be as he puts it 'registered' in experience in such a way as to ground our conception of such objects (pp. 155-7). Indeed it is unclear how any property could be registered in experience for a relationalist (ibid.). By contrast, at least in relation to Cassam's preferred, Evansian conception of a mind-independent object, representationalism

can, through its invocation of content, explain how this property is registered and thereby acquired, along with other properties we experience (p. 160 f.).

How devastating a critique of relationalism does all this amount to? Campbell himself offers responses in his epilogue to the book, in turn addressed by Cassam's own epilogue. Though there is much of interest in these exchanges, what I want to do here is offer an outline of a more general response one might give to Cassam's objections on relationalism's behalf that will ultimately serve to bring out what I think is a more principled problem with it as a response to BP.

Cassam's objections can be summarised as follows: firstly, he questions the general acceptability of experientialism, both in relation to concepts of particular things in the world, and the concept of mind-independence itself; secondly, he points up the apparent compatibility of Campbell's notion of mind-independent objects with Berkeleyan idealism; thirdly, he queries how relationalism can understand the experiential registration of properties in the world. With regard to the first point, relationalists could presumably demur at Cassam's suggestion that *it* has the burden of proof to show that our concepts *are* dependent in a significant and deep sense on experience. With regard to the second, relationalists could insist that mind-independent things *also* are, and have to be seen as, potentially unperceived by us, and perhaps also as material; or alternatively, that the notion of

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¹⁰ In the rest of this paper, my focus will be exclusively on our concept of mindindependence, which is the more fundamental issue. I thus allow, at least for the sake of argument, that some of our concepts of *particular* objects and properties may rely on experience, at least in part; I take it that this is of no use to relationalism insofar as it is consistent with explicitly idealistic views (that is, experientialism should not be understood in such a way that it is something an idealist could accept).

a causal unity, understood aright, is not something an idealist can actually accommodate (this is also the substance of some of Campbell's remarks in his epilogue). With regard to the third charge, relationalism could invoke, as Campbell has in the past, something like the idea of knowledge by acquaintance to explain how properties are registered in experience, extending the Russellian idea from objects like sense data to everyday tables and chairs.

One might not be wholly convinced by these replies, but it at least makes sense to ask: how strong a case for relationalism as a solution to BP are we left with, assuming they are cogent? Throughout the book Campbell presses the redundancy problem for representationalism. Now in fact, though Cassam does not fully accept this, he does acknowledge it has some force (pp. 200-202). I suspect this is because he is attracted to a kind of *epistemological internalism*: the view that the grounds we have for our knowledge or conception of something have to be consciously available to the subject. Certainly Campbell seems to accept this, and I can register personal sympathy with this part of his view. If we now, being generous to relationalism, and also accepting that epistemological internalism does create a serious redundancy problem for representationalism, does the former after all emerge, if not problem-free, nevertheless as our *best* response to BP as things stand?¹¹

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¹¹ I should stress that as I understand the dialectic, representationalism is not ruled out simply by accepting that the redundancy problem is a problem – which might (along with other assumptions we have made, i.e. against the qualia and the phenomenal intentionality view) seem to render relationalism the winner by default – but rather by the fact that the redundancy problem creates problems for seeing how it can solve BP. (In fact given that I think there is a further view of experience consistent with the negative claims of relationalism but opposed to its positive ones – see following section – this assumption is not ultimately that important for me, but dropping it would require a tedious complication of the arguments in this section.)

I think not. For what is still on the table is the possibility of a more principled rejection of experientialism, motivated not piecemeal through the kinds of counter-examples Cassam gives, but through an emphasis on the idea of a conceptual understanding that is essentially *in*dependent of experience for its grounding, resting rather on what we might call (if only for want of a better term) *innate ideas*. Such 'ideas' may of course require that we *have* experience for them to 'come on line', but that is quite a different matter from their being thus grounded. Moreover, though modern conceptions of the doctrine of innate ideas deriving from cognitive science see them as sub-personal structures of the brain, there seems no barrier to an epistemological internalist making use of the notion through the idea of somehow drawing on such structures in a conscious act or acts of (non-sensorily grounded) conceptual understanding.¹²

Now in fact Georges Rey (2005), in his commentary on Campbell (2002a), takes up the idea of innate ideas or knowledge as the possible source of our conception of mind-independence. Campbell's response to Rey is that stressing such knowledge doesn't exclude the idea that experience plays a vital role in the acquisition of the concept of mind-independence; and moreover, that that is all relationalism ever wanted to say, i.e. that it never denied the contribution of innate knowledge (Campbell 2005: 162). However, nowhere in this exchange is there any consideration of the idea that our conception of mind-independence might be grounded *purely* in non-experientially-based conceptual activity. This is odd: the

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¹² The model here is the Chomskyan idea that a suitably motivated individual can draw on her innate knowledge of syntax through intuitions and thereby consciously construct a theory of her language that (in the limit) coincides with that innate knowledge.

view after all doesn't threaten the idea that experience has an important role to play in acquiring concepts of particular mind-independent things, and knowledge about them, but only that experience can ground our conception of mind-independence *per se*.

Elsewhere (Campbell 2011a) Campbell criticizes what I think could be viewed as a somewhat similar account of the origin of mind-independence that Cassam puts forward (in Cassam op. cit.), presenting it as inspired by Kant. According to this time-slice of Cassam, our conception of mind-independence derives both from experience of objects and some non-experientially grounded conceptual component akin to a Kantian category. Campbell's critique, very briefly, takes the form of a dilemma: either this view acknowledges the importance of our experiential contact with mind-independent objects, and hence is just a variant on relationalism; or it does not, and hence lapses into a kind of idealism, in which our conscious mental lives might in principle fail to be in epistemic touch with anything 'outer', and our notion of mind-independence will concern only a phenomenal world. I think as far as the first horn goes Campbell is right. However it is the second which interests me, in that the interpretation might be seen as corresponding to my suggestion that our conception of mind-independence is grounded wholly in innate ideas, and only enabled by experience (which enabling job might then be presumably be done without experience literally making contact with the external world).¹³ However, construed thus, Campbell's objection seems wholly gratuitous.

 $^{^{13}}$ I should also say that though Cassam doesn't talk in terms of innate ideas himself, there would seem no barrier to this interpretation of his Kantian view. (And for the

If there are mind-independent objects, and we have an innate concept of mindindependent objects, then we can reasonably expect this concept will latch onto them and not anything phenomenal, whatever our experience is like. Moreover, if the role acknowledged by Campbell to be played by innate ideas (or knowledge) in grounding our conception of mind-independence does not lead to an idealist construal conception of this on his relationalist account, then why should it do so if the role afforded experience is gradually reduced, ultimately to the point where it acts merely as a trigger? It is important here to remember Cassam's objection that Campbell's initial statement of relationalism is not clearly a non-idealist position, in that what we are aware of might be construable in mind-dependent terms (e.g. as bundles of sensations). Now I suggested above, on behalf of relationalism, that one can block that interpretation by insisting on a meatier notion of mind-independence. But where is that to come from, if not from non-experientially based understanding? And given that, how can relationalism avoid idealism if another view which simply lays exclusive stress on such understanding apparently cannot?¹⁴

The debate thus comes to down to something like a clash of intuitions over whether you think experience does or doesn't play a vital role in grounding our conception of mind-independence. Relationalism might be seen as the default view if one starts out with the first. But given there is a coherent, non-idealist alternative, and given also that there are many challenges that relationalism still has to face down – for example, telling us precisely what acquaintance is and how it allows us

record: though Kant himself of course espouses a form of idealism, I take it this and his reasons for it go beyond what is at issue in the current discussion.) ¹⁴ In putting the point this way I am also indicating that I am open to a certain deflation of the whole mind-independence issue; see the Conclusion.

to pick up information about the world around us – it strikes me that the prospects of cogently arguing this are not that great.

I conclude that a consideration of BP does not at all clearly support relationalism.

3. Phenomenological externalism

In spite of failing to be mandated by a consideration of BP, relationalism *qua* theory about the nature of experience is, in my view, motivated by many sound insights (as are other versions of so-called 'naïve realism' in the literature). Most fundamentally, the phenomenal character of sensory experience cannot credibly be understood in terms of qualia or representational content, but is, rather, at least to a large extent, constituted by the very things in the world we experience and their qualities.

Though this kind of externalism – 'externalism about experience', or simply 'externalism' as I shall call it in the following – is in the first instance a phenomenological claim, derived from the first-personal analysis of our own experience, I see no reason not to accept it as part of a theory of what sensory experience *is*, absent strong reason to do otherwise.

On the other hand, I also, like Cassam and representationalists, think that there must be more emphasis on the subjective side of experience than relationalism allows. However I do not think what is needed is a return to representationalism, even in part. We need instead something different from both representationalism and relationalism.

To enter these issues, we can start by considering a generic objection standardly raised against relationalism (and naïve realism more generally) that we can call 'the mismatch problem': quite simply, the way the world is and the way we experience it need not match up. Holding the world constant, experience can vary (cf. aspect perception, attentional shifts, effects of differing past experience etc.); holding experience constant, the world can vary (cf. hallucinations and dreams); and, finally, the way the world is and the way we experience it may fail to coincide (illusions). If the phenomenal character of experience is given largely by the external world, how can all this be (cf. Cassam at p. 141 ff.)?

Now relationalism, as we have seen, already has some answers to this question insofar as our experiences of objects, or scenes, are always from a particular point of view, as well as being subject to shifts in attention, degrees of watchfulness and the like. Campbell also takes up hallucinations (p. 90 ff.) and illusions (p. 86 ff.), and discusses various responses relationalists have made or might make consistently with resisting representationalism. Against this background one can I think identify relationalism's responses to the mismatch problem as falling into one of three broad categories. Firstly, it makes recourse to a broadly *intentionalist* position about experience which, in addition to the objects of perception, acknowledges different ways or *modes* in which these objects are perceived (cf. Crane 2009). Most intentionalists also include representational content amongst the determiners of phenomenal character; that of course is precisely what relationalism denies, but I think it is useful nevertheless to see it as a form of intentionalism in the broad sense just characterised, insofar as things like

point of view, attentional structuring and so on contribute to the character of experience. Secondly, relationalism makes use of the broad ideas behind *disjunctivism*: that genuine perceiving and at least some other forms of experience that the individual may not be able to identify as differing from perceiving nevertheless must be seen as being fundamentally different kinds of state and as differing in experiential character. Thirdly and finally relationalism can make ontological gambits about the nature of the external world, as for example Bill Brewer's (2011) account of illusion appears to in embracing the idea that things in the world can in and of themselves *look* certain ways (in certain contexts).

There are of course many issues one might take up here in relation to the relationalism-representationalism debate, as Cassam does. As noted my sympathies are firmly with relationalism, and think a lot of what it has to say by way of resisting the pressure to go representationalist is either correct or at least promising (this applies in particular to its particular take on the intentional structure of experience, and its disjunctivism, at least when it comes to things like hallucinations and dreams). What I want to do now however is focus on a further aspect of the mismatch problem that is I think less often or at least less extensively discussed than those mentioned above; and then on a response of Campbell's to it that falls into the third kind of strategy identified above, but that I think fails. Cassam again

¹⁵ Campbell also talks of 'modes of presentation' in a slightly different sense in chapter 3 in his discussion of selection versus access, arguing that insofar as a 'mode of presentation' is understood as a property use to select some object in perception it should be seen as something external (p. 67). Here I abstract away from this possibility, noting merely that insofar as he acknowledges modes of a more standard kind (point of view, watchfulness etc.) he also acknowledges a significant role for things on the subject side as determinants of phenomenal character.

gives expression to the problem (without going on systematically to pursue it) as follows: 'Doesn't physics show that the "qualitative character of the world is quite unlike anything that shows up in your experience?" (p. 3)' (p. 110, citing Campbell). Campbell's response to this is to invoke the idea of different levels of reality, claiming that this can be used to vindicate the idea of experiences as a relation to mind-independent things and qualities in the world that constitute their phenomenal characters (see section 1, above). As we have seen, Campbell sees the idea of levels of reality in turn as warranted by the rise of the special sciences, as well as the hard problem of consciousness.

However, he surely moves too quickly here. Though the special sciences certainly show a need for various levels of *explanation*, the idea that these have ontological implications is another step. Moreover, even if they do have such implications, that this should vindicate the idea that things like coloured, solid, noisy objects are literally *there* in objective, physical reality in the same way electrons, quarks and black holes are seems far less secure. Now Campbell has elsewhere (Campbell 1993) defended a view known as 'colour primitivism' on which colour (as we experience it) *is* just there in the world along with electrons and the rest. However, this is highly controversial as a philosophical position, as well as conflicting with what I take to be a consensus amongst practising scientists – at least since the time of the scientific revolution – that colours and much else in the everyday world of experience simply cannot be aligned alongside the entities of

fundamental physics in one common reality. ¹⁶ Of course none of this shows colour primitivism – or other forms of primitivism about other qualities and objects of the world we experience – are false. Nevertheless, the way Campbell argues for relationalism in Campbell & Cassam (op. cit.) is seriously compromised, for as we have seen, he argues for this position in part by *appeal* to the idea that such qualities do exist mind-independently, 'out there' for us to experience; whereas if this idea is controversial, it can hardly serve this function. Furthermore, I take it that a, if not the, primary motivation for primitivism (of various varieties) is precisely the way colours (etc.) seem to figure in our experience: as external qualities and objects, which qualities and objects literally constitute the phenomenal character of this experience. However, I think in fact that we do not need to endorse the idea of colours etc. being there in the world independently of the way they figure in our experience to uphold this intuition. ¹⁷

To see this requires a somewhat different starting point from that most contemporary philosophical discussions of these issues adopt. Consider then first (fundamental) physics. Many philosophers see physics as charting the fundamental structure of reality, and thereby placing heavy constraints on what else we might

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¹⁶ Byrne & Hilbert (2007) offer critical discussion of primitivism. I lay greater weight on the general scientific point insofar as people like Byrne and Hilbert's positive views tend towards a kind of physicalism or anti-realism about colour, which I would also reject. As we shall see, my own view of the nature of experience, phenomenological externalism, itself embraces a kind of colour realism insofar as it upholds the idea the colours as we perceive them are out there in the world and not inside our minds or heads (and indeed much else that realists defend, such as what we find defended in Allen 2016). What I reject is primitivism in Campbell's sense.

¹⁷ The idea that the hard problem can be solved through relationalism, which was Campbell's other motivation for it, also rests as far as I can see on the tenability of various kinds of primitivism – see e.g. Fish (2008) for a view along these lines – so will not be taken up separately here.

want to populate reality with. However, it is arguable that a more a plausible view of what physics qua scientific enterprise actually amounts to is simply the charting of complex interrelations between its proprietary posits – charting 'physical reality' if you will, but where the idea of this being *a* let alone *the* 'reality' plays no substantive role (this idea is related to the deflationary 'natural ontological attitude' Arthur Fine finds in science; cf. Fine 1986). 18 Given this conception, physics itself is simply silent on the existence of properties corresponding to, say, how things look, smell or sound, for there is, as far as its reality is concerned, just what physics 'finds there'; which again is not to say that such and such things don't exist, rather, these issues are simply moot. Now as we know, philosophers have sought to take the world-view of physics (or something like it) and 'locate' various non-physical qualities in it, either by reducing them to it or eliminating them from it – or, as Campbell does, adding them in somehow. However, at least to judge by the extent to which any particular such strategy has achieved consensus over the years, we might wonder whether there is much point to it. My first suggestion is then that we should start by letting physics be physics.

The second thing to note now, pursuant on this, is that physics is – of course – not conversant about everything we talk or think about. In particular, it is not conversant about subjective experience, 19 something that nevertheless surely

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¹⁸ Fine sees his 'NOA' position as simultaneously deflating anti-realist or instrumentalist tendencies in philosophy of science.

¹⁹ I am abstracting away here from Bohr's idea that quantum mechanics shows that reality must be understood as involving some kind of intervention from a subjective force; suffice it to say here that this so-called 'Copenhagen interpretation' is far from standard let alone uncontroversial as a take on the implications of modern fundamental physics.

deserves serious consideration. If one gives it this, and on its own terms, - that is, looks at experience as a *phenomenologist*, concerned with the structures of experience $per se^{20}$ – what one plausibly finds, at least if something along the lines of what relationalists and naïve realists have averred is on the right lines, is the presentation to the subject of a world of certain kinds of objects and qualities (in fact not just this, but certainly this in some way, and certainly not anything warranting talk of qualia or representational content). But now if this is what experience is ('is like') and this description is not answerable to any 'physical reality', then what need is there for a theory of experience to posit a *separate* ontology of colours, sounds and everyday objects alongside electrons, quarks and the rest? If the theory of experience finds these things there for us, in our experience, then that is, at least *prima facie*, good reason to have them there, insofar as understanding experience is concerned. We might indeed say that what a study of experience reveals is precisely a world of experience – a world-for-me or, perhaps, a world-for-us. This is not relationalism because we are not merely related to acquainted with – something wholly independent of us, existing alongside electrons and the like. The kind of existence physical entities have no more concerns the world-for-us than the latter concerns the world of physics.²¹

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²⁰ Note then that I am thinking here of 'experience' as denoting a particular *kind* of phenomenon, not (as in the Husserlian tradition) as simply coextensive with 'phenomena', in line with my taking phenomenology to be a kind of theoretical science, broadly naturalistic in character (see note 2).

²¹ The world of physics might thus be thought of as something like the *world-in-itself*, or *the view from nowhere* – though only something like, and certainly not in the sense Kant envisaged in speaking of *Ding an sich* (more on this below). Having said that, the idea of a world-for-us I am recommending here does plausibly have resonances with some aspects of Kant's thought about the phenomenal world as

This sketch gives us a rough outline of what I mean by 'phenomenological externalism' (PE henceforth). To clarify it somewhat further, we can first consider in what way PE itself involves a relational conception of experience. Now some might see PE as aptly described by the term 'relationalism'; Evan Thompson, for example, whose views I would see as cleaving closely to PE, uses this term to characterise his theory of colour (see Thompson 1995). However, we need to tread carefully here. To start with, PE is in any case a different kind of relationalism from Campbell's, in being a view on which phenomenal character consists in a relation – or at least results from such – not in what we are related to (acquainted with). That is, PE will be able to and want to say that experience and its phenomenal character can be seen as the joint upshot of what organisms bring to the physical world by way of their neural and somatic apparata, on the one hand, and the nature of the physical world, on the other, and is in part illuminable by these things.²² However nothing in this prohibits us from thinking of experience itself fundamentally in terms of objects and properties in a world around us, in accord with externalism. Relatedly, we should be clear at what level PE is in any case relationalist, in the sense outlined. Many socalled 'relationalist' views about things like colour typically operate with a picture on which they are dispositions to give rise to certain kinds of inner experiences, the intrinsic nature of which are what explain phenomenal character. However, this is

something out there to be experienced but also dependent on us – as consisting of secondary qualities, in one particular sense of that notion (cf. McDowell 1985 and, in particular, Allais 2015).

²² Illuminable, but not reducible. More generally, between fundamental physics and the world-for-us there will be many levels of description that can cast light on the nature of our experience, without making in-roads into explaining conscious experience itself (insofar PE respects, without trying to solve, the hard problem).

clearly inconsistent with the externalist commitments of PE (as well as Campbell's relationalism). Nor should PE be seen as committed to there being a self-subsistent mind or self that either projects its contents onto the physical world or constructs its own world out of materials given by this latter. The idea of a world-for-us – the world of experience – need not and probably should not be cashed out in these or any other terms, but rather should be regarded in the first instance as a primitive and fundamental feature of the phenomenological account of experience.²³

Though explicit expressions of PE are not that easy to come by, they do I think surface from time to time. Here for example is Alva Noë:

The perceptual world is not a world of effects produced in us in our minds by the actual world. But the perceptual world is the world for us. We can say that the world for us is not the physical world, in that it is not the world of items introduced and catalogued in physical theory. But it is the natural world (and perhaps also the cultural world). [...] One consequence of this is that different animals inhabit different perceptual worlds, even though they inhabit the same physical world. The sights, sounds, colours and so on that are available to humans may be unavailable to some creatures, and likewise, there is much that we cannot ourselves perceive. We lack the sensorimotor tuning and the understanding to encounter these possibilities. (Noë 2004, 156)

The kinds of objects and properties that 'show up' for us and other experiencing organisms is dependent in part on what we variously bring to the physical world, as

²³ There is no doubt more to say here – for example one might see *subject* and *world* as mutually presupposing structures or poles within the manifold of experience as a whole – but I hope the idea behind PE is at least sufficiently clear to make use of for present purposes. (For the record: 'relationalism' will refer to only Campbell's view in what follows.)

well as that world itself. However, this does not mean the world-for-us *per se* can be reconstructed from more primitive terms like 'mind'.²⁴

No doubt many readers will find this talk of the 'world-for-me' or 'world-for-us' (indeed, the very glib movement back and forth between these expressions) as so obfuscatory or absurd as to render any apparent problem relationalism has making sense of primitivism about colours and the like anodyne by comparison.

Below I will make some remarks that I hope will assuage this impression. However, I also hope the initial repugnance does not apply to all readers. In any case, I think it is clear that what I am calling 'phenomenal externalism' is an extant view in the literature that bears a strong affinity with relationalism and draws on much of what is attractive about it, whilst avoiding an unwelcome commitment of it. At the very least, then, I think it deserves an airing as a further possible position within the literature on perceptual experience. To further promote that end I will in what's left of this section do the following. Firstly, I will suggest how PE plausibly provides a

²⁴ A commitment to the idea of a 'world-for-us' is also plausibly attributable to Varela, Thompson & Rosch's (1991) autopoetic enactivism (see e.g. pp. 172-3), as well as being a natural gloss on Gibson's seminal ideas about 'affordances' as the immediate objects of perception (Gibson 1979). Another prominent enactivist, Hubert Dreyfus also seems to commit to this idea in his article with Stephen Dreyfus on existential phenomenology and the Matrix, where they argue that in a Matrix world people 'are directly coping with perceived reality, and that reality isn't inner' (Dreyfus & Dreyfus 2005: 75-6). (Having said that, in Dreyfus' recent book with Charles Taylor – Dreyfus & Taylor 2015 – a position is defended on which physics tells us more about the same reality as our 'embodied copings' cope with. I will return to this view and more generally the relationship between the world-for-us and physical reality below.) Finally I can mention the work of Max Velmans (op. cit.), who less clearly qualifies as an enactivist but whose conception of consciousness as concerning a distinct phenomenal world, neither in the brain nor identifiable with the world of physics, would qualify him to the ranks of PE (indeed, as mentioned in note 2, he uses the phrase 'phenomenological externalism' himself, as well as referring approvingly to the phenomenological school as a precursor of his view.)

more coherent version of a non-representationalist intentionalism than relationalism. Thereafter I shall consider and try to answer two possible objections to PE.

As suggested, particular views cleaving respectively to PE and to relationalist conceptions of experience (relationalism itself as well as other forms of naïve realism) will tend to have much in common at the level of phenomenological analysis and motivation. Both class of views start from a broad-based intentionalist view of experience which lays stress both on the things in the world we experience as well as how we experience them – albeit not how we represent them – as constitutive of phenomenal character. They will also tend, I think, to be sympathetic to certain disjunctivist treatments of at least things like hallucination or dreaming. Of course, they will not and do not need to coincide with respect to the analysis of every element of experience; for example, illusion might be more amenable to a more straightforward analysis assuming PE rather than relationalism, insofar as the former operates with the notion of a world-for-us, though I won't pursuing this line here, or seeing it as giving the former any kind of advantage over the latter. What does however I think give PE an advantage is the following: experience has an essentially unitary character; it is, at least at a certain high level of abstraction, one homogenous kind of thing. The problem this creates for relationalism is that for it experience is fundamentally a product of two very different things: objects and properties in the objective world, on the one hand, and certain features of our subjective access to this world, on the other. But then it becomes very hard to understand exactly how these things could come together to create the unitary

phenomenon that experience is. (Note that this is not question-begging against relationalism: the charge is not that objective things and properties cannot be part of phenomenal character, but rather that it is obscure how these kinds of thing could combine with subjective properties to produce unified experience.) PE by contrast faces no such explanatory challenge: the things in the world-for-us that we see, hear and touch are already part and parcel of the unified intentional structure that is experience.

Maybe this is just a variant on the expression of puzzlement over the very idea of acquaintance as a kind of epistemic relation that I briefly discussed in section 2. Just as it is unclear how I get to know about something by being acquainted with it, or even what this means, it might seem unclear how something could be part of my experience just by my being acquainted with, or again what this might mean.

Relationalists might accuse the opposition of lack of imagination or charity here; and certainly I do not mean to suggest the point as a knock-down argument against it. Nevertheless it does strike me as an advantage for a view of experience that this kind of question is avoided, and that the components of experience, if you will, are already within the same ontological category. This is the case for PR: experience is most basically a world-for-us: a world shaped by our subjectivity, though a world of things and qualities nevertheless.

I turn now to the two objections. The first can be seen as turning the justmentioned advantage I claimed for PE on its head and seeing its unified account of experience as in fact falsifying our phenomenology. Though there are I think different ways one might make this point, I will focus on a particular version of the objection that Campbell makes to Noë's theory of experience, though one that I think he would see as hitting any form of PE insofar as it sees important links between action and experience (which it at least in most versions does). Now according to Noë (op. cit.) certain aspects of at least visual phenomenology – such as the seeming 'presence' of whole, three-dimensional objects, certain parts of which are nevertheless out of view at any time - can be explained in terms of our implicit knowledge of sensorimotor contingencies such as 'If I were to move my gaze to such and such a location on this object, I would experience so and so'. Understood in a suitably non-reductive way Campbell thinks this is insightful; indeed, that this kind of knowledge can be built into the 'point of view' parameter in an overall account of visual phenomenology. However, if one understands it as an account of what visual experience constitutively is, Campbell thinks it amounts to a form of phenomenalism, in which experience of the world is reduced to a complex body of conditional knowledge about what sensations one would have if one did so and so. This implies that nowhere does experience of the particular or categorical get into the picture; as Campbell puts it: 'The ordinary world, there independently of us, there for us to explore, has simply disappeared' (Campbell 2008: 667; see also Leddington 2009.).

Now I am inclined to agree that this is a telling objection to Noë's enactivist theory insofar as this is conceived – as Noë, at times at least, seems to conceive it – as a constitutive or reductionist one. However, though PE would, like Campbell want to draw on Noë's ideas, it is important to understand it is no more committed to these as a reductionist view of experience than relationalism is. What PE can and should rather insist on is that what we might call *presentational* and *action-oriented*

elements are *inextricably intertwined* in our experience as a whole, experience which is not *per se* factorizable into these different components. Importantly, this does not mean that PE cannot acknowledge that sensory experiences presents us with particular objects (or particular properties) along, as it were, one dimension or axis of such complex experiences. Moreover, just as the action-oriented dimension may be explained from a lower level – implicit knowledge of sensorimotor conditionals will presumably have some kind of neural underpinning – so in explaining the presentational axis we might advert to the fact that in perception we - that is, our physical bodies and sensory surfaces - are in causal interaction with distinct physical structures outside our bodies, with their own physical properties. The existence of these structures and properties might then be invoked as an illumination or 'vindication' of the presentational dimension of experience. Of course, this would be an explanation of an experiential, personal level fact from the sub-personal level: the physical object in question is not in the world we experience, as it is for relationalism. But since according to PE experience is not in its essence identified with a relation to something pregiven, as it is for relationalism, there seems no reason to think it should not satisfy us. (There is no doubt more that could be said here, but my aim here, again, is primarily to motivate and defend PE as a viable contender in the philosophy of perception debate, not vindicate it.)

The second objection concerns what to many may seem the most alarming feature of PE, namely, its apparent commitment to a plurality of different worlds. To start with we have the split between the phenomenal world-for-us and the world-initself – the world of fundamental physics. Secondly, we seem to have to contend

with a plurality of phenomenal worlds assuming different species and maybe even different individuals are sufficiently different in their sensory and somatic makeup. But these may seem simply bizarre and untenable commitments.

Now I would not deny that PE faces a challenge, indeed several challenges here. However, I also think any registration of utter consternation can be ameliorated. Let us start with the second broad challenge above. In relation to this, I would say firstly that in fact it hardly seems absurd at all to suppose that some different species literally inhabit different phenomenal worlds - say, human beings and frogs; or at least, to the extent there is, as they say, 'something it's like' to be a frog at all, this will, surely, correspond to the experience of a quite different kind of world from ours (though still, given externalism, some kind of world nevertheless). Secondly, on closer phenomenological analysis of our experience, we plausibly find, as Husserl stressed, something like a common human lifeworld that our individual subjectivities necessarily relate to: an intersubjective background of significance that we must see ourselves and our individual perspectives as part of to make sense of them as such (cf. also Dreyfus & Taylor 2015: ch. 6). Any world-for-me is thus always only comprehensible against the backdrop a common world-for-us. So the idea that PE brings with it a brute plurality of subjective worlds simply because our experience is all somewhat different should not be countenanced. Moreover – and now returning to animals - it doesn't, at least today, seem completely absurd to suggest some species themselves might have common lifeworlds, or indeed that certain animals might share their lifeworld with one other or even with us – their lack of linguistic abilities notwithstanding. In fact, these issues strike me as

ultimately empirical questions, albeit ones that may be very difficult to adjudicate. I don't suppose these considerations will render phenomenal worlds less unpalatable to many, but I do think that if one isn't *a priori* disposed to reject the very idea, they do suggest ways of making progress in thinking about it.

This leaves us with the question of the relationship between any such world and the world of physics. How should we conceive of this? By way of contrast to my own view, I will discuss briefly a stance on this question that might seem the most natural and that has recently been put forward by Hubert Dreyfus and Charles Taylor in their book *Retrieving Realism* (op. cit.). The main target of this is what the authors call 'the mediational picture' of the mind-world relation, which sees our contact with the world as mediated by a third item, such as an idea, sense datum, thought or utterance, raising the traditional spectre of mind-body dualism and external world scepticism. Drawing on work by Heidegger, Merleau-Ponty, as well as Samuel Todes' (2001) seminal ideas, they argue for an alternative picture of the mind-world relation on which the body and skilled, absorbed coping has a foundational role to play in understanding how experience connects us with the world, a connection which is moreover direct and constitutive. At the same time, the world thus revealed has to be understood, at least in the first instance, in terms of our capacities for embodied coping. This is very much in the spirit of PE. However, they are also keen to point out that our coping always operates within *boundary* conditions: conditions that limit the possibilities for action and experience 'from without', so-to-speak, like the rigidness of a stick or the softness of a bed of leaves (Dreyfus & Taylor: 138). Dreyfus & Taylor then conjecture that natural science can

be understood as an endeavour that investigates these boundary conditions on their own terms. On their line, talk of a 'world-for-us' (or an ant's world, or whatever) thus does not enunciate a completely different reality from that which physics delineates, but a kind of *view* on reality whose nature in-and-of-itself physics can tell us about.

Now it also turns out that Dreyfus & Taylor do not hold that the 'view from nowhere' that physics provides is necessarily superior to any perspectival conception of reality (this is the 'pluralistic' part of their 'pluralistic robust realism'; cf. ibid.: chs. 7 and 8). This idea I find plausible in itself. However, in their hands it is very hard to understand, since for them any conception aims to capture the oneand-only 'reality'; but if physics captures this reality as it is in itself, how can alternative views of the same reality fail to be in some way a distortion or misrepresentation of it? Furthermore, I think it is hard on their assumptions to make sense of the idea that any world of experience, albeit object-involving in its phenomenology, can in fact be anything other than a virtual world: a kind of (perhaps collective) representation or even hallucination generated by our brains. In view of this, it seems to me that the position Dreyfus & Taylor end up in is in fact very close to a version of the meditational view that they wanted to get away from. If, as we are assuming here, one wants to uphold a genuine externalism about experience, this strikes me as a very bad result.²⁵

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²⁵ This is a somewhat truncated critique of Dreyfus & Taylor; for more details (as well as further discussion of the significance of 'boundary conditions') see Knowles (forthcoming).

Dreyfus & Taylor's attempt to 'retrieve realism' (as they put it), at least along with upholding PE, thus plausibly fails. This suggests that a defender of PE has to face head on the question of how one should understand the idea that there is *both* a world (or, possibly, worlds) of experience, and a physical world, neither being reducible to the other. How should one proceed here?

To start with, I think one can see the former (assuming for the moment its singularity) as the only *world* there is; that is, our ordinary experience corresponds, precisely, to what we ordinarily think of as a world, extended in Euclidian space and with directional time, containing solid objects interacting with each other causally in all the different ways we are accustomed to and exhibiting an independence from our individual subjective takes on them. Physics by contrast involves a highly rarefied conception of things, indeed, one so at odds with common sense that it arguably doesn't qualify as a description of a *world* as we would think of this at all. This might tempt some towards an anti-realist conception of physics, but insofar as one can understands its claims in truth-conditional terms, it seems unclear what grounds one could have for this (this point is connected to Fine's defence of NOA discussed briefly above). What we are not committed to saying that there is both a *world* of experience and a *world* of physics.²⁶

In spite of this, I think PE must acknowledge phenomenology and physics as something like two 'non-overlapping magisteria', to borrow Stephen J. Gould's metaphor (cf. Gould 1997 – something he applied to the divide between science and

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²⁶ I should also stress that under the general heading 'physics' one should allow for the possibility that there is an irreducible plurality of natural scientific theoretical disciplines, such as physics-of-the-very-big, physics-of-the-very-small, chemistry, and even certain theoretical kinds of biology and psychology.

religion/ethics): two fundamental but also fundamentally different schemes or discourses of understanding – two 'sciences' in a suitably loose sense of the phrase. To this one might then object that they nevertheless must relate to each other somehow: after all, as well as being a highly mathematized and theoretical discourse, fundamental physics is also an empirical one; moreover, much of what I have said by way of motivation for and defence of PE has assumed they will relate via various intermediary levels of understanding. Doesn't this force one into a more substantively realist position? It may suggest it but I think the answer is: not necessarily. Sciences that furnish in the first instance autonomous modes of understanding can be used to describe or redescribe existing phenomena – where the latter are themselves characterised in terms of some preexisting discourse – in the service of some or other explanatory goal. Thus, the world of experience is one that we can and do often seek to redescribe in purely physical terms, understanding this in terms of a view of ourselves as physical systems with a central nervous system stimulated by outer objects that initiate internal processing by neural mechanisms. In doing this we may also cast light on the 'higher' level phenomenon, here experience, insofar as we can ascertain significant correlations between this and features of neural processing – though, on the view defended here, without any goal of fully explaining the former in terms of the latter, or making metaphysical claims to the effect that consciousness is 'in the head' or anything of that kind. This non-reductionist stance is not *a priori*; reductions, or at least 'unifications', as one might rather call them, do occur between different disciplines in science, though

they are not criterial for its success. ²⁷ In the case of conscious experience it seems clear – at least, I contend that in the light of the hard problem it is clear – that we should not be expecting anything like a reduction or even unification of our understanding of this with what we know from fundamental physics. But reduction is not the only possible goal of relating different descriptions to one another.

What I have said here only gestures at an account of how we should think about experience and physical science along the lines of PE.²⁸ What I think and hope it does show is that there is a complexity to the issues, forced upon us by deep problems with other available pictures, that makes simply pushing PE aside as a non-starter inappropriate.²⁹

Conclusion

Let us recur finally to Berkeley's puzzle (i.e. BP): is there any relationship between PE and my treatment of this? I think there is. Now I have spent relatively little time discussing the concept of a mind-independent object, but in fact it seems to me there is probably more than one idea to which this form of words might correspond. Crudely, one might say there are, on the one hand, 'mind-independent objects' like

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²⁷ See Chomsky (2001, 106-7) on both these points. His first point, illustrated in relation to the famous 'reduction' of chemistry to quantum physics, is that in such cases adjustments are standardly needed at both levels of explanation. Rorty (1991) defends a strongly non-reductive view of science somewhat similar to that offered here, partly through the lens of Fine (op. cit.), whilst somewhat similar accounts can be found in Dupré (1993) and Ladyman & Ross (2007).

²⁸ Again, for more on these matters see Knowles (forthcoming).

²⁹ A further important aspect of the dialectical situation concerns whether we can so much as make sense of realism as ordinarily understood (see Putnam 1983; Price 2011; Knowles 2014). If we can't, I think a further intuitive resistance to what can seem like metaphysical extravagance will naturally fall away.

tables, chairs and trees; and on the other, 'mind-independent objects' like electrons, quarks and bosons. Insofar as tables etc. are in a world-for-us they are also in some sense mind-dependent, or (as I would prefer to say) organism-dependent; however, if PE is right, they are no less external and intersubjective for that. Thus we can say that BP simply doesn't arise for them; or perhaps that a (naturalised) form of Berkeleyan idealism about precisely *these* kinds of objects is correct – though in thus restricting the idealism, and in any case vindicating the objects' status as external and intersubjective, there should be nothing objectionable about that. Thus a supporter of PE will also say that things like electrons and bosons are *not* in the world for us and are not in any meaningful way external to us,³⁰ though they are quite real, making clear that PE is not a form of idealism in toto. But now does BP arise for these posits of physics? Arguably not, for the idea that everyday experience can give us any conception of what these things are is neither very plausible nor problematic, if we accept what physicists themselves say about them. And then we can say that whatever conception we do have of them, as the peculiarly organism*in*dependent things they are, must in some sense come from non-experientially based thought, i.e. precisely the innate ideas account I sketched.³¹

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³⁰ I would uphold this even in the face of Ian Hacking's famous defence of entity – in particular, electron – realism on the grounds that 'if you can spray them, they are real' (Hacking 1983, 24). This might seem to suggest that electrons, at least, are in the world-for-us, but all it in fact shows is that we can seek *relate* this world to that of sub-atomic particles (see the discussion towards the end of section 3). The thoroughly *outré* nature of electrons (and the rest) which grounds their constitutive separation from the things of this world remains. (I should perhaps add that I have never understood how Hacking's argument was meant to function as an argument for realism about electrons in the face of anti-realist doubt.)

³¹ Thanks to Walter Hopp, Solveig, Aasen, Sebastian Watzl, John Campbell, Ronny Myhre, Thomas Raleigh, Michael Amundsen, Truls Wyller and Jussi Haukioja for

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