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Powerful Qualities, Phenomenal Concepts and the New Challenge to Physicalism

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Abstract

Defenders of the phenomenal concept strategy have to explain how physical and phenomenal concepts both provide a substantive grasp on the nature of their referents, whilst referring to the very same experience. This is the ‘new challenge’ to physicalism. In this paper, I argue that if the physicalist adopts the powerful qualities ontology of properties, a new and powerful version of the phenomenal concept strategy can be developed, which answers the new challenge.

Keywords: Powerful Qualities, Phenomenal Concepts, New Challenge.

1. The Phenomenal Concept Strategy and the New Challenge

1.1 The Phenomenal Concept Strategy.

The phenomenal concept strategy (PCS) was developed to defend physicalism from the knowledge and conceivability arguments [Jackson 1986; Chalmers 2010]. The core claim is that we can think about experiences using at least two kinds of concepts: physical and phenomenal ones. Physical concepts characterise experiences in physical/functional terms, for example ‘nociceptors firing’. Phenomenal concepts characterise experiences in virtue of their phenomenal character, for example ‘the experience of pain’. Proponents of the PCS claim that physical and phenomenal concepts have the same referent, and that they are ‘inferentially isolated’ from one

another: facts involving phenomenal concepts cannot be deduced from facts involving physical ones. This makes the PCS a version of 'type-B' physicalism [Chalmers 2010: 115].

On this view, pre-release Mary knows everything about human colour vision using *physical* concepts, but she cannot deduce any truths that feature phenomenal concepts (because of inferential isolation). When she first has an experience of colour, she learns a *phenomenal* concept for an experience she previously only knew under a physical concept. A similar analysis is given of the conceivability argument: because phenomenal concepts are not deducible from physical ones, no contradiction can be derived from thinking of a zombie world. Nonetheless, physical and phenomenal concepts have the same referent. Or so claims the proponents of the PCS (see Loar [1990/1997]; Papineau [2002]; Balog [2012]).

1.2 *The New Challenge*

Consider the following two claims:

- 1) Physical and phenomenal concepts are co-referential.
- 2) Phenomenal concepts do not characterise their referents in physical/functional terms, and phenomenal concepts are inferentially isolated from physical ones.

(1) and (2) cannot be denied by the proponent of the PCS, but they can be used to generate the new challenge. Though this challenge has been expressed slightly differently [Horgan and Tienson 2001; Goff 2011; Veillet 2015], the core idea is that phenomenal concepts *correctly* characterise our experiences: the concept 'the experience of pain' correctly characterises a painful experience. Further, the concept

is substantive: saying that an experience is painful *tells you something* about the experience. Now, the physicalist claims that the experience *is* a physical/functional entity so (claims the proponent of the new challenge) if the phenomenal concept characterises the experience correctly, then it should characterise it in physical/functional terms. However, phenomenal concepts do not do this. So, given that phenomenal concepts *correctly* characterise their referents, it must follow that the experience is *not* physical/functional. Therefore, we must reject (1) and the PCS collapses. This is the new challenge.

In response to the challenge, some claim that phenomenal concepts give us no substantive grasp at all on the nature of experiences [McLaughlin 2001: 324; Papineau 2002: 90-1]. This has generally been seen as implausible, as it implies that the concept 'the experience of pain' contains no content about its referent. Surely this is wrong, if nothing else it tells us that it is painful!

An alternative is to accept that phenomenal concepts give a substantive though *incomplete* grasp of their referents. The viability of this response turns on what 'incomplete' means. It will not help to claim that phenomenal concepts characterise the experience in terms of some of its properties or parts, whilst physical concepts characterise it in terms of other properties or parts, because this involves accepting that experiences have properties or parts that the phenomenal concepts latch onto, that are not described by our physical concepts. This is tantamount to accepting dualism [Goff 2011]. Obviously, invoking parts *of* properties does not help either.

Another way that a phenomenal concept might give an ‘incomplete’ grasp of an experience is if it correctly and substantively characterises the experience but in a way that does not reveal that the experience is physical. On this view, phenomenal concepts and physical ones both substantively and correctly characterise their referents in conceptually distinct *ways* but not in virtue of distinct properties or parts. This line has been taken by Diaz-Leon [2014] and Elpidorou [2016] though these thinkers primarily aim to show that there is no inconsistency in this approach. What has not been put forward is a worked out account of phenomenal and physical concepts which explains *how* they could do this. In any case, this paper is concerned with giving a new account so I set aside Elpidorou and Diaz-Leon in what follows.¹ I am concerned with the new challenge, so I will also set aside other attacks on the PCS, such as Chalmers’ [2010: 305-36] (see Balog [2012] for a response).

In section 2, I argue for a particular account of phenomenal and physical concepts. In section 3, I introduce the powerful qualities view and use it to develop a new version of the PCS that can answer the new challenge. I do not have space to thoroughly examine the arguments in favour of the powerful qualities view itself. Rather, the main conclusion of this paper is conditional: *if* the powerful qualities view is accepted, then the new challenge can be answered. I also contrast my view with Russellian monism, and show that it can explain inferential isolation. I then consider objections (section 4).

¹ Schroer [2010] takes steps in this direction, but his account primarily applies to phenomenal concepts of colour, so is of limited application. In my [2013] I suggested the powerful qualities view as an *example* of two different ways of grasping a property in response to Goff [2011], but I did not develop a version of the PCS (I suggested that such a view might be developed, but my discussion was far too brief to be convincing [2013: 1294-96]).

The powerful qualities view has been applied to issues in the philosophy of mind before, most notably by John Heil [2003]. However, Heil has very different concerns from myself, mainly using the view to shed light on colour and intentionality. Heil does briefly suggest that the view calls into doubt the possibility of zombies [2003: 247-49] but his argument is very different from my own. Heil's argument does not mention the PCS, or issues such as the new challenge or inferential isolation at all. Clearly, this is different from my intention, as these are the issues that this paper is centrally concerned with. Furthermore, Heil does not use the powerful qualities view to address the knowledge argument, whereas if my view succeeds, it will address both the conceivability and the knowledge argument. Finally, my own view does not have the weaknesses that have been pointed out with Heil's argument.²

2. Physical and Phenomenal Concepts.

2.1 Physical Concepts and Dispositional Concepts.

Consider what I call 'dispositional concepts'. Dispositional concepts have modes of presentation that characterise entities in terms of their *dispositional profile*. By 'mode of presentation' I mean the descriptive content associated with the concept, which any entity must fulfil in order to fall in the concept's extension. Modes of presentation are akin to Fregean senses (I borrow this characterisation of a mode of

² Specifically, Heil's argument is that (on the powerful qualities view) qualities and dispositions cannot vary independently of each other (see also Carruth [2016]). However, as I point out in Taylor [2016], this is only problematic for the conceivability argument if we assume that all dispositional properties *by definition* are physical, which is question begging and implausible. The view to be developed in this paper only relies on weaker (and more plausible) claims about how physical and phenomenal concepts characterize their referents.

presentation from Chalmers [2010: 362]). We must distinguish between what Block calls 'cognitive' and 'metaphysical' modes of presentation. The former are the representational or semantic features of *concepts* that determine reference, and explain the informativeness of true identity statements. A metaphysical mode of presentation is a property of the *referent* in virtue of which it is picked out by a concept [Block 2007: 446-8]. In this paper, I use 'mode of presentation' in the former, cognitive sense. That is, as I use the term, modes of presentation are features of *concepts*, not referents. Adopting modes of presentation does not beg any questions against anti-physicalists. Indeed, thinkers who press the new challenge usually assume that concepts have modes of presentation, or something like them.³

For a mode of presentation to characterise a property dispositionally is to characterise it in terms of its *manifestation*: what effects it makes objects disposed to bring about, and its *stimuli*: what 'trigger' conditions will bring about the manifestation [Molnar 2003: 195].⁴ One way to understand dispositional modes of presentation is that they pick out properties in terms of their *relations* to other entities, even though the properties that they pick out are *intrinsic* [Bird 2007].

The archetypal dispositional concepts are those that have modes of presentation that characterise entities in terms of the *causal powers* that the property endows objects with: their nomological profile. Fragility, for example, is picked out in terms of a causal power: it being 'for' a particular manifestation (smashing), given a particular condition (being hit with a hammer). To describe a property as fragile is

³ For example, when Goff [2011] says that concepts 'reveal the nature' of their referents, he is making a claim about what descriptive content is a priori accessible to the concept user.

⁴ Some reject the 'stimuli/manifestation' locution [Martin 2008] but nothing I say turns on this.

to characterise it in terms of its causal powers, which are paradigmatic dispositional characterisations.

Turn now to the concepts of consciousness science. I use 'physical concepts' and 'scientific concepts' interchangeably, and by both I mean the concepts that are employed by cognitive science to refer to the entities studied by that science. On the dominant view of psychological explanation, psychological faculties are defined *functionally*, in terms of what causal roles they fulfil in the cognitive system, and what effects they have in particular circumstances. Piccinini and Craver say: '[f]unctional properties are specified in terms of effect on some medium or component under certain conditions' [2011: 291]. In this quotation, they isolate two essential features of specifying a property functionally: the *effects* of a property on some system and the *conditions* under which it would bring about those effects. Specifying a property in this way is to specify it in terms of its dispositional profile: what causal effects or manifestation the property is for, and the stimuli conditions in which it brings about those effects. More generally, functional specifications of properties pick properties out in terms of their causal roles, which are canonically dispositional features of the property. As Cummins says '[f]unctional analysis of a capacity must eventually terminate in dispositions' [2000, p.126].

Dispositional characterizations of conscious experiences are explicitly seen in empirical theories of consciousness. According to global workspace theory, consciousness is information that is 'available' to consumer systems in the brain, such as verbal report, memory consolidation and action control [Dehaene 2014]. This

theory clearly characterises consciousness in terms of its dispositional features: its *availability* for consumption.⁵

It is not coincidental that the concepts of consciousness science work this way. Defining consciousness in causal/dispositional terms allows one to empirically test for consciousness by probing subjects' behavioural dispositions, and it is also part of how *explanation* in cognitive science proceeds: by defining something functionally, and then decomposing it into a variety of subsystems, which can then themselves be functionally explained [Piccinini and Craver 2011].

Many thinkers would go further than the claim that consciousness science uses concepts that characterise entities dispositionally, and make a global claim: that *all* of science characterises properties in dispositional terms. Chalmers says that 'a property such as mass is characterized by an associated dispositional role, such as the tendency to resist acceleration' [2010: 133]. The fact that Chalmers (the most prominent opponent of the PCS) accepts these claims demonstrates their plausibility, independently of defending the PCS.⁶ Importantly, this paper only requires the modest claim that *consciousness science* uses concepts that have dispositional modes of presentation, but the global claim about all of science is worth noting.

⁵ Sometimes the term 'broadcasting' is used, which can cause confusion because it is not *prima facie* a dispositional term. However, for something to be 'broadcast' still means that it is available in a certain way [Block 2008: 301-3], so it is still dispositional.

⁶ Many think that science characterizes entities in 'structural and dynamic' terms [Alter 2015]. This is consistent with my argument. For example, some take 'structure and dynamic' to mean *relational*, and (as mentioned above) to characterize an entity dispositionally involves characterizing it relationally, even though dispositions are intrinsic. Similar things can be said for the claim that science characterizes entities in extrinsic terms, or by Ramsey sentences that characterize properties by their nomological profiles.

2.2 Phenomenal Concepts

Recall that phenomenal concepts characterise experiences in terms of their phenomenal character. Plausibly, phenomenal concepts do not have dispositional modes of presentation. This claim can be supported by the fact that attempts to translate phenomenal truths into dispositional/functional terms, as in the analytic functionalist tradition [Lewis 1966] are notoriously implausible.⁷ Additionally, claims involving phenomenal concepts do not follow from dispositional/functional descriptions [Chalmers 1995]. This lends credence to the claim that phenomenal concepts do not have dispositional/functional modes of presentation.

We can make this more precise by saying that phenomenal concepts have what I call ‘purely qualitative’ modes of presentation. Here ‘qualitative’ should *not* be taken to mean that they possess qualia, but should be understood more in line with how ‘categorical’ is understood in metaphysics. Purely qualitative concepts pick out their referents in terms of their occurrent nature, without any relation to how the entity would behave given certain stimuli or what its functional/causal role is. Furthermore, a ‘purely qualitative’ concept is not a priori equivalent to any dispositional/functional/causal concept. Plausibly, phenomenal concepts are like this: describing something as a pain is to characterise it entirely in terms of its occurrent nature, not how it would behave with relation to stimuli or manifestations, or its functional profile. Indeed, much of Chalmers’ discussion of the hard problem derives its force from the claim that experiences seem to us to be qualitative, and that

⁷ At least, anyone attracted to either the PCS or to anti-physicalism will think that analytic functionalism is implausible.

consciousness science is limited to dispositional/functional descriptions of entities [1995]. So, accepting these claims begs no questions.

Phenomenal concepts are not only distinctive because of their modes of presentation, but also because of how they are formed. It is often said by advocates of the PCS that *having* an experience is crucial for the formation of a phenomenal concept for an experience of that type [e.g. Papineau 2007]. A similar idea is that a subject cannot apply or use a phenomenal concept unless they have had the relevant type of experience.⁸

Strictly speaking, an explanation of how phenomenal concepts are formed is inessential to the main argument of this paper. However, given what I have already said, we can see how such an explanation might go. Recall that the reason for consciousness science to characterise entities dispositionally is tied to its explanatory constraints: its need to give functional explanations to make entities scientifically tractable. The formation of phenomenal concepts, by contrast, proceeds on the basis of introspection. Of course, introspection is not subject to the explanatory goals that consciousness science is, and so need not employ dispositional characterisations of entities. Rather, when we introspect experiences we are currently having, we grasp them in a more immediate way, in terms of their occurrent, qualitative make-up. This claim about introspection has been noted before, Simon Blackburn says: ‘categoricity

⁸ For example, Balog claims that there are ‘basic’ and ‘non-basic’ applications of phenomenal concepts, and that basic applications of phenomenal concepts require the tokening of the relevant experience at the time the concept is applied. In turn, the application of non-basic phenomenal concepts requires the subject to already have applied a basic one, or at least to have previously had an experience of the relevant type. In Balog’s view, this is a contingent fact about how we acquire phenomenal concepts, and it is not a constitutive condition on phenomenal concept possession [2009: 265]. Other advocates of the PCS draw a similar distinction [Block 2007: 438; Papineau 2007: 127-28; Chalmers 2010: 270-71].

comes with the subjective view: there is nothing dispositional, to the subject, in the onset of pain or a flash in the visual field' [1990: 65].

This can be incorporated into our proposed view of phenomenal concepts. Phenomenal concepts are formed on the basis of introspection, which is why having an experience is required for formation of the concept. Furthermore, the fact that experiences appear to introspection in a qualitative manner explains why phenomenal concepts have a qualitative mode of presentation. Conversely, the constraints present in a scientific study of consciousness are what lead to scientific concepts having distinctively dispositional modes of presentation. As I mentioned, this explanation of how phenomenal and scientific concepts are *formed* is not required for my main argument, so readers unhappy with it can replace it with another. Nonetheless, I include it to demonstrate how the view can be plausibly fleshed out.

3. Powerful qualities

3.1 *The Ontology of Phenomenal Properties*

I now outline the 'powerful qualities' view of properties, and argue that *if* we adopt it, a new and powerful version of the PCS can be developed which answers the new challenge. The powerful qualities view was developed by C.B. Martin and John Heil. The central claim is that each property is *both qualitative and dispositional*. This is expressed as an identity claim:

If P is an intrinsic property of a concrete object, P is simultaneously dispositional and qualitative; P 's dispositionality and qualitativity are not

aspects or properties of P; P's dispositionality, P_d , is P's qualitativity, P_q , and each of these *is* P: $P_d=P_q=P$. [Heil 2003: 111].

Similarly, Martin says: 'the qualitative and dispositional are identical with one another and with the unitary intrinsic property itself' [2008, p.65]. It can be tempting to think of the powerful qualities view as the claim that properties have distinct dispositional and qualitative *parts*, or that properties themselves have distinct dispositional and qualitative properties (Armstrong interprets the view this way [1997: 250]). However, Martin and Heil are careful to reject these interpretations [Martin and Heil 1999: 46-47]. Indeed, they argue that such a view would be unparsimonious and unexplanatory ([Heil 2003: 118-120] see also Strawson [2008]). As is clear from the quotations above, they take the qualitative and the dispositional to be *identical* with one another (and with the property), they are not parts of a property or properties of a property.

I do not have the space to fully analyse all of the various arguments in favour of the view. This has been done extensively elsewhere [Martin 2008; Heil 2003, 2010, 2012; Martin and Heil 1999, Jacobs 2011 and Strawson 2008]. Rather, this paper is primarily concerned with the *applications* of the view are to the PCS. However, I will outline the central motivations for the view in order to give a flavour of it.

Advocates of the view reject the idea that qualitative and dispositional properties must be distinct kinds of property. They motivate this based on several considerations. First, they argue that properties cannot be 'purely' dispositional (and non-qualitative) because this implies all properties are in a sense reliant on others for their identity, in a way that leads to a vicious circle or regress, with the consequence

that properties do not have determinate identity [Heil 2003: 107-8]. Additionally, powerful qualities theorists argue that purely dispositional properties do not have sufficient being to for it to be plausible that all properties are purely dispositional [Martin 2008: 61-63].

They also attack the claim that properties are purely qualitative, on the grounds that a completely non-dispositional ontology ultimately leads to incoherence [Martin 2008: 66; Strawson 2008]. This is in addition to pressing epistemological arguments against pure qualities, arguing that such properties would be in principle unknowable [Heil 2003: 90-95]. Finally, they argue against the plausibility of the contingent laws of nature that are accepted by those who believe in purely qualitative properties [Heil 2012: 75-8]. They conclude that *all* properties must be *both* dispositional and qualitative.

By claiming that properties are dispositional, powerful qualities views also retain the theoretical force of dispositional ontologies in accounting for laws of nature [Heil 2003: 94], causation [Martin 2008: 46-52] and modality [Martin 2008: 53], whilst avoiding the objections to the pure dispositional view mentioned above. Thus, by claiming that properties are powerful qualities, the view retains the theoretical power of its rival positions, and avoids negative consequences.

Some philosophers simply reject the powerful qualities view without much argument [Armstrong 2005: 315] but without such an argument, this objection has limited force. Another source of resistance to the view stems from the intuition that qualitative properties are only *contingently* related to dispositional ones. Powerful qualities theorists acknowledge the power of this intuition (they themselves describe

the identity as ‘surprising’ [Martin and Heil 1999: 47]). However, note that the intuition that qualities and dispositions are contingently related plausibly stems from commitment to Humean modal principles of independence and recombination. However, even Humeans admit that these are only methodological principles, which can be given up if the best view of properties demands it [Armstrong 1997: 146-147]. Plausibly, the powerful qualities view is just such a case.

For the current paper, what is crucial is that the view is a widely respected position within the literature on properties, supported by metaphysical considerations independently of the philosophy of mind, so invoking it begs no questions against the anti-physicalist.

Advocates of the powerful qualities view are happy to accept that the dispositional and the qualitative are *conceptually* distinct. In this paper, I have given an explanation of what this distinction consists in, by giving an account of dispositional and qualitative concepts.⁹ The view can acknowledge this conceptual distinction whilst giving an ontologically robust account of the nature of properties that explains why that distinction is not mirrored by a metaphysical distinction of any kind.

It is crucial to stress that (on the powerful qualities view) qualitative and dispositional concepts are not in any way *misdescribing* properties: properties really are dispositional and really are qualitative. It is just that the features of properties in virtue of which they are dispositional are no different from the features of them in

⁹ Heil [2003: 117-120] and Martin [2008: 65] explain this conceptual distinctness in terms of the (somewhat mysterious) faculty of ‘partial consideration’. The explanation of the conceptual distinction given in this paper need not make use of this mysterious notion (though it is not in tension with it).

virtue of which they are qualitative. To say that the qualitative and the dispositional are not separate is not to say that they are not real.

This is important for the defender of the PCS. Recall that the adherent of the PCS has to explain how scientific and phenomenal concepts could both correctly and substantively characterise *the same experience*, without claiming that they do so by describing different properties or parts of the experience. If the advocate of the PCS adopts the powerful qualities view, she can solve this problem. On such a view, an experience has properties, which are powerful qualities. A scientific concept has a mode of presentation that characterises an experience's properties in a particular way (a dispositional way), whilst a phenomenal concept has a mode of presentation that characterises the very same properties of the experience in another way (a purely qualitative way).

Importantly, on this view both phenomenal and scientific concepts *substantively* and *correctly* characterise the experiences they refer to. Take scientific concepts: they have modes of presentation that characterise experiences in dispositional terms. This gives us a rich and substantial characterisation of the experience in terms of its dispositional/functional role. Experiences really are dispositional in these ways, because they have certain properties that are powerful qualities, and powerful qualities are dispositional. Now take phenomenal concepts, which have purely qualitative modes of presentation. Again, these concepts can give us a rich substantive characterisation of the experience (as painful, for example) and experiences really are qualitative in these ways, again because they have properties that are powerful qualities. So it is not as though either concept is somehow

misdescribing the experience. For this explanation to work, the advocate of the PCS needs to accept the powerful qualities view because this is what gives an ontological account of the nature of properties that explains how dispositional and purely qualitative concepts could both latch onto them.

This version of the PCS avoids many of the problems associated with other versions. As I noted in section 1.2, Papineau and McLaughlin were forced to deny the substantivity of phenomenal concepts, and so this view is an improvement. The view also avoids other pitfalls for the PCS in answering the new challenge. The physicalist cannot say that experiences have *distinct properties*, one a dispositional property and the other a qualitative property, and that scientific and phenomenal concepts each characterise these distinct properties of the experience. That would be tantamount to property dualism. On the proposed view, the dispositional/qualitative concepts each substantively characterise the *very same properties of the experience*. So, what we get is two concepts that can substantively characterise an entity in virtue of that entity's properties, without claiming that the two concepts must be latching on to different properties of the entity.

The advocate of the PCS can claim that scientific and phenomenal concepts are both characterising the experience, and she can accept the intuition that by characterising the experience, each concept is correctly characterising the properties of the experience. She can accept all of this whilst still claiming that the two concepts are latching onto the same properties of the experience. No need for separate properties, or parts of properties, or properties of properties. No need for any

metaphysical distinction of any kind between the referents of the two concepts. This is precisely what the advocate of the PCS was looking for.

To summarise: on the view proposed here, physical and phenomenal concepts substantively characterise experiences in virtue of dispositional and qualitative modes of presentation respectively. How these concepts could do this is explained ontologically, so long as we accept that phenomenal properties are powerful qualities. There is still the issue of how this view explains inferential isolation, which I will turn to below, but first it will be helpful to contrast my view with one that is superficially similar: Russellian monism.

3.2 Russellian Monism

Many versions of Russellian monism claim that science deals with dispositional characterisations of entities, and that phenomenal properties are categorical/qualitative properties [Stoljar 2001, Chalmers 2010, pp.133-137]. To this extent, the view is in agreement with mine. However, Russellian monists accept views of properties on which qualitative/categorical properties are *distinct* from dispositional ones and thus that phenomenal properties are distinct from the properties studied by science [Stoljar 2001]. This is clearly different from my position.

The view developed here thus has some similarities with Russellian monism, but utilizes a different view of properties. Now is not the time for a full and detailed comparison of the two views, but I will give some reasons to think that mine is preferable (at least for the physicalist). First, Russellian monism relies on the claim that science must remain profoundly ignorant of categorical/qualitative properties

[Stoljar 2001: 260]. It has been argued [Ney 2007] that this result is unacceptable for someone who embraces a physicalist epistemology, even before we come to questions about consciousness. So the physicalist has principled reasons for avoiding such views from the start. My view does not have this consequence. On my view, there are no properties that are 'cut off' to scientific investigation, even if science is limited to studying properties in a certain *way*, using a certain kind of concept (I will return to this issue in section 4.3). Second, some have argued that Russellian monism leads to epiphenomenalism [Howell 2015]. My view plainly does not have this consequence, as it identifies phenomenal properties with dispositional/causal properties.

3.3 Inferential Isolation

I have outlined how the powerful qualities view can accommodate the fact that phenomenal and scientific concepts are co-referential, correct and substantive. There is another important strand to the PCS, which is that phenomenal concepts are inferentially isolated from scientific ones. I now turn to this.

As I said, to characterize a property dispositionally is to characterize it in terms of what role it plays: its manifestations and stimuli. Is it possible to infer from such a dispositional characterization of properties some truth involving phenomenal concepts? To shed light on this question, we can return to the Lewisian analytic functionalist view, because it is instructive to see where it goes wrong. On Lewis' view, we start with a phenomenal concept, and use conceptual analysis to translate that concept into a set of causal/functional conditions, such that anything that fulfils those conditions counts as a referent of the phenomenal concept. This translation is

the first step in the Lewisian functionalization model [Lewis 1966]. Now, *if* it were possible to carry out such an analysis on phenomenal concepts, then it would be easy to see how dispositional/causal characterisations of properties could imply phenomenal truths. If we had a characterisation of some property from science, which characterised it in terms of what role it filled *and* we knew (from the kind of conceptual analysis just outlined) that fulfilling that role was sufficient for the property to count as fulfilling the phenomenal concept, then we would have a conceptual implication from the dispositional truths to phenomenal truths. This would be an example of the Lewisian framework working.

However, because phenomenal concepts are purely qualitative, we cannot give a set of dispositional/causal conditions such that anything fulfilling those conditions counts as a referent of that concept. For this reason, the first link in the Lewisian chain is broken: the lower level scientific truths that characterise entities in terms of what roles they fill cannot imply the phenomenal truth because we cannot specify phenomenal concepts in terms of what causal/dispositional roles a property must fill in order for that concept to be satisfied. This is why dispositional truths fail to imply phenomenal ones.

To put all of this in simpler terms: the information about phenomenal properties that we get from consciousness science is restricted to what causal/functional roles such properties fill. Such truths *could* imply that a certain phenomenal concept is satisfied but only if the conditions for the phenomenal concept to be satisfied could be stated in terms of the fulfilment of a certain dispositional/functional role. However, we cannot give such a set of

dispositional/function conditions for phenomenal concepts to be specified because they are purely qualitative. As a result, the deduction fails and we have inferential isolation.

4. Objections and Replies

4.1 Controversy

Objection: the version of the PCS proposed here relies heavily on a controversial view of properties. Would the physicalist be comfortable resting their view on this?¹⁰

Reply: this is an important question. Here I give four reasons to think that my use of the powerful qualities view is reasonable in defending the PCS. First, even readers unhappy with the powerful qualities view can accept the conditional conclusion of the paper: *if* one accepts the powerful qualities view, then one can solve the new challenge to physicalism. This is clearly an important and substantial claim, demonstrating as it does a link between a prominent theory of properties, and the foremost challenge facing physicalism today. The conditional conclusion also demonstrates the importance of ontology for debates in the philosophy of mind generally.

Second, this objection would be sound if the powerful qualities view were independently dubious, or if it were postulated *ad hoc* to save the PCS. But on the contrary, it is a widely respected and prominent view in the literature on properties, with much to recommend it independently of the philosophy of mind.

Third, an essential part of assessing whether we should accept a metaphysical view is to examine the problem solving potential that it has. If the powerful qualities

¹⁰ Thanks to an anonymous referee for raising this.

view can be used to provide the most plausible overall solution to the mind-body problem, then this will be a strong (perhaps decisive) reason to accept it. For this reason, this paper does not just *rely* on the powerful qualities view, but it actually provides a good reason to accept it by demonstrating some of its applications in the philosophy of mind. In this way, this paper itself contributes support for the view.

Fourth, controversial commitments are completely unavoidable when we are discussing the metaphysics of consciousness. As I mentioned above, Russellian monism (one of the main rivals to the PCS) relies on claims about the nature of properties that are *at least* as controversial as the powerful qualities view. Indeed, note that versions of the PCS other than the one developed here will also take on controversial commitments. For example, consider the constitution versions of the PCS, on which phenomenal concepts are themselves partially constituted by the experiences or phenomenal properties that they refer to [McLaughlin 2001: 324; Papineau 2002: 116-18; Chalmers 2010: 265-67]. As I noted above (footnote 8), advocates of the constitution view typically claim that there can be ‘basic’ and ‘non-basic’ applications of phenomenal concepts, of which only the former involve the tokening of phenomenal experiences [Balog 2009: 294-96]. In this way, constitution accounts can avoid the implausible consequence that we have to token an experience whenever we use a phenomenal concept to think about an experience. Nonetheless, the view still claims that the *basic* applications of phenomenal concepts are partially constituted by experiences, which is itself a heavy and controversial commitment.

After all, it does not seem like most of our concepts are constituted by their referents (see Balog [2009: 306]).¹¹

I am not claiming that constitution views should be rejected because of their controversial commitments. I am simply pointing out that all versions of the PCS (and, indeed, all views on the mind-body problem) will carry controversial commitments, and so the fact that my view is committed to a thesis such as the powerful qualities view should not be taken as reason to dismiss it.

More generally, the whole debate over physicalism itself relies on adopting some account of what physicalism even is, which will involve making commitments to controversial claims about supervenience [Jackson 1998], grounding [Dasgupta 2014], or a similar metaphysical notion. This is unsurprising. After all, the debate in question is fundamentally a metaphysical one over the nature of consciousness and its metaphysical relationship to the rest of reality, so we should expect any position in this sphere to come along with deep metaphysical commitments. Given that these are unavoidable, it is better that they be acknowledged openly and explicitly.

4.2 Purely Qualitative Concepts

Objection: On this view, phenomenal properties are powerful qualities. Powerful qualities are not 'purely qualitative' properties, because (as well as being qualitative) they are dispositional. So when we describe phenomenal properties using purely qualitative concepts (like phenomenal concepts) are we not misdescribing them?

¹¹ A thorough discussion of constitution views, and their relation to my own view, is clearly beyond the scope of this paper. However, I will briefly note that my view has the advantage of answering the new challenge. See Trogon [2016] for a critical discussion of constitution views.

Reply: there are two interpretations of what it means for a concept to characterise its referent in a 'purely qualitative' manner:

- i) The concept has a mode of presentation that characterises it in a qualitative manner, it does not pick its referent out dispositionally.
- ii) The concept's mode of presentation characterises its referent as not dispositional: it is a necessary condition on fulfilling the concept that its referent is not dispositional.

(i) is perfectly compatible with the claim that the concept refers to a property that is in fact dispositional, it is just that the mode of presentation that the concept has does not characterise its referent dispositionally. It is in the sense of (i) that I claim phenomenal concepts are purely qualitative. Conversely, no concept that characterises its referent in the manner of (ii) could correctly characterise a property that is dispositional, so no such concept could refer to a powerful quality. However, I do not claim that phenomenal concepts characterise their referents in the manner of (ii), and there is no reason to think they do.

4.3 Complete Characterisations

Objection: if we accept the powerful qualities view, does this not imply that scientific concepts fail to give a complete characterisation of properties? Is this not in tension with physicalism?¹²

Reply: once we are clear what we mean by 'complete', this worry disappears. Recall that on the powerful qualities view, the qualitativity and the dispositionality of a property are *identical*, and each is identical with the property itself. So, when we

¹² Thanks to an anonymous referee for suggesting this objection.

think of a property under a dispositional mode of presentation, we are thinking of *the entire property* in a certain way. So the description is not ‘incomplete’ in the sense that it is failing to describe some part of the property. Rather, by using dispositional concepts, consciousness science describes the entire property, just in a dispositional manner.

Of course, the view proposed implies that consciousness science is limited in the sense that it is describing experiences in a particular *way*, using a particular kind of concept, when properties could be described using another kind of concept. However, this consequence is carried by all versions of the PCS. It certainly does not endanger the view’s status as physicalist, any more than any view that postulates a merely conceptual distinction between the physical and the phenomenal.

Furthermore, for my argument to work we only need to accept that the concepts of *consciousness science* have dispositional modes of presentation. It is perfectly consistent with this to claim that other sciences, such as physics, chemistry, and biology can make use of qualitative *and* dispositional concepts and thus that they can describe properties in both ways.

4.4 Explosion of Identities?

Objection (put to me by Philip Goff): if we are to accept the powerful qualities view, then what is to stop us from identifying anything we like with anything else we like, and simply claiming a conceptual distinction between them? Goff’s favourite example is the claim that tree bark is identical with ‘the spirit of the forest’.

Reply: the bark/spirit position is implausible for reasons that do not affect the powerful qualities view. The powerful qualities view is motivated by a host of

independent metaphysical considerations, whilst the bark/spirit view is unmotivated and we have good reason to think that the spirit of the forest does not exist, and so cannot be identical to anything.

5. Conclusion

If we adopt the powerful qualities view, then we can answer the new challenge. This conclusion has far-reaching implications: first, it demonstrates the problem-solving power of the powerful qualities view, which is crucial in assessing the view itself. Second, given this conclusion, physicalists will doubtless be interested in adopting the view and integrating it into their ontology.

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