

Powerful Qualities, Zombies and Inconceivability

Abstract

One powerful argument for dualism is provided by David Chalmers: the ‘zombie’ or conceivability argument. This paper aims to establish that if one adopts the ‘Powerful Qualities’ account of properties set forth by Martin and Heil, this argument can be resisted at the first premise: the claim that zombies are conceivable is, by the lights of Chalmers’ own account of conceivability, straightforwardly false.

The Powerful Qualities account of properties is briefly outlined. Chalmers’ argument is set out, and several distinctions which underlie it explained. It is argued that to make sense of the claim that zombies are conceivable, some account of properties must be given. The paper’s central claim is presented and defended from potential responses: given the Powerful Qualities view, zombies are in fact inconceivable. Finally, an error theory is presented, motivated by this view, which offers an explanation of why so many have taken the conceivability of zombies to be unproblematic, and the view is briefly contrasted with Russellian Monism.

I. Introduction

In debates concerning the ontology of mind and body—concerning whether or not there is some ontological divide between the mental and the physical—it has long been claimed that, at the very least, one can *conceive* of such a divide. More

recently, David Chalmers has constructed a sophisticated argument which relies on this conceivability claim: the 'zombie' or conceivability argument. Roughly speaking, 'zombies' are creatures physically identical to human beings, but which lack certain aspects of the internal mental life that humans have. The argument proceeds by claiming first that zombies are conceivable; second, that on these grounds they are possible, and finally, that their possibility is incompatible with a monistic ontology of mind and body, such as physicalism.

This paper aims to establish that, given a certain account of the ontology of properties (namely, the 'Powerful Qualities' account set forth by Charlie Martin and John Heil), the conceivability argument can be resisted at the first premise: the claim that zombies are conceivable is, by the lights of Chalmers' own account of conceivability, straightforwardly false. It will not be the business of this paper to argue in favour of the Powerful Qualities view, but rather to examine what consequences follow for the conceivability argument *if* the view is accepted.

The result established is significant in several respects. First, it may serve to make the Powerful Qualities view more attractive to those who support monistic ontologies, but are worried by the conceivability argument. Second, it ought to give pause to anyone who accepts both the Powerful Qualities account of properties and *also* the conceivability argument, who may have to give up one of these two positions in light of the arguments below. Third, it serves as a case study in support of a more general claim: that in order to proceed with debates in the philosophy of mind in a careful fashion, it is essential to get one's ontology straight first.

Section two outlines the Powerful Qualities account of properties, highlighting those features which are most pertinent to the current discussion.

Section three elaborates on several distinctions which underlie the conceivability argument, and then sets out what I hope is an accurate and charitable reconstruction of Chalmers' conceivability argument. Section four argues that in order to make sense of the claim that zombies are conceivable, some explicit account of the ontology of properties must be given. Section five provides the argument for the central claim of this paper: that, contrary to what many have supposed, the claim that zombies are conceivable is false (at least given the Powerful Qualities account of properties). Section six examines some potential counter-responses to my argument, and also outlines an error theory, motivated by the Powerful Qualities view, which offers an explanation of why so many have taken the conceivability of zombies to be unproblematic. Section seven briefly contrasts the view with Russellian Monism.

Alongside the extensive work that both Martin and Heil have published on the Powerful Qualities view, positions similar to it have become of increasing interest in recent years. For instance, such views have recently been defended by Jon Jacobs (2011); Kristina Engelhard (2010) and Galen Strawson (2008). Whilst Mumford and Anjum (2011) do not sign up wholly to the Powerful Qualities view, they have adopted certain aspects of Martin's account. More generally, ontologies which take a realist view of causal powers, which is a key component of the Powerful Qualities view, are now commonplace (see, for instance, Bird 2007; Shoemaker 2007; Molnar 2003). It is important, therefore, to explore how these developments in metaphysics bear on debates in related areas such as the philosophy of mind. This paper is one such exploration.

II. Powerful Qualities

One of the key debates in the metaphysics of properties concerns whether properties are, fundamentally speaking, dispositional or categorical/qualitative/occurrent. Some philosophers argue that all real properties are causal powers or dispositions (e.g. Shoemaker 2007); or that all fundamental properties are dispositional—if there are any non-dispositional properties, they depend in some sense on the dispositional properties. Others, such as David Armstrong (e.g. 1997) have argued that all real properties are best characterised non-dispositionally (various terms have been used to denote non-dispositionality, examples include 'categorical', 'occurrent' and 'qualitative'); or that all fundamental properties are of this sort—if there are any dispositional properties, they depend in some sense on categorical/qualitative/occurrent properties. There are also those who take a mixed view, holding that some real, fundamental properties are dispositional and other real, fundamental properties are categorical/qualitative/occurrent (e.g. Molnar 2003).

These three approaches are not, however, exhaustive. A fourth position—the 'Powerful Qualities' view, originally formulated by Martin, and developed by Heil—agrees in some sense with each of the above positions, whilst also disagreeing with each of them (see Martin 2008; Heil 2003; and Martin & Heil 1998 and 1999). It is in agreement with the first view outlined above that there are no real, fundamental properties that fail to bestow upon their bearers certain dispositional features. And it agrees with the second view that there are no real, fundamental properties that fail to bestow upon their bearers certain non-dispositional features. There is a sense, therefore, in which it agrees with the mixed view. However, contrary to the mixed view, the Powerful Qualities account

of properties holds that all real properties are *both* dispositional *and* (the preferred term of its proponents, and that which I shall use in this paper henceforth) qualitative. Thus, it is not that there are two (exclusive) classes of properties, the dispositional and the qualitative, which are co-fundamental, and exist alongside one another, as the mixed view holds. Nor, indeed, does the fundamentality of the dispositional properties threaten that of the qualitative properties (as the first view outlined above holds), nor vice versa (as the second view holds). Rather, according to the Powerful Qualities view, all real properties are best characterised as dispositional-cum-qualitative and qualitative-cum-dispositional, with no priority afforded to either dispositionality or qualitativity.

In Martin's later work (e.g. 2008), and the work of Heil (e.g. 2003), the notion that all real properties are both dispositional and qualitative is expressed in terms of a *surprising identity*: whilst, *prima facie*, it might appear that 'dispositional' and 'qualitative' pick out heterogeneous property types, in fact the dispositional is identical with the qualitative. Every real property is unitary and simple, and makes both a contribution to the dispositional nature of the object that bears it (that is, informs how that object will behave in various circumstances) and makes a contribution to the qualitative nature of the object that bears it: “[t]hese cannot be prised apart into the purely qualitative and the purely dispositional” (Martin 1997: 216).

Some critics have found such a characterisation of properties hard to conceive (see Armstrong 2005: 315 or Lowe 2006: 134), and certainly much could be said about how this surprising identity claim ought to be understood. However, this paper is not the place for such an exploration. Rather, the claim will be taken

at face value in order to examine what consequences follow for the conceivability argument *if* the position as stated is accepted.

If this surprising identity claim is to be taken seriously, then some tempting misinterpretations of the position must be avoided. Chief amongst these would be interpreting the Powerful Qualities view as taking all real properties to be somehow composed of two distinct parts, one dispositional and the other qualitative. Nor should the view be taken as asserting that there is some sense in which, whilst all real properties are both dispositional and qualitative, there is some sense in which properties are *really* or *more fundamentally* one or the other. There is no priority in either direction: according to the Powerful Qualities view, the dispositional and the qualitative are co-eval and co-fundamental, because they are (surprising as this may be) one and the same thing—namely, the unitary, simple property itself.

There is not space in this paper to argue in favour of the Powerful Qualities account of properties. The interested reader can find arguments in favour of the Powerful Qualities view in Martin (2008) and Heil (2003; 2012). Two points ought to be noted about the nature of the arguments that are put in favour of the view. First, these arguments are *a priori*. Second, such arguments only invoke premises which are independent of the issues in the philosophy of mind which are the focus of this paper, and so consequences which follow from the position should not be seen as begging any questions within the mind-body debate.

Two further nuances of the Powerful Qualities account ought to be highlighted at this juncture, both concerning how that account conceives of dispositionality. First, on this view, the operation of dispositions is said to be

reciprocal and mutual (see Martin 2008: Chapter 5). That is to say, when some manifestation occurs it is never the work of a single disposition (perhaps having been set off by some 'trigger' event). Rather, every manifestation is brought about by the mutual and reciprocal action of (at the very least) two dispositions. Second, dispositions, according to the Powerful Qualities account, are, in the current technical jargon, massively multi-track. That is to say, each disposition disposes its bearer towards a huge variety of different manifestations with different reciprocal disposition partners. Thus, the very same disposition D_0 , when coupled with each of its possible "reciprocal disposition partners for mutual manifestations" (*ibid.*: 56) of the set $\{D_1...D_n\}$ will be directed towards a set of different manifestations $\{M_1...M_n\}$. On the Powerful Qualities account, therefore, there is no sense in which one can talk of *the* (unique) manifestation which a particular disposition is disposed towards, or indeed, *the* (unique) disposition from which a particular manifestation springs.

III. *The Conceivability Argument*

The central premise of the conceivability argument may well find its origin in, and be most immediately recognisable from Descartes' claim that the mind and body can be conceived of as existing apart from one another (2008, Sixth Meditation). If they can be so conceived, then it is possible they could actually exist apart from one another, as for Descartes, whatever man can conceive, God can actualise (*ibid.*: 51). Any two things that can possibly exist apart cannot be identical, and so mind and body must be distinct. If the mind and body are distinct, then dualism is true. If dualism is true, then physicalism (and indeed any form of monism) is false. Chalmers has more recently developed and defended an argument that bears at

the very least a family resemblance to the Cartesian argument outlined above (for instance, 2010: Chapter 6).

Chalmers' conceivability argument is focussed on one aspect of mental phenomena: conscious or phenomenal experience. This sort of experience is *that which it is like* to undergo a particular mental process or to be in a particular mental state. Examples include:

[...]the felt quality of redness, the experience of dark and light, the quality of depth in a visual field[...] the sound of a clarinet, the smell of mothballs[...] bodily sensations from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion[...] the experience of a stream of conscious thought. (*ibid.*: 5)

In motivating his argument, Chalmers asks us to consider creatures, known as zombies, who are physically identical to us but who lack all such experience (1996: 94). Zombies, as far as appearances go, are exactly like us. However, for all the similarity of their bodily movements and vocalisations to ours, when a zombie peers out into the gradually darkening red-hued sunset; inhales the musty smell of her closet whilst strains of the next door neighbours' daughter's clarinet practice come screeching through the wall; when she cries out wildly due to the touch of a red hot poker, or that of her lover (and so on...), there is *nothing* that it is like to be her: none of this is accompanied by conscious experience.

The zombie is able to react and respond to stimuli; to manipulate her environment; to regulate herself, just as we would in each of these situations—but there is simply nothing it is like to do so. If zombies seems too far-fetched, Chalmers need not rely on full zombies for his version of the conceivability argument, but partial ones, who lack some particular phenomenal experiences

(2003: section 3.2), or what he calls inverts: creatures who do not lack any particular experiences, but rather experience differently than we do, perhaps they experience red when we experience green, and vice versa (*ibid.*). It is worth reiterating at this juncture that all these creatures (zombies, part-zombies and inverts) must be *exact physical duplicates* of subjects of conscious experience such as us. A red-green colour-blind person, for instance, is not an example of an invert, as a relevant physical difference (in the cones present in the eye) underlies and explains the difference in their visual experiences. Zombies may well inhabit zombie worlds; worlds that are complete physical duplicates of our own, but without any conscious experience. In such a world, for example, my zombie twin is currently sat typing about zombies, just as I am here (1996: 94–5), but there is nothing it is like for my zombie twin to do so.

The first premise of Chalmers' conceivability argument is that zombies, part-zombies or inverts are conceivable.

III.1 Some Preliminary Distinctions

The conceivability argument involves a distinction between *physicality* and *experience*. When Chalmers discusses the physical, he means by this the fundamental entities and laws which figure in a complete account of microphysics (2010: 142), something he sees as inevitably "com[ing] down to two things: the structure and dynamics of physical processes" (1996: 118). So the claim that zombies (or part-zombies, or inverts) are conceivable is the claim that creatures identical to ourselves in terms of their microphysical composition, structure, dynamics and the microphysical laws which govern them, but which lack

experience entirely (or partially, or differ in the nature of their experience) are conceivable.

Ideal, *prima facie* and *secunda facie* conceivability also need to be distinguished. Briefly, something is *prima facie* conceivable when, on first glance, it appears to be conceivable (to avoid circularity here, some criteria will need to be given for conceivability, more of which momentarily) (2010: 143–4). Something is *secunda facie* conceivable when it is *prima facie* conceivable *and* remains conceivable after some sustained rational scrutiny to ensure that it really does meet whatever criteria is being applied for conceivability (*ibid.*). Something is ideally conceivable when it remains conceivable given ideal rational reflection. Some might find the notion of ideal rational reflection inherently problematic. It is less than clear to me, for instance, what it would take for some act of rational reflection to be such. However, nothing I say in what follows will turn on this, so for the purposes of this paper I am happy to grant Chalmers the notion. He discusses some such problems, and tentatively indicates what an account of ideal conceivability might look like in (2002: 148). Chalmers claims that if something is *secunda facie* conceivable for us, then this is an excellent indication that it is ideally conceivable (*ibid.*: 197). For a full account of this distinction, and those that follow, see Chalmers (2002).

Chalmers also distinguishes between *positive* and *negative* conceivability. Something is negatively conceivable when it is not ruled out *a priori*, that is, when it does not entail a contradiction (*ibid.*: 149). Contrastingly:

Positive notions of conceivability require that one can form some sort of positive conception of a situation in which S is the case. One can place the varieties of positive conceivability under the broad rubric of *imagination*:

to positively conceive of a situation is to in some sense imagine a specific configuration of objects and properties. (*ibid.*: 150)

It is unclear exactly how much philosophical weight positive conceivability can bear. However, the version of the conceivability argument examined in this paper invokes negative conceivability, so the difficult task of unravelling just what positive conceivability is, and what its philosophical consequences are, need not concern us here.

The notion of negative conceivability provides a criterion by which to judge *prima facie*, *secunda facie* and ideal conceivability. Something is *prima facie* negatively conceivable if it does not entail a contradiction on first glance, *secunda facie* negatively conceivable if it does not do so following sustained rational scrutiny and ideally negatively conceivable if ideal rational reflection could not uncover a contradiction in what is being conceived.

Chalmers defends the second premise of his conceivability argument (that conceivability leads to possibility) through an appeal to a further distinction: that between *primary* and *secondary* conceivability. However, as I do not challenge his argument by attacking the second premise, I shall not discuss it here: for Chalmers' account see (1996: Chapter 2), or, for a full discussion of both the foundations and applications of this distinction see Garcia-Carpintero, M. & J. Macia eds (2006).

Various combinations of *prima facie/secunda facie/ideal*; positive/negative and primary/secondary conceivability allow for twelve different formulations of conceivability. Most of these receive some treatment in Chalmers (1996). The discussion in this paper is not sensitive to the primary/secondary distinction, and will not be concerned with the (somewhat nebulous) notion of

positive conceivability. Intellectual honesty and philosophical prudence dictates that whilst we must begin pre-theoretically with *prima facie* conceivability, we ought always to pass over it in favour of *secunda facie* conceivability: if we want to put any weight on what at first glance appears conceivable, it is incumbent on us to subject this appearance to sustained rational scrutiny. This leaves on the table *secunda facie* negative conceivability and ideal negative conceivability. The former is considered by Chalmers to be a very good guide to the latter, and the version of Chalmers' argument critiqued here relies on the latter.

III.2 Chalmers' Conceivability Argument

The version of Chalmers' argument presented below is reconstructed from several different iterations presented in Chapter 6 of (2010). I omit those parts of the argument not pertinent to the discussion at hand, and where he has used some symbolic shorthand, I have written out the argument fully. Despite these changes in presentation, and certain omissions, I hope I have presented Chalmers' argument accurately and charitably. The argument runs as follows:

(P1) It is ideally negatively conceivable that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there;

(P2) If it is ideally negatively conceivable that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there, then it is possible that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there;

(P3) If it is possible that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there, then physicalism is false;

(C1) Physicalism is false.

Premise one claims that a conceiver possessed of all relevant information and engaged in ideal rational reflection on the subject could derive no contradiction from, or could not rule out *a priori*, the notion of a world which is an exact physical duplicate of our world at which nothing undergoes conscious experience (a zombie world); or one at which some of the physical duplicates of our-worldly subjects-of-experience undergo less conscious experience than their our-worldly counterparts (a partial zombie world), or one at which some of these duplicate entities undergo different conscious experiences (an invert world). Premise two affirms the link between ideal negative conceivability and possibility. Premise three claims that such a possibility is incompatible with a physicalist account of the ontology of mind and body. The conclusion ought to be clear.

IV. *Duplication and Properties*

Chalmers' first premise, the claim that a zombie world is ideally negatively conceivable, is the target of the response developed below. To appreciate the force of this response, we need to take a closer look at (P1), and consider exactly what it is that we are being asked to accept as conceivable. That (P1) is open to examination is a point often (although not always, see, for instance, Worley (2003) or Van Gulick (1999)) missed. In his discussion of the argument, Tim Crane states 'Premise (1) is also fairly uncontroversial [...] all [it] requires is that one can conceive of a physical replica of any phenomenally conscious creature which lacks

[such consciousness]. This is clearly conceivable.' (2001: 100). Before assenting to Crane's assessment, we should be clear on both what it means for some world to be an exact physical duplicate of our own, and what it would take for such a world to differ in terms of the conscious experiences that occur there. Only then will the conceivability of zombies acquire the 'clarity' attributed to it by Crane.

IV.1 What is physical duplication?

This question is ontological in nature: it concerns what sorts of entities (in the broadest sense) there are in both our own world and the putative zombie world.

What it would take for some world to be a physical duplicate of this world then includes, but may not be limited to:

1. it containing duplicates of all the physical objects found in this world;
2. these objects being arranged in the same manner;
3. these objects having the same physical histories (past arrangements);
4. these objects being subject to the same physical laws.

Condition 1 requires some further specification. Duplication, conceptually speaking, involves similarity; perfect duplication, exact similarity. Properties are what characterise objects, and as such, they provide the dimensions along which objects can be similar or dissimilar. For an object O_1 to be a duplicate of another object O_2 (physical or otherwise) it would need (at least) to instantiate exactly similar properties in an exactly similar pattern, both synchronically and diachronically; it would seem perverse to insist that O_1 is a physical duplicate of O_2 if these two instantiate dissimilar physical properties. For two things to fail to be

mental duplicates would be for there to be a dissimilarity in the mental properties they instantiate or the pattern (both synchronic and diachronic) in which they are instantiated. It seems then, that regardless of the general account of ontology the proponent of the conceivability argument puts forward, they are going to have to provide *some* account of properties (whether their fundamental entities are objects, facts, states of affairs or whatever...) in order for the notion of duplication to play the required role in the argument.

Of course, had one the relevant technical expertise, one could *duplicate* something without settling on an account of properties (just as one could perform sums without a rich conception of numbers). But without such an account, one cannot (in the relevant sense) conceive of duplication *per se*, and so, *a fortiori*, not of physical duplication without a duplication of conscious experience—and the conceivability argument requires that one cannot uncover a contradiction *a priori* in this (just as, without some more developed account of number, one could not reliably decide whether it is conceivable or not that the sum of two evens be odd). Without a positive conception of the relevant notions one cannot, with confidence, endorse the claim that no such contradiction can be found: the demands of sustained rational scrutiny which amount to *secunda facie* conceivability require that an account be given. As will be seen below, it is the account of properties outlined in section two that will be operative in the response to the conceivability argument, and if the above is correct, any proponent of this argument will have to have some such account.

IV.2 *The physical/conscious distinction*

For something to be a physical duplicate is for it to instantiate exactly similar physical properties; for Chalmers this means for it to instantiate exactly similar structural and dynamic properties at the microphysical level. Structural and dynamic properties, at first glance, seem like ideal candidates for characterisation in purely dispositional terms. These are to be contrasted, remember, with conscious experiences; things which Chalmers regularly characterises with the term 'quality'. Conscious experiences of the sort relevant to the current discussion, at first glance, seem like ideal candidates for characterisation in purely qualitative terms. If this is correct, then (P1) asserts the conceivability of a world which is an exact dispositional duplicate of our world, but which differs with regard to its qualitative nature; that is, that the preceding notion cannot be ruled out *a priori*, that it does not entail any contradiction.

There are other ways that this distinction can be drawn, but for the purposes of this paper we shall accept the manner set out above. As this is Chalmers' own way of drawing the distinction (other prominent proponents of arguments in favour of dualism also draw the distinction in this way, e.g. Jackson 1982; and both Blackburn 1990 and Hawthorne 2001 have argued that what physical science does is track dispositionality), it seems justified to adopt it here.

V. *Responding to the Conceivability Argument*

There are a number of ways one might respond to Chalmers' argument. The argument appears to be valid, so any response will question the soundness of the argument. (P3) ought to be relatively uncontroversial. Thus, responses to the

argument will target the viability of the conceivability claim, (P1), and/or the link between conceivability and possibility, (P2).

One fairly common response (e.g. Hill and McLaughlin 1999) is to deny the truth of (P2), that is, to deny that ideal negative conceivability entails possibility. If conceivability does not entail possibility, that is, if some things which are not ruled out *a priori* by acts of ideal rational reflection are nonetheless impossible, then Chalmers' argument does not go through. Chalmers discusses a number of ways this attack might be elaborated in (2002), and provides a response in (2010: section 3.6). The debate surrounding this question is complex, and Chalmers' response is subtle and nuanced. For the sake of this paper, I am willing to grant the truth of (P2), that is, to accept the link between ideal negative conceivability and possibility.

Another possible response is to question whether there is any good reason to accept (P1)—to accept the claim that zombie world are ideally negatively conceivable. This amounts to denying Chalmers' claim that *secunda facie* negative conceivability is an excellent guide to ideal negative conceivability (2002: 197). For the purposes of what follows, however, I am willing to grant the link between *secunda facie* and ideal negative conceivability. The response given below is stronger than that just outlined, as it claims not that we lack a reason to assert (P1), but that we have a reason to *deny* it.

V.1 (P1) is false

That Chalmers' notions of physical phenomena and conscious experiences seem apt to be characterised in purely dispositional and purely qualitative terms, respectively, gives us reason to doubt (according to the account of properties put

forward in this paper) that what they pick out are *properties*. A proponent of the Powerful Qualities account of properties does not need to hold that these descriptions are erroneous. Rather, any inference from the aptness of such descriptions to the claim that there are therefore pure dispositions or pure qualities is erroneous. Objects can be described in purely dispositional terms, just regarding how they will behave in a variety of situations; and likewise they can be characterised in purely qualitative terms, regardless of their potential behaviours. But neither of these characterisations is exhaustive, for the properties which, in complex combinations, are the truthmakers for these purely dispositional or purely qualitative descriptions are themselves purely *neither*, and impurely both. For a proponent of the Powerful Qualities account, dispositions and qualities are identical.

If duplication is a matter of the instantiation of exactly similar properties, and if the notions of the physical and the consciously experiential in play in Chalmers' argument do not pick out properties, then the question surrounding the conceivability of a physical-but-not-consciously-experiencing-duplicate is less clear cut than it might at first have appeared to be, for we cannot straightforwardly identify some set of purely physical (purely dispositional) properties which are instantiated by both objects in the duplication-pair, and some set of purely consciously experiential (purely qualitative) properties which are instantiated by only one of the objects in the duplication-pair.

The proponent of the conceivability argument, in asserting (P1), holds that no contradiction can be derived from the claim that a world alike in all its dispositional features to our own (a physical duplicate of our world) could differ in at least some of its qualitative features (*not* a duplicate of our world in terms of the conscious experiences that occur there). But according to the Powerful

Qualities account of properties, dispositional and qualitative features are bestowed in virtue of properties in complex combinations, each of which makes specific contributions to both the overall dispositionality and overall qualitativity of the objects that instantiate them. The notion of an exact physical duplicate which is not a duplicate in terms of conscious experience fails to respect the identity claim central to this account. All real property instances make some particular dispositional contribution, D, to the object O_1 that instantiates them if and only if they also make some particular qualitative contribution, Q. But (P1) asserts that it is conceivable that some object O_2 instantiates at least one property that makes an exactly similar dispositional contribution as it does to O_1 , but not an exactly similar qualitative one, that is, that it is conceivable that some property could make dispositional contribution D without making qualitative contribution Q. This straightforwardly contradicts the bi-conditional assertion made by the Powerful Qualities account.

Given the Powerful Qualities account of properties and the account of duplication argued for in section four, a contradiction can be derived *a priori* from the notion of zombies (etc.). This contradiction, whilst not necessarily immediately apparent, can be uncovered after some sustained rational scrutiny. That is to say, zombies (etc.) are not *secunda facie* negatively conceivable, and so, *a fortiori*, not ideally negatively conceivable. Thus, (P1) is false.

Whilst it has been said above that conscious phenomenal experience is apt to be characterised in purely qualitative terms, that is, that the phenomenal is to be accounted for in terms of the qualitative; this should not be taken to entail the claim that all qualitative features of things are conscious phenomenal experiences. According to the Powerful Qualities account, all real properties bestow some qualitative nature on the objects that instantiate them. But this is

not to endorse panpsychism, which says that *everything* undergoes conscious experience. Rather, phenomenal features are a sub-class of qualitative features. Thus, if the Powerful Qualities account is correct, the properties, whatever they may be, that account for a particular phenomenal experience, will bestow both some dispositional (some causal, dynamic, structural) and some qualitative nature on their bearer. But not everything which, by virtue of the properties it instantiates, has both some dispositional and some qualitative nature will undergo conscious phenomenal experience.

This characterisation of the phenomenal in terms of the qualitative (as opposed to the dispositional), seems to be something that Chalmers should accept. For if the phenomenal is accounted for dispositionally, then it is hard to see how his famous 'hard problem' would be motivated—there is nothing *prima facie* mysterious about the relationship between two dispositional (causal, structural, dynamic) features of a system. (See, for instance, Chalmers' discussion of hard and easy problems of consciousness in 1995). It is the intrinsic, occurrent features of phenomenal experience that are supposed to motivate the hard problem—features which are to be accounted for in terms of qualitativity.

The Powerful Qualities account of properties gives one the tools to make a principled denial of the first premise of the conceivability argument. Furthermore, the account is motivated by *a priori* considerations which are independent of the issues in the philosophy of mind which are at stake in this debate, and so cannot be accused of simply begging the question in favour of the inconceivability of zombies.

V.2 *Zombies are impossible?*

I am not the only person to have appealed to the Powerful Qualities account of properties in order to respond to the conceivability argument. Heil highlights the inconsistency between this view of properties and the possibility of zombies, stating 'Qualities and powers cannot vary independently. The possibility of zombies depends on the denial of this thesis', (2003: 248; see also Heil & Robb 2003: 189). His attack on the argument focuses on the possibility, rather than the conceivability, of zombies. I have opted to aim at the latter, in order to fend off a potential response from the proponent of the argument. It might be held that if our modal epistemology comes into conflict with certain claims made by our ontology, then this highlights some problem with the ontology outlined. Proponents of the conceivability argument take *secunda facie* negative conceivability to be an excellent guide to ideal negative conceivability, which in turn is seen as a perfect guide to possibility. They might hold, therefore, that if a certain ontological position comes into conflict with what they take to be possible (via conceivability), this is simply evidence against that position. The strongest line of attack is to show that first, for the conceivability claim to even get off the ground, *some* ontological account of properties or other must be given, and second, given a certain account—the Powerful Qualities account—the conceivability claim itself cannot be maintained.

I have shown that, given that the proponent of the conceivability argument must inevitably settle on some substantive account of properties, the notion of zombies may entail a contradiction *a priori*; rendering them inconceivable according to Chalmers' account of conceivability. Given this, questions concerning the relative status of conceivability and ontology with regards to our modal epistemology dissolve: the former is inextricably tied to the

latter, and it is no longer open to the proponent of this argument to claim that the clash between the Powerful Qualities account and the possibility of zombies highlights a defect with that ontology. Of course, the proponent of the conceivability argument may wish to deny the Powerful Qualities account altogether, but she *cannot* do that on the grounds that it clashes with the conceivability of zombies, on pain of begging the question. She will need both an alternative account of properties, and independent motivation for adopting that account rather than this one.

VI. *Counter-Responses*

VI.1 *Modal variation of what a property contributes*

A proponent of the conceivability argument might respond to the claims made above that even if one accepts that every real property makes both a dispositional and a qualitative contribution to whatever bears it, these contributions could come apart modally; that is, that the same property that makes contributions D_1 and Q_1 at this world might make entirely different contributions— D_2 and Q_2 , say—or partially different contributions— D_1 and Q_2 , say—at some other world.

One needs to be clear on what would need to be the case in order for these to represent genuine possibilities. The first case, where the same property makes completely different contributions in a different possible world, requires that we have a very peculiar account of property similarity. The natural way to consider two properties as the same (or, for a trope theorist, as members of the same exact resemblance class) would be in terms of those properties making exactly similar contributions to the objects that bear them. If we give up on this way of grouping properties as the same, we will need some other principle, by

which to do so. The only option seems to be a quidditism according to which the identity of properties is trivial and brute (see Bird 2007: 44 f.38). Such a conception, however, will not help the proponent of the conceivability argument. If we are to accept that two objects located at different worlds are duplicates of one another in virtue of bearing certain properties that can be considered the 'same', but which make wholly dissimilar contributions to those objects, we seem to have given up on any notion of duplication which is of philosophical interest. It is also hard to see what would license, as the proponent of the argument would require, us considering such objects as specifically *physical* duplicates and specifically *not* duplicates in terms of conscious experience.

Perhaps, as in the second case above, the same physical properties (properties considered in terms of their dispositional contribution) could contribute in distinctive ways in terms of qualitativity at different worlds. If one accepts the Powerful Qualities account, zombie worlds will not be conceivable, as these properties will always make *some* qualitative contribution. Invert worlds, however, will be conceivable (worlds which are physical duplicates but at which some conscious experiences are *different* rather than absent). Chalmers' takes the possibility of invert worlds to be enough to establish his dualist conclusion (1996: 99–101). Thus, if my response allows for inverts, it is of little relevance to the mind-body debate. One might consider it possible for properties that make an exactly similar dispositional contribution to their bearers to make dissimilar qualitative contributions if one does not take the identity claim of the Powerful Qualities account seriously; instead considering properties as somehow 'made up' of a dispositional and a qualitative 'bit' which could be freely recombined. However, for the purposes of this paper, we are examining what follows for the

conceivability argument *if* the Powerful Qualities account is correct—and this includes taking the identity claim seriously.

Another reason one might take the notion that the dispositional and qualitative contributions made by a property can vary independently of one another to be plausible is if one thought something like the following: properties are *really* qualities, but they all also make a dispositional contribution to whatever bears them in virtue of the laws of nature that hold at the world in which they are instantiated. Thus, in different worlds with different laws, two distinct qualities Q_1 and Q_2 could make the same dispositional contributions/play the same dispositional role. However, this manner of characterising the situation is of little use as a response to the challenge to the conceivability argument laid out above, as it fails to properly understand the Powerful Qualities account: there is no direction in which properties are *really* either qualitative or dispositional, and only circumstantially or contingently the other.

VI.2 A posteriori necessity

At least one supporter of Powerful Qualities, Jacobs (2011: 89–90), interprets the identity claim as being one of *a posteriori* necessity. Chalmers' discusses how *a posteriori* necessities might bear on his account extensively, and provides convincing arguments, utilising the resources of two-dimensional semantics, to show that an appeal to this class of identities do not pose a challenge to his argument (for instance, 2010, section 3.6). Briefly put, the idea is that if the identity between the physical (dispositional) and conscious experience (qualities) is an *a posteriori* one, then whilst strictly speaking these two could not vary independently, we must allow for a variation analogous to that between water

being identical with H₂O and watery-stuff being identical with XYZ on Twin Earth. If this is granted, Chalmers' is able to exploit a peculiar feature of qualities: whilst we might maintain a genuine distinction between water and watery-stuff, it is plausible that no such distinction can be maintained between some quality Q and Q-y-stuff. Given this, the same quality can play different dispositional roles in different worlds, and qualities and dispositions can vary independently of one another: the conceivability of zombies (or at least inverters) is back on the table.

This, however, is not the correct manner in which to characterise the identity claim as conceived by the main proponents of the Powerful Qualities account of properties. Heil, for instance, makes it abundantly clear that the force of the identity claim is such that the dispositional and the qualitative cannot, in the strongest of senses, vary independently of one another (2012: section 4.12). The identity between the qualitative and the dispositional is not like that of water and H₂O; an imprecise pre-scientific conception of a substance being coupled with precise scientific account of the substance's internal constitution. Rather, the reasoning in favour of the identity claim is *a priori* in nature, and concerns the nature of a certain fundamental ontological category: properties. We may not know *a priori* the particular identities which obtain between specific dispositions and qualities, such information being only attainable *a posteriori* and in a falsifiable form. This, however, does not count against the arguments given in this paper: for if the Powerful Qualities view as elaborated by Martin and Heil is correct, what we do know *a priori* is that for a given disposition D₁, first, it will be identical with some quality or other Q_n; and second, for any specific quality Q₁, if it is in fact the case that D₁=Q₁ at this world, this identity will hold at all worlds. This reasoning can be run in either direction—nothing of philosophical significance

should be inferred from the fact that we started by considering a given disposition as opposed to a quality.

VI.3 *The Apparent Conceivability of Zombies*

Notwithstanding the arguments given above, some may hold that zombies, part-zombies and inverters *ought* to be conceivable. If this normative intuition is strong enough, it may lead one to conclude that there must, therefore, be something wrong with an account of properties (such as the Powerful Qualities account) which rules out zombies (etc.) *a priori*. If anything ought to be conceded to this response, it is that there does not seem to be anything immediately difficult about 'forming a picture' in one's mind of zombies (etc.). Doing this might be taken by some to be 'conceiving'. The challenge is to plausibly accommodate this intuition, or, to put it another way, to provide an error theory for the conceivability argument. If this can be done, then the force this response has will be dispelled, and it poses little problem for the challenge levelled at the conceivability argument in section V.1.

It is important to be clear about what needs to be accommodated here: the possibility of something that looks exactly like a human, engages in all sorts of human-like behavioural activities, but which differs with regard to conscious experience. Such an entity, it must be recognised, does not automatically meet the requirements of the first premise of the conceivability argument: it is a further step to assert that this entity is a *physical duplicate* of a human being. The Powerful Qualities account can accommodate the intuition in favour of the conceivability of this sort of entity. Remember that on this account dispositions are multi-track: the having of a certain property disposes the bearer to behave in

a huge variety of ways with a huge variety of different reciprocal disposition partners. Given this, certain properties will share some of what they dispose their bearers to do; although no dissimilar properties will dispose bearers in *exactly* the same way. These properties which share some of the dispositional contribution they make to their bearers will nonetheless differ in terms of the qualitative contribution they make. It seems to me that there could be two objects that were propertied such that they had substantial dispositional overlap with regards to all the reciprocal disposition partners one would normally expect them to come into contact with, but which diverged radically with regards to atypical partners.

One could represent this as in *Fig. 1* below, where two objects'— O_1 and O_2 —dispositional profiles are represented as two triangles, each point inside the triangle representing the manner in which the object would manifest were it to interact with some reciprocal disposition partner O_n . Where the triangles overlap, the objects O_1 and O_2 would manifest in just the same way given interaction with the same partner O_n . Where they do not, they would manifest differently. Suppose that all the sorts of partners we would expect either O_1 or O_2 to encounter fall within the shaded zone: that is, suppose that, in all the situations we would expect them to find themselves, they behave just the same. The partners that lie in the white zones are highly atypical for both O_1 and O_2 , but it is only through interaction with such partners that the (dispositional, and thus, physical) differences between O_1 and O_2 could be uncovered. Objects such as these look like they would satisfy the intuition that a positive conception of dispositionally identical but qualitatively distinct objects can be coherently formed.

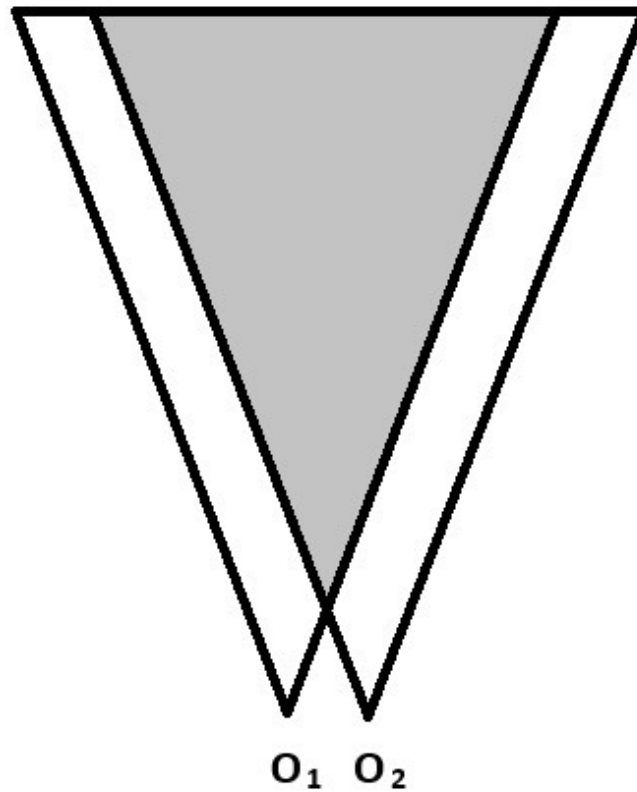


Fig. 1

O_1 and O_2 would not however be dispositional (and therefore physical) *duplicates* of one another; they would simply appear as such when considered in a limited sense, or in a sufficiently coarse grained manner. The genuine possibility of these sorts of entities, whilst they do not support (P1), ought to satisfy the intuition that we can conceive of something that looks exactly like a human, engages in all sorts of human-like behavioural activities, but which differs with regard to conscious experience (Stoljar 2007 makes a similar argument, albeit differently supported, appealing to *apparent* conceivings of zombies). That we can comfortably form a picture of such an entity in our mind—and indeed the genuine metaphysical possibility of such an entity—has no bearing on the truth or falsity of (P1), for whilst such things are similar in various ways to human beings, they are most certainly *not* duplicates of them in the relevant sense.

VI.4 *Physical Powerful Qualities, Mental Powerful Qualities*¹

Consider the following account of the ontology of mind and body: any instance of phenomenal experience is to be accounted for in terms of the subject who undergoes it instantiating some phenomenal property (which contributes to both the qualitative and the dispositional nature of its bearer) and some distinct but correlated neural property (which also contributes to both the qualitative and the dispositional nature of its bearer). Both of these properties are powerful qualities, but they are distinct, although it may be nomologically necessary that they are always co-instantiated in our world. Given that these properties are distinct, and only linked by nomological necessity, then it is metaphysically possible that at some world with different laws, there could be a creature which instantiates the neural property but not the phenomenal one: that is, there could be a zombie, part-zombie or invert.

The picture sketched above allows both that all real properties are powerful qualities and that zombies (etc.) are possible. As such, it might be thought to represent a serious challenge to the central claim of this paper: that the conceivability of zombies is threatened by the Powerful Qualities account of properties.

This response involves giving up on the idea that the distinction between the physical and the mental is to be drawn in terms of dispositionality and qualitativity. Given that this is the manner in which Chalmers draws the distinction when motivating the conceivability argument (see section IV.2), in order to make use of this response some amendment to the argument will have to be made: a different and principled way to draw the distinction will have to be

¹ My thanks to an anonymous reviewer for pressing the importance of this line of response.

provided. In doing so, it must not be specified (as it is in the brief sketch above) that experiential and non-experiential properties are really distinct: for this is the *conclusion* of the conceivability argument, and so on pain of begging the question must not be required in order to secure the premises. So, at the very least, if the argument put forward in this paper is correct, then there is work to be done by the proponent of the conceivability argument (if the Powerful Qualities account of properties is correct).

There is not the space in this paper to engage in a detailed examination of the debate concerning the drawing of the physical/mental distinction. However, a couple of points should be noted. First, as discussed in section V.1, drawing the distinction in terms of dispositionality and qualitativity plays a key role in motivating the Hard Problem, and so might not be so easily given up. Second, so long as (contra the Powerful Qualities account) ‘disposition’ and ‘quality’ *are* taken to pick out heterogeneous property kinds, drawing the distinction in this manner is felicitous for the conceivability claim—other ways of drawing the distinction may not be.

Furthermore, adopting this response leads to an arguably untenable (or at least highly unappealing) view of the relationship between the experiential and the physical. This is because it entails that it cannot be the case that our experiences are produced by our bodies and their interactions with our environment. According to realist views of causal powers, such as the Powerful Qualities account, production is a matter of the manifestation of dispositions. So, if our experiences are the manifestation our physical dispositions in interaction with the powers of items in their environment, then any physical duplicate of a human placed in identical circumstances should produce just the same manifestations as the human. *Ex hypothesi*, for the proponent of this response,

the zombie duplicate lacks the experiences, but if what I have said is correct, produces the same manifestations. Thus, according to the account on which this response rests, our experiences cannot be produced by our bodies interacting with their environment.

VII. Russellian Monism

Russellian Monism is an account of the ontology of mind and body committed to three central claims:

5. That there are two fundamental property types: irreducible intrinsic qualities on the one hand, and structural properties that obtain between these on the other.
6. That the intrinsic qualities are responsible for phenomenal consciousness.
7. That only the structural properties are amenable to scientific investigation.

Russellian Monism is not ruled out by the conceivability argument, and if one specifies that the intrinsic qualities are physical properties, then it may count as a form of physicalism. However, Chalmers states that '...because [Russellian Monism] relies on speculation about the special nature of the fundamental properties in microphysics, it is a highly distinctive form of physicalism that has much in common with property dualism and that many physicalists will want to reject', (2010: 152). Russellian Monism, just like property dualism, involves invoking a fundamental distinction in property types (claim 5). Furthermore, it entails that those properties, physical or no, that are responsible for phenomenal consciousness remain inaccessible to science (claims 6 and 7).

It might be asked if the same issues arise for an account of the ontology of mind and body which takes all fundamental properties to be powerful qualities. If they do, then this view will be no more attractive to physicalistically minded monists than Russellian Monism, a position which Chalmers has already conceded. The same issues do not arise, however. First, the view outlined in this paper does not endorse a distinction of fundamental property types, and so is not structurally similar to property dualism in the way Russellian Monism is. Nor does the view suffer from the worry that some large class of the real properties are beyond the reach of the sciences; for if, as has been suggested, science tracks the dispositional natures of things, and, as the Powerful Qualities account holds, *all* properties contribute to the dispositions of the objects that instantiate them, then all real properties are amenable to scientific enquiry. Even if it were to be the case on the Powerful Qualities view that science does not reveal the qualitative contribution made by properties (whether or not this is the case is a tricky question, one which would require much more attention than can be given here), the view would still have an advantage over Russellian Monism. Whilst on the latter view, a whole class of properties remain entirely inaccessible, on the former, *all* properties fall within the purview of science, although science may not be able to characterise properties exhaustively.

VIII. Concluding Remarks

In this paper, I have argued that in order for (P1) to be intelligible, some substantive account of properties needs to be given, for in the absence of such an account, we cannot make sense of the notion of duplication. I have tried to be as charitable to this argument as possible, accepting its account of conceivability,

and the (not uncontroversial) claim that from this sort of conceivability one can draw substantive conclusions about possibility. I have demonstrated that accepting the Powerful Qualities account of properties renders (P1) false. Making explicit what it would take for there to be zombies, part-zombies or inverts—that is, the independent variation of the dispositional and qualitative contributions made by exactly similar properties—uncovers a contradiction which hitherto lay unnoticed. Zombies, part-zombies and inverts are shown, by the lights of the Powerful Qualities account, to be *secunda facie* negatively inconceivable, and thus we have no reason to deny that they are ideally negatively conceivable, that is, to deny (P1). I have responded to a number of objections that might be raised against my challenge to the conceivability argument, and have attempted to dispel any lingering intuition that might remain that somehow zombies, part-zombies and inverts *ought* to be conceivable.

Exactly what lesson will be taken from this will vary depending on what prior commitments and philosophical objectives one has. Doubtless a staunch adherent to the conceivability argument will take it to suggest that there must be something wrong with the Powerful Qualities account—but it is then incumbent on them to provide some suitable alternative to this account, and to establish that by its lights, zombies are conceivable. Those who wish to resist the conclusions of the conceivability argument, conversely, may take this to result to increase the attractiveness of the Powerful Qualities account. If nothing else, I hope that the arguments put forward in this paper show that, in order to make headway on certain difficult questions in the philosophy of mind, it is essential to proceed in a spirit of both ontological seriousness and candour.

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