

Perceptual Experience and Physicalism

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1. Introduction

Although there seems to be widespread disagreement regarding how we should go about answering questions about perception - whether we should look to science to provide us with all the answers, or whether first person reflection can reveal the nature of perceptual experience - there is one thing that many philosophers do agree on: our philosophical account of perceptual experience should be compatible with *physicalism*. In other words, we haven't provided a successful account of perceptual experience if that account essentially involves non-physical entities.

This general commitment to physicalism has had a significant impact on the direction the philosophical debate about perception has taken in recent years. It used to be the case that questions about the nature of our perceptual experiences were approached from within an indirect realist framework. Indirect realists hold that we perceive the world around us indirectly, in virtue of directly perceiving some other kind of entity. The best known version of this view is the sense-datum theory, according to which all of our perceptual experiences are essentially relations to sense-data. (Russell 1912, Broad 1925, Price 1950, Ayer 1956, Jackson 1977, Lowe 1992, and Robinson 1994)

One of the biggest challenges facing any theory of perception is to account for hallucinations - experiences where we seem to be aware of entities that are not in fact present in our local environment. The sense-datum theorist has a ready response to this challenge; hallucinations are like veridical perceptual experiences in that they too consist simply in the awareness of sense-data. Sense-datum theory therefore provides an explanation of what we are aware of during a hallucination as well as providing a unified account of all of our perceptual experiences - hallucinations, illusions and veridical experiences are all essentially relations to sense-data. These experiences differ only with respect to how they are related to the world, and veridical experiences are classified as such because they are related to the world in the right kind of way. (What counts as the right kind of way for our sense-data-involving perceptual experiences to be related to the mind-independent world varies between different versions of

the theory. Causal history is important - veridical perceptual experiences are those which have been caused by our interacting with the world through our sense organs. A veridical visual experience will have been caused by photons reflected from objects in our local environment impacting on our retinas, and so on. In addition, according to some versions of the view, the sense-data involved during veridical perceptual experiences will resemble the objects in the world which caused the experience.)

The relational analysis provided by the sense-datum theory is motivated by the assumption that seeming to be aware of an object instantiating various properties must involve a genuine awareness of something which instantiates those properties. In other words, if we seem to be aware of a purple unicorn (during a hallucination, say), then there must be something purple and unicorn shaped for us to be aware of, even if it isn't a mind-independent physical object, like an actual unicorn. This assumption is called the phenomenal principle, and is one of the driving forces behind the sense-datum theory. Here is Howard Robinson's version:

If there sensibly appears to a subject to be something which possesses a particular sensible quality then there is something of which the subject is aware which does possess that quality. (Robinson 1994: 32)

To endorse the phenomenal principle is to adopt a non-physicalist metaphysics. During hallucinations there aren't any (relevant) physical things in one's local environment for one to be aware of, and yet the phenomenal principle insists that in such cases we must be aware of something. This must therefore be a non-physical something. Indeed, sense-data are typically understood to be mind-dependent, non-physical entities.¹ And so we can see that although the sense-datum theory provides an answer to the question of what we are aware of during hallucinations, the explanation is not a physicalist one. The sense-data theory is now a minority view in the contemporary debate, and the reason given for rejecting it is almost always based on its failure to conform to a physicalist metaphysics.²

¹ At least, this is the dominant view.

² There are other problems with sense-data besides their non-physical nature. Epistemological concerns include the so-called 'veil of perception' problem – the worry that the mind-independent world is entirely unknowable since we are only ever directly aware of mind-dependent sense-data. Other problems concern the location of sense-data. These entities are said to have the properties they are perceived as having, such as shape and size.

This shift is interesting; contemporary philosophy of perception has abandoned the phenomenal principle as a fixed point for theorising, and has adopted physicalism instead. I suspect that this alteration to our starting point when thinking about perception is not in fact due to a deep change of opinion regarding our preferred metaphysical theory, but is instead a result of circumstances. In other words, I expect that we have always seen the attractions of physicalism – certainly since Descartes’ interaction problem (the problem of trying to explain how physical and non-physical entities can causally interact). (Princess Elisabeth of Bohemia 2007) Although not all philosophers are physicalists, non-physical entities tend to enter the picture only when there are no physical entities available to do the explanatory work required. Hallucinations present exactly this kind of challenge. There aren’t any physical objects to explain such experiences, and so we posit non-physical objects, as a last resort, as it were. I would like to tentatively suggest that the shift to physicalism does not therefore represent a radical shift in ideology, but rather, has been brought about by the development of a view which makes it possible and plausible to deny the phenomenal principle, and, by so doing, avoid the need of introducing non-physical entities.

Representationalism (or intentionalism) is now the dominant position in contemporary philosophy of perception, and it has achieved this status through its claim to provide a successful and comprehensive physicalist account of the mind. Indeed, it was developed for this very purpose. (See Dretske 1995, 2000 and Tye 1995, 2000. Note that Dretske’s 1995 is entitled ‘Naturalizing the Mind’.) Like the sense-datum theory, representationalism provides a unified account of perceptual experience.³ Veridical, illusory and hallucinatory perceptual experiences are fundamentally the same kind of mental state – they are all representational states with representational content. All of our perceptual experiences say something about the

They must therefore occupy a location. But it is difficult to come up with a plausible account of the location of sense-data since they are mind-dependent entities.

³ This distinguishes these views from naïve realism (sometimes called ‘the relational view’) which analyses veridical perceptual experiences as consisting in relations to the ordinary physical objects in our local environment. Naïve realists adopt disjunctivism when faced with the problem of hallucination, and claim that hallucinations are entirely different kinds of mental state from veridical perceptual experiences. Since the debate I am focusing on in this paper takes place between representationalists and their non-relationalist opponents, I will assume, in-line with these views, that a theory which can provide a unified account of perceptual experience is to be preferred. For an excellent introduction to disjunctivism, see Byrne and Logue 2009.

way the world is - if they get the world right then the experiences are veridical, if they get the world wrong, they are illusory or hallucinatory.⁴ On this view, the phenomenal character of our perceptual experiences is grounded in (or constituted by, or identical to) their representational content, and so if the representational content of two experiences is the same, then their phenomenal character will also be the same, whether they are veridical, illusory or hallucinatory.⁵

The idea that our perceptual experiences have content would seem to allow for a new explanation of hallucinations. More importantly for contemporary philosophy of mind, it allows for a *physicalist* explanation of hallucination. This is because representationalism provides a way of denying the Phenomenal Principle. As Tim Crane points out:

[P]erception, like belief, is a form of representation of the world, and it is not true of representations in general that when a representation represents that something has a property, there is something which does have that property. (Crane 2006: 132)

Representationalists therefore seem able to give a unified account of all our perceptual experiences without positing anything non-physical to explain hallucinations. However, recently, a number of philosophers have questioned representationalism's compatibility with physicalism, and have pointed out that mainstream representationalists typically seem to rely on relations to non-physical entities. The main aim of this chapter is to reinforce and expand on this argument. I will suggest that positing non-physical entities is not just a dispensable feature of some forms of representationalism, in fact there is something essentially non-physicalist about the way representationalism is standardly formulated. This is interesting for two reasons: first, it brings to light the possibility that the leading physicalist account of perception is in fact incapable, as it stands, of meeting the criteria laid down by a genuinely physicalist metaphysics. Second, it shows that a commitment to the popular idea that the philosophy of perception should proceed in accordance with physicalism leads to the rejection of the dominant view in the philosophy of mind.

⁴ The existence of veridical hallucinations (hallucinations which happen to match the way the world is) makes the above definition merely a first-pass characterisation of the veridical versus non-veridical distinction.

⁵ The precise nature of the relationship between phenomenal character and representational content need not concern us here.

Those philosophers who have criticised representationalism for positing relations to non-physical entities have provided an alternative account, which is advertised as being the position we should endorse if we want to hold on to our commitment to physicalism (particularly if we want our account to include illusions and hallucinations as well as veridical perceptual experiences). They argue that perceptual experience must be wholly non-relational: perceivers enter into causal relations with their environment, but our experiences do not involve any essential relations. In the last part of this paper I will point out one of the difficulties which arises for this view; by making perceptual experience wholly non-relational, it is difficult to do justice to the idea that perceptual experiences can be assessed for accuracy. I should point out that my aim in this chapter is not to defend physicalism, nor to promote a particular position in the philosophy of perception, but rather to point out some of the interesting consequences of holding on to the idea that our investigations should proceed along physicalist lines.

2. Representationalism and Physicalism

Representationalism ostensibly meets the demands of physicalism rather easily, since representing the world to be a certain way does not require an ontological commitment to the entities which are represented. A veridical experience of a horse is a representational state which ‘says’ that a horse is present, and a hallucination of a unicorn is a representational state which ‘says’ that a unicorn is present. In the first case, a horse *is* present (say) and the experience is veridical. In the second case, there is no unicorn present, and the experience is a non-veridical hallucination. Importantly, neither the veridical nor the hallucinatory experience involve an essential relation to the particular object which is represented. As we saw above, representationalists sometimes draw analogies between perception and other representational states, like beliefs, and point out that just as beliefs do not require an ontological commitment to the entities our beliefs are about, neither do perceptual experiences. In the same way that we can have beliefs about unicorns, so we can have perceptual experiences (hallucinations) about them too.

However, the representationalist’s claim to provide a genuinely physicalist account of perceptual experience has recently come under attack, most notably by Susanna Schellenberg (2011), Uriah Kriegel (2011), and David Papineau (2014). They point out that once we look into the details of mainstream representationalism, there seems to be a noticeable reliance on relations to non-physical entities. The ontologies of mainstream representationalist accounts contain what Schellenberg calls ‘peculiar entities’, that is, entities that do not fit comfortably within a genuinely physicalist ontology. The peculiar entities we find in representationalist

ontologies are not the non-physical, mind-dependent objects posited by the sense-datum theorist; instead they tend to be non-physical, mind-independent abstract objects. To begin with an obvious example, many representationalists hold that perceptual experiences are propositional states and so involve relations to propositions, which are generally considered to be abstract objects. (see Byrne 2005, Glüer-Pagin 2014, Pautz 2007, Stoljar 2004 Thau 2002, Tye 1995).

It has also become popular to posit uninstantiated properties to explain the phenomenal character of hallucinations. (See Bealer 1982, Bengson *et al.* 2011, Dretske 2000, Forrest 2005, Horgan, Graham & Tienson 2004, Johnston 2004, Lycan 2001, McGinn 1999, Pautz 2007, Sosa 2007, and Tye 2002, 2014a.) Interestingly, not only does this seem to constitute a move away from physicalism, it also seems to involve a return to the phenomenal principle, at least in spirit. The original phenomenal principle claims that even hallucinations involve the awareness of some sort of *object*, whereas here, we are talking about the awareness of *properties* which aren't instantiated by objects. Still, the central motivation behind the principle is that even hallucinations must involve an awareness relation to *something*, and this idea gets preserved in this more recent version. This return to the spirit of the phenomenal principle is surprisingly popular. The following quotes illustrate the wide-spread commitment to uninstantiated properties amongst both philosophers who endorse externalist versions of representationalism, and those who are internalists.⁶ Dretske writes:

Hallucinations are experiences in which one is aware of properties (shapes, colors, movements, etc.) without being o-conscious [object-conscious] of objects having these properties.... Hallucinating about pumpkins is not to be understood as an awareness of orange pumpkin-shaped objects. It is rather to be understood as p-awareness [property-awareness] of the kind of properties that o-awareness of pumpkins is usually accompanied by....Awareness (ie. p-awareness) of properties without awareness (o-awareness) of objects having these properties may still strike some readers as bizarre.

⁶ The distinction between internalism and externalism within representationalism is not important for present purposes. Briefly, externalists think that the representational content of perceptual experiences ultimately depends upon relations between the subject and their environment – causal, historical, or teleological for example. (Dretske 1995, 2000, Tye 1995, 2000, Millikan 1984, Papineau 1984.) Internalists deny this, and hold that representational content and phenomenal character are internally determined. (Horgan and Tienson 2002, Loar 2003, Crane 2006)

Can we really be aware of (uninstantiated) universals? Yes, we can, and, yes, we sometimes are. [Dretske 2000: 163]

And Tye says:

[Y]ou cannot attend to what is not there. But on my view there is an un-instantiated quality there in the bad cases... an un-instantiated quality is present in hallucination. [Tye 2014b: 51]

Horgan, Graham and Tienson also seem to hold that perceiving subjects are acquainted with uninstantiated properties during hallucinations:

When experience presents various apparent objects as apparently instantiating properties and relations such as shape-properties and relative-position relations, experience thereby *acquaints* the experiencing subject with such properties and relationsExperientially presented *apparent* instantiation of the properties and relations suffices to acquaint the experiencing subject with them ... whether or not the experiencing subject is ever experientially presented with *actual* instantiations of them. [Horgan, Graham & Tienson 2004: 304]

Adam Pautz holds a similar view, although he replaces the acquaintance relation with a relation he calls 'sensorily entertaining'. He says:

Let *E* be the property of having an experience with the phenomenal character of the experience one in fact has on viewing a red ellipse, an orange circle and a green square...Intentionalism [or representationalism] holds that having *E* is identical with the property of sensorily entertaining a general proposition or complex property that may be represented as follows: <red, elliptical & orange, circular & green, square>. [Pautz 2007: 524]

I have said that this commitment to uninstantiated properties constitutes a move away from physicalism. Since it is possible to be a realist about universals without being a realist about abstract objects (if one holds the Aristotelian view that universals are always instantiated, for example), and it is only a commitment to abstracta which is a problem for physicalism, I need to explain this in more detail. After all, the physicalist could say that during hallucinations we

are aware of properties which are only locally uninstantiated; they are instantiated *somewhere*. For the proponent of the uninstantiated property account to be charged with contravening the principles of physicalism, it is necessary to show that they are committed to the metaphysically problematic, Platonic conception of universals. On this view, universals exist independently of their instantiations - they are abstract objects which exist outside the spatiotemporal realm. If representationalism involves uninstantiated properties understood in the Platonic sense, then questions about its compatibility with physicalism naturally arise.

Brad Thompson argues that representationalists who subscribe to the uninstantiated property analysis of the phenomenal character of hallucinations are indeed committed to the questionable Platonic interpretation. He describes a situation where we can have hallucinations of properties which are not instantiated anywhere. If the representationalist maintains that we can indeed have experiences of properties which are not instantiated anywhere, then they must sign up to the Platonic view of abstracta. Thompson asks us to imagine that every red object in the world has been painted another colour. Since it seems plausible to suppose that it would still be possible to hallucinate red even though there would no longer be any actual instantiations of red, the uninstantiated property theorist must endorse the Platonic conception of universals to be able to deal with the example. (Thompson 2008)

The situation Thompson describes is, of course, rather far-fetched. What is more, it is always open to the representationalist simply to deny the supposition that we would still be able to hallucinate red in the world Thompson describes. So let me provide a more persuasive example of a situation in which we seem to be aware of properties which are not instantiated anywhere. It is more persuasive because it involves experiences we can all enjoy right now. With a little help, we can all have colour experiences as of colour properties that are not instantiated anywhere. In his 2007, Paul Churchland provides the means by which we can experience a number of 'impossible colours' – impossible because no objects could genuinely possess such colour properties. For example, by staring at a yellow circle on a grey background and then looking at a maximally black stimulus one will experience an impossibly dark blue. The experienced blue will be as dark as the maximally black stimulus, which is impossible for any objective blue. (See Churchland 2007 chapter 9 for other examples.) Of course, the important point to take away from this is that analysing such experiences in terms of uninstantiated properties is only possible if the Platonic conception of universals is endorsed.

Many, if not most physicalist philosophers seem to be guilty of a kind of 'doublethink' when it comes to abstract objects, and rely on such entities freely. This is surprising; although it is notoriously difficult to give a satisfactory definition of 'abstracta', everyone should agree

that (whatever they are) abstracta will not meet the criteria (whatever *they* are) for being physical. For instance, we can be reasonably sure that one of the necessary conditions for qualifying as ‘physical’ is to be spatiotemporal, and abstract objects are not, of course, spatiotemporal entities. (See Rosen 2018 for a comprehensive discussion of possible ways of defining abstracta.) Admittedly, I am working with quite a simple and basic definition of physicalism. I understand physicalism to be the view that we should only allow physical entities into our ontology. (Of course, this raises the question of what counts as a physical entity!) One might think that abstracta can be accommodated within a physicalist ontology so long as they can be said to supervene on the physical; so long as once the physical facts are fixed, so are the facts about abstracta.⁷ It is outside the scope of the present paper to delve too deeply into this issue, however, it seems to me that such a definition of physicalism is far too lenient. Some versions of dualism would be able to qualify as physical on this view, namely, any version which has the non-physical substance supervene on the physical. This suggests, to me at least, that physicalism in any meaningful sense will need to be more restrictive.⁸

It is telling that proponents of the uninstantiated property view do seem, on the one hand, to want a strict version of physicalism since they tend to reject sense-datum theory out of hand for its use of mental intermediaries in perception. Of course, if it would be permissible to allow non-physical abstracta into our physicalist ontologies so long as they supervene on the physical, it would be entirely open to the sense-datum theorist to make the same move and claim that sense-data supervene on the physical too. The fact that this potential manoeuvre isn’t considered before the sense-datum theory is rejected suggests that proponents of the uninstantiated property view do not consider abstracta to be acceptable because they supervene on the physical (and are, to that extent, compatible with a physicalist metaphysics). Instead, it seems to be a case of ‘they’re problematic, but needs must’.

Although abstracta tend to appear in philosophical theories more frequently than sense-data, it seems to me that the former are, in fact, more problematic, metaphysically speaking, than the latter. After all, sense-data are concreta – they are real, concrete entities, albeit non-

⁷ I would like to thank Heather Logue for suggesting I address this possibility.

⁸ Uriah Kriegel (2011) and David Papineau (2014) also take issue with the idea that our experiences, which are concrete, spatiotemporal entities essentially involve abstract entities. Kriegel offers a principle he calls ‘the explanatory closure of the realm of concreta’ which expresses the plausible demand that everything in the realm of concreta should be *explainable* solely by appeal to what goes on in the realm of concreta. (Kriegel 2011: 146)

physical entities. Surprisingly, Tye comes very close to noticing this himself. As part of his discussion of the sense-datum theory, Tye considers an alternative way of defining sense-data – as non-physical, non-mental entities. He says:

And sense-data, conceived of as non-mental entities, face other problems. For example, where are they located? In the same space as physical objects? How is this possible? Further, how can their qualities make a causal difference? [Tye 2014b: 50]

It is interesting to note that the very same concerns arise for his uninstantiated property theory. Indeed, it is hard to miss the similarity between the sense-datum theory and the representationalist's attempt to explain hallucinations in terms of relations to uninstantiated properties.

Schellenberg takes particular issue with views which posit an acquaintance or awareness relation to peculiar entities (see footnote 1 of her 2011). Although I agree that there is certainly something mysterious about the idea that we can be acquainted with or aware of non-physical entities, if the goal is to produce a thoroughly physicalist account of all perceptual experiences (including hallucinations), then it is the peculiar entities themselves that are the problem.⁹ This point is significant for two reasons. First, it means that representationalist views which do not posit uninstantiated properties but do make use of propositional contents are equally problematic from a (genuinely) physicalist perspective. And second, it reveals that the dependence on peculiar entities is not an incidental feature of only some representationalist views, rather, it seems to be an essential part of mainstream representationalism itself. Let me explain this in more detail.

It is uncontroversial that the defining feature of representational states is that they have *content*, and there are good reasons for thinking that all versions of mainstream representationalism are committed to content being abstract. Of course, if representationalists are committed to abstract contents, we do not need to consider every version of mainstream representationalism individually to assess whether it relies on peculiar entities; *all* versions rely on peculiar entities. It is important to note that endorsing the idea that perceptual states have

⁹ Pautz (2007) also believes it is the awareness relation that is problematic with the externalist's uninstantiated property idea. Again, I agree that postulating an awareness relation to abstract entities is particularly counter-intuitive, but the metaphysical worries arise whatever the relation.

content does not automatically force one to accept peculiar entities. As we will see later on, it is possible to create a version of representationalism/ intentionalism upon which perceptual states do have content, but this content isn't abstract.

There is a particular and rather interesting reason why mainstream representationalists find themselves committed to abstract contents. To bring out this reason it will help to introduce a distinction between what I'll call 'object-relationalism' and 'content-relationalism'. Both sense-datum theory and naïve realism are versions of 'object-relationalism' since they hold that the perceiving subject stands in an essential (and not just causal) relation to the objects of perception – for sense-datum theories the direct objects of perception are sense-data, and for naïve realists, they are ordinary objects in the local environment. Now, it turns out that mainstream representationalism is a version of 'content-relationalism'. Although proponents of this view deny that essential relations hold between perceiving subjects and the *objects* of experience, they maintain that subjects stand in some sort of two-place relation to the *contents* of their perceptual experiences. In other words, the content of a particular perceptual experience is or involves something ontologically distinct from the subject's experience. Consequently, although representationalists set themselves up as direct opponents of naïve realism they haven't in fact moved very far away from a relational analysis of perceptual experience after all.¹⁰ It is easy to overlook the essential relationality of representationalism since it has become popular to refer to naïve realism as 'relationalism' or 'the relational view'. This is unfortunate inasmuch as it masks the fact that relationalism is just as much a theoretical commitment of representationalism as it is of naïve realism – it's just that representationalists are content-relationalists whereas naïve realists are object-relationalists.¹¹ Crane makes the relational element of representationalism explicit in the following:

¹⁰ A point of clarification is in order. My claim that representationalists advocate what is ultimately a relationalist account of perceptual experience does not commit them to an 'act-object' view. Representationalists posit a relation to a content, but they need not hold that this abstract content is the object of the perceptual experience in the same way that sense-data or ordinary objects are the objects of perceptual experience for the sense-data theorist and the naïve realist (respectively). For an argument that some representationalist views collapse into disjunctivism, see Gow 2018.

¹¹ Of course, the sense-data view is also a relational view; all perceptual experiences are analysed in terms of essential relations to sense-data.

Every intentional state, then, consists of an intentional content related to the subject by an intentional mode. The structure of intentionality is therefore relational, and may be displayed as follows:

Subject – Intentional mode – Intentional content. [Crane 2003: 39]

And Pautz says:

Standard intentional states must be taken to be *relations* to intentional contents or properties or other abstract objects. [Pautz 2013: 205]

Pautz is explicit about the abstract nature of contents in the quote above, and since many philosophers think that perceptual experiences have a propositional content, it is easy to see why this version of mainstream representationalism is committed to abstracta. But it is the fact that mainstream representationalists endorse content-relationalism which explains why they must accept peculiar entities within their ontology. Contents, whether understood to be propositions, properties or property complexes will have to be abstract if the subject is to stand in a two-place relation to them. This point is most easily brought out by considering hallucinations rather than veridical perceptual experiences.¹² After all, representationalists can (and sometimes do) try to analyse the content of veridical experiences in terms of the actual physical objects and properties which are represented during the experience. This manoeuvre is often motivated by appealing to the idea that perceptual experience is *transparent* – we aren't aware of features of our experiences, but only of the objects and properties our experiences represent.¹³ If the content of a veridical experience can be analysed solely with reference to physical objects and properties, then the content of these experiences need not involve abstracta. However, this is not possible for hallucinations, for the simple reason that the subject is not relevantly related to any physical objects and properties during their experience. Indeed,

¹² The existence of hallucinations also explains why a Russellian analysis of propositions won't meet the demands of physicalism.

¹³ See Harman 1990 for the contemporary origins of this idea and Tye 2000, 2014b for a detailed development. See Gow 2016 for an argument that the transparency claim is based on a confusion and cannot serve the purpose to which it is assigned.

this is the reason why many representationalists appeal to uninstantiated properties to explain hallucinations in the first place. To summarise, according to mainstream representationalism, all perceptual experiences involve relations, not to objects, but rather to *contents* which are (at least in the hallucinatory case) non-physical, abstract entities.

3. Non-relationalism

At this juncture, one might wonder why mainstream representationalists commit themselves to content-relationalism. After all, it is this commitment which explains their failure to provide a genuinely physicalist account of perceptual experience. And in fact, the solution offered by mainstream representationism's critics is to analyse perceptual experiences as non-relational representational/ intentional states. (Kriegel 2011 Mendelovici 2018 Nida Rümelin 2011) Along with mainstream representationalists, non-relationalist representationalists deny object-relationalism. That is, they deny that perceptual experiences involve any essential relations to objects (there will, at least in the good cases, be causal relations to objects). However, they also deny content-relationalism; they deny that perceptual experiences involve relations to contents.

Adverbialism, the original non-relational view developed by Chisholm (1957) and Ducasse (1942) is thought to be unable (or unwilling) to accept the intentionality of perceptual experience. (Also see Joshua Gert's paper in this volume.) In other words, perceptual experiences are thought not to have contents at all on this view. Examples of this assumption are easy to find. Tye says: 'we could even deny that perceptual experiences *have* contents (as, for example, adverbial theorists do).' (Tye, 2007: 610) And Crane describes adverbialism as the view which explains '*all* features of what it is like to have an experience in terms of intrinsic, non-intentional qualities of experience.' (Crane 2006: 142) However, contemporary advocates of non-relational views do not share this commitment, and instead offer a non-relational analysis of intentionality itself. (Kriegel 2011, Mendelovici 2018, Nida Rümelin 2011)

So contemporary non-relationalism is a version of intentionalism/ representationalism: perceptual experiences have contents. It is the denial of content-relationalism which distinguishes non-relationalist representationalists from mainstream representationalists. Instead of construing content as something abstract to which the perceiver stands in a two-place relation, according to the non-relational representationalist framework, contents *characterize* experiences; they are *ways of experiencing*. Adverbialists notoriously advocated a change in how we talk about our experiences to reflect the essentially non-relational nature

of perceptual experience. They suggested that we exchange our existing ‘relational’ terminology with terminology that exposes the true metaphysical nature of perceptual experience. ‘I see red’ becomes ‘I see redly’. This terminology reflects the fact that seeing something red is not essentially a matter of standing in a relation to something red; instead, it is a matter of seeing in a certain way - ‘redly’ refers to a way of experiencing.

All non-relational accounts of perceptual experience are committed to denying that perceptual experience involves any essential two-place relations. We stand in causal relations to our environment, and when things go well we perceive our environment, but our perceptual experiences involve neither essential relations to objects nor to contents. Denying both object-relationalism and content-relationalism allows non-relational theories to be genuinely physicalist. Perceptual experiences are non-relational states or processes of perceivers, and we can identify these states or processes with neural states or processes.¹⁴ Although non-relational views are able to meet the demands of physicalism, there are further consequences of denying that perception involves essential two-place relations. In the remainder of this chapter I will outline one potential difficulty relating to whether we can still assess perceptual experiences for accuracy on a non-relational representationalist framework.

4. Perceptual experiences and Accuracy

First we must get clear on what assessing our perceptual experiences for accuracy would involve. Consider the following quotation:

Attributing accuracy to something thus involves assessing it with respect to something else... [Siegel 2010: 31]

This seems exactly right. Assessing for accuracy involves, at the very least, making a comparison between two things. When it comes to perceptual experience, assessing for accuracy would require comparing the way the world actually is with the way the world is presented in the experience. If the way the world is presented in the experience matches the

¹⁴ Of course, non-relationalism isn’t essentially physicalist – one could be a substance dualist yet still believe that perceptual experiences are non-relational states or processes of perceivers. The important point is that, unlike mainstream representationalism which relies on relations to abstract entities, non-relationalism enables us to identify a perceptual experience entirely with a neural process.

way the world is, then the perceptual experience is accurate. Michelle Montague has offered a well-developed theory about the process of making accuracy assessments which she calls the ‘matching view’ (Montague 2013). She claims that unless there is a sufficiently close match between how the world is and how it is represented in the perceptual experience, then true perceiving (when ‘perceiving’ is understood as a success verb) will not have occurred. In other words, if our experience gets things wrong to a significantly large degree, then we cannot call the experience one of *perceiving* the world, even if it has been caused in a similar way to cases where perceiving does take place (such as stimulation by photons (in vision) and by sound waves (in audition)).¹⁵

It is easy to understand how the process of assessing for accuracy works by using sense-datum theory as an example. Assessing our perceptual experiences for accuracy on the sense-datum theorist’s framework is a matter of comparing the sense-data the perceiving subject are directly aware of with the local, mind-independent environment. If there is a sufficient degree of resemblance between the sense-data and the objects and properties in the world which were causally involved in the experience, then the matching condition has been met, and we have a case of accurate, or veridical, perception.

Of course, there is a well-known objection to the indirect realist’s proposal, originating with George Berkeley. Aiming his objection towards the views of his contemporaries, who appealed to ideas rather than sense-data, Berkeley stated that ‘an idea can be like nothing but an idea’. (Berkeley 1948–1957 PHK 8) It isn’t entirely clear what his reasons were for this claim. Perhaps the thought is that it doesn’t make sense to say that two things resemble each

¹⁵ Incidentally, Montague’s position on this is a very strong one. She says she will assume, for ease of explication, the falsity of the eliminativist view of secondary qualities like colours and sounds. This is perhaps misguided since, if eliminativism about colours (and so on) is correct – and indeed, it seems to be the prevailing view amongst vision scientists – it seems that Montague will have to claim that we *never* see the world. (See Gow 2014 for discussion.) After all, not only is it a central feature of the phenomenology of our visual perceptual experiences that we experience objects in the world as being coloured, for the most part, seeing objects’ colours constitutes our seeing the object. In other words, in typical circumstances, we see objects in virtue of seeing their colours. If it turns out that objects are not in fact coloured in the way our experience takes them to be then according to Montague’s analysis, none of our visual perceptual experiences will ‘match’ the world to a degree sufficient to warrant ‘seeing’.

other unless they can be compared, and because we only have direct access to our own ideas (or sense-data), we can never be in a position to make the required comparison. Or Berkeley could be claiming that entities from different metaphysical categories - mental entities like ideas and sense-data on the one hand, and physical entities in the mind-independent world on the other - are too different to be compared. (See Downing 2013 and Winkler 1989 for further discussion.)

Indirect realists can respond to these objections relatively easily. In response to the first point, they can concede that we can't make the comparison ourselves, but hold that there is still a fact of the matter about whether our ideas or sense-data resemble physical objects. Indirect realists can operate with a relatively weak notion of resemblance, and this enables them to respond to the second point; they can argue that so long as the ideas or sense-data possess some of the same properties as objects in the world, it makes sense to think that a comparison can take place, and that an adequate degree of resemblance can obtain. Further problems may arise since the red of the sense-datum tends not to be thought of as exactly the same property as the red in the world, but some sort of relation exists between them and so we can see what direction the sense-datum theorist can move in. The fact that sense-datum theory posits something (sense-data) which stand in a relation to the perceiver's experience at least provides the theory with something that can be compared with the world. It is clear that a comparison can, at least in principle, take place on this account and so the idea that our perceptual experiences can be assessed for accuracy on an indirect realist framework is, therefore, perfectly coherent.

It should also be clear how our perceptual experiences can be assessed for accuracy on the view offered by mainstream representationalism. Recall that on this view, our perceptual experiences involve a relation to a content, such as a proposition. We can therefore assess our perceptual experiences for accuracy by comparing the content of our experience - the way our experience *says* that the world is - with the way the world actually is. If the way the world is matches the content of the experience, then it is accurate or veridical, if not, it is inaccurate or non-veridical. Again, the reason the comparison required for assessing for accuracy can take place is because mainstream representationalists posit something (a content) to which the perceiver is related, and this content component can be compared with the world. However, when it comes to trying to assess perceptual experiences for accuracy on a non-relationalist framework, problems start to surface.

To begin with, it is important to reiterate that the reason we are able to assess our perceptual experiences for accuracy on both mainstream representationalism and sense-datum theory is because our experiences involve something which we are able to compare with the

world. On mainstream representationalism our experiences involve a relation to a content, and on sense-datum theory our experiences involve relations to sense-data. Putting aside issues regarding whether we are in fact able to carry out the comparison ourselves, the fact that our perceptual experiences involve something with which a comparison can be made, ensures that there is a fact of the matter about whether or not our experiences match the world. This allows our experiences to qualify as either accurate/ veridical or inaccurate/ non-veridical. Now, on a non-relationalist framework, our perceptual experiences do not involve essential relations to either objects or contents. This means that there isn't anything – neither sense-data, nor propositional content, nor any other kind of content component - which can be compared with the world to see whether it matches. In other words, it is difficult to see how a comparison could even begin to take place – what exactly are we to compare with the world?

It is quite clear that making a comparison necessarily involves (at least) two things. When we are wondering whether our perceptual experiences match the way the world is (and are therefore veridical) the experience must provide us with something which can be compared with the world. On the sense-data view, our perceptual experience involves sense-data, which can be compared with the world to see if the perceptual experience deserves to be classified as veridical or not. On mainstream representationalism, our perceptual experience involves a content which says something about the way the world is, and can therefore be compared with how the world actually is. But on non-relationalism, we just have a single, non-relational mental state/ process. There is nothing (no *thing*) with which to carry out the comparison; for the content of the state is not something distinct and separable from the subject's experience, the content is simply a *characterization* of the non-relational experience. Perceptual experiences understood non-relationally seem unable to provide us with anything with which to carry out a comparison, and therefore, unable to meet the matching condition.

Perhaps the non-relationalist will respond to the challenge by proposing that we compare the whole non-relational perceptual experience with the world. This is problematic. After all, the proposal would be that on the one hand we have the world and on the other, a way of experiencing. Not much sense can be made of the claim that we can compare the world with a way of experiencing. How would the world have to be to match a way of experiencing? To paraphrase Berkeley; surely a way of experiencing can only be like another way of experiencing. The difficulty non-relationalists have with meeting the matching condition is most clearly brought out by employing the adverbialist's terminology, which, for all its shortcomings, reflects very clearly the non-relational nature of perceptual experience.

Consider a perceptual experience as of a purple unicorn. In order to reflect the non-relational nature of this experience, the adverbialist will characterise it as a subject ‘seeing purplely and unicornly’. Again, this reflects the fact that perceptual experiences are a matter of experiencing a certain way rather than a matter of standing in a relation to something. In order for this experience to be assessed for accuracy, we need to carry out a comparison with the way the world is, but what precisely are we to compare with the world? The experience does not involve a relation to an object (like a sense-datum) which can be compared with the world to see if it matches. Neither does it involve a relation to a content which ‘says’ something about the way the world is, and can render the experience accurate so long as the way the world actually is matches with this content. *Contents on non-relationalism do not make claims about the way the world is*; instead, they are simply ways of experiencing, and we cannot compare a way of experiencing with the world. ‘Anna sees purplely’ is on a par with ‘Anna walks slowly’. It is clear that it makes little sense to ask whether Anna’s walking slowly is accurate or not, and it is equally unclear what sense can be made of asking whether Anna’s seeing purplely is accurate or not.

5. Conclusion

A commitment to physicalism characterises contemporary philosophy of mind. Indeed, the idea that our account of perceptual experience should be compatible with physicalism seems to be one of the few assumptions that are shared by the majority of philosophers. My aim in this paper has not been to defend this assumption, nor to defend the theory of perception which seems best placed to provide a genuinely physicalist account of our perceptual experiences. Instead, my aim has been to explore some of the consequences that arise from this wide-spread commitment to physicalism. I have argued that mainstream representationalism, which advertises its physicalist credentials as its major selling-point, is not a genuinely physicalist view. Versions of this theory typically make essential use of relations to abstract, non-physical entities in their accounts. What is more, I have argued that so long as content is construed as something to which perceivers stand in some sort of two-place relation, all versions of mainstream representationalism will fail to conform to a physicalist metaphysics. This is because content must (at least in some cases) be abstract (and therefore non-physical) if the perceiver is to stand in a two-place relation to it.

The physicalist solution to these problems is to adopt non-relationalism. On non-relationalist views, perceptual experiences should not be analysed as relations to objects nor to contents. Perceptual experiences are non-relational mental states, and the content of the

experience is a way of characterizing the experience – contents are ways of experiencing. Although non-relational views are able to meet the physicalist's criteria, I have argued that they encounter difficulties when trying to explain how our perceptual experiences can be assessed for accuracy. This is because (at least according to a popular view) assessing for accuracy requires comparing an aspect of the experience with the mind-independent world. On the sense-datum theory we can compare sense-data with the world, and on mainstream representationalism we can compare the content of the experience with the world, but if perceptual experiences are non-relational then they cannot provide anything with which a comparison to the world can be made. Perhaps there are other legitimate ways of assessing perceptual experiences for accuracy besides the matching view. However, as things stand, it looks as if the generally-held belief that we should begin our investigations into the nature of perception from a physicalist standpoint may result in our having to give up on the idea that our perceptual experiences can be assessed for accuracy.

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