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Sensory Experience and Representational Properties

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SENSORY EXPERIENCE AND
REPRESENTATIONAL PROPERTIES

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KING'S COLLEGE LONDON

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B I O G R A P H Y

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The 106th Presidential Address marks the inauguration of David Papineau as President of the Aristotelian Society for the 2013/14 academic year.

E D I T O R I A L N O T E

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SENSORY EXPERIENCE AND
REPRESENTATIONAL PROPERTIES

DAVID PAPINEAU

I. INTRODUCTION

THIS paper has a specific focus. It is about the nature of the conscious properties we instantiate when we have sensory experience. My concern will be with the metaphysical essence of these properties (and not with their putative significance for epistemological issues, or role in enabling reference to objects, or any such further matters).

Until I started working on this topic, I was happy to assume that these properties are representational. I vaguely supposed that conscious sensory experience could somehow be equated with representing one's environment to be thus-and-so in some mode. But this now seems quite wrong to me. My main worry is not the many *prima facie* counter-examples to representationalism that have been discussed at length in the literature. Rather it is that representational properties strike me as simply the wrong kind of thing to constitute conscious properties.

At first pass, representationalism about experiential consciousness seems to offer obvious attractions. For a start, there is every reason to suppose that conscious sensory experiences *are* representations. Considered from a scientific or evolutionary point of view, they certainly look like states that are designed to guide subjects' behaviour in a way appropriate to their (possibly only apparently) perceived environmental circumstances—that is, they look like states which represent those circumstances to subjects.

Moreover, a representationalist account of sensory consciousness promises to account for the apparent similarity of matching veridical and erroneous sensory experiences without bringing in any dubious mind-dependent objects. Sense-datum theories account for the similarity between a perception, illusion and hallucination as of a blue shirt, say, by positing a sense-datum present in all three cases to bear the blueness. But if a *sensory experience as of a blue shirt* is a kind of *representing that a blue shirt is present*, then such an experience doesn't require that anything really blue exists, any more that a *sentence saying* that a blue shirt is present requires something really blue to exist.

Even so, it now seems to me, as I said, that representationalism is all wrong. I still think that sensory experiences are representations all right. But I don't think that the conscious properties that they involve are

representational properties. By way of analogy, the sentences that I am now writing are representations, but their shape properties are not the same as their representational properties. The two are only contingently connected. Those shapes could easily have had different representational properties.

As well as criticizing representationalism, this paper will also defend a positive view of sensory experience. As the analogy just given will have suggested, I favour the view that the conscious properties of experience are intrinsic and non-relational. My positive view will thus have some similarities with the ‘adverbialism’ that flourished briefly a few decades ago.¹ It will also overlap with the views of those who argue for intrinsic sensory ‘qualia’, or ‘mental paint’, to use Ned Block’s graphic coinage (2004). However, contemporary defenders of qualia standardly present themselves as pointing to *extra* conscious features of experience, over and above those that can be equated with representational features.² This is not my view. I deny that *any* of the conscious features of experience are representational. In my view, it’s all paint.

I must confess that my positive view strikes me as little more than common sense. It is certainly the default view among theorists of perception outside philosophy. Given this, it is strange that it is not currently viewed as a serious option inside philosophy. True, this view—for want of a better term, let us call it non-relationism—has some unattractive features. While it shares with representationalism the advantages of a uniform account of the conscious nature of veridical and erroneous experiences, its needs to work hard to make good its insistence that conscious experience lacks any kind of relational structure. Still, all accounts of conscious experience turn out to have ugly features somewhere, so I do not regard the blemishes of non-relationism as by any means fatal. And moreover I hope to show that the representational theory is even more unsightly, whichever way you turn it.

¹ See Ducasse 1942, Chisholm 1957. There are also similarities between my positive view and the American ‘critical realism’ of Roy Wood Sellars and others in the 1920s; see Coates 2007 for discussion and development of this tradition.

² Thus Block op cit: ‘. . . friends of qualia can agree that experiences at least sometimes have representational content too . . . The recent focus of disagreement is on whether the phenomenal character of experience is *exhausted* by such representational contents. I say no’ (p. 165, his italics). And Peacocke 2008: ‘The *subjective* properties of an experience are those which specify what having the experience *is like* for its subject. The *sensational* properties of an experience are those of its *subjective* properties that it does *not* possess in virtue of features of the way the experience *represents* the world as being (its representational content)’ (p. 7, my italics this time).

In what follows, I shall not discuss disjunctivism or direct realism except in passing. To some extent this is simply because this view has a different focus. Where I am interested in the metaphysical nature of *all* conscious sensory experience, erroneous as well as veridical, disjunctivists are primarily concerned only with the good veridical cases, and offer a positive account of the erroneous bad cases only secondarily, if at all. Still, I recognize that a full treatment of these issues would need to assess non-relationism against disjunctivism as well as against representationalism. But only so much can be covered in a short paper. For now my aim is only to get non-relationism back onto the table, and representationalism off it.

II. REPRESENTATIONALISM

Representationalists equate having conscious sensory experience with representing things to be thus-and-so. But few if any representationalists say that subjects are sensorily experiencing things to be a certain way *whenever* they represent them to be that way. This is because many circumstances that can be represented sensorily can arguably also be represented non-sensorily, in thought and other ways. As well as seeing a blue shirt to be present, for example, I can also believe a blue short to be present, or remember a blue short to be present, and so on.

So representationalists need to add something to their basic equation of sensing with representing, in order to specify which kinds of representation constitute sensory experience. Thus for example Michael Tye holds that only mental representation that is poised, abstract and non-conceptual ('PANIC') constitutes sensory experience (1995, 2000).

Others add more, to accommodate the possibility that the same representational content might go with different conscious properties when represented in different sensory modes, as when a square object is represented both visually and tactually. Ambitious representationalists, like Tye, argue that such cases in fact involve different representational contents, and that the equation of conscious character with PANIC-style representational content is thus enough to accommodate them. (For instance, touch arguably represents facts about hardness and texture that vision doesn't.) But other representationalists are less ambitious, and hold that representational content needs to be complemented by specific sensory mode (vision, touch, hearing, . . .), and not just by some cross-modal PANIC-like requirement, in order to determine the conscious character of sensory experiences. (Cf Crane 2001.)

These details will not be at issue in what follows. Let us simply take it henceforth that representationalists specify some category or categories *within* which they equate conscious character with representational content. The relevant specification might be generic, covering all sensory

modalities, as with Tye's PANIC theory, or it might differentiate different sensory modalities. But within the relevant categories all representationalists will hold that how it consciously feels for you is nothing but how you are representing things to be.

So construed, representationalism faces a number of immediate and familiar putative counter-examples. We can group these into two kinds. The first are examples that argue that there is more to conscious character than is fixed by representational content. The second are examples that argue that there is more to representational content than is fixed by conscious character.

The counter-examples in both categories can all be formulated as pairs of contrast cases. The first category of counter-examples will contain pairs that arguably have the same representational content but different conscious characters. Thus we have:

Blurry vision. Two cases where the same scene is being visually represented, but where (a) the subject's vision is clear and (b) where the subject's vision has become blurry through tiredness or some similar cause.

Visual field. Two cases where some object is visually represented as having the same objective size, but where (a) it is seen from nearby and (b) it is seen from afar and so occupies less of the visual field.

Inverted spectrum. Two cases where the same external colour, say greenness, is visually represented, but where (a) it is viewed by a normal subject and (b) it is viewed by someone who has been fitted with inverting lenses from birth and so responds to greenness with the same internal brain state with which others respond to redness.

The second category of counter-examples works the other way round. Now we have pairs that arguably display the same conscious characters but have different representational contents.

Lookalikes. Two cases where a woman with a given appearance is seen, but where (a) I am visually representing my wife and (b) a doppelgänger of mine is visually representing *his* wife.

Generic Hallucinations. Two cases with a visual experience as of a blue shirt, but where (a) an actual shirt is perceived and visually represented to be blue and (b) where the experience is a

hallucination and so cannot have a singular representational content that some given shirt is blue.³

Inverted earth. Two cases involving intrinsically identical colour-experiencing subjects, but where (a) greenness is visually represented by a normal subject on Earth and (b) redness is visually represented on ‘inverted earth’ (where grass is red and so on) by a subject who has been given inverting lenses and so responds to redness with the same internal brain state with which Earthly subjects respond to greenness.

Cosmic swampbrain. Two cases of subjects with intrinsically identical brains, but where (a) one is a normal Earthly subject with normally representing sensory states and (b) the other is a ‘cosmic swampbrain’ that has randomly assembled itself along with supporting vat in outer space and so arguably isn’t representing anything at all.

There is now a huge amount of literature on putative counter-examples like these. The task facing defenders of representationalism is to show that, despite initial appearances, none of the counter-examples really violate the determination of conscious character by representational content, or vice versa. However, I am not going to enter into the details of these debates at this point, though I shall comment on some of them later. Instead I now want to step back and consider the metaphysical nature of representational properties. Once we are clear about this, we will be far better-placed to understand what is going on in the problem cases.

III. REPRESENTATIONS AND PROPOSITIONS

What is it for a subject to represent that things are thus-and-so? More specifically, what is it for a subject to do this in some sensory mode?

Representationalists are not always explicit about this, but most of the literature seems to presuppose that sensory representation is a matter of the subject bearing some relation to a *proposition*.

One way of thinking about this would be by analogy with the model of ‘propositional attitudes’. Just as some philosophers think of believing in terms of subjects bearing the *believing* relation to a proposition, and

³ I call these ‘generic hallucinations’ in recognition of the fact that not all sensory hallucinations need lack singular contents. On the face of things, my visual hallucination that my wife is F has a perfectly good singular content. But see section V below.

of hoping as their bearing the *hoping* relation to a proposition, and so on, so we can perhaps think of experiencing subjects as bearing some 'sensing relation' to a proposition (or perhaps some more specific visual relation, tactual relation, or so on).

An alternative would be to think of a subject as being in an intrinsic visual state (or tactual state, or . . .) that *expresses* a proposition, by analogy with the way that sentences in a language are standardly taken to express propositions. Perhaps these vehicles of representation could be brain states, or even dualist mind states. Subjects could then themselves be viewed as sensorily representing propositions in virtue of housing sensory vehicle states that express those propositions.

Now, one kind of kind of question that we could ask about these models would focus on the relevant relations. What is it for a subject to bear some *sensing relation* to a proposition, or alternatively for some sensory vehicle state to *express* a proposition? But in the present context I propose to by-pass these issues, puzzling as they are. This is because, even if they can be satisfactorily dealt with, there will remain a more immediate worry about any representationalism about sensory experience that trades in propositions. This is that propositions are abstract entities. There seems something quite amiss with the suggestion that my here-and-now conscious feelings are constituted by my bearing any kind of relation to abstract entities.

We can bring out the point by comparing propositions with *facts*. There is the *fact* that my shirt is blue, and the *proposition* that my short is blue. While both are identified by the phrase 'that my short is blue', and both involve the same object, my shirt, and the same property, blueness, they are very different. As I see it, the fact is concrete (my shirt *has* the property blueness), is located in space and time, and is the kind of thing that can have causes and effects. The proposition that my shirt is blue has none of these features. After all, even if my shirt were green, and it were no fact that my shirt is blue, the proposition that it is blue would still exist (assuming propositions to exist at all). Apart from anything else, this proposition would still be needed to serve as the content of the mental states of those who falsely believe my shirt to be blue, or visually misperceive it to be blue.

Propositions are not concrete facts, so much as *possible* facts. There are various philosophical ways of analysing propositions. Some philosophers regard them as sets of possible worlds. Others see them as Russellian structured compounds of objects and properties (yoked together, not as in an actual fact, but in a way that allows propositions to represent falsely). Yet others view propositions as Fregean structured compounds of senses that have objects and properties as referents. There are many interesting differences between these ways of analysing propositions. But the important point for present purposes is that they

all agree that propositions are abstract objects, existing outside space and time, and not the kinds of things that enter into causal relations.

This seems to me a fatal problem for those representationalists about sensory consciousness who hold that sensory representation consists in subjects being related to propositions. My conscious sensory feelings are concrete, here-and-now, replete with causes and effects. How can their metaphysical nature essentially involve relations to entities that lie outside space and time?⁴

Direct realists hold that our sensory experiences in the good cases constitutively involve the facts that we perceive. For example, when you perceive my shirt to be blue, the fact that my shirt is blue is literally part of your conscious state and indeed contributes the distinctive aspects of its conscious character. Some find this direct realism weird—how can something outside my head possibly contribute constitutively to how I consciously feel? But you don't have to find direct realism weird to object to the idea that sensory experience involves relations to *propositions*. It is one thing for a concrete fact in my visible surroundings to contribute constitutively to how I feel. It would be quite another for an abstract proposition outside space and time to do so. This would require my consciousness to somehow reach out and hook onto the denizens of some presumed Platonic realm. I find it hard to make any sense of this.

Note that the issue here is not whether or not propositions exist. In the next section I will touch on this issue. But that is not what matters here. Even if it is agreed that propositions exist, the problem that I am pressing remains. My complaint is not that propositions don't exist, but rather that supposed relations to entities in a Platonic realm outside space and time cannot matter to consciousness.

If representationalists say that they see no problem here, I am not sure I have much more to say. One doesn't have to be an ardent materialist or naturalist to be puzzled by relations between human minds and abstract propositions. The trouble is that we have no serious model to explain how such relationships can make any difference within the spatiotemporal world.

Representationalists often introduce their view by contrasting it with the sense-datum theory: while both offer a uniform account of veridical and erroneous experiences, the sense-datum theory, urge the representationalists, suffers from the metaphysically mysterious nature of its posited sense data. A relationship between concrete minds and abstract propositions strikes me as no less metaphysically mysterious.

⁴ This worry is aired but not endorsed in Pautz 2010 292-3. See also Kriegel 2011 141.

IV. DOING WITHOUT PROPOSITIONS

Some readers might be wondering whether propositions are essential to representationalism. Even if everyday discourse identifies sensory experiences and other representational states by means of their supposed relations to propositions⁵, it is by no means clear that these supposed relations are really constitutive of representational properties. An alternative perspective would be to view everyday references to propositions as a dispensable device with no implications for the metaphysical nature of representation.

This perspective is appealing independently of its significance for representationalism about sensory experience. Whatever view we have about sense experience, there seems little doubt that some mental and linguistic phenomena are genuinely representational, and moreover that such representation makes a difference within the spatiotemporal world. Given this, there would seem ample independent motivation to seek an understanding of representational properties that does not essentially involve abstract propositions.⁶

However, this line of thought will turn out to be of limited help to representationalism about sensory experience. We may be able to show that representation in general does not essentially involve propositions. But this will only highlight further difficulties facing representationalism about sensory experience in particular.

In the rest of this section I shall briefly explore the general prospects for representation without propositions, as this will in any case be helpful for issues discussed later in this paper. In the following two sections I shall explain why this line of thought only leads to further problems for the representationalist view of sensory experience.

The philosophy of applied mathematics offers a useful model for understanding representation without propositions. When doing physics it is useful to characterise certain quantities via their relation to numbers conceived of as abstract entities outside space and time. So for instance we might characterize the mass of some object in terms of its bearing the mass-in-grams relation to some real number. However it would seem odd to regard this relationship as metaphysically constitutive of the body's mass. We don't want to think of the body's disinclination to

⁵ I shall assume that throughout this paper that representational 'that clauses' in every discourse aim to refer to propositions. This point deserves further discussion, but it would take us too far afield here.

⁶ Uneasiness about the abstract nature of propositions has led some recent philosophical logicians to seek more concrete ways of understanding propositions. (King, Soames and Speaks 2014.) This seems to me the wrong way to go. We will do better to stick with the abstract propositions, but treat them as dispensable devices.

accelerate in response to some force as depending on its relation to a real number outside space and time. (Apart from anything else, *which* real number enters into this relation is a conventional matter, depend on which units we choose to measure mass in.) The natural response here is to view the number as a convenient *label* for an intrinsic property of the body. The idea would be that physical bodies in general have intrinsic inertial properties; these properties come in degrees (for example one body can have twice the mass of another); and we can usefully keep track of the structure of these intrinsic properties by mapping them conventionally into the real numbers.

Perhaps it is possible to view propositions in the same spirit. They are labels for the real representational features of mental states and other vehicles of representation. Mental states have non-abstract representational properties whose nature is contained within the spatiotemporal world. But it is convenient to characterize these properties indirectly, by mapping them into the abstract world of propositions.

The project of showing how physics can be understood without reference to abstract numbers will be most familiar to philosophers from Harry Field's defence of 'fictionalism' about mathematics (1980). But fictionalism is not what interests me here. Whether or not Field's arguments suffice to discredit the existence of numbers and other abstract mathematical objects per se, there is surely every reason to suppose that *physical* processes do not involve entities which lie outside space and time and that reference to abstract objects in physical theory is therefore a dispensable convenience. Similarly, in connection with representation, it is not the existence of abstract propositions per se that concerns me. I have no strong views on whether abstract propositions exist in their own right. But even so it seems clear to me that representation as a natural phenomenon does not depend on propositions, so in principle ought to be understandable without reference to them.

Much of the literature on Field's programme focuses on the possibility of 'representation theorems' which might show how particular bit of physics can be formulated 'nominalistically' yet usefully modelled in abstract terms. The provision of such theorems is not always straightforward. Quantum mechanics in particular raises difficulties. However, it would be a mistake to suppose that the metaphysical message of Field's programme need wait on a complete set of representation theorems. Even if we cannot show in detail how to formulate our physical theories without referring to abstract objects, this scarcely discredits the thesis that physical quantities and processes themselves are in no sense constituted by such abstract entities. Our inability to describe this reality in purely nominalist terms seems far

more likely to reflect the limitations of our ingenuity than the structure of reality itself.⁷

The same moral applies in the representational case. The suggestion I am exploring is that propositions stand to representational properties as numbers stand to physical properties. Representational properties themselves do not involve propositions or other abstract objects, even though propositions and their interrelations provide a convenient way of mapping the structure of representational properties. Now, the ideal way to vindicate this suggestion would be to provide a full-blooded representation theorem or something equivalent. First we would show how to articulate the structure of representational properties in purely nominalist terms; and then we would show how using propositions to model this structure provides a convenient but dispensable way of exploring it.⁸ However, as I have just pointed out in connection with physics, such a complete demonstration is not essential to the metaphysical thesis that representational properties do not involve abstract objects. We might have good reason to believe that propositions are a dispensable crutch, even though we can't show in detail how they might be dispensed with.

For those readers who feel disinclined to take this proposal seriously without at least some indication of how to construct a nominalized account of representation, it might be helpful to recall Donald Davidson's approach to meaning (1984). Consider a case where some vehicle *S* represents that *P*. For Davidson, the ontological commitments of this circumstance were best displayed by the schema:

S is true if and only if *P*.

As Davidson saw it, one important feature of such 'T-sentences' was that they captured representational facts without 'reifying truth conditions'—

⁷ Cf Leng 2013 where this point is stressed in defence of a fictionalist view of pure mathematics.

⁸ Robert J. Matthews has explored this kind of measure-theoretic approach to mental states in *The Measure of Mind* (2007) and other publications (1994, 2011). However, his focus is rather different to the one envisaged here. I am interested in the idea that reference to *propositions* is a dispensable device that enables us to chart the *representational* properties of mental states. But Matthews hopes instead to show that reference to *representational* properties is a dispensable device that enables us to chart the *internal causal* properties of mental states. While I agree that charting internal causal properties is an important *part* of what is achieved by propositional mental state attributions (see section VIII below), the idea that this is the *only* point of such attributions seems to me suffer from the same flaw as the Fodorian explanatory solipsism discussed in the section after next.

that is, without any commitment to the idea that vehicles of representation gain their representational power by ‘expressing’ abstract entities like propositions.

Now, any attempt to develop a nominalist account of representation in this Davidsonian spirit would need to show that the ‘true if and only if’ which features in T-sentences does not surreptitiously smuggle in propositions after all. Davidson himself aimed to do this by reading the ‘if and only if’ truth-functionally and by regarding ‘true’ as in effect implicitly defined by his theory of interpretation. Neither of these moves seems to me a good idea. Still, plenty of other options remain available for nominalizing representational facts in a generally Davidsonian way.

In addition to so nominalizing representational facts, a full-fledged account of the dispensability of propositions would also need to show in detail how references to propositions provide a useful way of modelling the nominalist representational facts reported by T-sentences. However, this is not the place to pursue these issues. My purpose here has only been to show that there is philosophical space for a nominalist approach to representation.

V. SENSORY EXPERIENCE AND SINGULAR CONTENT

Let us now consider whether a nominalist account of representation will enable representationalists about sensory experience to avoid the oddity of building conscious properties out of relations to abstract entities.

An initial difficulty is that sense experiences don’t seem to have truth conditions at all, whether these are construed as reified abstract objects or finessed in some Davidsonian way. This makes it hard for representationalists to avoid building conscious properties out of relations to abstract objects after all, even given the possibility of a nominalist account of truth conditions.

To see the problem here, consider first generic hallucinations. Suppose I am hallucinating a blue shirt. What then is the condition whose obtaining would render my sense experience veridical (not that it is)? At first pass we might expect all sense experiences as of particular facts to be construable as representing that some specific object has some given property—that some particular shirt is blue, say. But in the hallucinatory case there is no actual shirt in play. So we cannot here construct a truth condition involving any specific object—we cannot divide logical space, so to speak, into the regions where *that shirt* is blue and those where *it* is not.

This point quickly forces representationalists to deny that the conscious properties of *any* sensory experiences, including veridical ones,

are ever determined by *singular* representational contents, in the sense of contents involving specific particular objects. Start with hallucinations. Representationalists are committed to equating the conscious features of hallucinations with representational properties, so they need to find *non-singular* representational contents for hallucinations that do not involve any specific perceived objects, given that hallucinations don't have them. Now bring in veridical perceptions and illusions. Representationalists are committed to treating perceptions and illusions as consciously akin to any matching hallucinations; and they equate conscious character with representational content; so they end up needing to determine the conscious nature of perceptions and illusions by non-singular representational contents too.

The phenomenon of lookalikes provides an independent reason for representationalists to deny that sensory experiences have singular contents. Take any two particular objects that look just the same to two observers. Since the objects are distinct, any sensory experiences of them will have different singular truth conditions. (I am representing *my* wife to be wearing a blue dress; my doppelganger is representing *his* wife to be wearing a blue dress.) But by hypothesis the sensory experiences produced by the distinct objects have the same conscious character. (Our wives *look* the same.) So in order for representationalists to equate the shared conscious character of these two experiences with representational contents, they need once more to posit some non-singular representational content that does not involve the different particulars and so can be shared by the two experiences.

One possible option at this point is to construe sensory experiences, not as having singular contents that attribute properties to given objects, but rather as having existential contents that convey only that there is *some* object at a given location in one's environment which is a shirt and blue. But this doesn't work very well. Consider a sense experience as of a blue shirt, when there is in fact a blue shirt at the relevant location in my environment, but where the sense experience is not caused by that shirt, but by some scientist fiddling with my visual cortex. On the present suggestion, this sense experience ought to be counted as veridical, for the existential condition that something at the relevant location is a shirt and blue is indeed satisfied. But this looks wrong: this experience surely doesn't get things right, given that it has arisen quite independently of the real shirt in the environment whose blueness is supposed to make it true. (Soteriou 2000, Tye 2007.)

Given this, many intentionalists currently adopt a different tack. They construe the representational content of sense experience as directly feature-placing. On this view, the representationalist contents of experiences are a kind of incomplete condition. They simply present certain properties as instantiated in the environment, not via a complete existential condition saying that some object or other has them, but via a

kind of incomplete ‘gappy’ content. Thus an experience might present *blueness* and *shirtness* directly to a subject, or *wifely appearance*, *blueness* and *dressness*—not as attached to given particular object, but simply as currently instantiated.⁹

Now, I should say immediately that whole idea of construing experiences as having non-singular contents strikes me as highly ad hoc. If it were not that it promises to save representationalism, the idea that sensory experiences lack singular contents would have very little to recommend it. But let that pass for the moment (I shall return to it in the next section). At this stage I want to make a different observation, namely, that the favoured representationalist ploy of construing experiences as having ‘gappy’ contents brings back all the disadvantages that attached to abstract propositional contents. I earlier said that a supposed relation between subjects and abstract propositions was metaphysically quite unsuitable to serve as a plausible basis for conscious properties. The last section offered the prospect of understanding representational contents without bringing in propositions as abstract objects. But unattached properties are no less abstract than propositions, and so all the earlier difficulties come back. Properties abstracted from any facts into which they enter must be viewed as residing in some Platonic realm outside space and time. Given this, a relation between minds and such abstract entities seems a poor candidate for the constitution of conscious sensory properties. We have no good model for how an embodied mind might reach out and grasp such abstract Platonic denizens, and even if we did it seems the wrong kind of relation to create the here-and-now features of my conscious life.

A comparison with direct realism is again illuminating. It would be one thing to hold, with the direct realists, that sensory consciousness is constituted by my relation to properties instantiated in actual facts, as when I am aware of the blueness of the shirt actually in front of me. It is quite another to hold that they are constituted by my relation to blueness per se, as when I am hallucinating a blue shirt, and there is no instance of blueness to hand at all, but only the abstract property blue residing somewhere outside space and time.

⁹ Crane (2013) has recently argued that terms like ‘that giant rabbit’ in ‘he saw that giant rabbit on the barstool again’ should be treated as genuine singular terms subject to existential generalization, and that to this extent hallucinations can be viewed as having normal singular contents. I am not sure that I want to disagree here. The semantics of mental state attributions is a complicated matter (cf footnote 13 below) and it may well be that the right account will assimilate terms like ‘that giant rabbit’ to other singular terms. In any case, Crane certainly does not want to ground conscious sensory properties in relations to non-existent entities.

VI. BROADNESS

One option for representationalism at this point would be to go nominalist once more. Earlier I explained how representationalists might be able to avoid mental relations to abstract propositions by viewing the propositions as dispensable labels for more concrete representational properties. Perhaps the same move could be made with ‘gappy’ contents: the apparent mental relations to abstract properties could similarly be avoided by viewing the properties as labels for more concrete representational features of experiences.

Now, I am not sure how far any actual representationalists would want to pursue this line. For the most part, the defenders of representationalism seem remarkably unperturbed by the fact that they are building conscious properties out of unexplained mental relations to non-spatiotemporal entities. Indeed, as we shall see in section IX below, a significant number of representationalists take such relations to be positively necessary in order to account for the introspectible phenomenology of conscious sensory experience.

Even so, I would like to explore the nominalist option a bit further at this point. It will be illuminating to look more closely at the kind of representational properties offered by the nominalist programme. Even if these properties allow representationalists to avoid embarrassing Platonist commitments, they will turn out to be unsuitable for representationalism in other ways. In particular, there is every reason to expect such properties to be *broad*, in ways that are highly awkward for representationalism.

We saw earlier how a nominalist perspective might equate the property of representing that P with the property of being true if and only if P. (And similarly perhaps the ‘gappy’ property of representing property F might derivatively be equated with being apt to contribute systematically to the representation of F-involving Ps.) Now, any such nominalist representational properties will clearly be highly complex and relational. For a state to represent that the roof is wet, say, is a matter of its having some further property—truth—just in case the roof is wet. Given this, it is natural to wonder about the explanatory significance of representational properties. What is the explanatory point of attributing such highly complex relational properties to states? What do we gain by viewing certain states as being possibly true depending on whether or not some further circumstance obtains?

This is scarcely the place to attempt a complete answer to this question, but a natural first thought is that attributions of representational properties offer a way of tracking subjects’ relationships to their *environments*. The subject is in a state that is typically caused by P, and the subject’s subsequent actions will tend to achieve their aims if

P. Some philosophers seek to parlay these platitudes into reductive accounts of representation, equating representational contents with typical causes of representational states, or with the conditions under which actions prompted by those states will succeed. But one does not have to embrace any such reductionism to recognize that the primary explanatory role of representational contents is to portray subjects as embedded in certain ways in their wider environments.

Once we recognize this, then it becomes unsurprising that representational contents should typically be *broad*. By ‘broadness’ I mean the possibility of two intrinsically identical subjects nevertheless being in mental states with different representational contents. Broad contents of this kind were first drawn to the attention of philosophers by a series of thought experiments which argued that the possession of beliefs about many natural kinds (for instance, *elms*, *water*, and *arthritis*) depends not just on the internal properties of subjects but also on the natural and social environment in which they are embedded. (Putnam 1975, Burge 1979.)

Some philosophers purport to find broadness perplexing, and the supporting intuitions dubious, on the grounds that the point of attributing representational contents is to explain *behaviour*, conceived of as basic bodily movements: it cannot be right to attribute different contents to intrinsic identicals, they argue, given that they will always behave in the same way. (Fodor 1980.) But this misses the point of representational attributions. While such attributions may *inter alia* be relevant to the explanation of bodily behaviour—I shall return to this briefly later—their main purpose is to register subjects’ relation to their environments. If all we wanted was to predict bodily movements, there would be no call to correlate mental states with external environmental circumstances in the first place; a purely non-semantic characterization of those states would do the job perfect well. (Field 1978.) The whole point of representational attributions is environment-involving, and so it is only to be expected that identical subjects in different environments will represent different things.

I take these points to argue that sensory experiences as well as thoughts will have broad contents. The attribution of representational contents plays the same explanatory role in both cases. Just as with thoughts, the reason we view sensory experiences as representational is to relate subjects to aspects of their environment. So we have every reason to expect that intrinsically similar sensory states will have different contents for subjects embedded in different environments.

Broadness is of course the source of the second range of counterexamples mentioned earlier (lookalikes, generic hallucinations, inverted earth, cosmic swampbrain). In all of these examples we have a pair of cases where two subjects are intrinsically identical but are in

different relevant environments. The intrinsic identity argues that they are consciously identical, but the environmental difference argues that they are representationally different.

Representationalists have a choice in the face of such examples. They can either resist the representational broadness, and insist that the two subjects are representationally equivalent despite their environmental differences. Or they can accept the representational broadness, and insist that the two subjects are consciously different despite their intrinsic identity.

All representationalists take the first option with lookalikes and generic hallucinations. But some take the second option with inverted earth and cosmic swampbrain.

We have already seen how their basic commitments force representationalists to deny that lookalikes and generic hallucinations have singular representational contents. In line with this, they will hold that there is no broad variation in contents in either kind of case. With respect to lookalikes, my dopplegänger and I are both visually representing only the presence of a certain womanly appearance, despite the fact we are confronted with different particular women. And in connection with hallucinations, both the good and bad experiencers are alike representing only the properties of blueness and shirtness, despite the fact that in the good case the subject has a perfectly good object to which to attach these properties.

It would be possible to take the same kind of line with inverted earth and cosmic swampbrain, arguing that in each case the contrasting pair of subjects have the same representational contents despite their different environments. But most representationalists go the other way. Instead of working on the representational contents to make them come out the same across the contrasting subjects, they bite the bullet and say that the conscious experiences of the contrasting subjects will be different. So, for example, they maintain that the conscious visual properties enjoyed by my twin on inverted earth will be different from mine, despite our intrinsic similarity, in virtue of the fact that he is representing greenness when I represent redness. And similarly representationalists deny that cosmic swapmbrain will share the experiences of its normally embodied intrinsic duplicates, maintaining instead that it will have no experiences at all, in line with the fact it is not representing anything at all, for lack of any environment to represent. (Dretske 1995 1996, Tye 1995, Lycan 1996 2001, Byrne and Tye 2006.)

I don't find either of these representational responses to broadness particularly convincing. Let us take the two kinds of cases in turn. First lookalikes and generic hallucinations. The basic commitments of representationalism may demand a denial of singular contents, but more

general considerations make this denial decidedly unappealing. One of the primary purposes of sensory experience is undoubtedly the reidentification of particulars, as when I recognize my wife, or my shirt, or any other familiar object. (Of course we recognize them *by* registering their appearances, but this is no reason to hold that we are only *representing* those appearances; after all, many thoughts are derived from appearances too, but we don't deny them singular contents on this account.) Indeed there are whole areas of the brain, like the fusiform face area, whose purpose is manifestly to subserve the reidentification of particulars. Given this, there seems every reason to hold that I and my doppelgänger are visually representing different women, that the veridical perceiver is representing *that* particular shirt, and that the hallucinator is failing to represent a truth condition at all. To an unbiased eye, the denial of these natural claims will look like a case of the theoretical tail wagging the attributional dog.

With inverted earth and cosmic swampbrain the awkwardness of the preferred representational response is even more evident. Many will take it to be simply obvious that the contrasting pairs of subjects must be consciously identical, given their intrinsic identity. Perhaps we should not be too quick to side with this intuition in the case of cosmic swampbrain. It is a strange and unfamiliar case, and maybe little weight should be accorded to intuitions about such far-off possibilities. But going broad about consciousness seems far less attractive for inverted earth. Here we have a subject just like you or me in every respect, save that it has been living for a while in an environment where the colours of surfaces have been switched, but in such a way as to have no causal impact on the subject. It seems very odd, to say the least, to hold that such a difference would produce a conscious difference.¹⁰

By this stage, I hope that readers are becoming worried about the philosophical costs of representationalism. I have already stressed the difficulties that arise when representationalists try to build conscious properties out of relations to abstract entities. We now see in addition that broadness forces representationalism into a number of other unattractive commitments. Perhaps these costs would be worth paying if there were no good alternative theory of conscious experience. However, there seems to me an obvious alternative theory, one which shares all the virtues of representationalism, yet suffers from none of its disadvantages.

¹⁰ Note how this broad representationalism is again more extreme than direct realism. It constitutes consciousness, not out of properties immediately present to veridical perception, but rather out of those with which subjects have become environmentally correlated over time. (So even an Inverted Earthling who is hallucinating a grass lawn will be consciously inverted with respect to its intrinsically identical Earthly counterpart even though there is nothing red in its immediate vicinity at all.)

VII. NON-RELATIONISM

My positive proposal is to identify the conscious properties of sensory experiences with their *vehicle* properties rather than their representational properties. As I said earlier, I have no doubt that in the actual world all sensory experiences are representations. But it is not *what* they represent that fixes their conscious character, but *how* they represent.

By way of analogy, take the sentence ‘Paris is south of London’. This has the *representational* property of being true if and only if Paris is south of London. But it also has the *vehicle* properties of being written in Times Roman script, in black letters, 12 point, and so on. Note how in a different world (indeed in a different language) a physical state could have just the same vehicle properties yet not that representational property.

So my positive proposal is that conscious sensory properties are analogous to the sentence’s vehicle properties rather than its representational properties. They are the simple intrinsic properties whose instantiation in fact represents to subjects that things are thus-and-so, not the more complex relational property of so being represented to. To my mind, this non-relational¹¹ view benefits from all the virtues of representationalism, while suffering none of the defects.

Note first how non-relationism, no less than the representational theory, offers a uniform account of veridical, illusory and hallucinatory experiences. There is no difficulty in explaining why matching such cases should have the same conscious character—this will simply be because they all involve intrinsically identical vehicles of representation.

Second, note that non-relationism is under no pressure to build relations to abstract entities into conscious properties. We have seen how representationalists find it hard to avoid the metaphysical awkwardness of invoking relations to non-spatiotemporal abstract entities in their account of conscious properties. Non-relationism simply by-passes all these difficulties, since it equates conscious properties not with representational properties but with intrinsic vehicle properties. There is no reason to think of these vehicle properties as trading in any dubious Platonist relations.

¹¹ I originally wanted to give my positive view the slightly more catchy name of ‘vehicle representationalism’, in virtue of its appeal to ‘vehicle properties’. But on reflection it seemed best to drop this, given that my central claim is that conscious sensory properties are not essentially representational at all.

Third, note how the last section's difficulties about broadness simply dissolve away once we make the non-relational switch from representational properties to vehicle properties. We can simply allow that all the contrasting pairs (lookalikes, generic hallucinations, inverted earth, cosmic swampbrain) involve different broad *representational* contents, in virtue of their different environments, yet insist that they will be *consciously* identical, in virtue of their shared vehicle properties. Since we are now equating conscious properties with vehicle properties rather than representational properties, we can allow broadness in the latter while keeping consciousness itself independent of the environment.

Finally, note how the converse set of counter-examples to representationalism mentioned earlier also cease to present any difficulties once we switch to non-relationism. These were the cases where the contrasting pairs putatively involved different conscious properties even though representationally the same (blurry vision, visual field, inverted spectra). I have not returned to these since first mentioning them, since they raise no significant issues of principle, and correspondingly leave representationalists plenty of room to manoeuvre, either by insisting the cases are representationally different (the natural move for blurry vision and visual fields) or consciously the same (also a possible line with inverted spectra). Still, for what it is worth, these examples don't even present *prima facie* objections to non-relationism, since non-relationists can simply attribute any conscious differences in play to differences in vehicle properties even if representational content remains the same. They simply need to observe that the vehicle states involved in blurry vision (or seeing things more closely, or seeing red with the lenses fitted) are different in relevant respects from the contrast cases.

This last reference to 'relevant respects' is likely to prompt an obvious question about my non-relationist stance. *Which* intrinsic properties do I propose to equate conscious properties with?

This kind of question will be familiar from debates about physicalist accounts of mental properties generally. Should physicalists equate mental properties with strictly physical properties, or rather with 'functional' causal-role properties which can be variably realized by different strictly physical properties? And, if the latter, how fine-grained should the role properties be—how many detailed organizational differences make a difference to conscious properties?

I do not propose to answer this kind of question in this paper (though I shall consider some related issues in my final section). The thesis that matters for present purposes is simply that the properties that fix a subject's conscious experiential properties are intrinsic vehicle properties rather than representational ones. For all that matters here, these may be strictly physical properties, or functional causal-role

properties¹², or indeed dualist mental-stuff properties. Any of these could serve as the intrinsic properties of the states that carry representational content. My concern in this paper is only to establish that sensory properties are intrinsic properties of some kind, not to adjudicate between these options.

VIII. REPORTS OF SENSORY EXPERIENCE

As I said earlier, I take the non-relationist view to be the default position among theorists of perception outside philosophy. Given this, and given its many apparent advantages over representationalism, we might well wonder why it is so out of fashion within philosophy.

To the extent that any non-relationist view is mentioned in the contemporary philosophical literature, it is normally under the heading of ‘adverbialism’. In a middle of the last century some philosophers reacted to the idea that sense experience required a relation to ‘sense data’. They suggested that reports like ‘X is seeing a red object’ were better interpreted along the lines of ‘X is seeing redly’. The point of this adverbial reading was to get away from the idea that sense experience has an act-object structure, and to present it as simply involving an intrinsic modulation of the manner in which X is seeing. (Ducasse 1942, Chisholm 1957.)

Insofar as adverbialism supports the idea that conscious sensory properties are non-relational, it is in line with the arguments of this paper. However, in the contemporary literature it is invariably quickly dismissed on the basis of a criticism due to Frank Jackson (1977). Consider a subject who is simultaneously seeing a red square and a green circle. The adverbialist will presumably describe this as a matter of the subject ‘seeing redly, squarely, greenly, circularly’. Jackson’s objection is that this fails to specify that the red goes with the square and the green with the circle. The adverbial description would seem to apply equally to someone who is seeing a red circle and a green square.

Now, it is not obvious that Jackson’s objection cannot be answered in its own terms. Michael Tye has attempted to show how reports of sensory experience might be construed in a way that meets Jackson’s worry directly (1984 1989). But in any case this seems to me more than a viable non-relationism needs. The important part of non-relationism, as far as I am concerned, is a thesis about the metaphysical nature of sensory experience: it is constituted by intrinsic non-relational

¹² References to ‘functional’ or ‘causal-role’ properties in this paper should all be understood in a ‘short-arm’ way, as referring to structures of causes and effects internal to subjects, and not to causal relations to external items.

properties of subjects. An analysis of the logical form of sensory experience reports is a secondary matter. Maybe these can be analysed along adverbial lines. But this does not seem to me the most obvious way of defending non-relationism.

After all, it is no part of non-relationism, as I am construing it, to deny that sensory experiences *have* representational properties. It is just that these are distinct from their conscious properties. So there is no reason why non-relationists should not take linguistic reports of sensory experiences at face value, as specifying the representational contents of those experiences. Indeed I explored just this possibility at some length earlier, suggesting that such reports specify representational contents via the in-principle dispensable device of propositional modelling.

I would now like to suggest that these representational descriptions also perform a second duty, by also specifying the intrinsic conscious properties of representational experiences. Note that, despite Jackson's criticism, there is no reason to think of these intrinsic properties as somehow unstructured. An experience of a red circle and a green square will be built up from a number of intrinsic elements combined in a certain way, elements which it will share with other experiences. In line with this, my present suggestion is that our reports of sensory experiences indicate this intrinsic structure obliquely, alongside their specifications of representational content. When we describe the representational content of experiences, we are also along the way labelling their intrinsic structures, indicating what kind of elements they contain and how they are combined.

According to this suggestion, reference to the intrinsic properties of experience comes out as a case of the familiar phenomenon of reference by contingent description. Ordinary reports of sensory experience identify their intrinsic properties indirectly, via a description of other properties, representational properties, with which they are only contingently connected.

Non-relationism about experience is sometimes countered by P.F. Strawson's observation that the natural way to respond to requests to describe your experiences is to specify what they are *about*: 'I see the red light of the setting sun filtering through the black and thickly clustered branches of the elms; I see the dappled deer grazing in groups on the vivid green grass...' (1979, p. 97). From the perspective of my present suggestion, there is no need to resist Strawson's point, taken as a comment about the linguistic form of sensory experience reports. Such reports do not directly identify intrinsic features of experiences, but proceed via first specifying a relationship between the subject and certain mind-independent objects and properties. But this does not mean that such reports don't also indicate the intrinsic conscious features of experience.

Of course, the best way of justifying this suggestion would be a detailed account of how this system of labelling works. But here I can do no more than draw attention to the possibility of such a system.¹³

IX. TRANSPARENCY

I suspect that the real reason that non-relationism is philosophically peripheral nowadays is little to do with technical worries about the logical form of linguistic reports of sensory experience. Rather the resistance derives from the thought that *introspection* shows us *directly* that sensory experience is relational. The problem isn't that language presents it as relational. It is rather that we can tell directly, from reflection on our own sense experience, that it has a relational structure.

This is the message of the 'transparency' or the 'diaphanousness' of perception. As a number of writers have pointed out, when we turn our introspective attention inwards and attempt to identify any supposed intrinsic features of sense experience, we seem unable to discern anything apart from the external objects and properties of which we were aware when our attention was directed outwards. So, for example, Harman (1990): "Look at a tree and try to turn your attention to intrinsic features of your visual experience. I predict you will find that the only features there to turn your attention to will be features of the presented tree, including relational features of the tree 'from here'" (p. 39).

This line of argument is widely taken to show that conscious experience relates us to objective worldly properties. However, it strikes me as quite unconvincing. Here is what does seem true about the exercise Harman invites us to perform: when you switch from attending to the tree, and instead turn your mind introspectively to the nature of your visual experience, none of your conscious sensory properties alter; that is, introspecting makes no difference to the conscious nature of your sensory experience. But this scarcely dictates any conclusions about the nature of the conscious experience itself. That introspection doesn't make a conscious sensory difference is surely consistent with pretty much any view of conscious sensory properties. On the face of it, all parties to the debate—non-relationists, sense datum theorists, and

¹³ I view this as a general point about 'content clauses'. They characteristically indicate internal 'syntax' as well as external 'semantics'. Earlier I took issue with Fodor's 'methodological solipsism', arguing that representation as such is to do with environmental embedding rather than internal causal workings. However, I think that *attributions* of representational content generally tell us about the latter as well as the former.

disjunctivists, as well as representationalists—can happily agree that introspection *per se* leaves sense experience as it is.

True, the phenomenon of ‘transparency’, as I am understanding it, does arguably place constraints on accounts of *introspection*. It implies that introspection doesn’t alter sense experience. But on reflection this constraint is unsurprising. If introspection is a cognitive rather than sensory activity, as seems independently plausible, then ‘transparency’ is just what we should expect. There is no obvious reason why turning one’s thoughts to one’s sensory experience should alter the experience itself. After all, most things aren’t altered by being thought about.

From my perspective, then, our conscious sensory properties, the ones we are aware of when we introspect, are intrinsic properties of us, and metaphysically quite distinct from the properties of objects that successful sensory experience enable us to perceive. The ‘blueness’ that I know to be present when I introspect my sense experience is a property of me, not of the object out there. Of course there is a perfectly good sense in which I *perceive* the external blueness of my shirt itself in the good case. But I so perceive that external blueness in virtue of *having* a different property of conscious sensory ‘blueness’.

Still, isn’t there just one property that I am *aware of*? And so don’t we have to equate the conscious ‘blueness’—which surely I am aware of—with the shirt’s blueness, on pain of denying that I am aware of the shirt’s colour? Well, I don’t at all mind saying that I am ‘aware of’ the shirt’s external colour in the good case. Of course I am. But in that sense I am not ‘aware of’ my conscious ‘blueness’. Indeed in a normal situation, where I am not introspecting, I deny that there is any sense at all in which I am aware *of* my conscious ‘blueness’. It is a conscious property all right, and I can turn my mind to it by introspecting, but when I am not introspecting, as I normally am not, I have no state of mind which is *about* that ‘blueness’. I just consciously have the ‘blueness’.

And in an hallucinatory or illusory case, when I am not introspecting—what am I aware of there? It can’t be the external blueness, because there isn’t any, not the conscious ‘blueness’, because I am not introspecting. I say that in this case there is *no* property at all that I am in any sense aware *of*. I *have* the conscious property of ‘blueness’ all right. But this does not in any sense make me aware of anything, if there’s no external blueness there, and I am not introspecting. As I said, I just *have* the ‘blueness’.

X. INTRINSIC INTENTIONALITY

There are a number of philosophers who would agree with much of what I have said so far, but will nevertheless urge that conscious sensory experience is ‘intrinsically intentional’. Even if conscious sensory experience is an intrinsic matter, and does not *represent* in a broad environment-involving sense, it nevertheless ‘points to’ a range of putative objects and properties, it ‘presents’ subjects with a putative world. (Loar 2003, Farkas 2013.)

In the end I am not sure how far I want to disagree here. While I don’t think that this line of thought succeeds in showing that sensory consciousness is in any way intrinsically *representational*, I do recognize that sensory consciousness does have features which might warrant viewing it as in some sense intrinsically ‘intentional’. I shall finish this paper by briefly discussing these features.

It will be useful to consider these matters from the perspective of the cosmic swampbrain. Let us now suppose, for the sake of the argument (since this will be agreed by the friends of intrinsic intentionality), that the cosmic swampbrain shares all the conscious properties of its more happily located intrinsic duplicates. And let us also agree that there is no sense in which its states represent features of an environment. After all, the swampbrain doesn’t have any environment to speak of, let alone an established pattern of correlations between its intrinsic states and features thereof.

Even so, despite the fact that its states doesn’t actually represent an environment, there is an obvious initial sense in which it will *seem* to the swampbrain that its states so represent. After all, the swampbrain is intrinsically just like a normal human brain. So just as we humans *believe* our sensory states to represent our environment, when we reflect on the matter, so will the swampbrain have corresponding internal cognitive states. Moreover, if there is a conscious phenomenology to such cognitive states, the swampbrain will feel just like we do when we believe that our sensory states are representational.

Of course, from my perspective these cognitive states of the swampbrain are not really *representing* anything. I haven’t said anything so far in this paper about either the conscious or representational properties of cognitive states. But I am inclined to take the same line with these as I do with sensory states. I see no reason to deny that cognitive states have a distinctive phenomenology of conscious properties. But these are intrinsic properties, and as such only contingently connected with the representational properties that cognitive states possess in the actual world. So cosmic swampbrain’s cognitive states will share conscious properties with ours, but not representational properties. It will *feel* to cosmic swampbrain, so to

speak, as if its cognitive states are representing that its sensory states represent, even though those cognitive states aren't really representing anything.

So that is one sense in which I agree that sensory experiences intrinsically appear representational. Still, perhaps this is a bit thin. The point just made is about cognitive reactions to sensory experiences, rather than the nature of the experiences themselves. This does not yet give us a sense in which the experiences themselves are intrinsically intentional.

But perhaps there is also room to show, not just that our sensory experiences are naturally thought of as representational, but that they naturally lend themselves to such thoughts. My thought here is that many sensory experiences are particularly *apt* to represent specific circumstances, in the sense that they are just the kinds of things that would be suitable to represent those circumstances, if only they were embedded in an appropriate environment.

As it happens, this kind of aptness to represent specific circumstances applies much more to some kinds of sensory experience than others. Compare colour and shape perception. On the face of things, our conscious colour experiences could easily have represented other properties than colours, such as other radiant features of surfaces. Indeed it strikes us that just the same conscious colour experiences could easily have represented different surface *colours*, as in inverted spectrum scenarios. With shape perception things seem different. It is hard to imagine shape experiences representing anything but shapes. And correspondingly it certainly doesn't seem that 'square' and 'circle' experiences could easily swap their representational roles.

At first pass, this contrast can be attributed to the differing ways in which the two kinds of experience seem to be constituted by internal functional roles. Conscious shape experiences seem to be constitutionally tied to a rich structure of functional relationships with other shape experiences and also with inclinations to action. By contrast, colour experiences seem only to have a limited range of built-in connections with other colour experiences and none with inclinations to action. This is why it seems easy to 'invert' colour experiences but not shape ones. It looks as if we could swap the 'red' and 'green' experiences while leaving all their essential functional connections intact. But with shape experiences it seems that any such swapping would inevitably carry with it some differentiating functional features.¹⁴

¹⁴ Farkas 2013 argues interestingly that functional features of shape experiences not only explain why those experiences are well-suited for representing shapes, but also

In the literature, these points are often taken to argue that, while a ‘functional’ account of shape perception is viable, any account of colour perception will need to bring in ‘qualia’ in addition to functional properties. The thought is that, while an experience as of a circle, say, can arguably be metaphysically equated with being-in-a-state-with-such-and-such-an-internal-functional-role, the relevant internal roles for ‘red’ and ‘green’ experiences are not sufficiently distinctive, and so something else—physical realization perhaps—is needed to ground the differing natures of the colour experiences.

I have no strong views on these matters. As I said earlier, I am not concerned in this paper with *which* intrinsic properties constitute the nature of conscious experience. But it is worth emphasizing that in my terms it is indeed a choice between *intrinsic* properties that is at issue here. We need to view the ‘realizer’ and ‘role’ options as two different ways of viewing sensory experiences as *intrinsic* to subjects, and not as a choice between an ‘intrinsic’ realizer account and a ‘representational’ role account.

This issue is often muddled in the literature. Many of the arguments aimed at showing colour experiences involve ‘qualia’ are concerned to establish that they can’t be accounted for in either representational *or* functional terms. And this can then create the impression that those experiential properties that escape such arguments—such as shape experiences—are effectively in the same category as representational properties. Perhaps this is part of the explanation for the tendency, noted earlier, for friends of ‘qualia’ so readily to allow that there are also many ‘representational’ sensory properties alongside the qualitative ones.

Be that as it may, from the perspective of this paper the assimilation of functional properties to representational properties is a mistake. Functional properties, as I am understanding them, are *internal* causal role properties. They are a matter of subjects housing certain intrinsic causal structures, intrinsic in the sense that their presence does not depend on any entities outside the subject. As such, functional properties cannot be representational properties, since representational properties require environments. Cosmic swampbrain has states with all the internal functional roles you could want, yet none of its states are in any sense representing anything.

This non-representationality of internal functional properties is not undermined by limitations on what they are capable of representing. Perhaps the in-built structural features of conscious shape experiences mean that *anything* that they could serve to represent would be very like

why they strike us as representing things ‘out there’, in a way that pain and smell experiences, say, do not.

external physical space, some kind of three-dimensional structure which contains objects that persist through a fourth dimension. Where colour perception could be in principle be made to serve many representational purpose, shape experiences are only good for one representational thing. Even if this were so, I say, it doesn't follow that conscious shape properties are constitutionally the same as representational properties. Cosmic swampbrain has the former, but lacks the latter.

Having made these points, I am not sure that I have any further objections to those who want to insist on the 'intentionality' of experience. I am happy to allow that the intrinsic nature of certain conscious sensory experiences suits them excellently for certain representational purposes. Indeed in certain cases there may be just one kind of thing that they are good for representing, and plugged into an appropriate environment they will do so in an ideal way. From my perspective, this does not mean that these conscious properties are intrinsically representational. There are possible cases, as with cosmic swampbrain, where consciousness and representation come apart. Still, if some philosophers want to say that, even so, these conscious states' aptness for representation means that they are 'intrinsically intentional', I am happy to stop there.¹⁵

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