Pautz on the laws of appearance, internalism, and color realism

Jeff Speaks

June 13, 2022

Adam Pautz's *Perception* is the best general treatment of theories of perceptual experience that I've ever read. Each chapter is packed with fascinating arguments. Here I'll focus on two problems Pautz raises for representationalist theories of perceptual experience.

1 THE LAWS OF APPEARANCE

1.1 *The puzzle of the laws of appearance*

One of the problems Pautz poses for representationalist views of perception is a dilemma generated by claims which he calls 'laws of appearance.' The dilemma is basically this: each of the laws seems necessary; but it is hard to see why the laws should be necessary, if representationalism is true.

Pautz lists six types of laws of appearance.[1] I think that they fall into three categories:

1. *Content restriction laws*: certain contents are, just in virtue of the kinds of contents they are, ineligible to be represented in perceptual experience. Examples include abstract contents (like the proposition that justice is a

---

[1] Pautz (2021), §3.8. Further references are also to this work.

virtue) and radically indeterminate contents (like the proposition that an object is colored — with no further information about which color).

2. *Inclusion laws*: laws which say that if the content of experience includes one sort of property it must also include another. For example, if one perceptually represents an object as colored one must also perceptually represent it as having a certain location.

3. *Exclusion laws*: laws which say that one can't represent an object as having both of two properties. For example, one can't represent a single surface as red and green, or a single object as round and square.[2]

Each of these generalizations appears to be necessary, rather than contingent. But if laws of these types are necessary, this looks puzzling from the point of view of representationalism, because there appear to be no parallel laws governing other representational states.[3] There's no special difficulty, for example, in entertaining any of the contents just listed in thought. So the representationalist seems forced to say that it is just a brute fact that perceptual representation, but not other sorts of representation, is necessarily governed by the laws of appearance.

1.2 Connections between representationalism, sense datum theory, and naive realism

One move for the representationalist is to push back against the intuition that the laws of appearance are necessary. Here I want to grant for the purposes of argument the claim that the laws of appearance are necessary, and ask whether this poses a distinctive problem for representationalism, as opposed to other views about the nature of perceptual experience. My focus will be on two of the central rivals to representationalism: sense datum theory and naive realism.

Each of these theories of experience is related in systematic ways to representationalism. Consider first sense datum theory. The sense datum theorist's explanation of the character of experience begins with the properties instantiated by the sense data to which we are related in experience. In the simplest case, this will be a matter of the sense datum simply instantiating the properties which, according to the representationalist, are perceptually represented. So, where the representationalist says that an experience represents an object as red, the sense datum theorist says that it is a relation to a red sense datum.

But it would be an oversimplification to say that a sense datum theorist simply *equates* the properties presented in experience with the properties instantiated by the relevant sense datum. Some properties instantiated by sense

---

[2]One might think of exclusion laws as a special case of content restriction laws. As we'll see below, the issues raised by these two types of laws are quite different, so it will be useful to keep them separate for purposes of this discussion.

[3]Note that a puzzle — albeit an easier one — would remain even if the laws held with something weaker than metaphysical necessity. After all, violations of each of these laws applied to the case of thought are actual rather than merely possible.

data are not presented in experience and do not affect the character of experience in the way in which redness does. One obvious example would be properties to do with the ontological status of sense data. Historically, some sense datum theorists have taken them to be mental entities; others have taken them to be mind-independent. But neither sort of theorist thinks that properties of sense data which characterize the ontological category to which they belong are presented in experience. So being a property of a sense datum is not sufficient for being a property which is presented in experience, and shapes the character of that experience.[4]

To have a stable term for the phenomenon, let's say that the subset of a sense datum's properties which are presented to the perceiver and which shape the character of the experience are *pictured* by the sense datum. Then it seems that we can translate between the representationalist and the sense datum theorist using the following schema:

> E represents F as instantiated $\iff E$ involves a relation to a sense datum which pictures F

The clam is not (of course) that these claims are equivalent, or terminological variants of one other. Rather, the idea is just that a representationalist will accept an instance of the left side of the schema iff a sense datum theorist would accept the corresponding instance of the right side.

Let's turn now to the relationship between representationalism and naive realism. The naive realist explains the character of experience in terms of the facts about the perceiver's environment which are disclosed by the perceptual experience. For present purposes we can ignore the well-known complications for naive realism which are introduced by cases of illusion and hallucination. Setting aside these cases, where the representationalist says that an experience represents an object as red, the naive realist says that the experience involves disclosure of the redness of an object in the perceiver's environment. More generally, it seems that we can translate between the claims of the representationalist and the claims of the naive realist using the following schema:

> E represents F as instantiated $\iff E$ involves the disclosure of an instance of F

Again, it appears that — setting aside non-veridical experiences — the representationalist will endorse an instance of the left hand side of this schema iff a naive realist will accept the corresponding instance of the right hand side.

These connections between our three theories will help to frame our discussion of the bearing of the necessity of the laws of appearance on these theories. We have seen that a case can be made that, if these laws are necessary, they

---

[4]For some theorists, it will not be a necessary condition either, for reasons Pautz (26-7) discusses: one might hold that the character of experience is determined, not just by the nature of the relevant sense datum, but also by the perceiver's interpretation of that sense datum. I set this point aside for simplicity.

will be brute, unexplained necessities from the point of view of the representationalist. Our question is: are matters any different for these two rivals of representationalism?

1.3 Content restriction laws

Let's consider first content restriction laws, which say that certain contents are, just in virtue of the kinds of contents they are, ineligible to be the contents of perceptual experiences. Just to have an example, let's consider contents which involve predication of an abstract property, like the property of being a virtue. If we suppose that it is a necessary truth that perceptual experiences cannot represent the property of being a virtue as instantiated, then it appears that — given the above principles — the sense datum theorist and the naive realist also are forced to accept as necessary clams which are closely related to the sorts of content restriction laws the representationalist must accept as necessary.

The sense datum theorist will have to accept as necessary the following claim:

> Certain properties, just in virtue of the sorts of properties they are, are ineligible to be pictured by sense data.

The naive realist will have to accept as necessary the following claim:

> Certain properties, just in virtue of the sorts of properties they are, are ineligible to be disclosed by perceptual experience.

It is not obvious that these principles are any less brute or inexplicable than the content restriction laws themselves.

I can think of two ways in which a sense datum theorist or naive realist might respond. First, they might respond by trying to give an explanation of the relevant necessary truth. Second, they might respond by arguing that their failure to explain the necessary truth is less damaging than the corresponding failure by the representationalist.

The sense datum theorist might seem well-placed to pursue the first strategy. After all, according to the version of sense datum theory we have presented, the properties pictured by a sense datum are a subset of the properties instantiated by that sense datum. Might the sense datum theorist say that the nature of sense data precludes them from instantiating properties like being a virtue, and that this explains why sense data cannot picture these properties?

There are two reasons to be hesitant about this proposed explanation. First, it is not obvious that appeal to the essence of sense data is more explanatory than an appeal — which presumably the representationalist could make — to the nature of the perceptual representation relation. Second, the explanation is not sufficiently general. As we have seen, sense data only picture a subset of the properties they instantiate. But there would appear to be analogues of the content restriction laws for properties which sense data can instantiate but cannot picture. An example might be

4

The property of being mental is ineligible to be pictured by sense data.

or (depending on the theorist's preferences)

The property of being mind-independent is ineligible to be pictured by sense data.

At least one of these claims would seem to be necessary and not explicable in terms of a restriction on what properties can be instantiated by sense data. Examples could be multiplied using other sorts of properties which can be instantiated by, but not pictured by, sense data.

The opponent of representationalism might concede that the above truths are both necessary (from the point of view of the sense datum theorist and naive realist) and inexplicable, but still less damaging to these theories than the laws of appearance are to the representationalist. Here is one way to make the case. The representationalist, one might argue, is worse off than their rival because (i) they say that perceptual experiences are of the same kind as other representational states and (ii) content restriction laws do not hold for these other representational states. It is worse, the argument holds, to posit brute necessities about one member of a kind when the corresponding claims do not hold of other members of that kind.

But while this style of argument has some intuitive force, it seems to generalize a bit too readily. It is plausible that it is a necessary truth about me that I could not be a fried egg. This is not a necessary truth about my breakfast. Does the necessary truth about me seem more puzzling or less explicable if we concede that both me and my breakfast are members of the kind 'material object'? Surely not; despite our shared membership in this kind, there are salient differences between me and my breakfast which explain why this necessary truth would hold of me but not of it. But it is not obvious that the representationalist can't say something parallel. Representationalists never said that perceptual experiences were like thoughts and beliefs in every respect, after all.

1.4   Inclusion laws

Let's turn now to our second kind of law of appearance: the inclusion laws. Let's take as our example the claim — which for purposes of argument we are conceding to be a necessary truth — that, necessarily, if one perceptually represents an object as colored one must also represent that object as having a certain location.

As in the case of content restriction laws, the sense datum theorist and naive realist seem forced to posit necessary truths which are closely related to the relevant laws of appearance. It appears that the sense datum theory must accept the necessity of inclusion-law-analogues like

It a sense datum pictures a color, it must also picture a location.

The naive realist must accept the necessity of inclusion-law-analogues like

> If an experience discloses the color or an object, it must also disclose its location.

As above, it is not obvious how these necessary truths could be explained by the respective theories, and also not obvious why, if they cannot be explained, these necessities are less damaging for the sense datum theorist and the naive realist.

In the case of inclusion laws, however, the sense datum theorist and naive realist may seem to have an advantage. Both of these theories explain the character of experience in terms of properties of certain existing entities — sense data in the one case, and the perceiver's environment in the other. But it is plausibly a general necessary truth that any entity which has a color must have a location. So, in particular, any sense data or external objects which have a color must have a location. Can the sense datum theorist or the naive realist exploit this fact to explain the inclusion-law-analogues above?

Perhaps; but it is not at all obvious how an explanation of this sort would work. As we have seen, sense data only picture a subset of the properties they instantiate. And according to naive realism, experiences only disclose a subset of the properties of the objects in the perceiver's environment. So the simple facts that sense data and external objects are necessarily located if colored would not suffice to explain the two principles above. For that we would need some extra premise which explained why a sense datum's picturing a color would require *picturing* a location (rather than just instantiating one) and why an experience's disclosing the color of an object would require the *experience disclosing* its location (rather than the object just having a location).

The problem for the sense datum theory can be pressed by noting that there would appear to be examples of types of properties A, B such that (i) having a property of type A entails having a property of type B but (ii) sense data can picture properties of type A without picturing any properties of type B. Many sense datum theorists who think that only sense data can be colored will think that color properties and the property of being a sense datum are examples. But if this is possible, what is the explanation of why this cannot happen with color and location?

The problem for naive realist can be pressed by noting that there would appear to be examples of types of properties A, B such that (i) having a property of type A entails having a property of type B but (ii) experiences can disclose properties of type A without disclosing any properties of type B. Many naive realists will think that color properties and reflectance properties are an example here. But then, again, what is the explanation of why this cannot happen with color and location?

As with the content restriction laws, it turns out to be harder than it seems at first to see why these laws pose more of a challenge to the representationalist than to the rivals of representationalism.

1.5   Exclusion laws

Let's consider last the exclusion laws. These are a more difficult and interesting case. The exclusion laws say that certain sorts of impossible propositions cannot be among the contents of perceptual experience. Examples include propositions which represent a single surface as red and green or a single object as round and square.

When thinking about the bearing of the necessity of the exclusion laws on our three theories of experience, I think that it is useful to frame the discussion by asking whether *any* impossible propositions can ever be among the contents of experience. Let's call the affirmative answer to this question 'impossibilism' and the negative answer to this question 'anti-impossibilism.'

It is not obvious whether impossibilism or anti-impossibilism is true. There are a number of examples in the literature which attempt to show that impossibilism is true. One is the waterfall illusion, which Crane (1988) and others describe as an experience in which a single object is represented as moving and not moving. But, as Pautz (55, 138) and others plausibly point out, it is not at all clear that this is the correct account of the experience's content; some regard it as more apt to describe the experience as one in which the object is represented as stationary and the *something* is represented as in motion. A second sort of example involves Escher-style impossible figures. But, as Bayne (2010) plausibly argues, in many cases the relevant experiences can be understood as a series of experiences over time whose contents are individually possible but jointly impossible. A less well-explored route to impossibilism focuses on representation of identity and distinctness of objects and properties (as propositions about identity and distinctness will typically be impossible if false). But this line of argument would require contentious assumptions about the scope of perceptual representation.

So none of the arguments for impossibilism seems clearly compelling. (And the anti-impossibilist might reasonably point out that the difficulty of coming up with a clear example of a perceptual experience with an impossible content is itself somewhat telling.) Rather than try to decide whether impossibilism or anti-impossibilism is true, I want to consider each possibility, and ask how it bears on the dialectic between our three theories of experience.

Suppose first that impossibilism is true. Then we can have experiences which are 'as of' p despite p being impossible. This looks bad for the sense datum theorist, who then seems forced to say that sense data can picture impossible properties. But that means that sense data can instantiate impossible properties — which is impossible.[5] It also looks bad for the naive realist, at least if they say that all illusions are indiscriminable from veridical perceptions. For then they seem forced to say that there can be veridical disclosures of objects having impossible properties. And that again looks like a contradiction.

The representationalist, by contrast, can smoothly accommodate impossibil-

---

[5]To be sure, there is wiggle room for the sense datum theorist to say that sense data can picture (in the above sense) properties which they do not instantiate. But this would threaten to undercut some of the central motivations for sense datum theory.

ism. True, there would remain the problem of explaining why some impossible propositions can be perceptually represented while others — the ones mentioned in the exclusion laws — cannot. But compared to the problems which impossibilism would pose for the representationalist's rivals, this seems like a modest challenge.

Let's now suppose instead that anti-impossibilism is true. Then the sense datum theorist and the naive realist would appear to be on considerably stronger footing. They can then explain the exclusion laws as a special case of the more general thesis of anti-impossibilism, and can explain the latter (respectively) in terms of the fact that sense data and perceptually disclosed elements of reality cannot have impossible properties. By contrast, the representationalist seems stuck with no explanation of the general thesis of anti-impossibilism.

How should the representationalist respond? Here is one idea. One theme in the literature about nonconceptual content is that perceptual states have different kinds of contents than 'conceptual' states like thoughts. One way of cashing this out is to say that perceptual states have unstructured contents – e.g., sets of possible worlds – as their contents, whereas conceptual states have structured propositions as their contents.

But a familiar line of thought would seem to show that, if a type of propositional attitude (i) has sets of possible worlds as its contents, (ii) distributes over conjunction, and (iii) is such that it is not possible for a subject to stand in that propositional attitude relation to every proposition, then anti-impossibilism is true of that propositional attitude. Suppose for reductio that a propositional attitude relation R satisfies (i)-(iii), and that a subject stands in R to some impossible proposition P. By (iii), there must be some other proposition Q that the subject does not stand in R to. By (i) subject does stand in R to the conjunction of P and Q (because, on a possible worlds conception of content, the conjunction of any proposition and the impossible proposition is identical to the impossible proposition). But then by (ii) the subject stands in R to Q, which is a contradiction.

But it is very plausible that the perceptual representation relation satisfies (ii) and (iii). So, if it also satisfied (i), that would explain why impossibilism is true of it. I concede that there are other reasons for finding this view unattractive. But if one considers the question of how a representationalist might explain the truth of anti-impossibilism, the view does sort of suggest itself.

If this were our landing point, there would be some irony in that. One of the earliest and most influential contributions to the debate about nonconceptual contents was Crane's discussion of the waterfall illusion. Crane argued that the fact that the waterfall illusion represents an object as having contradictory properties shows that perceptual experience is nonconceptual. I think that the interpretation of the waterfall illusion is questionable, and that the inference from that interpretation to nonconceptualism is invalid. The present suggestion is a reversal of Crane's idea. The best argument for nonconceptualism in the vicinity turns out to be, not that we can have perceptual experiences with impossible contents, but that we can't.

8

2   REPRESENTATIONALISM AND REALISM

Pautz argues that the best version of representationalism ends up denying that objects are colored. Further, and worse, he argues that the best version of representationalism is committed to a similar irrealist view about the other properties represented in experience, including spatial properties. I want to explore the possibility of the representationalist resisting this kind of irrealist view.

Here's one way to represent Pautz's line of thought. Let's begin by defining three 'package views' which combine certain sorts of representationalism with certain views of the sensible properties:

> PACKAGE A: externalist representationalism + response independent realism about sensible properties

> PACKAGE B: representationalism + response dependent realism about sensible properties

> PACKAGE C: internalist representationalism + irrealism about sensible properties

Of course, Pautz does not think that these are the only logically possible packages. But I take it that he does think that they are the most plausible options for the representationalist. He then argues against Packages A and B, and defends C.

I am sympathetic to Pautz's arguments against Packages A and B. Rather than replying to those arguments, I want to consider the possibility of defending a package not on the list:

> PACKAGE D: internalist representationalism + response independent realism about sensible properties

Why does Package D not make the list of contenders? Pautz says

> 'If the brain 'made up' the experiential representation of all perceptible properties ... as internalist representationalism maintains, then it would be an inexplicable coincidence if those properties independently belonged to the objective world before sentient creatures evolved' (181-2).

The intuition here is clear enough. If experience is fully explained by internal facts, what could explain my experiences magically matching up with response-independent properties of objects in my environment? This would seem to be the kind of coincidence of which we should be suspicious.

But, while it is not hard to see the intuitive pull behind the thought that internalism pairs more naturally with irrealism, it is worth giving this intuition a closer look. Suppose that, like most people, I blithely believed before studying philosophy that the color, shapes, etc. that I perceptually represent objects as having are (in the good case) genuine response-independent properties of objects

9

in my environment. I take it that Pautz's view is that, in this pre-philosophical state, I am or at least could be justified in believing that (e.g.) bananas are yellow, and in believing that this is a response-independent property of bananas. So:

> [PRE-PAUTZ] Before learning about the nature of color representation, I am (or could be) justified in believing that objects have response-independent color properties.

Suppose that now gives me Pautz's book as a gift. I am struck by the power of Pautz's defense of internalist representationalism, and come to believe that the phenomenal character of my color experiences is fully explained by my internal neural states. Suppose that I adopt a very strong version of this view, and say that the phenomenal character of my color experiences is explained by and supervenes on my internal states.

I think that Pautz's view is that, if I reflect on the internalist representationalist view I have just adopted, this will undercut the justification I used to have for believing that bananas are yellow. So:

> [POST-PAUTZ] After learning of the truth of internalist representationalism, I am not (or would not be after sufficient reflection) justified in believing that objects have response-independent color properties.

After all, if were justified in maintaining my prior beliefs about the colors of things, I would then be endorsing Package D, rather than Package C.

If [PRE-PAUTZ] and [POST-PAUTZ] are true, then it seems that my knowledge of the truth of internalist representationalism must be a defeater of my prior justification for beliefs about the colors of objects. The challenge is to state a principle which both explains why our prior justification for beliefs about the colors of things is defeated when we come to know that internalist representationalism is true and avoids implausibly general skeptical consequences.[6]

To give an example of a way in which this style of reasoning might lead to general skeptical consequences, we can suppose that researches into the nature of mental representation uncover that internalism is true of our mathematical mental representations. Would it then be an inexplicable coincidence that mathematical reality corresponds to our representations? Would this undercut our prior justification for believing that 2+2=4? This seems implausible. And there are obvious worries about self-defeat in the vicinity if parallel points can be made about the representational states which figure in the reasoning used to support internalist representationalism itself.

I think that Pautz will say that these cases are not analogous to the case of our perceptual representation of colors. But why not? One answer would be to say that, in the case of the colors and other sensible properties, we have

---

[6]These issues have of course been much discussed in the context of evolutionary debunking arguments. For some of the difficulties in avoiding more general skeptical conclusions, see White (2010).

independent evidence that the phenomenal character of our experiences does not correlate well with the response-independent properties of external objects. But if this is the central reason for giving up on response-independent realism about color, it seems to be independent of the truth of internalist representationalism.

References

Tim Bayne, 2010. *The Unity of Consciousness*. Oxford University Press UK.

Tim Crane, 1988. The Waterfall Illusion. *Analysis* 48.

Adam Pautz, 2021. *Perception*. Routledge.

Roger White, 2010. You Just Believe That Because ... *Philosophical Perspectives* 24(1):573–615. doi:10.1111/j.1520-8583.2010.00204.x.