

## How Particular Is Perception?

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*The Unity of Perception* is a splendid achievement. It fuses the representational, phenomenal, and epistemic dimensions of perception into a coherent whole, bound together by their common basis in the exercise of perceptual capacities. Central to the account is Schellenberg's broadly Fregean theory of perceptual content, which assigns a pivotal role to *modes of presentation* (MOPs). Schellenberg develops the theory in impressive detail, applying it to a wide range of cases. I find many aspects of her theory quite compelling, especially her invocation of capacities in order to elucidate content. Nevertheless, I will argue that Schellenberg neglects key aspects of perceptual experience.

### §1. Fregean particularism

Schellenberg compares her Fregean theory with an opposing *Russellian* theory, according to which perceptual content is constituted by perceived objects and properties. To illustrate, suppose you perceive object  $o$  as having property  $F$ . In this case, Russellians say that the content of your perceptual state can be modeled as an ordered pair

$\langle o, F \rangle$ .

If you perceive a red cup *as* red, then  $o$  is the perceived cup and  $F$  is the property redness.

Schellenberg holds that the Russellian theory does not differentiate finely enough among perceptual states. She maintains that an adequate theory should instead posit perceptual contents

composed of MOPs, where distinct MOPs can share the same denotation. She argues that Fregeans are better positioned than Russellians to accommodate various phenomena, such as perceptual changes that occur when your perspective on the environment shifts (p. 65).<sup>1</sup>

In an earlier discussion, Schellenberg (2011) treated perceptual content as constituted by MOPs of objects and MOPs of properties. When you see object  $o$  as having property  $F$ , the content is an ordered pair:

$$\langle \tau, \Psi \rangle,$$

where  $\tau$  is an MOP of object  $o$  and  $\Psi$  is an MOP of property  $F$ . Schellenberg now rejects this property-based Fregean view (p. 15). She instead takes  $\Psi$  to be an MOP of a property-instance instantiated by  $o$ . If you perceive a red cup as red, then  $\Psi$  is an MOP of the instance of redness instantiated by the cup. On the property-based Fregean view,  $\Psi$  denotes a *universal*, which can be instantiated on multiple occasions by distinct entities. On the newer view,  $\Psi$  denotes a *particular*: a specific property-instance. Schellenberg calls the newer view *Fregean particularism*. According to Fregean particularism, perceptual content is constituted exclusively by singular MOPs: that is, MOPs whose semantic role is to denote particulars.<sup>2</sup>

Schellenberg elucidates singular MOPs by invoking perceptual capacities (pp. 87-92). She says that we have repeatable capacities to “single out” particulars in perception. A singular MOP results when you exercise such a capacity in a specific environmental context. For example, suppose you have a capacity to single out objects of type  $\alpha$ . When you apply this capacity to object  $\alpha_1$ , the result is a singular MOP that Schellenberg notates as

$$MOP_{r\alpha}(\alpha_1).$$

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<sup>1</sup> Page references are to *The Unity of Perception* unless otherwise noted.

<sup>2</sup> Some passages in the earlier discussion adumbrate Fregean particularism without endorsing it (Schellenberg, 2011, p. 35, fn. 20).

Suppose furthermore that you have a capacity to single out property-instances of type  $\pi$  and that you successfully apply this capacity to property-instance  $\pi_1$  instantiated by  $\alpha_1$ . The resulting perceptual state has a content that Schellenberg notates as:

$$\langle MOP_{r\alpha}(\alpha_1), MOP_{r\pi}(\pi_1) \rangle.$$

Schellenberg says that the component MOPs are *de re*, where “a *de re* mode of presentation is constituted at least in part by the particular singled out” (p. 64). Presumably the subscript “*r*” is meant to evoke “*de re*.”

Let us consider how Fregean particularism handles four otherwise similar subjects  $S_1$ ,  $S_2$ ,  $S_3$ , and  $S_4$ :

- $S_1$  perceives object  $\alpha_1$  as being red.  $\alpha_1$  is in fact red.
- $S_2$  perceives a numerically distinct but qualitatively identical object  $\alpha_2$  as being red.  $\alpha_2$  is in fact red.
- $S_3$  experiences an hallucination as of a red object.
- $S_4$  perceives object  $\alpha_1$  as being red. However,  $\alpha_1$  is not red ---  $S_4$  is suffering an illusion of some kind.

We may stipulate that  $S_1$ - $S_4$  enter into perceptual states with the same phenomenal character.

Schellenberg says that  $S_1$ - $S_4$  exercise the same two perceptual capacities: a capacity to single out objects of type  $\alpha$ , and a capacity to single out property-instances of redness (p. 91).  $S_1$ - $S_4$  deploy the capacities in different contexts, yielding different *token contents*:

$$S_1: \quad \langle MOP_{r\alpha}(\alpha_1), MOP_{r\pi}(\pi_1) \rangle$$

$$S_2: \quad \langle MOP_{r\alpha}(\alpha_2), MOP_{r\pi}(\pi_2) \rangle$$

$$S_3: \quad \langle MOP_{r\alpha}(\_\_\_\_), MOP_{r\pi}(\_\_\_\_) \rangle$$

$$S_4: \quad \langle MOP_{r\alpha}(\alpha_1), MOP_{r\pi}(\_\_\_\_) \rangle$$

A few comparisons:

- $S_1$  perceives  $\alpha_1$ , while  $S_2$  perceives  $\alpha_2$ . For that reason,  $S_1$ 's token content contains an MOP of  $\alpha_1$ , while  $S_2$ 's token content contains an MOP of  $\alpha_2$ . Similarly,  $S_1$ 's token content contains an MOP of property-instance  $\pi_1$ , while  $S_2$ 's token content contains an MOP of property-instance  $\pi_2$ .
- $S_3$  does not perceive any object, and she does not perceive any property-instance of redness. Hence the empty argument-places. Schellenberg says that  $MOP_{r\alpha}(\_\_)$  and  $MOP_{r\pi}(\_\_)$  are “gappy” singular MOPs. Each gap “marks the failure to single out a particular” (p. 89).
- $S_4$  exercises a capacity to single out instances of redness. Since no instance of redness is present,  $S_4$  fails to single out any such property-instance. The result is  $MOP_{r\pi}(\_\_)$ , a gappy singular MOP.

The common elements  $MOP_{r\alpha}$  and  $MOP_{r\pi}$  in all four token contents register that all four subjects exercise the same perceptual capacities. Exercise of those capacities in different contexts yields different singular MOPs (sometimes gappy singular MOPs).<sup>3</sup>

## §2. Accuracy-conditions for perceptual states

Like most contemporary discussants, Schellenberg links perceptual content to *accuracy-conditions*: “The accuracy conditions of perceptual content specify the way the environment of a

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<sup>3</sup> Schellenberg says that “ $MOP_{r\alpha}$ ” and “ $MOP_{r\pi}$ ” are *functional expressions* (p. 88). For example, “ $MOP_{r\alpha}$ ” denotes a function from objects to singular MOPs. I do not know how to reconcile this position with the thesis that  $MOP_{r\alpha}(\_\_)$  is a singular MOP. If “ $f$ ” denotes a function from domain  $X$  to range  $Y$ , then normally we do not take “ $f(\_\_)$ ” to denote an element of domain  $Y$ . Rather, we take it to be a vacuous term. A functional expression comes to denote a member of the range only when we fill its argument-place with a name for a member of the domain. Schellenberg acknowledges this worry and replies that “the notion of function in play is distinct from the one in formal discussion” (p. 95, fn. 28). I am not sure what notion of function she has in mind.

perceiver would have to be for the content of her perceptual state to be accurate” (p. 93). She does not say how exactly the token contents delivered by Fregean particularism relate to accuracy-conditions. She does not specify systematically the conditions under which a token content is accurate. To see why this matters, consider the token content:

$$C = \langle MOP_{r\alpha}(\alpha_1), MOP_{r\pi}(\pi_1) \rangle.$$

Nothing about  $C$ , taken by itself, determines an accuracy-condition. One might endorse a clause along the following lines:

$C$  is accurate iff there is a property  $F$  such that  $\alpha_1$  has  $F$  and the resulting property-instance is  $\pi_1$ .

Alternatively, one might endorse the following clause:

$C$  is accurate iff there is no property  $F$  such that  $\alpha_1$  has  $F$  and the resulting property-instance is  $\pi_1$ .

The first accuracy-condition looks fairly plausible. The second does not.  $C$  taken by itself is compatible with either accuracy-condition or with any other accuracy-condition one might care to stipulate. An ordered pair on its own does not determine an accuracy-condition. A similar point applies to the Russellian theory considered in §1: nothing about  $\langle o, F \rangle$  taken on its own mandates that the ordered pair is accurate iff  $o$  has property  $F$ . The point is a highly general one that arises whenever one construes contents as set-theoretic entities.<sup>4</sup>

Since Schellenberg does not say how exactly her token contents relate to accuracy-conditions, it is difficult to assess the precise commitments of Fregean particularism. She says enough to make me doubt that her theory can generate suitable accuracy-conditions for many commonplace perceptual experiences.

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<sup>4</sup> One might well conclude that set-theoretic entities are not contents --- useful formal proxies for contents, perhaps, but not contents themselves. I am sympathetic to that conclusion, but my ensuing argument does not depend upon it.

Compare  $S_1$  and  $S_4$ . Intuitively,  $S_1$ 's perceptual state is accurate, while  $S_4$ 's perceptual state is inaccurate. Schellenberg agrees. But her reason for saying that  $S_4$ 's perceptual state is inaccurate strikes me as mistaken. Here is her reason (pp. 94-95):

[I]t is necessary to distinguish two ways in which a content can be inaccurate. One way is for the content to make a claim about the environment that is not accurate. A second way is for it to fail to make an accurate claim about the environment... [T]he fact that a content is gappy implies that the content is necessarily inaccurate insofar as a gappy content could never make an accurate claim about the world.

I do not think we should say that the content of  $S_4$ 's perceptual state is *necessarily* inaccurate. The perceptual state represents the world as being a certain way: namely, as being such that  $\alpha_1$  is red. So the state is accurate iff  $\alpha_1$  is red. Since  $\alpha_1$  is not red, the state is inaccurate. But the state would have been accurate had  $\alpha_1$  been red. Thus, the perceptual state has an accuracy-condition that is satisfied in certain possible scenarios. Schellenberg's treatment does not deliver the intuitively correct accuracy-condition for  $S_4$ 's perceptual state.<sup>5</sup>

We routinely misperceive how the world is. We routinely perceive objects as having properties --- such as shapes, sizes, colors, or locations --- that they do not have. Misperception can occur when one suffers a perceptual illusion, when objects are far away, and so on.

Whenever you perceive an object as having a property even though the object does not have the property, Schellenberg's treatment yields an intuitively incorrect accuracy-condition.

Schellenberg might deny that perceptual states have the accuracy-conditions I have attributed to them. Any such denial would be problematic for two reasons:

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<sup>5</sup> Schellenberg can say that, if  $\alpha_1$  had been red, then  $S_4$  would have entered into a perceptual state with a different, accurate content. However, this is not what is at issue. What is at issue is the accuracy-condition for (the actual content of)  $S_4$ 's actual perceptual state, not the accuracy-condition for (the content of) some possible perceptual state that  $S_4$  would have entered into under different circumstances.

(i) Schellenberg says (p. 93): “The content  $c$  of a perceptual state brought about by being perceptually related to environment  $E$  is accurate if and only if  $E$  is the way  $c$  represents  $E$  to be.”  $S_4$  perceives  $\alpha_1$  as being red. She represents her environment as being such that  $\alpha_1$  is red. It then follows from what Schellenberg says that the content of  $S_4$ ’s perceptual state is accurate if  $\alpha_1$  is red.

(ii) *Perceptual psychology* studies how the perceptual system estimates distal conditions based upon proximal sensory stimulations (Burge, 2010; Rescorla, 2015). For example, the perceptual system estimates depth based upon convergence, retinal disparity, motion parallax, and other cues. Detailed mathematical models describe perceptual estimation of shape, size, motion, color, and other observable properties. The resulting perceptual estimates are evaluable as accurate or inaccurate. A perceptual estimate that an object has a certain size is accurate iff the object has that size; a perceptual estimate that an object has a certain shape is accurate iff the object has that shape; and so on. Thus, something like my favored accuracy-conditions are arguably implicit in perceptual psychology.

Overall, then, there are strong intuitive and theoretical pressures towards my favored accuracy-conditions.

The property-based Fregean view seems better positioned than Fregean particularism to deliver the desired accuracy-conditions. According to the property-based view, perceptual content in the simplest case is given by an ordered pair  $\langle \tau, \Psi \rangle$ , where  $\Psi$  denotes a *property* rather than a *property-instance*. The property-based view entails that the perceptual states of  $S_1$  and  $S_4$  share a single token content. Assuming that a state’s token content determines its accuracy-condition, the two perceptual states have the same accuracy-condition. This is the

intuitively correct result: the two perceptual states represent the world as being the same way; the difference between the states is that one is accurate while other is inaccurate, not that they are accurate under different conditions. I submit that the property-based Fregean view is preferable to Fregean particularism. Fregean particularism errs by treating perceptual content as constituted entirely by singular MOPs of environmental particulars.

### **§3. Perceptual attribution**

A closely related worry arises at the level of perceptual capacities.

Fregean particularism focuses exclusively upon capacities to discriminate and single out particulars. Plausibly, though, there are additional capacities deployed by perception. As Burge (2010) argues, we have perceptual capacities to attribute distal properties --- such as shapes, sizes, and colors --- to perceived particulars. By exercising these attributional capacities, along with capacities for singular representation of particulars, we enter into perceptual states that are accurate just in case perceived particulars have the attributed properties. We can enter into such states even when the perceived particulars do not have the attributed properties. For example, you may mistakenly perceive an object as being red. In this case, you exercise a perceptual capacity to attribute redness, even though the object is not red.

When you misperceive an object as being red, you do not “single out” a property-instance of redness: there is no instance to be singled out. What you do instead is attribute redness to an object that, as it happens, is not red. A proper understanding of this case and similar cases requires us to augment the particularist’s meager inventory of perceptual capacities. Particularists hold that perception represents a property-instance rather than the property itself. A property is the sort of thing that can be attributed. A property-instance is not. Only by recognizing a



perceptual capacity to attribute properties can we generate the intuitively correct accuracy-condition for  $S_4$ 's perceptual state.

Schellenberg argues that attribution is not necessary for perception (p. 69). She argues that some perceptual states do not attribute properties to particulars. For present purposes, I grant that she is correct. I grant that *some* perceptual states do not attribute properties. Still, I maintain that perceptual attribution routinely occurs.

Officially, Schellenberg concedes that perceptual attribution of properties may sometimes occur (pp. 67-68). I have difficulty seeing how to reconcile that concession with Fregean particularism, which seems to leave no room for perceptual representation (let alone attribution) of properties. Moreover, despite her official openness to perceptual attribution, Schellenberg offers several arguments designed to show that we are perceptually related to property-instances *as opposed to* properties. She writes (p. 15):

Perceptual relations are a kind of causal relation. So when we perceive, say, the shape of the cup in front of us, that shape must be causally efficacious --- otherwise we could not perceive it. Thus, given plausible assumptions about causation, the shape of the cup must be a concrete spatio-temporal particular rather than a universal. After all, universals are neither spatio-temporally located nor causally efficacious. I will assume an Aristotelian view on which properties are understood in terms of their instances. Hence, I will assume that we perceive property-instances.

I agree with Schellenberg that we do not *perceive* properties. My claim is that we *perceptually attribute* properties, not that we perceive them. For example, when you perceive a cup as red, you do not thereby perceive the property redness. You perceive the cup, and you perceptually attribute redness to it. Perceptual attribution of properties does not require that properties be

“causally efficacious.” I grant that they are not. Even granting that properties are not causally efficacious, it seems clear that we can attribute them *in cognition*, as when one judges that an object is red. If we can attribute properties in cognition, then why not say that we can attribute them in perception? And if we can attribute properties in perception, then surely there is a perfectly good sense in which we can be perceptually related to them. Thus, the causal inefficacy of properties does not militate against the thesis that we are perceptually related to properties.

Schellenberg offers an additional argument that is relevant here. The argument targets the Russellian view of perceptual content, but, if successful, it would work just as well against the property-based Fregean view. The argument concerns cases where you misperceive an object as instantiating a property, even though the property is nowhere instantiated (e.g. Hume’s missing shade of blue). In such cases, the Russellian view and the property-based Fregean view both posit perceptual representation of an uninstantiated property. Schellenberg objects that this posit “is metaphysically controversial since accepting the existence of uninstantiated properties requires some kind of Platonic ‘two realms’-view on which there is more to reality than the concrete physical world” (p. 83).

In my opinion, a large literature over the past century has mounted a compelling case that abstract entities are, at least in some cases, metaphysically harmless (Linnebo, 2018) and indispensable to scientific inquiry (Putnam, 1975, pp. 345-357). We have excellent reason to believe that there is more to reality than the concrete physical world. Moreover, it seems that you can represent uninstantiated properties within cognition: e.g. you can represent John as instantiating the property *green-eyed cardiologist born on July 25, 1975* even if no one actually instantiates that property. Is there any reason to say that you can represent uninstantiated properties within cognition but not within perception?

Schellenberg responds that there is a crucial difference between perception and cognition. The difference is that perception involves *sensory awareness*. If perception involves “awareness relations to (uninstantiated) abstract entities,” then “these (uninstantiated) abstract entities must exist... The same is not true of beliefs as of abstract entities, since there is no reason why a belief as of *o* must be analyzed in terms of a sensory awareness relation to *o*” (p. 148, fn. 16). I concede that, in typical cases where you perceptually attribute a property to an object and the object has the property, you may count as “sensorily aware” of the property. However, I see no reason to say that you are sensorily aware of a property in cases where the perceived object does not have the attributed property. In particular, if the attributed property is nowhere instantiated, then I see no reason to say that you are sensorily aware of the property. There is no obvious reason why attributing a property, whether in perception or cognition, requires sensory awareness of the property. Assuming it is common ground that cognition can attribute properties (including uninstantiated properties), some further difference between perception and cognition is needed to rebut the thesis that perception can likewise attribute properties.<sup>6</sup>

There are cases where perceptual representation of a property-instance plausibly occurs. For example, if I see a wisp of red smoke, then it is plausible that I perceive a property-instance of redness without attributing redness to any particular. There may also be cases where perception of a property-instance occurs *alongside* perceptual attribution of the corresponding property. So I do not deny that perception can represent property-instances. I insist only that we should countenance widespread perceptual attribution of properties.

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<sup>6</sup> Theorists who want to avoid positing properties can still say that perceptual attribution occurs. They can posit attributive perceptual MOPs whose semantic role is to be *satisfied* by certain objects (e.g. a perceptual MOP satisfied by precisely those objects that are red). They can say that the posited MOPs combine with singular perceptual MOPs, yielding perceptual contents with the appropriate accuracy-conditions (e.g. a perceptual content that is accurate iff the perceived object is red). Tarski’s theory of truth is an existence proof that a workable semantics for attribution does not require one to posit properties. Thus, theorists who are moved by Schellenberg’s Aristotelian animadversions can still in good conscience postulate capacities for perceptual attribution.

Assigning a central role to perceptual attribution would require Schellenberg to emend Fregean particularism, perhaps by reviving her earlier property-based Fregean view. It would also mandate an expanded conception of the capacities deployed by perception. I do not think that the needed changes would affect the main thrust of Schellenberg's project. The changes might even bolster the epistemological reflections offered later in the book, by grounding the analysis of perceptual evidence in a wider array of perceptual capacities.

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