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ABSTRACT

Almost every case of visual experience is as of a unified state of affairs and as of one or more specific particulars. I argue that a view on which the content of visual experience is a singular proposition, does a better job at explaining these two features of visual experience than three popular theories: the Complex Property Theory, Generalism, and Fregean Particularism. The defended view, however, entails that there are no visual hallucinations, traditionally understood. I make the case for the plausibility of this consequence.

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1. Two Features of Visual Experience

I am looking at a red stress ball. My visual experience represents quite a few properties. At the very least: redness, roundness, and bulgy-ness. But it does not simply represent redness *and* roundness *and* bulgy-ness, as though my experience represents the properties one-by-one. No; my visual experience represents a *unified* state of affairs—a red, round, bulgy thing being there. And this is so even if my experience turns out to be non-veridical, that is, even if the state of affairs represented by my experience does not obtain. The point is that the way things appear or seem to me by virtue of undergoing this experience is as of a unified state of affairs. Call this the *objectual unity of perceptual experience*.

My experience can also be characterized in terms of its *particularity* (Montague 2016: 117; Schellenberg 2018: 13). Like objectual unity, this is a phenomenological feature of experience. I seem to be aware of particulars in the environment (for example, a red ball), not abstract universals (for example, the property of being a red ball). So, this is a claim about the *class of entities* I seem to be presented with in experience. This is the *generic particularity of experience* (French and Gomes 2019: 3). But stopping here yields a description that is phenomenologically impoverished. For I do not seem to simply be aware of *a* red ball (a particular). I seem to be aware of *this specific red ball*, not just some red ball or other which has the same type of characteristics as this one. And as before, veridicality is otiose. The point is that my experience is *as of* this particular apparent red ball. Call this second sense of phenomenological particularity, the *specific particularity of experience* (French and Gomes 2019: 3).¹

¹ Schellenberg (2018) distinguishes between the *phenomenological* and the *relational* particularity of experience. The latter is a metaphysical claim to the effect that while undergoing the experience, the subject is thereby
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Objectual unity, generic and specific particularity are ubiquitous—at the very least for the visual domain. Whether these features characterize perceptual experiences in other sensory modalities (plausible) and whether there can be perceptual experiences, visual or otherwise, that fail to have one or both features (also plausible), is largely set aside here. What matters most is that visual experiences do have them, and that seems innocuous enough, or so I'll assume. For if visual experiences can indeed be characterized by their objectual unity and phenomenological particularity, then we should expect that our theories of perceptual (visual) experience can explain these facts. Yet it turns out that this is no easy task.

I have two theses—one negative, and one positive. The negative thesis is this: three major theories of perceptual experience, namely, the complex property theory (§2.1), generalism (§2.1) and *de re* Fregean particularism (§2.2), cannot account for both objectual unity and phenomenological particularity. If they can account for one, it will be at the expense of the other. The lessons learned from these negative results point towards our positive thesis (§3): to explain both objectual unity and phenomenological particularity, perceptual experience—irrespective of its veridicality—must represent singular propositions. As will become clear, this has revisionary consequences for our understanding of so called 'total' or 'perfect' visual hallucinations—namely, that there are none. Rather, on the view to be developed, purported cases of such experiences are better understood as extreme cases of visual illusion.

Before we proceed, a note about my assumptions. My proposal employs a broadly *representationalist* framework. For present purposes, this means two things. First, I assume that it is a *constitutive* condition of perceptual experience that it represents the world to be a certain way. Here, the way the world is according to an experience is called the *representational content* of the experience. Second, I assume that the phenomenal character of an experience is closely tied with the representational content of that experience. Our focus on representationalism means that some other theories of perceptual experience—most notably, naïve realism—will be set aside. This is admittedly a limit of my analysis since naïve realism has been advertised as having the resources to deal with phenomenal particularity (French and Gomes 2019). However, naïve realism faces well-known problems of its own, some of which carry over to dealing with phenomenal particularity in non-veridical cases, which, in contrast, is, easily handled by representationalism. These points will be flagged as they arise in the final section.

2. Three Theories of Perceptual Experience

2.1 The Complex Property Theory and Generalism

According to the *complex property theory* (henceforth, the CP theory):

1. The phenomenal character of an experience *E* is identical to a *complex property C*,
2. *E* has *C* as its phenomenal character in virtue of *E* representing *C* in the right way, and

related to a particular. Although I ultimately agree with Schellenberg that experience instantiates relational particularity, my starting point in this paper only involves the phenomenological aspect.

3. *E* representing *C* in the right way is tantamount to the subject being *perceptually aware of C* in *E*.²

Strictly speaking, the CP theory *proper* is just (1): a claim about what phenomenal character *is*. However, CP theorists are often also committed to (2) and (3). Claim (2) is a claim about what it is for an experience to *have* a phenomenal character. Claim (3) is about what it is for a subject to consciously perceive: they should be aware of a complex property.

Regarding the nature of complex properties, it is generally assumed that they are a class of *universals* structured out of more simple properties and relations (Johnston 2004: 135). CP theorists also maintain that when an experience is veridical, the represented complex property is locally instantiated. However, if the experience is hallucinatory, it represents an *uninstantiated* (if only locally) complex property (Dretske 1999: 107; Johnston 2004: 156).³

Now consider *generalism*:

4. The representational content of perceptual experience is a *general proposition*, and
5. The phenomenal character of experience is determined by, or is reducible to, the general propositional content of experience (McGinn 1982; Hill 2021).

When combined with *Russellianism* about propositional content—on which a general proposition just is a complex property predicated of something—generalism can be seen as a close cousin of the CP theory. Both theories take the phenomenal character to be determined by the represented complex property. The only difference is that, on generalism, the content involves predication, whereas on the CP theory, it does not. From another point of view, however, generalism is considerably different from the CP theory. On generalism, the subject stands in something akin to an *attitudinal relation* to the content of her experience. Just as a subject can take a *believing* attitude toward a proposition, she can take a *sensory attitude* toward a proposition, in which case, the proposition would be the content of her experience.

Consider again, my experience as of a red ball on my desk. Let us see how the CP theory and generalism may explain the objectual unity of my experience.

2.1.1 Q1: In virtue of what is my experience as of a unified state of affairs?

Since on the CP theory the phenomenal character of an experience is *identical* to the complex property represented by it, the natural move would be to explain objectual unity in terms of some unifying relations between the components of the complex property. The idea, then, would be that such relations hold these components together in a way that, taken as a whole, the complex property strikes the subject as a unified state of affairs:

² See Dretske 1999, Johnston 2004, and Tye 2014. It is worth noting that Johnston is not a representationalist, but I discuss his view here because he can be considered a complex property theorist in all the ways relevant to this paper. What differentiates him from CP representationalists like Dretske and Tye is his account of perceptual awareness. Representationalists conceive perceptual awareness as a matter of representation; Johnston considers it as a matter of acquaintance (2004: 148).

³ Some have argued that the CP theorists should also allow for *globally* uninstantiated properties and thereby, be committed to Platonism (See e.g., Thompson 2008, Gow 2018).

Grounding Unity in Property Combination An experience is objectually unified in virtue of the combinatorial relations between the components of the complex property it represents.

More specifically, the CP theorist might appeal to some sort of *conjunctive* relation between the components of the complex property to account for unity.⁴ A conjunctive relation guarantees that its relata are instantiated together. The conjunctive property of *being red and round*, for example, is such that anything that instantiates it also instantiates its constituent parts—that is, *being red* and *being round*.

In the case of my experience as of a red ball, the CP theorist might say that my experience represents the conjunctive property of *being red and round and being at L*, where *L* is the location of the ball in my visual field. Since the conjunctive relations guarantee that *redness*, *roundness* and *being at L* are instantiated together, the complex property is unified. The unity of this complex property, in turn, explains the objectual unity of my experience.

The problem with this strategy, however, is that it fails to account for the fact that objectual unity is independent of the veridicality of experience. The conjunctive relations determine the *instantiation conditions* of their relata. All that the conjunctive relation between redness, roundness and being at *L* amounts to is the following conditional: *if* something instantiates the conjunctive property, then it conjunctively instantiates redness, roundness and being at *L*. However, such a conditional relation does not guarantee that the properties are *actually* unified. It only guarantees unity *if* the complex property is instantiated. For the sake of comparison, consider the *fitting relation* between two jigsaw puzzle pieces *a* and *b*. This relation can be cashed out as follows: *if a* and *b* are correctly put into the puzzle frame, then they would assemble together. But this does not entail that the pieces are *actually* assembled in any way. Similarly, a conjunctive relation between two components of an uninstantiated property does not guarantee any actual unity between its relata. Therefore, the most promising strategy of the CP theory for explaining objectual unity is suspect.

In contrast to the CP theory, generalism has a straightforward explanation of objectual unity: an experience represents a unified state of affairs in virtue of having a *unified proposition* as its representational content. Of course, how to best explain the unity of the proposition is a hotly contested matter in philosophy of language.⁵ But this is not our concern here. The point is that if a representationalist theory of perceptual experience allows for the grounding of objectual unity, as a phenomenological feature of experience, in the unity of the propositional content, then that theory has served its task. It has explained a fact about the phenomenology of experience by a fact about the representational content.

Grounding Objectual Unity in Propositional Unity An experience is objectually unified in virtue of having a unified proposition as its content.

This is good and well. However, the main difficulty for both generalism and the CP theory is explaining the phenomenological particularity of experience. Again, consider my experience as of a red ball on my desk.

⁴ See Armstrong 1997: 31 for discussion of conjunctive, disjunctive, and structural relations between properties.

⁵ For a detailed discussion of some of the recent responses to the problem of the unity of the proposition, see King, Soames, and Speaks 2014.

2.1.2 Q2: In virtue of what is my experience (i) as of a particular (that is, a red ball), instead of a universal (for example, the property of being a red ball) and (ii) as of this specific red ball instead of some red ball or other?

The complex property theorist can offer a number of potential responses to this question. They might, on the first try, suggest that I am ‘simply mistaken’ about the particularity of my experience (Mehta 2014). However, even if we assume that it is possible for one to be mistaken about the phenomenal character of their own experience (Williamson 2000), this still does not give us an adequate explanation. The CP theorist must explain what about the phenomenal character tricks me.

A second response might be that complex properties include spatiotemporal relations such as *being at such and such distance from the perceiver* and *being at the present time*. In virtue of this, the CP theorist suggests, the complex property strikes the subject as spatiotemporally extended, and ‘thereby mimics particularity’ (Johnston 2004: 142). But this response at most amounts to an explanation of the generic particularity; it might help us to explain why it seems to the subject as if she is aware of a particular while, in fact, all she is aware of is a bunch of universals. However, this suggestion cannot explain the specific particularity of experience. My experience as of the red ball on my desk is not as of some spatiotemporally extended red ball or other. It simply is as of *this* specific red ball. Johnston’s strategy misses this point.

Specific particularity is also a problem for generalism. A general proposition is not true of any *specific* particular; it is true of *some particular or other* which satisfies it. So, it is unclear how an experience with general content can be specifically particular.

To account for specific particularity, the proponents of the CP theory and generalism might maintain that experience represents *fine-grained* and *highly determinate* spatiotemporal properties, such as fine-grained and determinate location, shape, border, and colour properties, which taken together strike one as nothing but a *unique* object. It is this impression of uniqueness that underlies the specific particularity of experience (Hill 2021: 1404).

In reply, we should note that both *granularity* and *determinacy* are gradable features of experience, whereas specific particularity is not. An experience can represent the location and borders of an object in a more or less fine-grained manner without thereby being more or less particular. Consider blurry vision. If I unfocus my eyes and look at the spot on my desk, my experience represents the shape and borders of the spot in a much less fine-grained manner than normal vision does, and if the spot is small enough, my experience might not even represent it in any determinate location. Generally, the properties represented by my experience might be just too coarse-grained to determine any unique object. But despite all this, my experience exhibits particularity: by virtue of how things appear to me, my experience is as of *this very spot* which I take myself to be looking at. Uniqueness is not the same as particularity (See also Gottlieb and Rezaei 2021).

Another way to account for specific particularity in the CP theoretic or generalist framework might be to deny the distinctness of generic and specific particularity in the case of perception altogether. On this strategy, in contrast to thought, where one can think about, for example, some red ball or another but not about any specific red ball, in perception, one cannot have an experience as of a red ball without thereby having an experience as of a specific red ball. In perception, specific particularity comes for free with generic particularity.⁶

⁶Thanks to the anonymous referee for suggesting this point.

However, the reason for this apparent disanalogy between thought and perception seems to be that our everyday experiences are almost always specifically particular. This makes it quite hard to come up with an example of a merely generically particular experience, the comparison of which with other experiences tells us what the phenomenology of specificity amounts to. This might tempt us to say that generic particularity always entails specific particularity.

Nonetheless, I think there are rare cases of visual experience where one has an experience as of some object but not as of any specific object.

An example is *ganzfeld* experience, in which the subject has an experience as of a homogenous, coloured, fog-like light (Hochberg, Triebel, and Seaman 1951). In this case, although the experience is as of *something* being of a certain colour, since there is no appropriate figure-ground segregation, no specific object can be singled out.

Another example comes from ‘crowding’ paradigms. Crowding is the ‘deleterious effect of clutter that disrupts the recognition of features ranging from orientation and colour to motion and depth’ (Greenwood and Parsons 2020). If a collection of moving figures is presented in peripheral visual field, the subject has an experience as of *some* objects moving, however, due to crowding, no specific moving object is perceptually recognizable (See Block [ms]: 72). This suggests that generic particularity can in principle be dissociated from specific particularity, and thus, requires a separate explanation.⁷

Based on these considerations, I conclude that the CP theory and generalism cannot adequately explain the specific particularity of experience. Although in this section we framed generalism in Russellian terms, our conclusion also extends to the views which posit *de dicto* Fregean content as the determinant of phenomenal character (for example, Chalmers 2010: ch. 12). *De dicto* contents represent whatever satisfies them. Consequently, they should be considered a species of general propositions and, therefore, incapable of grounding specific particularity.⁸ There might be, however, some hope in another variant of Fregeanism which posits *de re* Fregean content as the determinant of phenomenal character. So, next, let us consider a version of such a view, called *De re Fregean Particularism*, and its potential for explaining the objectual unity and the phenomenological particularity of experience.

2.2 *De re Fregean Particularism*

The guiding idea of Fregean particularism is that perception is *fundamentally* a matter of employing perceptual capacities which function to ‘differentiate, single out, and in some cases classify mind-independent particulars of a specific type’ (Schellenberg 2018: 31). On this view, each perceptual capacity is individuated by the type of particulars which it functions to single out. Furthermore, when a perceptual capacity singles out a particular (an object, property-instance or event), a *de re mode of presentation* (MOP) of that particular is formed. This *de re* MOP is constituted partly by the perceptual capacity itself and partly by the singled out particular (2018: 87–8, 92). In

⁷ Also, Searle (1983: 63) provides a well-known generalist explanation for the particularity of experience. I do not discuss it here, however, as it has been widely criticized (e.g., see Bach 2007).

⁸ Schellenberg (2010: 36) criticizes *de dicto* Fregeanism along with other generalist accounts on the ground that they cannot account for what she calls the *relational* particularity of experience. While I agree with her on this point, my claim in this paper is that generalist accounts cannot even fully explain the *phenomenological* particularity of experience (For a similar view, see Montague 2016: Ch. 6).

contrast to *de dicto* Fregean senses, *de re* MOPs are ‘inherently relational’: they are partially constituted of the particulars that they represent.⁹ The representational content of an experience is the ordered set of the *de re* MOPs formed in that experience (2018: 88). For example, in the case of a veridical experience, *e*, of a red ball, two MOPs are formed: $MOP_{rBall}(\beta)$, which singles out the ball, β , and $MOP_{rRed}(r)$, which singles out an instance of redness, r . So, the representational content of *e* will be given by

$$Content_e = \langle MOP_{rBall}(\beta), MOP_{rRed}(r) \rangle^{10}$$

In non-veridical experiences, however, at least some of the employed perceptual capacities fail to pick out any particulars and, consequently, the ensuing representational content will contain a *gappy* MOP. If *e* in the above case was an illusion—for example, if the colour of the ball was, in fact, green—, then the perceptual capacity for picking out instances of redness would fail to pick out any particulars, making the content of *e* gappy:

$$Content_e = \langle MOP_{rBall}(\beta), MOP_{rRed}[-] \rangle.$$

Moreover, the phenomenal character of an experience is understood as the *mental act* of employing perceptual capacities involved in that experience, irrespective of the success of perceptual capacities in picking out any particular. The phenomenal character of *e*, for example, is constituted by the mental act of employing the perceptual capacities which serve to pick out balls and instances of redness, irrespective of whether there are any balls or instances of redness in the environment to be picked out. It follows that the phenomenal character of an experience is *determined* by the ordered set of perceptual capacities employed in the experience, *excluding* the particulars singled out by those perceptual capacities. Schellenberg (2018: 87) calls this set the ‘*content type*’ of experience. In general, in the case of an experience *E* as of an object *O* and properties $P_1, P_2, \dots$, the content type of *E* is:

$$Content\ Type_E = \langle MOP_{r[Object\ Type]}[-], MOP_{rP_1}[-], MOP_{rP_2}[-], \dots \rangle.$$

The notion of content type, so defined, allows the theory to explain the possibility of phenomenally indistinguishable experiences of numerically distinct objects. Suppose that after seeing the red ball β , I close my eyes and before opening them, β is replaced with the completely similar red ball β^* . The representational content of this new experience is:

$$Content_{e^*} = \langle MOP_{rBall}(\beta^*), MOP_{rRed}(r^*) \rangle,$$

which is different from the representational content of my experience of β . Yet, these two experiences have the same phenomenal character. Fregean particularism explains this by saying that since the same set of perceptual capacities is employed in these two experiences, they have the same content type, $\langle MOP_{rBall}[-], MOP_{rRed}[-] \rangle$. Since it is the content type that determines the phenomenal character, these two experiences are phenomenally indistinguishable.

⁹ In the rest of this section, following Schellenberg, I shall use formula of the form ‘ $MOP_{r\tau}(\tau)$ ’ to show the *de re* MOP of a particular τ of the type *T*.

¹⁰ It is controversial whether we possess perceptual capacities that independently function to single out non-natural kinds such as balls. Here, for the sake of explication, I have assumed that we do have such capacities. None of what follows, however, is dependent on this assumption.

With the basics in place, let us see if this theory can explain the objectual unity and the particularity of the experience e discussed above.

2.2.1 Q1: In virtue of what is e as of a unified state of affairs?

For e to be objectually unified, its representational content, $Content_e$ as described above, should represent a unified state of affairs. But what in $Content_e$ is supposed to guarantee this? Although the modes of presentation in $Content_e$ are unified in the sense that they are all members of the same set, this cannot explain the objectual unity of e . For there is nothing in an n -tuple of modes of presentation *per se* that can guarantee that they purport to represent a unified state of affairs. So, at first pass, the prospects are bleak.

This pessimism might be hasty though. Isn't there any way for the Fregean particularist to adopt something similar to the propositional unity strategy adopted by generalism? They might maintain that perceptual experience not only is a matter of singling out objects and property-instances, but also a matter of representing truth-evaluable content.

However, maintaining that perceptual experience has truth-evaluable content is tantamount to endorsing an *attributive view* of perception: the view that perception constitutively involves attributing properties to objects. After all, a representational vehicle has truth-evaluable content only if it attributes properties or relations to an entity or a set of entities. Schellenberg, however, explicitly rejects the attributive view of perception:

On the view developed here, property-instances, objects, and events are all particulars out in the world and if we notice them, we represent them by discriminating them and singling them out from their surround. There is no need to say that in doing so we attribute properties to objects or to events (2018: 67).

Putting this aside, it is not even clear how this account *could* adopt an attributive explanation of objectual unity. If, as the theory has it, the phenomenology of experience is exhausted by the employment of discriminatory capacities, then there remains no room for perceptual attribution to contribute to the phenomenology of experience.

Still, one might hope to account for objectual unity in this framework by postulating some sort of *binding relation* between the MOPs constituting the content of experience. On this suggestion, the content of an experience E of an object o , instantiating a property P should be formulated as:

$$Content_E = \langle BND [MOP_{rO}(o), MOP_{rP}(p)] \rangle,$$

where ' $BND [MOP_{rO}(o), MOP_{rP}(p)]$ ' designates a binding relation between $MOP_{rO}(o)$ and $MOP_{rP}(p)$. With this relation in place, it is guaranteed that the MOPs represent a unified state of affairs. But how should we understand this binding relation exactly? Since we want $MOP_{rP}(p)$ to purport to represent a property-instance belonging to what $MOP_{rO}(o)$ purports to represent, a natural suggestion is to define the binding relation in one of the following ways:

6. $BND [MOP_{rO}(o), MOP_{rP}(p)]$ obtains iff p belongs to o , or
7. $BND [MOP_{rO}(o), MOP_{rP}(p)]$ obtains iff $MOP_{rP}(p)$ purports to single out a property-instance belonging to what $MOP_{rO}(o)$ purports to single out.

Let us assume that both these formulations can guarantee that the representational content purports to represent a unified state of affairs. Yet, this is not enough, because we want the binding relation to also have phenomenological import such

that it may explain objectual unity as a *phenomenological* feature of experience. This requires modifying the Fregean particularism's original suggestion to the effect that the phenomenal character is constituted *exclusively* of employment of perceptual capacities, because the original form of the view renders the binding relation between the perceptual capacities phenomenologically irrelevant. So, depending on our construal of the binding relation—that is, (6) or (7) above—we can modify Fregean particularism's view of phenomenal character in either of the following ways:

- V₁ The phenomenal character of *E* is constituted by (a) the mental act of employing $MOP_{ro}[-]$ and $MOP_{rp}[-]$, and (b) the mental act of singling out the relation of *p* (that is, the singled-out property-instance) belonging to *o* (that is, the singled-out object).
- V₂ The phenomenal character of *E* is constituted by (a) the mental act of employing $MOP_{ro}[-]$ and $MOP_{rp}[-]$, and (b) the *co-directedness* relation between $MOP_{ro}[-]$ and $MOP_{rp}[-]$. This relation signifies that $MOP_{rp}[-]$ singles out a property instance belonging to what $MOP_{ro}[-]$ singles out.¹¹

The difference between these two views is that according to V₁, the phenomenal character of *E* is partially constituted by the mental act of singling out a relation between the singled-out particulars *p* and *o*, but according to V₂, the phenomenal character of *E* is partially constituted by the co-directedness relation between the perceptual capacities that single out *p* and *o*. However, both of these formulations are problematic. The problem with V₁ is that it cannot explain the objectual unity of misrepresentations, where at least one of the MOPs is gappy. For example, in the case of an illusion, $MOP_{rp}[-]$ does not single out any property-instance; there is no relevant property-instance, *p*. Consequently, there is no relevant *belonging relation* to be singled out in order to bind $MOP_{rp}[-]$ with $MOP_{ro}[-]$ (For similar points, see McGrath 2019: 7379). The difficulty with V₂, on the other hand, is that it requires the relations between perceptual capacities to show up in the phenomenal character of experience. I find this counterintuitive. Visual experience is as of the particulars in the environment and their relations, not as of the perceptual capacities or the relations between them.

The upshot, in my view, is that it is not clear how Fregean particularism can explain the objectual unity of experience. What about particularity? Let us return to my experience, *e*, as of a red ball.

2.2.2 Q2: In virtue of what is *e* (i) as of a particular (that is, a red ball), instead of a universal (for example, the property of being a red ball) and (ii) as of this specific red ball instead of some red ball or other?

Recall that according to Schellenberg, the phenomenal character of an experience is determined by its content type. The content type of *e* is this:

$$\text{Content Type}_e = \langle MOP_{rBall}[-], MOP_{rRed}[-] \rangle .$$

If *e* is veridical, the tokening of this content type would yield a singular content. However, if it is non-veridical, at least some of the MOPs in the content would be gappy. In either case, we may say that the content type of *e* is *potentially singular*, that is, when tokened, it *purports* to directly single out particulars in the environment

¹¹ The notion of co-directedness of perceptual capacities has been proposed by Schellenberg (2019: 748) in response to McGrath (2019). However, no definition of co-directedness is offered there. The definition given here is my best guess as to what the co-directedness relation between two perceptual capacities amounts to.

(Schellenberg 2018: 92). Given this, and since the phenomenal character of e is the mental act of tokening this content type—that is, the mental act of employing perceptual capacities $MOP_{rBall}[-]$ and $MOP_{rRed}[-]$ —, it naturally follows that e phenomenologically purports to directly single out particulars in the environment. And this is all we mean by phenomenological particularity.

I believe that this is a successful explanation. I want to emphasize, however, that this explanation is based on the claim that phenomenal character just is the mental act of employing perceptual capacities. As we saw, this view of phenomenal character, by rendering perceptual attribution phenomenologically irrelevant, is the main reason why this theory cannot straightforwardly explain objectual unity in terms of the unity of a truth-evaluable representational content. So, although Fregean particularism is successful in explaining particularity, its explanation of this feature stands in the way of a natural explanation of objectual unity.

Let us take stock. In this section, I examined three familiar theories of experience and showed that they do not provide a clear explanation of objectual unity (Fregean particularism) or phenomenological particularity (generalism), or either (the complex property theory). But as promised, the examination of these accounts leads us to a sketch for an adequate theory, which will be discussed in the next section.

3. The Singular Proposition View

My defence of the singular propositional view of experience takes the form of an inference to the best explanation. I argue that this view has all the advantages of the views discussed above while sidelining their problems.

Let us start by considering the objectual unity of experience. As we saw, generalism offers a natural explanation of this feature: an experience is objectually unified in virtue of its representational content being a unified proposition. I shall borrow this line of explanation from generalism without committing to a generalist view of content.¹² As discussed above, the claim that perceptual experience has unified propositional content implies that the content of visual experience is truth-evaluative and thereby, visual perception is partially a matter of attributing properties and relations to particulars. Therefore, on our theory, perceptual attribution is what ultimately grounds the objectual unity of experience.

Regarding phenomenological particularity, the inadequacy of the complex property theory and generalism, on the one hand, and the success of Fregean particularism on the other, combine to suggest that particularity is fundamentally tied to the singularity of representational content. As we saw, Schellenberg appeals to the *potential* singularity of content types to explain particularity. But my contention is that a simpler explanation is available. We may simply say that a perceptual experience exhibits phenomenological particularity in virtue of its content being partially constituted by the object it represents. In other words, any phenomenologically particular experience possesses a *singular*

¹² One might worry that, since singular propositions are partially constituted by particulars, explaining the unity of such propositions may prove to be especially difficult. However, this shouldn't be a cause for worry. For on the most prevalent theories of propositions, the explanation of the unity of singular propositions is as simple as (if not simpler than) the explanation of unity of general propositions (See King, Soames, and Speaks 2014).

element that *directly* picks out the object of experience.¹³ Call this the *singularity claim* (SC). Depending on how one conceives the role of perceptual attribution in perceptual reference, the singularity claim may take a *weak* or *strong* form.

On the weak reading of SC, the singular element of experience should be understood as something akin to linguistic demonstratives such as ‘that’; it refers to the object of experience without encoding any of its properties. The perceptual attributes play no *constitutive* role in the content of the singular element. Several studies lend support to this understanding of perceptual reference.

The most significant evidence comes from multiple object tracking (MOT) paradigms. In a classic implementation of the paradigm, subjects are presented with 8 to 10 objects on a screen some of which start flashing on and off for a few seconds. Subsequently, the flashing ends and all objects start to move across the entire visual field. The participants are asked to keep track of the objects that had been flashing (targets). After a short period of time, one of the objects is again flashed and the subjects are asked to report whether the flashed object was among the targets. Results indicate that subjects can keep track of up to 5 moving objects despite changes in location (Pylyshyn and Storm 1988). More importantly, some studies suggest that the ability to track objects is not considerably reduced when the moving objects change colour or shape (Bahrami 2003; Zhou *et al.* 2010).

Another line of evidence is provided by a version of the *apparent motion paradigm*, called the *phi phenomenon*. In the phi phenomenon, the fast flickering of two figures next to each other creates the experience as of an object moving between them (Steinman, Pizlo, and Pizlo 2000). Studies suggest that when the two figures differ in colour and shape, one has an experience of a single object rapidly changing location, colour, and shape (Green 2017: 6).

The best explanation for the visual system’s ability to track objects despite radical changes in their features is that it has a tracking mechanism that selects the tracked objects without encoding any of their properties. That is, perceptual attributives likely play no *content-constitutive* role in the perceptual singling-out of the objects (Green 2017: 6).

This suggestion, however, should be distinguished from what we can consider the strong reading of SC—namely, that the perceptual attributes play no metasemantic role even in *fixing* the reference of the singular element, leaving the task to ‘a brute causal mechanism’ (Pylyshyn 2009: 269).

The weak singularity claim does not entail its stronger version. Nor do the studies supporting the former clearly support the latter.¹⁴ One might plausibly hold that although the perceptual singular element directly refers to its object, perceptual attributes and the causal relation between the object and the experience are both necessary for fixing of the perceptual reference; at least some properties of the object should match the features that the experience attributes to the object in order for the singular element to have a determinate reference.¹⁵

My contention is that weak singularity is sufficient for explaining particularity. All that matters for particularity is that experience directly picks out a specific object. This

¹³ Averill and Gottlieb (2021) also appeal to singular representation to explain phenomenal particularity, but their view requires non-actual objects in the case of total hallucination. The view to be developed here does not require any such metaphysical exotica.

¹⁴ See Quilty-Dunn and Green (forthcoming) for an extensive discussion of the evidence.

¹⁵ For a defence of this view see Green 2017.

is what explains why my experience of the red ball on my desk is as of *this* particular ball, not of *some red ball* or *another*.

This suggestion along with the idea of explaining the objectual unity of experience by the unity of the propositional content gives us the following first take:

- T1** A visual experience *E* is objectually unified and phenomenologically particular *because*:
 (a) the representational content of *E* is a unified *singular* proposition, and (b) the phenomenal character of *E* is grounded in the representational content of *E*.¹⁶

However, straightforward as it is, this idea faces the problem we noted earlier: experiences of two qualitatively similar but numerically distinct objects can be identical in phenomenology yet differ in content. This implies that phenomenal character cannot be straightforwardly grounded in singular content.

We can avoid this problem, however, once we differentiate between the aspects of phenomenal character that concern the *qualities* presented, on the one hand, and the aspects that concern how the presented qualities are *attributed* to the environment, on the other. When I look at the red stress ball on my desk, the phenomenology of my experience, on one hand, presents me with a reddish quality and a round bulgy shape, and on the other, it attributes such qualities to the scene before me in a singular and unified way.

My suggestion is this: the aspect of the phenomenal character that concerns the presented qualities is grounded in the properties represented by the experience. My experience of a red ball is reddish and roundish in virtue of representing the colour red and round shape. The aspect of phenomenal character that concerns the attribution of phenomenal qualities, however, is grounded in a set of *vehicular* properties of experience. In particular, the fact that phenomenal qualities are attributed in a unified way is grounded in the vehicular property of *representing a unified proposition*, and phenomenological particularity is grounded in the vehicular property of *representing a singular proposition*. Thus, an experience exhibits objectual unity and particularity in virtue of instantiating the property of *representing a unified singular proposition*.¹⁷ In light of this, we can sketch our theory as follows:

- T2** For any objectually unified and phenomenologically particular experience, *E*: (a) *E* represents a singular proposition, (b) The qualitative aspect of the phenomenal character of *E* is grounded in the properties it represents, and (c) The objectual unity and phenomenological particularity of *E* are grounded in the property of representing a unified singular proposition.

So far so good. But still, many may consider this theory as a non-starter. The main reason is that if we explain phenomenological particularity based on the fact that visual experience has a singular element, then this theory is committed to the following thesis.

- Object Dependence** Any objectually unified and phenomenologically particular visual experience represents a particular.

¹⁶ Of course, any proposition is unified. I say 'unified proposition' merely to emphasize the role of the unity of the propositional content in this theory.

¹⁷ Unlike the view defended here, the problem of indistinguishable particulars is a difficult challenge for naïve realism. On naïve realism, the phenomenal character of experience is constituted by the particulars and property instances that the experience is of. This counterintuitively entails that experiences of two objects with identical visual properties should differ in phenomenal character (See Mehta 2014).

However, it has traditionally been assumed that there can be experiences that are (a) objectually unified and phenomenologically particular but also (b) hallucinatory; viz., they do not represent any particulars.

I argue, however, that this assumption is unwarranted. I argue that we have no principled reason to commit to the conjunction of (a) and (b). If we accept that phenomenologically particular experience has a singular element that picks out the object of experience independently of the properties represented by the experience, then it is in principle possible for the singular element of an experience to represent a particular without it veridically representing *any* of the visual properties of the particular. Call such an experience an *exhaustive illusion*. I argue that any putative case of phenomenologically particular hallucination is re-describable in terms of an exhaustive illusion. Therefore, such cases do not threaten Object Dependence.¹⁸

As an example of an exhaustive illusion, consider John, who is sitting in a room seeing a small red cube, *C*, on the right side of his visual field. Now, suppose that we manipulate the lighting conditions of the room such that the colour of the cube, as perceived by John, changes from red into green. At this stage, everyone accepts that John's experience represents *C*, even though it is illusory regarding the colour of *C*. Next, we use an appropriately designed mirror so that *C* appears on the left side of his visual field. Here, again, we may say that John's experience still represents *C* but does not veridically represent the spatial and colour properties of *C*. Finally, we use a distorting prism so that the cubic shape of *C* appears conic to John. Consequently, he finds a green cone on the left side of his visual field, instead of a red cube on the right. Here are two plausible descriptions of John's condition at the final stage:

8. John's experience no longer represents *C*.
9. John's experience represents *C* but in a deeply illusory way. It fails to veridically represent any of the visible properties of *C* (colour, location, and shape), and instead, attributes properties to *C* that *C* does not instantiate.

On (8), John is having a hallucination as traditionally defined. On (9), however, he is having an exhaustive illusion. The singular element of John's experience represents *C* although his experience radically fails to represent the visually salient properties of *C*. My suggestion is that we can generalize this example to re-describe any purported case of phenomenologically particular hallucination.

Before such claim can be made plausible, however, we should differentiate Object Dependence from the following claim:

Object Seeing Any objectually unified and phenomenologically particular visual experience is a case of seeing an object.

Object Seeing does not directly follow from Object Dependence. This is because having a conscious experience whose singular element picks out an object may not be sufficient for *seeing* that object. Seeing arguably involves the veridical representation

¹⁸ We should note, however, that Object Dependence does not ban the existence of hallucinations, traditionally understood, which *do not* exhibit specific phenomenological particularity. It is compatible with the theory defended here that such experiences do occur and that they are objectless. But in the rest of this paper, I will drop the qualification 'phenomenologically particular', and by 'hallucination' mean phenomenologically particular hallucination unless otherwise indicated.

of at least some properties of the seen object. Thus, if the singular element of an experience picks out an object but does not veridically represent an adequate proportion of the properties of the object, it cannot be a case of seeing. So, although the theory defended here is committed to Object Dependence, it is not thereby also committed to Object Seeing. It does not imply that in hallucination the subject sees anything.

We should also consider, at this point, a significant corollary of our earlier discussion of the role of perceptual attribution in perceptual reference. We accepted the weak singularity thesis while rejecting its stronger version. This means that in cases where the properties perceptually attributed to an object do not match a sufficient number of its features, perceptual reference is not fully achieved. However, this does not entail that perceptual reference *entirely* fails. If we accept that the role perceptual attribution is limited to partially fixing the reference of the singular element, instead of constituting its referent, then there is no compelling reason to believe that when perceptual attribution is nonveridical, the singular element lacks reference altogether. Rather, the proper conclusion is that, in such cases, the singular element is rendered semantically *vague*: while the causal nexus between the experience and environment plays its role in determining the perceptual reference to some degree, since an appropriate descriptive relation is lacking, it remains partially underdetermined as to what link in the causal nexus is picked out.

One might worry, at this point, that the vagueness of perceptual singular reference in illusory experiences might undermine our explanation of particularity: if perceptual reference is vague, then the singular element does not pick out any specific particular, and *a fortiori* the presence of the singular element cannot ground the specific particularity of illusions.

In response, we should differentiate between the *specificity* of a representational vehicle and its *sharpness*. Representations can be specific, in the sense that concerns us, without being sharp. Suppose that, while looking out of my window, I come to think that it is raining now. This thought exhibits particularity: the demonstrative 'now,' refers to *this* specific time, not *some time or another* that it rains. Despite this, 'now' is also vague; the time period that it picks out is largely underdetermined; it may range from this very moment to this hour, to today. The specific particularity of my thought, then, is not a matter of its sharpness. A thought may be vague but specifically particular. Similarly, the singular element of an illusory experience may be vague, but this does not undermine its role in establishing specific particularity.

Returning to our discussion of hallucinations, to show that such experiences can be understood as cases of exhaustive illusion, I divide hallucinations into two groups of *external* and *internal* hallucinations. The former includes hallucinations which are causally explained by appealing to a set of abnormal conditions outside of the subject's cognitive system. Internal hallucinations, in contrast, are causally explained by referring to a set of abnormal conditions inside the subject. I will take up each group in turn.

The often-discussed brain-in-a-vat scenario describes an extreme case of external hallucination. Suppose that an evil scientist has attached a brain to an appropriately designed computer so that the states of the brain are counterfactually dependent on the computer states. Suppose that the machine is in *S* and this puts the brain in a state *M*, that is a conscious perceptual state phenomenologically indistinguishable from a veridical experience of a red ball. On the traditional description of this case,

M does not represent any particulars. However, because *M* is objectually unified and phenomenologically particular, by Object Dependence, our theory implies that *M* directly picks out a particular.

The alternative understanding of this case, I suggest, is this: *M* is an exhaustive illusion whose singular element refers to the causal nexus between *M* and *S*. Since this experience attributes the properties of a red ball to the causal nexus, and also instantiates the property of *representing a unified singular proposition*, it is phenomenologically indistinguishable from seeing a red ball. However, because perceptual attribution is non-veridical, the singular element of *M* is semantically vague; although it refers to the causal nexus leading to the experience from the machine, there might be no fact of the matter as to exactly what part of the causal nexus it picks out (Cf. Raleigh 2014; Ali 2018; Masrour 2020).¹⁹

‘Nonsense,’ you may say, ‘you want us to believe that while it seems to the subject as if there is a red ball in front of her, she is, in fact, seeing the causal nexus leading to her experience? If she is seeing a causal nexus as a red ball, then she is not seeing anything at all!’ This is all true. But as noted earlier, this theory does not imply that the subject sees anything, but merely that the singular element of her experience vaguely refers to the causal nexus. Moreover, the phenomenal character of the subject’s experience is identical to the veridical experience of a red ball, so no wonder that it does not seem to the subject that she is seeing the causal nexus.

Other scenarios of external hallucination can be dealt with in similar ways. Descartes’ evil demon scenario, for example, describes a case in which the perceptual states of a subject are caused by a demon who constantly feeds their visual system with simulated information. In this case, we should say that the singular element of the subject’s experience vaguely refers to the causal chain leading to the experience from the demon (Cf. Chalmers 2010: ch. 13).

Moving to internal hallucinations, suppose Mary takes a dose of magic mushrooms, sufficient to give her a hallucination as of a red ball. Here, how things appear to Mary in her experience can be causally explained by referring to a set of drug-induced abnormal conditions inside her visual system. In particular, we may say that the drug has induced an abnormal brain state, *M**, that, in turn, causes Mary’s hallucination, *M*. Here, the singular element of *M* vaguely picks out some parts of the causal chain between *M** and *M*. Also, since *M* attributes the properties of a red ball to the causal chain, it is phenomenologically indistinguishable from a veridical experience of a red ball.

Similar considerations can also be applied to hallucinations generated by sensory deprivation as well as hallucinations experienced in clinical cases like Schizophrenia and Charles Bonnet syndrome. In the latter case, for example, due to impairments in retinal cells or optic pathways, the visual system of the subject does not receive adequate information to generate veridical experience of the environment, yet the subject may have complex visual hallucinations as of people, places, and objects. Several cognitive models emphasize the role of top-down stimulations from upstream neural areas in the generation of such hallucinations. In normal perception, top-down stimulations serve as modulatory factors on bottom-up signals from the early visual areas. But in the absence of adequate bottom-up information, the balance shifts in favour of top-down

¹⁹ This does not mean that the singular element refers to the *whole* causal nexus, since in that case, the reference would not be vague.

stimulations, resulting in hallucinatory experience.²⁰ On the view defended here, then, if such hallucinations exhibit specific phenomenological particularity, we should say that their singular elements vaguely refer to the causal chain leading to the experience from the up-stream areas.

In general, the recipe for making an alternative description of purported cases of specifically particular hallucination is that the singular element of such experiences picks out the causal chain leading to the experience, without there being a matter of fact as to what part of the causal chain the singular element refers to.²¹

So far, we have dealt with internal and external hallucinations. However, one might still argue that in some conceivable scenarios, there is no determinate causal factor in generating a hallucination. Suppose that Edgar is a disembodied soul, floating in empty space, having an uncaused, *sui generis* perceptual state which is phenomenally indistinguishable from a veridical perception of an ordinary object. Here, Edgar's experience is phenomenologically particular and objectually unified without there being any candidate object for it to represent. Another scenario of this sort describes a subject who, due to completely random microphysical reactions in her brain, is having a hallucination phenomenally indistinguishable from a veridical experience. Her experience does not have any determinate cause. It is a result of pure chance (Chalmers 2010: 479). Here, again, it seems that an experience can exhibit phenomenological particularity and objectual unity without representing any object.

However, as Chalmers notes (2010: 479), in such cases, the experience does not have *any* causal explanation. Nothing causally explains why Edgar the floating soul, or the person with random brain states is hallucinating a red ball instead of a green elephant or why their experience exhibits any regularities at all. On the theory defended here, such cases are metaphysically impossible, and I am happy to embrace this conclusion. All that such cases show is that the objectual unity and phenomenological particularity do not *conceptually necessitate* that the experience represents an object. This is, of course, compatible with our theory. However, it is not clear that such scenarios can also be reliable guides to our intuitions about metaphysical possibilities (Cf. Masrour 2020: 21-27).

4. Conclusion

We have here considered three familiar theories of perceptual experience and their explanations for the objectual unity and the phenomenological particularity of visual experience. We have seen that Fregean particularism fails to account for the objectual unity, that generalism fails to account for specific particularity, and that the CP theory cannot account for either.

²⁰ For an excellent review of cognitive models of visual hallucination, see Aleman and Vercammen 2013.

²¹ Here we should note that although naïve realism may provide a simple explanation of the objectual unity and particularity of veridical experiences, it arguably loses all of its force when it comes to hallucinations. This is simply because the naïve realist explanation rests on the assumption that phenomenal character is constituted by particulars and property instances in the perceived environment. However, this view of phenomenal character cannot extend to hallucinations, where the environment does not instantiate the perceived properties. To account for hallucinations, naïve realists often resort to the disjunctivist view of perceptual experience, i.e. the view that hallucinations are of a fundamentally different kind than veridical experiences. But this means that they lose their otherwise elegant explanation of objectual unity and particularity of hallucinatory experiences.

In contrast, the defended singular content theory shows how explaining objectual unity can be a matter of explaining the unity of propositional content. Although questions remain concerning the latter, resolving them is outside the scope of a theory of perceptual experience. With respect to phenomenological particularity, the singular content theory shows how it can be grounded in singular perceptual reference without sacrificing our intuitions about the possibility of phenomenally indistinguishable experiences of numerically distinct objects.

Furthermore, although this theory is compatible with the existence of hallucinations which do not exhibit specific phenomenological particularity, it demands that we regard putative cases of specifically particular hallucination as cases of exhaustive illusion. This revision might appear problematic at first sight, but I hope I have shown that the major objections can be given a plausible response.

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