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Misperceiving properties

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Abstract

Recently, a number of philosophers have argued that *property illusions*—cases in which we perceive a property, but that property is not the property it seems to us to be in virtue of our perceptual experience—and *veridical illusions*—cases in which we veridically perceive an object's properties, but our experience of some specific property is nonetheless unsuccessful or illusory—can occur. I defend the contrary view. First, I maintain that there are compelling reasons to conclude that property illusions and veridical illusions can't occur; and second, I maintain that the considerations supporting the possibility of such cases are uncompelling.

KEYWORDS

illusion, hallucination, perception, perceptual content, property perception, veridical illusion

1. INTRODUCTION

Our perceptual experiences of objects can fail in a variety of ways. For instance, sometimes we perceive an object but we misperceive it—the object we perceive doesn't possess all of the properties it seems to us to possess in virtue of our perceptual experience. Such experiences are *illusions*. The converse of such cases can also arise, at least in principle. Specifically, we could have a perceptual experience that presents an object possessing certain properties located in front

of us, and there really is an object possessing just these properties located in front of us, and yet we fail to perceive that object. Such experiences are *veridical hallucinations*.

Can our perceptual experiences of properties fail in analogous ways? The traditional account of illusion suggests that the answer is "no". According to the traditional account, an illusory experience is one that presents a perceived object as possessing some property it does not in fact possess.[1] This account suggests that there is one sense in which we can misperceive properties: An experience might present some property as possessing a higher-order property that it does not possess.[2] But, crucially, this account leaves no room for cases in which you perceive some property of an object but where *that property* perceptually appears to be *some other property*. Moreover, according to the traditional account, every illusory experience attributes at least one property to a perceived object that that object does not possess; and so, since veridical experiences only attribute properties that the relevant objects actually possess, veridical experiences can't be illusory.

Recently, a number of philosophers have rejected these consequences of the traditional account of illusion. Some maintain that, on occasion, we perceive a property, but that property is not the property it seems to us to be in virtue of our perceptual experience. Such experiences would be *property illusions*.[3] And some maintain that cases can arise in which we perceive an object, the properties our experience presents perfectly match the properties the object possesses, but our experience of some specific property is nonetheless unsuccessful or illusory. Such experiences would be *veridical illusions*.[4] Accordingly, if these philosophers are correct, object perception and property perception are more similar than the traditional account of illusion suggests; and, as such, the traditional account of illusion ought to be rejected.

I maintain that we ought to preserve the traditional account of illusion. In particular, I maintain that there are compelling reasons to conclude that property illusions and veridical illusions can't occur; and I maintain that, conversely, the considerations supporting the possibility

[1] See, for example, Smith (2002, p. 23) and Crane and French (2005/2015, Section 2.1). It's worth noting that a number of phenomena that psychologists characterize as illusions—such as the phi phenomenon and the Hermann grid illusion—don't fit the traditional philosophical account; this account entails that such phenomena be characterized as hallucinations rather than illusions.

[2] If one grants that perceptual experiences sometimes present properties as possessing other properties, the possibility of higher-order property illusions should be uncontroversial. Accordingly, I will ignore such higher-order illusions from this point forward.

[3] See, for example, Macpherson and Batty (2016), O'Callaghan (2017), Alford-Duguid (2020), Macpherson (2020), Ivanov (2021), and Mehta (manuscript, chap. 2).

[4] See, for example, Johnston (2006; 2014), Macpherson and Batty (2016), and Macpherson (2020).

of such cases are uncompelling. If so, then this conclusion has important consequences regarding the nature of perception. In particular, if property perception can't fail in ways analogous to illusion and veridical hallucination, then there are fundamental differences between our perceptual access to objects and our perceptual access to properties. And, moreover, these facts place significant constraints on adequate theories of perception—any adequate theory of perception needs to accommodate, and ideally, explain, the fundamental differences between object perception and property perception.[5]

(In what follows, I make two assumptions for the sake of simplicity. First, I assume that the *content view* is correct. That is, I assume that perceptual experiences, like prototypical propositional attitudes, are mental episodes partly constituted by representational contents. Second, I assume that perception requires a causal connection of the right sort. That is, I assume that one perceives some worldly item only if that item causes one's perceptual experience in the right way (i.e., the perceptual way).[6] While the resulting theory—that perceiving some item is a matter of having a perceptual experience that represents that item and that is caused by that item in the perceptual way—is controversial, it is plausibly regarded as the standard theory of perception. More to the point, most all attacks on the traditional account of illusion are intended to be consistent with these assumptions; as such, by making these assumptions, I'm not stacking the deck against property illusions and veridical illusions.)

2. AN ARGUMENT AGAINST PROPERTY ILLUSIONS

The trouble for the proponent of property illusions begins with a highly plausible principle regarding illusory experiences that I'll call the *competing property principle*: Every illusory perceptual experience either represents a property that the perceived object does not possess and that is incompatible with some property that the perceived object does possess, or represents a property that is distinct from and incompatible with the perceived property. For example, consider the Hering illusion, in which two straight lines appear to be curved. Your visual experience represents that these lines possess a property that they do not possess: being curved. And being curved is incompatible with a property that the lines possess, because the lines are straight, and lines can't be both curved and straight. If you think that the lines' straightness is perceived but

[5] For further discussion, see Millar (forthcoming).
[6] This common assumption may be too restrictive: see Ganson (2021).

misperceived, it's still the case that curvedness is represented and that curvedness is incompatible with straightness. Or, consider a case in which a dark blue square looks to be lighter than it really is due to the nature of the surfaces that surround it (e.g., the dark blue surface looks to be in shadow when it isn't). In this case, your visual experience represents that the square possesses a property that it does not possess: being light blue. And being light blue is incompatible with a property that the square possesses, because the square is dark blue, and objects can't be both light blue and dark blue (at least, not all over). Again, if you think that the square's dark blueness is perceived but misperceived, it's still the case that light blueness is represented and that light blueness is incompatible with dark blueness.

There are a number of compelling reasons to endorse the competing property principle. First, the principle is entailed by the most plausible account of the perceptual error that illusory experiences involve. It is uncontroversial that every illusory experience is a case in which you perceive something, but misperceive it. So, given that we are assuming that perceptual experiences are representational mental episodes akin to beliefs, misperceiving some item must be a matter of *misrepresenting* the perceived item. For, if a perceptual experience were a failure in some way that didn't involve misrepresentation, neither would it involve misperception. For instance, a perceptual experience might fail in the way that an empty belief fails—it might fail to be about any property at all; but such an experience is not a case where some property is perceived but misperceived (it's a hallucination rather than an illusion). Beliefs can also fail in the sense that they are improperly formed or unjustified; but there is no perceptual analogue of an improperly formed belief. Successful perception is like true belief rather than knowledge in that it is invulnerable to luck: The fact that you're only able to perceive some entity under extremely unlikely conditions, or thanks to some happy accident, does not suggest that your perceptual experience is unsuccessful in any respect.[7] In order for you to misperceive some perceived item, then, your experience must misrepresent that item; and, plausibly, in order for a perceptual experience to misrepresent some perceived item it must represent that that item possesses some property incompatible with the properties it actually possesses (or represent the perceived item to be some property that it isn't). For instance, the most plausible account of the perceptual error involved in your visual experience of the Hering illusion is that your experience represents that the lines are curved when they are actually straight.

[7] This issue is discussed at greater length below (Section 4).

Second, the competing property principle is entailed by the most plausible account of the sorts of judgements that illusory experiences make reasonable. Specifically, an illusory experience makes it reasonable for you to judge that some perceived item possesses a property that is incompatible with the properties it actually possesses (or to judge some perceived item to be a property that it isn't). For instance, in the case in which you view the dark blue square, it is reasonable for you to judge that the square is light blue. One might suggest that the unusual viewing conditions make it reasonable for you to judge that the square is light blue; however, even if you are not aware of the unusual viewing conditions (as you typically won't be in such cases), it's still reasonable for you to judge that the square is light blue. Or, one might suggest that it's reasonable for you to judge that the square is light blue because, under the circumstances, it possesses some *look* characteristic of light blue things; however, in ordinary cases of colour constancy, the square might take on the looks characteristic of various other shades of blue, but it won't be reasonable for you to judge that the square is those other shades of blue. So, the most plausible explanation is that it's reasonable for you to judge that the square is light blue even though it is dark blue because your experience represents that the square is light blue.

Third, the principle is entailed by the fact that illusory experiences make it possible for you to think about properties you have never encountered. For instance, suppose that you have lived your entire life in an environment composed of straight lines exclusively; and then suppose that you are presented with the Hering illusion for the first time. This initial experience of the lines in the Hering diagram would make it possible for you to think about curvedness—for instance, you might form the belief that some lines are curved.[8] And, plausibly, this illusory experience could not confer the capacity to form beliefs concerning a property you have never encountered without representing that property; so, we should conclude that this experience represents that the lines are curved.

While the competing property principle might seem reasonably innocuous, it has important consequences regarding the possibility of property illusions. If every illusory experience is such that it represents some competing illusory property, then the most plausible account of illusory experiences is that they represent the illusory property *rather than* the property that actually exists in the relevant part of the environment. The only alternative is to claim that property illusions occur

[8] Ivanov (2021, Section 2.2) and Millar (forthcoming, Section 4) describe similar examples. For discussion of the point as it relates to hallucinations, see Johnston (2004) and Pautz (2007).

when a perceptual experience represents *both* the competing illusory property *and* the property that actually exists in the relevant part of the environment. In the case of the Hering illusion, the claim would be that your experience represents that the lines are both straight and curved (or represents that the line's straightness is identical to curvedness). But such an account posits perceptual contents that are incoherent and that would strike perceivers as such; it is unacceptable, then, since when you view the Hering diagram you do not seem to be aware of an impossible state of affairs.

In order to order to avoid this difficulty (with the proposal that property illusions occur when a perceptual experience represents *both* the competing illusory property *and* the property that actually exists in the relevant part of the environment), a proponent of property illusions must adopt a particularly complex account of property perception. Specifically, she must claim that when one suffers a property illusion, the perceived property (or property instance) is represented via some non-descriptive or non-satisfactional mode of presentation. So, for instance, when you view one of the lines in the Hering diagram, the line's straightness is picked out via some indexical element—an analogue of "that". And of course, if the perceptual experience only included this indexical element representing the line's straightness, there would be no illusion—so this account requires that the experience also represents that the item picked out by the indexical mode of presentation is some way or other.[9] That is, your experience of the line's straightness would possess a content along the lines of: *that is curved*. In effect, this account maintains that perceptual experiences represent properties twice: First, the property is picked out via some indexical mode of presentation, and second, the property is characterized as being some way or other. Consequently, given that a much simpler account of illusory experiences is available—namely, the view that such experiences represent only the competing illusory property—we would need compelling independent reasons to conclude that some such experiences also represent a property that actually exists in the relevant part of the environment.

We can establish that there are no compelling independent reasons for drawing this conclusion by considering and rejecting the most plausible proposals. First, one might appeal to phenomenological considerations. That is, one might claim that our perceptual experiences of properties, just like our perceptual experiences of objects, exhibits a phenomenological *particularity*—just as your visual experience presents you with *this* particular tomato, it also

[9] For discussion of such a view of property perception, see Alford-Duguid (2020).

presents you with *this* instance of redness.[10] However, we should deny that perceptual phenomenology supports the specific proposal under consideration. The present proposal is that your perceptual experiences represent properties twice: First, the property is picked out via some non-descriptive, indexical mode of presentation, and second, the property is characterized as being some way or other. Perhaps first-person reflection reveals that our perceptual experiences present *objects* in some purely non-descriptive, indexical fashion; but the claim that our perceptual experiences put us in contact with property instances in a purely non-descriptive way—that in perception we have a kind of access to a given property instance that isn't mediated by its qualitative nature—is not similarly plausible. At the very least, phenomenological considerations do not support such a view; and, plausibly, such a view is in tension with perceptual phenomenology. To the extent that our perceptual experiences of properties exhibit an evident phenomenological particularity, we can capture this aspect of experience without positing indexical modes of presentation; we can explain the fact that this tomato's redness looks to be distinct from that tomato's redness simply by positing distinct components of representational content, or distinct representational vehicles.

Next, there are strategies for defending the claim that some illusory experiences represent a property that actually exists in the relevant part of the environment that don't appeal to phenomenological considerations. A first such strategy would be to point to the fact that many illusory experiences are such that the experience's illusory component is caused by a property in the perceptual way. However, we should reject the suggestion that a perceptual experience represents a property whenever the experience is caused by a property in the perceptual way. For instance, suppose you are looking at a single cloud directly overhead in an otherwise clear sky—one that occupies a tiny fraction of your visual field and looks to be very far away. The cloud being a certain determinate size causes your experience to have a certain specific phenomenal feature; but even so, your experience doesn't represent the cloud's determinate size—the cloud is simply too far away for you to see how big it is. Or, imagine a scenario in which you are outfitted with a visual-to-auditory sensory substitution device on a permanent basis. Your initial perceptual experiences using the device possess phenomenal features caused by the shapes of perceived objects; but even so, these initial experiences don't represent the shapes of those objects—you will only come to perceive shapes once you've been using the device for some time.

[10] My thanks to an anonymous reviewer for this suggestion.

Alternatively, you might appeal to some more robust connection between the perceiver and the purportedly misrepresented property. For instance, Macpherson and Batty suggest that an illusory experience represents a property whenever there is "a suitable pattern of counterfactual dependence between the experience and the environment" and when, in addition, one is "able to form some correct judgments about the environment solely on the basis of one's experience" (2016, p. 277). At least some illusory experiences are such that, not only is the experience's illusory component caused by a property in the perceptual way, but it also counterfactually depends on that property (in the sense that, if that property were replaced by some distinct property, the experience would be different) and enables you to make some correct judgements concerning that property; accordingly, you might claim that a perceptual experience represents a property whenever it is related to a property in these ways. However, we should reject the suggestion that these conditions suffice for an experience to represent a property. When you look at the cloud overhead, your experience's phenomenology depends on the cloud's size: if the cloud were a different size, your experience would be different. And you can make some correct judgements about the cloud's size on the basis of your experience: you might judge that the cloud has some size or other; if there were another cloud nearby, you would be able to determine which of the two was larger; and so on. Even so, your perceptual experience of the cloud does not represent its size.[11] (Analogous points could be made by employing the sensory substitution device example.)

Finally, following Ivanov (2021, Section 2.2), you might claim that a perceptual experience represents a property whenever it enables you to attend to a property and to track it through changes of appearance.[12] There is a potential for circularity here: the claim that you are attending to and tracking a specific property may presuppose that your experience represents it. But, so long as there are notions of *attending* and *tracking* that don't presuppose representing, you might claim that some illusory experiences are such that the experience's illusory component enables the

[11] Perhaps the experience represents that the cloud's size falls within some large range. The point here is just that the experience is caused by and counterfactually depends on the cloud's determinate size; and you are able to form some correct judgements concerning the cloud's determinate size on the basis of your experience. Even so, your experience does not represent the cloud's determinate size.

[12] Relatedly, following Alford-Duguid (2020, Section 1) and Mehta (manuscript, chap. 2), one might claim that a perceptual experience represents a property whenever it enables you to form a demonstrative thought that picks out that property. However, either we should insist that an experience's illusory component never enables you to form a demonstrative thought concerning a property that actually exists in the relevant part of the environment; or, we should insist that some such successful demonstrative thoughts don't require perceptual representation (e.g., perhaps when looking at the cloud overhead you can think about its determinate size by thinking about *that size* even though your experience doesn't represent its determinate size).

subject to attend to and track a given property. However, in that case, we should reject the suggestion that a perceptual experience represents a property whenever it enables the subject to attend to some property and to track it through changes of appearance. When you view the cloud overhead, you can attend to its size, and you can track its size as its appearance changes (e.g., as it drifts off into the distance). Even so, your experience of the cloud does not represent its size. (Again, analogous points could be made by employing the sensory substitution device example.)

Ultimately, then, the competing property principle provides compelling reasons to conclude that property illusions can't occur. The principle says that whenever we misperceive some object (or property), our experience represents an illusory property—one that is distinct from and incompatible with some property that the perceived object possesses (or is distinct from and incompatible with the perceived property). As such, the simplest account of illusory experiences is that they represent this competing illusory property *rather than* a property that actually exists in the relevant part of the environment. In order to maintain that properties are sometimes perceived but misperceived, then, one must adopt a complex account of perceptual content according to which properties are picked out via indexical modes of presentation and then characterized as being some way or other. This account would be acceptable only so long it were supported by compelling independent reasons; but since there are no such reasons, we should reject it as unnecessarily complex. (One might suggest that such a complex account of property perception is required precisely because there are clear examples of property illusions. I respond to this suggestion in the next section.)

3. PURPORTED EXAMPLES OF PROPERTY ILLUSIONS

Perhaps the best case for the existence of property illusions would be simply to point to examples. After all, if there are clear cases of property illusions, then the foregoing argument must have gone wrong somewhere, and we needn't worry too much about precisely where. Accordingly, we should consider the most plausible purported examples of property illusions. In particular, we should consider two kinds of example that Macpherson and Batty (2016) and Macpherson (2020) describe: illusions of pure property perception and illusions that are close matches.[13]

[13] I should note that Macpherson and Batty (2016) use "close match" as a technical term for a proposal discussed in Section 2 above. Specifically, they say that "what is required in order for there to be a closely matching experience is for there to be a suitable pattern of counterfactual dependence between the experience and the environment and, in addition, that one be able to form some correct judgments about the environment solely on the basis of one's

If a perceptual experience is caused by a property in the perceptual way and represents that property without attributing it to any object, then this experience constitutes pure property perception. Whether pure property perception occurs is controversial; but, as Macpherson and Batty (2016, pp. 269–270) note, the claim that some olfactory experiences constitute pure property perception is at least prima facie plausible. For instance, one might think that when you notice a fruity smell, your experience need not represent that the smell belongs to some particular piece of fruit, nor that the smell occupies some particular location—your experience might simply represent that fruitiness exists, or is present. If so, then the following sort of case could arise:

> Suppose that there is a fruity odour in the air and it causes you to have an olfactory experience as of a more intense fruitiness than the fruitiness in the air. Your experience represents the property "intense fruitiness", rather than the more accurate "moderate fruitiness". Suppose further that the reason that this happens is because the inside of your nose has been coated with a (non-odorous) chemical that skews the way the receptors in your nose fire in response to odours in the air. In particular, the coating makes all smells seem a little fruitier than they actually are. (Macpherson & Batty, 2016, pp. 273–274)

If the moderate fruitiness in the air is perceived but misperceived, then this is an example of a property illusion. But is the moderate fruitiness in the air perceived? Presumably, intuitions will vary. The important question is whether there are compelling independent reasons supporting one verdict or the other. And there are very good reasons to conclude that the moderate fruitiness in the air is not perceived. In order for some item to be perceived, it must be represented by an experience that it caused in the perceptual way. But, in the case at hand, your olfactory experience does not represent moderate fruitiness: it represents intense fruitiness, and it's not plausible that it represents both intense and moderate fruitiness. Consequently, since your experience does not represent moderate fruitiness, you do not perceive moderate fruitiness.

Conversely, there are no compelling reasons to conclude that the moderate fruitiness in the air is perceived. Macpherson and Batty claim that "it is reasonable to think that such a case counts as a case of perception" because your experience is caused by and counterfactually depends on the

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experience" (2016, p. 277). I will employ a more intuitive sense of "close match": an experience that misrepresents the environment, but not by much.

moderate fruitiness in the air: the coating in your nose is such that, if the smell in the air were more or less fruity, your experience's phenomenology would be different in corresponding ways (2016, p. 274). In addition, this example is also a case in which you are "able to form some correct judgments about the environment solely on the basis" of your experience: For instance, you might judge that a fruity smell is present. However, as we have already seen, the fact that an experience is related to some item in the environment in these ways is not a good reason to conclude that the subject perceives that item. Again, when you look at the cloud overhead, your experience's phenomenology counterfactually depends on the cloud's size, and you can make some correct judgements about the cloud's size on the basis of your experience; even so, you don't perceive the cloud's size.

Alternatively, one might claim that we should insist that the moderate fruitiness in the air is perceived because, if it isn't, then nothing is perceived. That is, given that we are assuming that olfactory experiences represent pure properties, the claim that the moderate fruitiness in the air is not perceived entails that the olfactory experience at issue constitutes a hallucination rather than an illusion—and that consequence is counterintuitive. However, while we should grant that there is something counterintuitive about categorizing this experience as a hallucination, we shouldn't put much stock in the relevant intuition. For instance, this intuition might be based on a background assumption that your olfactory experience represents some component of a complex property (e.g., that your experience is accurate with respect to the character of the odour, but gets the intensity wrong). Or, this intuition might be due to the strangeness of pure property perception: Perhaps it's difficult for us to suppress the assumption that the example involves some object—such as a cloud of chemicals in the air—that is misperceived. Consequently, while it seems strange to categorize the experience at issue as a hallucination, this strangeness is not a sufficiently compelling reason to conclude that the moderate fruitiness in the air is perceived—the reasons supporting the contrary verdict are much stronger.

The second sort of example—close matches—are cases in which your perceptual experience misrepresents something in your environment, but not by much. A proponent of property illusions might suggest that, when an experience dramatically misrepresents some feature of a perceived object, we should grant that the corresponding property is not perceived; but, when the disparity is only minor, we should insist that the property is perceived.[14] So, for example:

[14] Alford-Duguid (2020, p. 622) makes a related claim.

> Suppose that because you are wearing dark glasses, you experience objects and all of their visible properties accurately except for their colour which you experience as systematically skewed. You experience objects to be slightly darker than they really are. Suppose you look at a red ship and experience it to be a darker shade of red than it really is. Intuitively, this is a case of perception—but a case of misperception, and hence illusion. The dark glasses do not stop you seeing the colour of the ship or being sensitive to the colours of things more generally, they simply systematically skew your experience of the colours. (Macpherson, 2020, pp. 6–7)[15]

If the ship's colour is perceived but misperceived, then this is an example of a property illusion. But is the ship's colour perceived? We may assume that intuitions will vary. Again, the important question is whether there are compelling independent reasons supporting one verdict or the other. And again, there are very good reasons to conclude that the ship's colour is not perceived. A property of some object is perceived only if it is represented by an experience that it causes in the perceptual way. But, in the case at hand, while the boat is light red, your visual experience does not represent light redness: it represents dark redness, and it's not plausible that it represents both light redness and dark redness. Consequently, since your experience does not represent the boat's light redness, you do not perceive the boat's light redness.

Conversely, there are no compelling reasons to conclude that the boat's light redness is perceived. Macpherson and Batty (2016, p. 281) will point to the fact that your experience is caused by and counterfactually depends on the boat's light redness, and the fact that you can form some correct judgements concerning the boat's colour on the basis of your visual experience. However, as we've seen, these are not good reasons to conclude that a property is perceived. A related suggestion would be that because your colour experience is "systematically skewed", you can perceive relations that the boat's colour stands in to other colours (Macpherson and Batty, 2016, p. 281). However, the fact that you perceive that some property stands in a given relation to some other property does not entail that you perceive either of the relevant properties. For instance, if when you view the cloud overhead there is a second cloud beside it that takes up more room in your visual field, you will perceive that the second cloud is larger than the first—but you

[15] See Macpherson and Batty (2016, p. 281) and Ivanov (2021, Section 2.2) for similar examples.

won't perceive the size of either cloud. (By analogy, a balance scale can represent that one object is heavier than another without representing the weight of either object.)

Instead, following Ivanov (2021, Section 2.2), you might claim that you perceive the boat's light redness because you can attend to and track the boat's light redness. For instance, Macpherson says that, while wearing the dark glasses, "your experience will allow you to track" the boat's colour "and other colours in a wide variety of situations" (2020, p. 7). But, first, it's not clear that you are able to track the boat's light redness precisely because it's not clear that you perceive the boat's light redness. And, moreover, if there is some neutral sense of tracking in which you can clearly track the boat's actual colour, being able to track a property in this sense is not sufficient for perceiving that property. Again, when you view the cloud overhead, you can attend to its size, and you can track its size as its appearance changes; even so, you don't perceive the cloud's size.

Finally, one might claim that we should conclude that the boat's light redness is perceived because the difference between represented colour and actual colour is so minor. There are two ways of developing this suggestion. First, drawing on O'Callaghan (2017, p. 53, n. 13), one might claim that you perceive the boat's redness, and that, if you perceive the boat's redness, then you perceive (but misperceive) the boat's light redness. However, it's not clear that you perceive the boat's redness in this case precisely because it's not clear that you perceive its light redness. Moreover, even if we grant that you perceive the boat's redness, we should deny the assumption that you perceive a given determinate property whenever you perceive the corresponding determinable feature.[16] For instance, if when you view the cloud overhead you perceive that it possesses some determinable size, it's still not the case that you perceive its determinate size. Second, one might worry that almost all of our perceptual experiences get the properties of objects at least a little bit wrong; and so, if close matches don't qualify as perception, then we perceive almost none of the properties we encounter. However, this worry is based on unreasonable assumptions concerning the precision with which our perceptual experiences represent properties. Our perceptual experiences don't represent that objects are perfectly spherical or that lines are perfectly straight; rather, they represent that objects are spherical or that lines are straight. In the case of vision, there are clear limits on the details you can perceive; and these limits constrain the

[16] To be clear, O'Callaghan doesn't endorse this assumption—he simply suggests that a property illusion would be a case in which "you perceive some determinable feature but misperceive its determinate value" (2017, p. 53, n. 13). By itself, O'Callaghan's proposal would not help the proponent of property illusions in the present context, because whether determinate properties are ever perceived but misperceived is precisely the point at issue.

precision with which your visual experiences represent an object's properties. For instance, suppose that you have a visual experience that represents some particular line to be straight, and then later, when you get much closer, you discover that part of the line curves ever so slightly; in such a case, you have not discovered that your initial visual experience was inaccurate. As such, the claim that you don't perceive the boat's light redness in the case at hand does not entail that we perceive almost none of the properties we encounter.

4. AGAINST VERIDICAL ILLUSIONS

A veridical illusion would be a case in which you perceive an object, and the properties your experience presents perfectly match the properties the object possesses, but your experience of some specific property is nonetheless unsuccessful or illusory. That is, even though you perceive the relevant property, and even though your experience is wholly veridical, your experience of the property is illusory in some important sense.[17] There is a simple argument for the conclusion that such cases can't arise. An illusory experience is one in which some item is perceived but misperceived. And for the reasons outlined above (Section 2), you misperceive some item only if your experience misrepresents that item. But no veridical experience of some property misrepresents that property. So, a veridical experience of some property can't also be illusory.

We can put the point another way by reflecting on the notion of veridical hallucination. In cases of veridical hallucination, there are objects and properties in the environment that match the content of your perceptual experience, but you don't perceive those objects and properties because they don't cause your experience in the perceptual way. So, the reason that your experience can be veridical even though it does not constitute successful perception is that, in such cases, you have one of the necessary ingredients for successful perception—representation—but not the other—the right sort of causal connection. Conversely, in a parallel case of veridical illusion your experience would both represent and be caused by the relevant property; but then you have both necessary ingredients for successful perception, and so your experience can't be illusory.[18]

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[17] Macpherson and Batty (2016, pp. 281–282) and Macpherson (2020, pp. 7–8) understand veridical illusions in these terms. However, Hawthorne and Kovakovich (2006, pp. 162–163), Johnston (2006, pp. 271–273; 2014, pp. 114–118), Siegel (2010, pp. 36–37), and Smith (2010, pp. 396–398) maintain that in cases of "veridical illusion" the subject does not perceive the relevant property. I will classify cases in which an experience is wholly veridical even though some specific property is represented but not perceived, as veridical *property hallucinations*. On the notion of property hallucination, see Macpherson and Batty (2016, p. 281) and O'Callaghan (2017, p. 53, n. 13).

[18] It is for precisely this reason that Johnston (2006; 2014) maintains that the representational theory of perception should be rejected. Regarding the cases that he labels "veridical illusions", the representational theory of perception

Yet, one might think that the possibility of veridical illusions can be established by pointing to examples. The most common purported examples of veridical illusions are cases in which conditions that would typically precipitate an illusory experience are, by chance, perfectly counteracted by additional conditions that would also typically precipitate an illusory experience.[19] So, for example:

> Suppose your vision is systematically skewed in such a way that you see everything as slightly darker than it really is. (Perhaps you have had dark lenses inserted into your eyes.) You look at a stimulus that would, in most people, cause a colour illusion—a stimulus that most people would see as having a colour that was slightly lighter than it really is. The illusory qualities of this stimulus might perfectly cancel out the skewing effects of your vision. If it did, your experience would represent the colour accurately, but you would be having an illusory experience of it. (Macpherson & Batty, 2016, pp. 281–282)

If your experience of this surface's colour is illusory in some important sense even though you veridically perceive that colour, then this is an example of a veridical illusion. But is your experience illusory in some important sense? Presumably, intuitions will vary. The important question is whether there are compelling independent reasons supporting one verdict or the other. And there are very good reasons to conclude that your experience is not illusory: Your experience both accurately represents the surface's colour and is caused by the surface's colour in the perceptual way.

Conversely, there are no compelling reasons to conclude that your colour experience in this case is illusory. First, following Johnston (2006, pp. 272–273), one might claim that you are subject to two distinct illusions at once. In fact, Macpherson (2020, p. 8) characterizes the case in precisely these terms: The colour illusion generated by the dark lenses persists but just happens to be "perfectly off-set" by the colour illusion generated by the stimulus. However, it's not the case that you are subject to two illusions at once; rather, there are two sets of conditions that, in different

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entails that the subject perceives some specific property that, according to Johnston, the subject does not in fact perceive. (In effect, I argue below that in cases of the sort at issue there are no compelling reasons to deny that the relevant property is perceived.)

[19] Examples of this sort are described by Hawthorne and Kovakovich (2006, pp. 162–163), Johnston (2006, pp. 272–273), Smith (2010, pp. 396–397), Macpherson and Batty (2016, pp. 281–282), and Macpherson (2020, pp. 7–8).

circumstances, would precipitate an illusory experience. The fact that some set of conditions or some element of a scene would create an illusion in a certain range of circumstances does not imply that it does so in every circumstance. So, in the present case, the fact that the stimulus would have produced a colour illusion if not for the dark lenses does not entail that it produces a colour illusion even in conjunction with the dark lenses. Instead, the most plausible characterization of the case is that the dark lenses prevent the stimulus from precipitating the illusory experience that it would typically precipitate. (By analogy, the prisms in a pair of binoculars prevent you from suffering an illusory experience of the orientation of perceived objects—the prisms do not produce a second illusion to off-set the first.)

Alternatively, one might claim that your colour experience in the case at hand is illusory because it is veridical only due to an unlikely coincidence. For instance, Macpherson maintains that your colour experience is illusory because "you are not in perceptual conditions that make you systematically accurately sensitive to the lightness of objects" (2020, p. 8).[20] In other words, it's just lucky that your experience represents the surface's colour accurately: if you were to look at most any other surface, or the same surface under most any other conditions, your experience would misrepresent the relevant colours.

However, we should deny that there is any important sense in which luckily accurate perceptual representations are illusory.[21] To return to a point mentioned earlier, successful perception is like true belief rather than knowledge—it is invulnerable to luck. For instance, imagine that there are two spotlights pointed at a white object: one is blue and the other is yellow. If just the blue light illuminates the object, you will misperceive it to be blue; if just the yellow light illuminates the object, you will misperceive it to be yellow. But if both spotlights illuminate the object at once you will accurately perceive that it is white. Now suppose that these lights have been designed so that they don't illuminate the object at the same time, but due to some unlikely coincidence they illuminate the object simultaneously on exactly one occasion; and suppose that you happen to view the object on this occasion. In this case, there is no good reason to claim that your veridical experience is illusory—to the contrary, your perceptual experience of the object's whiteness is entirely successful. But luck plays precisely the same role in this case as it does in the

[20] Smith (2010, pp. 397–398) and Macpherson and Batty (2016, p. 282) make related claims.
[21] Johnston (2006, p. 275) makes precisely this point when arguing that representational theories are not in a position to maintain that experiences in cases of the sort at issue are illusory.

example at issue: The coloured lights in this scenario would each produce an inaccurate experience if operating in isolation, as they typically do; but because they luckily happen to be operating at the same time, neither light has its typical influence on the perceiver.

In fact, successful perception does not require that there be *any* counterfactual circumstances in which your experience would be veridical. Consider the following version of Lewis's (1980, pp. 248–249) *The Censor*. Suppose that there is a device in your brain that allows some individual, a censor, to monitor the activity in your visual cortex and intervene when necessary. The censor's job is to ensure that your every visual experience represents the object your eyes are focused on to be red. Whenever you happen to be viewing a red object, the censor does nothing—the implant in your brain does not influence the resulting visual experience in any way. But, whenever you focus your eyes on an object that isn't red, the censor uses the implant to manipulate the activity in your visual cortex so that the resulting visual experience represents the object to be red. Next, suppose that on a particular occasion you are viewing a ripe tomato under normal conditions; the implant in your brain remains dormant, and your visual experience represents that the object is red. In this case, if the tomato's surface were any other colour, your experience would misrepresent it to be red. That is, there is no range of counterfactual circumstances in which your visual experiences would vary in ways corresponding to variations of the colours in your environment—in Macpherson and Batty's (2016) terms, you are not "counterfactually sensitive" to the colours of the objects you perceive. But, even so, the most plausible characterization of this case is that, precisely because the implant has no influence on the electrical activity in your brain, you successfully perceive the tomato's redness.[22]

(I should note that Lewis maintains that the moral of this story of his is that seeing requires appropriate patterns of counterfactual dependence. That is, he maintains that in *The Censor*, you do not see the colour of the tomato at all. In defence of this interpretation of the case, Lewis claims that the "decisive consideration … is that the censor's potential victim has no capacity at all to discriminate by sight" (1980, pp. 248–249). By being able to "discriminate by sight", he means that "the subject is in a position to discriminate between" alternative scenes (1980, p. 245); so, his claim is that you do not perceive the tomato's redness because, on the basis of your visual

[22] While he doesn't mention Lewis's *The Censor*, Johnston describes a very similar example in order to show that "a subject can see an object without any illusion or hallucination entering in, even if the subject would lose a grip on the object's nature were the object to undergo a small intrinsic change" (2006, p. 275).

experience, you are not able to discriminate between cases in which you are viewing something red and cases in which you are viewing some other colour. However, we should reject the claim that perception requires such an ability. In *The Censor*, on the basis of your visual experience, you are able to discriminate the tomato's redness from the colours of nearby objects—and this ability is sufficient for you to perceive the tomato's redness.)

There is one last sort of example that we should consider. O'Callaghan suggests that property illusions are cases in which "you perceive some determinable feature but misperceive its determinate value" (2017, p. 53, n. 13); one might think that such cases would be better regarded as veridical illusions. Accordingly, we can reconsider the close match example described above: You see a light red boat, but your experience represents that it is dark red. One might claim that you perceive a determinable feature of the boat, its redness, because your experience represents that the boat is red and because this experience is caused by the boat's redness in the right way. Moreover, with respect to this feature, your experience is veridical, since the boat really is red. Yet, even though you veridically perceive the boat's redness, there is a clear sense in which your experience of this feature is unsuccessful or illusory: your experience represents that the boat is red in virtue of representing that the boat is dark red, but the boat is light red rather than dark red.

The principal reason to deny that this example constitutes a veridical illusion is that, if in cases of the sort at issue, perceptual experiences represent determinable categories in addition to determinate properties, the representation of determinable categories is grounded in the representation of determinate properties. For instance, regarding the case at hand, suppose that your experience represents both that the boat is dark red and that the boat is red. Plausibly, the boat's being represented as dark red and the boat's being represented as red are not two distinct, independent components of your experience. To the contrary, the simplest account is that your experience represents that the boat is dark red and *thereby* represents that the boat is red. Accordingly, in cases in which you perceive both the determinable category and the determinate property, the causal relation between a perceptual experience and a perceived determinable category involves the mediation of a perceived determinate property. (That is, in such cases, the causal relation necessary for successful perception of a determinable category is different from, and more complex than, the causal relation necessary for successful perception of a determinate property.) But, in the present case, you don't perceive the corresponding determinate property because your experience doesn't represent light redness. So, while your experience represents that

the boat is red, and the boat is red, your experience is not caused by the boat's being red in the right way; and so, you do not perceive the boat's redness. In other words, with respect to the boat's redness, your experience constitutes a veridical hallucination rather than a veridical illusion.

5. CONCLUSION

Ultimately, then, we do not have reasons to reject the traditional account of illusion. While the traditional account entails that neither property illusions nor veridical illusions can occur, as we've now seen, we have independent reasons for endorsing this conclusion. There are compelling reasons to conclude that properties can't be perceived but misperceived: The competing property principle suggests that whenever we misperceive some object, our experience represents that the object possesses some property that is distinct from and incompatible with a property it actually possesses—and it represents this competing illusory property *rather than* representing the relevant property that the object actually possesses. Conversely, there are no compelling reasons to conclude that properties are sometimes misperceived, as the most plausible examples of purported property illusions are unpersuasive. Similarly, there are compelling reasons to conclude that no veridical experiences are also illusory: An illusory experience of some item misrepresents that item, but no veridical experience of some property misrepresents that property. And, conversely, there are no compelling reasons to conclude that veridical illusions sometimes occur, as the most plausible examples of purported veridical illusions are unpersuasive.

If property perception can't fail in ways analogous to illusion and veridical hallucination, then there is a fundamental asymmetry between property perception and object perception. Some might be inclined to regard the fact that the traditional account of illusion entails that there is such an asymmetry as a cost of that account. However, there are independent reasons for insisting that perceptual experiences represent objects and properties in fundamentally dissimilar ways. For instance, while a hallucinatory experience can represent a property the subject has never encountered, it can't represent an object the subject has never encountered.[23] Accordingly, we should regard the fact that the traditional account of illusion entails that property illusions and veridical illusions can't occur as highlighting an important but underappreciated feature of perception—namely, that object perception and property perception are fundamentally dissimilar.

[23] See Johnston (2004) and Pautz (2007). For a dissenting view, see Alford-Duguid and Arsenault (2017).

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