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## *The Problem of Perceptual Agreement*

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*We present the problem of perceptual agreement (of determinate color) and submit that it proves to be a serious and long overlooked obstacle for those insisting that colors are not objective features of objects, viz., non-objectivist theories like C. L. Hardin's (2003) eliminativism and Jonathan Cohen's (2009) relationalism.*

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The philosophical literature on color is replete with arguments from perceptual variation. These arguments take various forms and reach different conclusions. Jonathan Cohen (2009), for instance, argues that perceptual variation supports the position that colors are highly relational features of objects; every object has many colors, relative to different observers and different viewing conditions. C. L. Hardin (2003) argues that perceptual variation commits us to eliminativism about colors since each color necessarily has a particular hue, and there is no fact of the matter as to what particular hue any object has.

We will not address these arguments here. Instead, we highlight a feature of color perception and our communication about it: we can agree when two objects are exactly the same determinate color. Whatever might be said about perceptual disagreement, we think that the problem of perceptual agreement that we highlight below proves to be a serious and long overlooked problem for those insisting that colors are not objective features of objects.

It is well known that we generally agree about the more determinable colors of objects. Otherwise, color vocabulary would not have earned its keep. It is also widely recognized that human color vision is fairly constant in how it sees an object's color across a wide range of lighting conditions, or at least that our judgments about an object's color will generally remain consistent even while viewing that object

across a wide range of lighting conditions. Objectivists about color, those holding that an object has its color independent of how it is experienced, often appeal to such agreements.<sup>1</sup> But these are not the agreements on which we focus here. We focus, instead, on determinate shades. This may come as a surprise, since it is well known that different observers under different circumstances will experience the color of an object differently and will even, at times, make different judgments about the colors of particular objects. For example, what any person sees as unique blue (as blue with no red or green in it) will be seen by most as having some red or green in it. And we know that two objects that match in color might match only relative to an observer and a lighting condition. Metameric matches, objects that appear the same color for an observer under some lighting condition despite having different reflectance profiles, will sometimes appear very differently colored to some other observer or to the same observer under some different lighting condition.<sup>2</sup>

To appreciate the perceptual agreement that we wish to focus upon, imagine someone tasked with matching the color of some paint. This task is common enough. If we have painted part of a room and find we do not have enough paint, or we are repairing a painting or a car, finding exactly the right color might be very tricky. It will not be enough, for instance, for the new paint to match the old only under sunlight. A match in color will require that any observer (or at least any observer we care about) under any lighting condition (or at least any lighting condition in which the object might be viewed) will not see a difference between the new paint and the old.

Now imagine that the task was successfully completed. The wall painted with the new paint matches the wall painted with the old paint. Enter Susan and John. Susan sees the walls as slightly more purple than blue; John sees the walls as slightly more blue than purple. That's our old friend, perceptual variation, entering the stage for a brief moment. What Susan and John agree on, what they might verify by looking at the walls where they meet across a wide range of lighting conditions, is that the two walls are exactly the same color. Indeed, we might reasonably claim that a necessary condition for two objects having *exactly* the same determinate color is that no one can visually detect a color difference between those objects so long as those objects are viewed side by side and against the same background. Yet, even this might not be sufficient for a perfect match, since A and B might be indiscernible in color for any observer under any condition, and B and C might also be indiscernible in color, even though A and C are discernible in color. And so, by that visual test, we will have shown that A and B are ever so slightly different. But our goal here is not to

<sup>1</sup> See, for example, Keith Allen (2017).

<sup>2</sup> See Hardin (1988) for a scientifically informed discussion of perceptual variation.

give a full account of what it is for two objects to have exactly the same determinate color. Undoubtedly, just as the standards for two objects having the same length might vary depending on purpose, so will the standards for two objects matching in color.

It is important to be clear about what it is that Susan and John agree about. It is not that Susan and John agree about what color the walls are, although they very well might. Rather, what they agree on, what they might well have determined visually across a range of lighting conditions, is that the walls *match* in color.<sup>3</sup> That is what they visually determine, not by seeing the walls at any particular moment, but over a range of lighting conditions. Moreover, when Susan claims that the two walls match in color, she is not merely claiming that they match for her, or for her at the moment. Susan's claim commits her to its being the case that the walls match for everyone (or everyone relevant for the standard she is using) across all lighting conditions (or every relevant condition for the standard she is using).<sup>4</sup> A non-objectivist about color must, of course, explain how we often agree in our judgments about an object's color and why color language seems to ascribe objective properties to objects, and some have taken on that task (e.g., Cohen (2009) and Brogaard (2015)). Their success or failure is not relevant here, however. Our interest is not in how we might explain agreement in judgment. Our interest is in how to explain a particular kind of visual success, our ability to each recognize visually that two objects match in color, i.e., our ability to determine that two objects are indiscernible in color across all lighting conditions.

What it is for two objects to look alike is simply for them to be visually indistinguishable, and so what it is for two objects to look alike in color is for their colors to be visually indistinguishable across observers and lighting conditions. Of course, two objects might look alike in color under some lighting condition and not another. Or they might look to be different colors while against different backgrounds, but the same against the same background. But we assume that the common sense standard for visually determining whether two objects have the same color is by looking at them side by side, against the same background, and under various lighting conditions. Susan and John, employing this common sense standard, agree that the two walls look to have the same

<sup>3</sup> Susan may only care, of course, about human observers (and so not care about ultraviolet shades) or only the lighting conditions that are typically available to homeowners, including sunlight. For Susan, it's likely enough that no difference can be seen; she only needs the walls to match, not perfectly, but perfectly relative to her particular interests.

<sup>4</sup> The predicate "is the same color as" thus seems to work much as "is the same height as." And if, for instance, Susan claims of one wall that it is blue, she commits to treating as blue anything that matches that wall in color across observers and lighting conditions. In this way, at least, "is blue" would seem governed much as "is tall." It seems not to ascribe a relative or "centered" property, as, perhaps, "is tasty" might. An opposing view is suggested by Andy Egan (2007) and endorsed by Brogaard (2015). Also see Cohen (2009).

colors. And we can well imagine that Susan and John are not alone. We can well imagine that no one could see a difference in color between the two walls. The two walls appear to be (at least very nearly) a perfect match in color. Everyone agrees.

Larry Hardin tells us that any objectivist about colors should agree that “it is normally possible to determine what color a thing has by looking at it” (2003: 191). Due to perceptual variation and our inability to select the favored observers and conditions, he argues that objectivism should be abandoned. But we now turn this argument on its head. Every eliminativist about color should agree that, since nothing is colored, no two things can be colored the same. But it is normally possible to determine whether two things are differently colored or the same color by looking at them, at least over a range of lighting conditions, against the same background, and compared side by side. That is what Susan and John did. They determined that the two walls have the same color by looking at them. Susan and John visually determined that the walls are alike in color. For Hardin, this success is illusory. The two objects are not alike in color despite Susan and John seemingly seeing that they are and everyone else agreeing, and despite our having every reason to believe that those objects share physical properties that explain their agreement.

A relationalist like Jonathan Cohen might seem better placed to account for agreement. For Cohen, each object has many colors, but colors are highly relational features of objects. On Cohen’s view, the color that you see an object as having in direct sunlight is not the same color that you see the object as having in shadow, and so you see a cup that is half in shade as having two colors. This, to many, is very counterintuitive. The cup, many will insist, appears uniformly colored, but partly in shade. Cohen’s reply is that, although you will see two different colors, your judgment that the cup is uniformly colored

is not a judgment to the effect that the regions are occurrently manifesting a common color, but rather to the effect that the regions share a color that one of them is not occurrently manifesting. That is, the subject judges that, although the unlit region looks different (in respect of color) from the region in shadow, the two regions would look the same (in respect of color) were they both viewed under sunlight. (2009: 56)

So Cohen might claim that when Susan judges that the two walls are colored the same, what she is saying is just that the two walls have all and only the same colors. John agrees. Agreement explained.

But this will not do. For Cohen, Susan is claiming that the two walls share a set of relational properties. John is claiming that the two walls share an *entirely different* set of relational properties. On Cohen’s account, when Susan and John each claim that the walls have the same color, they are making radically different claims.

To illustrate how odd this situation is, let’s look at a very different kind of case. Cohen tells us little about what it is for a property to be relational. He thinks that we can make do with paradigm examples

like *being a sister* (2009: 8). So imagine two detectives, Jake and Hank. Jake is hired by Evelyn, who is a sister of Laverne. Noah is their father. Hank is hired by Laverne. Jake concludes that Katherine, Evelyn's ward, is Evelyn's sister; and that Patricia, Laverne's ward, is Laverne's sister. Hank concludes that Katherine is Evelyn's daughter, and that Patricia is Laverne's daughter. It turns out that both are correct since the incestuous Noah fathered both Katherine and Patricia. Of course, Jake and Hank agree that Katherine is related to Evelyn just as Patricia is related to Laverne. But their agreement is accidental. Jake and Hank are equally correct and equally in the dark, but about different relations. That's *Chinatown*.

Cohen's account of colors puts Susan and John in positions similar to that of Jake and Hank. Susan and John agree, but not about what they thought they agreed about. But the case for Cohen is odder still, even if not nearly as disturbing. For not only do Susan and John agree that the walls share a color, but everyone does. And, presumably, what everyone agrees about is that the walls share a property in common. But it turns out, if Cohen is correct, no one (or hardly anyone) agrees about what it is that the walls have in common.

Nonetheless, one may object that, for the objectivist, concerns abound: What color is the color that the walls share, especially given that John and Susan won't typically agree on this issue? And what about problems having to do with perceptual variation that the objectivist must face? Such issues are beyond the scope of this short paper.<sup>5</sup> Instead, what is crucial here is that non-objectivists like Cohen and Hardin must contend with the problem of perceptual agreement and it isn't clear that a reasonable solution is forthcoming. The objectivist, on the other hand, has an easy and common-sensical solution: the walls share a common property; namely, they have exactly the same determinate color.<sup>6</sup>

<sup>5</sup> We take up these issues elsewhere. See Watkins and Sheeh (2022) and Sheeh and Watkins (unpublished). For a sample of other strategies, see Alex Byrne and David Hilbert (2004), Mark Kalderon (2011), and Allen (2016).

<sup>6</sup> The argument from perceptual agreement alone does not motivate any view of what colors are. Colors might be dispositions (e.g., McGinn (1983)), or properties that supervene on dispositions (e.g., McGinn (1996)), or physical properties (e.g., Byrne and Hilbert (2021)), or properties that supervene on physical properties (e.g., Joshua Gert (2021)). Moreover, for all we have said, an object might have different colors all over at the same time, at least at various determinable levels. What the argument is an argument for is that there must be some feature that objects share when they match in colors. Whatever feature that is might reasonably be a thought of as the determinate color of the object.

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