Justin Fisher's 'Color Representations as Hash Values'

BENJ HELLIE

Justin makes a novel case, based on reflection on the "telos" of color vision, for a dispositional theory of colors. Justin's case is highly suggestive, and comes tantalizingly close to resolving the debate in the metaphysics of color. But I have a few questions which I would like to see answered before I am converted.

The case for dispositionalism can, I believe, be set into a valid argument, as follows:

Semantic Premiss

The colors I see are the properties represented by my color representations;

Metasemantic Premiss

The property represented by tokens of color representation R in color visual system S is the property the presence of which best explains success, and the absence of which best explains failure, in cases in which R is tokened in S;

Explanatory Premiss

The property the presence of which best explains success, and the absence of which explains failure, in cases in which R is tokened in S, is the property of normally causing tokens of R in S when visually encountered;

Conclusion

The red I see is the property of normally causing tokens of RED in my color visual system when visually encountered, the yellow I see is the property of normally causing tokens of YELLOW in my color visual system when visually encountered; and similarly for everyone else: the red Bill sees is the property of normally causing tokens of RED in Bill's color visual system when visually encountered, the yellow Bill sees is the property of normally causing tokens of YELLOW in Bill's color visual system when visually encountered, the red Jane sees is the property of normally causing tokens of RED in Jane's color visual system when visually encountered, and so on.

The Semantic Premiss seems very difficult to deny (at least if the notion of a representation is understood as recommended McDowell 1994). The Metasemantic Premiss seems to be a nice way of capturing a sort of Millikanish view, and to debate it would take us far from the heart of Justin's proposal, so I'll grant it. But I'd like to raise a difficulty for what I take to be Justin's case for the Explanatory Premiss.

Why believe the Explanatory Premiss?

This is where the telos comes in. The case for the Explanatory Premiss seems to be in these two sentences:

"Color-representations are used, in the first instance, to facilitate recognition of various items (and kinds) and to enable storage and recall of information about them. The success of this scheme depends, largely, upon the fact that any relevant item will typically engender the same (or close enough to the same) color-representations whenever it is encountered in normal circumstances."

The argument here is quite compressed, so I am not sure I have understood it correctly. It seems to run something like this:

(1) For a tokening of a color representation in S to succeed is for that tokening to facilitate recognition by the possessor of S of, and enable storage and recall of information about, the causer of that tokening, or its kind;

(2) The property, the presence of which best explains the facilitation of recognition the possessor of S of, and the enabling of storage and recall of information about, the causer of that tokening, or its kind, and the absence of which explains the lack of such facilitation or such enabling, in cases in which the color representation R is tokened in S's color visual system, is the property of normally causing tokens of R in S when visually encountered.

(1) captures a certain doctrine about the telos of color vision: it is to promote efficient interfacing of visual information with memorial information about individuals and/or kinds. This doctrine is what Justin means by calling color representations "hash values", and is also endorsed by the color scientists Mollon (1989) and Sheppard (1992). This doctrine has the plausibility of a good evolutionary just-so story (by which I don't intend to be disparaging): roughly, it's good for survival when berries look a certain way all the time, and different from the way leaves look all the time.

Note however that it is vital to the plausibility of this doctrine that the information in question sometimes concern *kinds*: it's not plausible that it would contribute to survival to be able merely to efficiently handle information about *this* berry or *this* leaf, if merely for the reason that one berry is as good as another, and one leaf as bad as another.

Note that in (1), it is stated that success consists in efficient interface of information

about individuals *or* kinds. But should we rather perhaps take success to consist in efficient interface of information about individuals *and* kinds? Is success "disjunctive" or "conjunctive"? Either way there's a difficulty for (2).

First suppose success is disjunctive. Suppose that banana B has been painted red; hence it has the property of normally causing RED in Sue's visual system and lacks the has the property of normally causing YELLOW in Sue's visual system. Suppose due to some freak illusion that Sue sees B as yellow, that a YELLOW is tokened in her visual system. Now, this *won't* promote efficient interface with info about B. But it *will* promote efficient interface with info about *bananas*. Since one of these is enough for success (the success condition is disjunctive), this is a success. By (2), this success is explained by B's possession of normally causing YELLOW in Sue's visual system. But B lacks this property!

So suppose success is conjunctive: efficient interface needs to be promoted with info about both the object and its kind. Suppose once again that Sue sees B, but this time suppose there is no illusion: she sees B as red, that a RED is tokened in her visual system. This *will* promote efficient interface with info about B, but *won't* do this for *bananas*. Since both are required for success, this is a failure. But this raises two difficulties. First, intuitively this case is *not* a failure: the experience seems veridical. And second, by (2), failure is supposed to be explained in this case by B's lack of the property of normally causing a RED in Sue's visual system. But B has this property!

Atypical members of kinds raise trouble for (2) whether success is conjunctive or disjunctive. But it's not plausible that the telos of vision involves promoting efficient interface of info only about individuals, so dropping the involvement of info about kinds from (1) would rob it of intuitive support.

I'd like to see how to formulate a valid argument for the Explanatory Premiss in the spirit of Justin's case which is immune to this difficulty. But I'm afraid I don't know how to do this.

A few more questions

a. What makes something a YELLOW? Justin can't appeal to its semantic properties, lest he fall into the circularity he deplores for representationalist dispositionalism. Can I then ostend my YELLOWs by reflection on properties presented in my experience? If so, which ones? And also we're looking at sense-data; this might bother some (not me).

b. Suppose that Tweedledee and Tweedledum are looking at a red paint chip together. If Tweedledee and Tweedledum are perfect twins, they'll see the chip as having *exactly* the same color, right? Justin's account predicts otherwise: Tweedledee will see it as such as to cause a token of RED in *Tweedledee*, while Tweedledum will see it as such as to cause a token of RED in *Tweedledum*. These are different properties, against the intuition. Justin suggests in fn 22 in effect that maybe their tokens *also* represent the

property of being such as to cause a token of RED in one of our culture circle, but I'm not sure how to square this suggestion with the apparent individualism of the Metasemantic Premiss. Maybe it would be better for Justin to appeal to Egan-style relativism here (Egan forthcoming), on which red isn't a property at all, but rather the "centering feature" of being such as to cause a token of RED in ____.

c. Points a and b work together. What does it mean to say that both Tweedledee and Tweedledum instantiate a RED? What brings interpersonal tokens under the same type? If this can't be answered, then neither the fn 22 strategy nor the Egan-type strategy would work.

d. A familiar worry about subjectivist dispositional accounts is that they are "phenomenologically off-key": colors look categorical, nonrelational, and external (Broad put this by saying that, phenomenologically, vision is "saltatory"); and if so, the subjectivist dispositionalist needs some explanation of why we make this error. Maybe Justin's view is that the dual of the phenomenological report is true: colors *don't* look *dispositional* or *relational* or *internal*. Or maybe he endorses a projective error theory either about vision or judgement here: we mistake the categoricity and nonrelationality of *representations* to be in *colors* (not sure how projecting internality would help generate a sense of externality, though).

References

Broad, Charlie Dunbar, 1951. 'Some Elementary Reflections on Sense-Perception'. In Swartz 1965.

Egan, Andy, forthcoming. 'Appearance Properties?' To appear in *Nous*.

McDowell, John, 1994. 'The Content of Perceptual Experience'. *Philosophical Quarterly* 44: 190--205.

Mollon, J. D., 1989. ''Tho' She Kneel'd in That Place Where They Grew . . .' The Uses and Origins of Primate Colour Vision,' *Journal of Experimental Biology* 146: 21--38.

Shepard, Roger, 1992. 'The perceptual organization of colors'. In *The Adapted Mind*, edited by J. Barkow, L. Cosmides and J. Tooby. Oxford: Oxford University Press.

Swartz, Robert J., editor, 1965. *Perceiving, Sensing, and Knowing*. Berkeley: University of California Press.