

## Comments

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Cohen begins by defining ‘Color Physicalism’ so that the position is incompatible with Color Relationalism (unlike Byrne and Hilbert 2003, 7, and note 18). Physicalism, in any event, is something of a distraction, since Cohen’s argument from perceptual variation is directed against *any* view on which minor color misperception is common (Byrne and Hilbert 2004). A typical color primitivist, for example, is equally vulnerable to the argument.

Suppose that normal human observers S1 and S2 are viewing a chip C, as in Cohen’s example. C looks unique green to S1, and bluish green to S2. The problem, as Cohen has it, is to explain ‘what could (metaphysically) make it the case’ that S1, say, and not S2, perceive C correctly. He purports to find the explanation ‘extremely hard to imagine’, and so concludes that *both* S1 and S2 perceive C correctly. (That is not the only option, of course: Hardin concludes that *neither* perceives the chip correctly.)

However, *pace* Cohen, the explanation seems extremely *easy* to imagine. Presumably Cohen does not think that it is mysterious why S1 is representing C differently from S2. It *would* be mysterious if S1 and S2 were in the same brain states, but they aren’t: S1 and S2 differ in many ways relevant to the representation of colors.

On the side of C, presumably Cohen is not puzzled about what could ‘make it the case’ that the chip is one color rather than another. That *would* be puzzling if the chip didn’t interact with light (for example), but it does: it is a commonplace opaque uniform chip.

So, putting the two together, what ‘makes it the case’ that S1, not S2, is perceiving C correctly, is that S1 is representing C as being unique green, S2 is representing C as being bluish green (no problem so far), and C *is* unique green, not bluish green (likewise, no problem).

Cohen’s objection to this sequence of three steps must come at the third, where facts about representation and the color of the chip are purportedly conjoined. What could the objection be? A clue can be found in his note 7, where he compares the color case to disagreement about whether a joke is humorous. Combining the

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unique green chip with the appearance of bluish green is rather like, Cohen thinks, combining a humorous joke with complete lack of laughter in a normal well-informed (etc.) listener. If the latter combination is possible, then the misperception of humor by normal subjects is possible, which – let us pretend for the sake of the argument – is absurd.

If this diagnosis is right, then in order for the argument from variation to work, Cohen needs to *assume* that color misperception by normal observers (in normal conditions) is impossible – and so S1 and S2 perceive C correctly. But since this is the argument's *conclusion*, the question has been completely begged.

It is not clear to me whether Mizrahi's understanding of the argument from variation is the same as Cohen's. There is some indication that she thinks it raises an epistemological difficulty, as opposed to Cohen, who stresses that the problem is metaphysical. She remarks that 'Byrne & Hilbert seem to agree with Hardin that color realism needs an independent standard that would determine which chip, if any, is unique green'. If an 'independent standard' does not afford a *way of telling* which chip is unique green, then we do agree. The independent standard is simply given by the color (reflectance/productance, in our story, although that is incidental) of the chip. However, Mizrahi then goes on to say that we 'acknowledge' that there is a 'problem', namely 'there is no such *knowable* standard' (my emphasis). But we do not acknowledge that this is a problem at all. Why would it be? (See Byrne and Hilbert 2004.)

Mizrahi's own view is closer to Byrne and Hilbert's than she realizes. According to Mizrahi, colors are 'dispositions for a surface to reflect a determinate proportion of any incident light L'. (Some other parts of Mizrahi's paper suggest a more complicated account, which I shall pass over for lack of space.) Thus, the disposition of a surface to reflect 70% of 680 nm spectral light is a color, according to Mizrahi. She seems to think we disagree, but we don't. That disposition is a color because it is a reflectance type, specifically the disjunction of all SSRs that pair 680 nm with 70%. It is, however, not a color that the human visual system is in the business of detecting. Mizrahi departs from us, not on the nature of color, but on this *last* point – according to Mizrahi, the range of humanly detectible colors is enormously *greater* than is commonly supposed. (In this, she agrees with Cohen.) When a banana 'looks red' in 680 nm light, Mizrahi thinks, the banana does not appear to have a property that tomatoes in daylight *also* appear to have – the two colors are 'essentially different'. She is therefore vulnerable to a variant of the objection to relationalists that she cites earlier (Byrne and Hilbert 2003, 58). And in any case, she motivates her ingenious positive proposal solely by appeal to the misbegotten argument from variation.

Maund thinks that when one sees a tomato, the tomato is represented as being red (a 'phenomenological quality'). The tomato, according to Maund, is not red. One's experience does have a 'phenomenal quality' – a quale, of the full-bodied

Australian Shiraz variety. This phenomenal quality ‘is construed as an objective quality of a physical body’ (the tomato). The phenomenal quality is ‘part of the representational content’, by which Maund seems to mean that the experience represents the tomato as having the phenomenal quality – see his remark about Goodman and representation by exemplification. But then the distinction between phenomenological and phenomenal qualities collapses: in the case of the tomato, redness = the phenomenological quality (a merely apparent quality of the tomato) = the phenomenal quality (a genuine quality of the experience). Suppose I see a tomato next to a cucumber. On Maund’s view, it would appear to follow that my experience is both red and green – an interesting result, no doubt.

Maund’s argument for the illusory theory is that science has shown that there are ‘no properties that both play the right causal roles, in the perception of colour, and which satisfy the structural principles [about similarities], (nor that have the right sensuous, qualitative character)’. In his paper, at any rate, he does not explain why we are supposed to think that science has shown these things. Partly under the prodding of philosophers like Maund, Hilbert and I have tried to dispel any conflict between red tomatoes and the deliverances of science (Byrne and Hilbert 2003; see also Hilbert 1987 and Byrne 2003). Perhaps we are wrong, but Maund does not address our arguments.

If science has shown that tomatoes aren’t red, hasn’t it also shown that *experiences* do not have phenomenal qualities, properties with ‘the right sensuous, qualitative character’? Neuroscience has not yet turned up anything sensuous, as far as I know. Maund might reply that science has merely shown that if experiences have phenomenal qualities, then these qualities are non-physical. It would then be consistent for him to insist that experiences do have (non-physical) phenomenal qualities. But if that reply is acceptable, what’s to stop the analogous move, made on behalf of color primitivism? Tomatoes *are* red, but redness is not a physical property. (See Byrne and Hilbert forthcoming.) There is a danger that Maund’s attempt to preserve his account of color experience will end up spoiling his argument for the illusory theory.

Levine grants the premises of my paper in this volume (or at least is prepared to try them on for size), but denies my conclusion. The color-body problem, he claims, is just the old wine of the mind-body problem in a shiny new bottle, because ‘color is essentially a mental phenomenon’. As he nicely puts it: ‘The “qualia freak” is right in seeing colors and sounds as grounded in the nature of conscious experience, but wrong in thinking that this demands that they be thought of as intrinsic properties of experience. The representationalist is right in insisting on transparency, but wrong in thinking that this therefore entitles her to treat secondary qualities as extra-mental’.

Why is color a ‘mental phenomenon’? After refusing assistance from the sense-datum theory, Levine suggests that redness is ‘a disposition to enter into

[the primitive relation of looking-red] with a conscious viewer'. Levine emphasizes that 'x looks red to S' is not supposed to be understood in terms of x's causing S's 'sensory state [to possess] a certain qualitative character', but is instead 'intentional': when x looks red to S, x is *represented* to be red. The account of redness as a disposition to look red is therefore *nonreductive* (Byrne and Hilbert 1997, xxi) – 'red' appears in the analysandum. (For a similar view, see McDowell 1985.)

I do not think this account of color serves Levine's purposes. Rather than resurrecting the *mind*-body problem, Levine's proposal, if correct, dissolves the *color*-body problem. There is no problem explaining how a physical lemon can be disposed to *look* yellow, so, granted Levine's nonreductive dispositionalism, there is no problem explaining how a physical lemon can *be* yellow – and thus the color-body problem vanishes. What I don't see is why, given Levine's concessions about transparency, any residue of the mind-body problem remains.\*

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