Secondary Qualities: a First Stab

Throughout the history of philosophy, we encounter a metaphysical distinction between more and less fundamental properties of perceptible things, which is supposed to explain the reliability of our judgments attributing them. There are different ways of drawing this distinction, which, for systematic and interpretational reasons, have to be carefully kept apart:

**Error theory** Only the \( A \) properties are real; our perception of them explains why we falsely think we perceive \( B \) properties.

**Dispositionalism** Our perception of \( A \) properties is to be explained in terms of things being disposed to appear to us in certain ways, \( B \) properties being the categorical basis of such dispositions, and

- **Role** \( A \) properties being these dispositions of things perceived to appear in certain ways;
- **Realizer** \( A \) properties being properties of the type *whateve configuration of \( B \) properties grounds the disposition to appear in this way*;
- **Ground** \( A \) properties being the actual configurations / sets / fusions of \( B \) properties grounding the disposition;

**Realism** \( B \) properties are real, and had by the things perceived, but

- **Intra-object Causation** In things perceived, \( A \) properties cause \( B \) properties,
- **Intra-object Constitution** The \( A \) properties of things perceived constitute their \( B \) properties,

The importance of this contrast for modern philosophy, in particular the thinking of Descartes and of Locke, can hardly be overestimated. Despite its huge importance, the characterisation itself has proved surprisingly elusive (cf. Nolan 2011a: 3). What is it that lies at the bottom of the distinction between properties such as extension, size, shape, motion and position on the one hand and colour, sound, taste, odour, heat, cold etc. on the other? It is often said that primary qualities are primary in the order of explanation (Smith 1990). The notion of ‘explanation’ in play here is of a distinctively ontological kind.

A decision tree concerning colour

According to Byrne and Hilbert, colours have been identified with ways of altering light (Tye 2000; Byrne & Hilbert 2003); properties of a sense-datum-like mental array (Boghossian & Velleman 1989); properties that are entirely uninstantiated (Averill 1992; Hardin 1988; Maund 1993); dispositions to cause color experiences (McGinn 1983; Smith 1990; Johnston 1992); the ground of such dispositions (Jackson 1996; McLaughlin 2003; Cohen 2004); and “ecological” dispositions (Thompson 1995), for a related view see (Noë 2004: ch. 4).

From Adam Pautz, “Color Eliminativism”:
Are colours analysable in non-chromatic terms?

- no: Primitivism
  - exemplified by external objects?
    - no: Eliminativism
      - Are there colour properties?
        - no: strong
        - yes: weak
    - yes: Realism
      - What are they reducible to?
        - physical surface properties
        - dispositions for experiences

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### Revelation

Many theorists have remarked that our knowledge of colours is in some special way ‘direct’. Johnston (1992: 223) has called this aspect “Revelation”:

> The intrinsic nature of canary yellow is fully revealed by a standard visual experience as of a canary yellow thing. [...] It is just this idea that visual experience is transparently revelatory which Descartes denied when he wrote of our visual sensation as arbitrary signs of the properties that cause them, employing the analogy of the sensations which a blind man receives of texture as a result of using a cane to “see”. (1992: 223–224)

The central idea is that of completeness; this is particularly clear in a passage from Russell Johnston cites:

> ...I know the colour perfectly and completely when I see it and no further knowledge of it itself is even theoretically possible. (Russell 1912: 47)

We have to be careful here, however: while many authors interpret Revelation as the thesis that the essential properties of colours are ‘laid bare’ in experience\(^1\), it is plausible that Russell is just making the point that our knowledge by acquaintance is complete when we see a colour:

> There are not, on Russell’s view, different ways of being acquainted with one and the same colour. The point is [...] that the knowledge of the thing is complete; there is no further non-propositional knowledge of the thing to be had, once you have encountered it in experience. (Campbell 2009: 661)

Having complete knowledge-by-acquaintance, however, is compatible with there being more knowledge-by-description to be had about the very same colour (cf. Damnjanovic 2012: 76). This means that we cannot, as Byrne & Hilbert (2007: 77) do, understand Revelation as the conjunction of the following two theses:

- **infallibility**: if [...] it seems to be in the essential nature of the colours that \(p\), then it is in the essential nature of the colours that \(p\);
- **self-intimation**: if it is in the [essential] nature of the colours that \(p\), then [...] it will seem to be in the essential nature of the colours that \(p\).

Revelation is compatible with physicalism if (but also only if) it does not entail self-intimation.\(^2\)

### Response-dependence

The notion of response-dependence was introduced by Mark Johnston (1989) as a generalisation of the notion of secondary qualities (cf. Menzies (1991); Casati & Tappolet (1998); Yates (2008) for overviews of the debate). Johnston (1989: 145) characterises it as follows (the requirement that the “basic equation”, i.e. the biconditional, is necessarily present in Johnston’s original criterion, but clearly needed and commonly added in the literature, cf. also Pettit (1991) and Wright (1992) for similar characterisations):

\(^1\)Johnston himself, after having stated Revelation in terms of the ‘intrinsic nature’ of colours, later speaks of their ‘intrinsic and essential’ properties (1992: 223)

\(^2\)This is not to say, as Byrne & Hilbert (2007: 77) claim, that self-intimation entails primitivism. To rule out alternative theories, we would have to presuppose, for example, that dispositions “look like dispositions” (Boghossian & Velleman 1989: 86) and that colour terms do not rigidly designate whatever fills the colour-role of some folk theory (Jackson 1996).
A predicate \( F \) is response-dependent iff there are ‘substantial’ specifications of \( S, C \) and \( R \) such that it is necessary and a priori that, for all \( x \), “\( x \) is \( F \)” is true iff \( x \) has the disposition to produce in all of \( S \) a mental response \( R \) under conditions \( C \).


The “missing explanation argument” Johnston (1989: 170–173) deploys against any “response-dependent account of value or reason” (1989: 170) is that it cannot account for “the felt independence of value from value-directed responses” (1989: 172) that underlies Socrates’ objection to Euthyphro’s proposed definition of piety as what the gods love, which consists in pointing out that while

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\begin{align*}
\text{(Eu}_1) & \quad \text{The gods love } x \text{ because } x \text{ is pious.} \\
\end{align*}
\]

is true,

\[
\begin{align*}
\text{(Eu}_2) & \quad x \text{ is pious because the gods love } x. \\
\end{align*}
\]

is false. In Johnston’s opinion, the friend of response-dependence may accept instances of this argument, but not its most general conclusion:

...now the Socratic objector will take the decisive step, insisting that whatever is a reason is not a reason because we would stably take it to be so as we approach ideal conditions. Rather, in the most fortunate case, we would take it to be a reason under such conditions just because it is a reason. And now our kind of response-dependent theorist must dig in. The hyper-objectifying error has at last been manifested. The objector in effect wants hyper-external reasons, reasons which could in principle outrun any tendency of ours to accept them as reasons, even under conditions of increasing information and critical reflection. (Johnston 1989: 172)

Even if this reply is accepted, there are (at least) two problems with an account of secondary qualities as response-dependent: first, it is a classification of predicates, and second, there are ‘basic equations’ for all (Pettit 1990, 1991) or at least all basic concepts (Pettit 1998: 113). The first problem is particularly important because, arguably, the whole point of Locke is that our ordinary concepts for secondary qualities are response-dependent while the properties are not. The idea of the second criticism, in short, is that many concepts expressing what we intuitively take to be primary, and hence non-response-dependent qualities \( F \) have (or had) their reference fixed by some descriptive material \( F^* \) such that all instances of “\( x \) is \( F \) iff \( x \) is \( F^* \)” is known a priori by speakers competent with \( F \). It amounts to refuse the invitation of Johnston (1989: 146, n. 8) to exclude reference-fixing descriptions by fiat. Fodor puts the situation colourfully:

“...the concept chair expresses that property that things have in virtue of striking minds like ours as appropriately similar to paradigmatic chairs. (Fodor 1998: 18)

Another worry is more damaging: with what right are we assuming that there are independently ‘substantive’ specifications of the response \( R \)? Is it not at least possible that all red things have in common is that they appear red, to some under some circumstances? There would thus appear to be a vicious circularity: the property that is analysed dispositionally figures in the content of the response allegedly constitutive of it.

We should accept that there is a circularity, but deny that it is vicious:3

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3I can think of no other way to ‘remove’ the circularity than introducing so-called “primed” or “appearance” properties. Even if they can independently made sense of, however, their introduction only helps if they themselves are, rather arbitrarily, exempted from the analysis, making it doubtful, as Boghossian & Velleman (1989: 88) stress, that they are ever exemplified. If they are not so exempted, the account is either circular (if they are analysed in terms of colour-properties) or leads to an infinite regress (if they are analysed in terms of further, higher-order appearance properties).
The dispositionalist may point out that a circular account of a property can still be true, and indeed informative, despite its circularity. For instance, to define courage as a disposition to act courageously is to give a circular definition, a definition that cannot convey the concept of courage to anyone who does not already have it. Even so, courage is a disposition to act courageously, and this definition may reveal something important about the property – namely that it is a behavioural disposition. (Boghossian & Velleman 1989: 89)

Boghossian and Velleman claim that the circularity is vicious because the context in which “red” appears on the right-hand side of an instance of the dispositionalist biconditional is intensional:

Not only does [the instance of the dispositionalist biconditional for “red”] fail to tell us which colour red is, then; it also precludes visual experience from telling us which colour an object has. The former failure may be harmless, but the latter is not. [...] the dispositionalist about colour not only invokes the content of colour experience in explicating that content; he places that content in a relation to itself that it is impossible for it to occupy. (Boghossian & Velleman 1989: 89–90)

References


4They qualify the context as “intentional”, though they presumably mean “intensional”.

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