

Colour hallucination: In defence of externalist representationalism

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In a recent paper, Laura Gow (2017) raised a new and interesting problem for externalist representationalism, the conclusion of which is that its proponents are unable to provide an acceptable account of the phenomenal character of colour hallucination. In contrast to Gow, we do not believe that the problem is particularly severe — indeed, that there is any problem at all. Thus, our aim is to defend externalist representationalism against the problem raised by Gow. To this end, we will first reconstruct her reasoning, and then show that it poses no real challenge to externalist representationalism.

To set the stage for Gow’s problem, we will start by briefly listing some assumptions on which there is no disagreement. *Representationalism* is the claim that the phenomenal character of a perceptual experience *e* is determined by (or even identical to) the property that is represented by *e*. *Externalist* representationalists further claim that the property represented by *e* is an *external* property, i.e. a property that if instantiated at all, is instantiated by objects in the external world. Applied to colour experiences, this means that the alleged yellow-qualia that qualia friends believe they are ‘sensing’ while having an experience of a yellow object is identical to the external property whose instantiation their experience represents. And what is this property? Of course, the property of being yellow, as it is typically instantiated by material objects in the external world such as sunflowers, cheese and lemons — ‘external’ yellowness, so to speak. The philosophically interesting point then is that externalist representationalists identify the

alleged properties of our experiences with the quite ordinary properties of material objects in the external world.

At this point, however, the externalist representationalist has to face the question of what external yellowness, say, actually is. One widespread view is that colours are so-called response dependent properties. That is, the property of being yellow is nothing more than the property of having the disposition to evoke an experience that instantiates phenomenal yellowness in normal observers under normal conditions. Externalist representationalists cannot accept this view, however, as it would force them into a vicious circle. At least, it would be explanatorily questionable to claim on the one hand that phenomenal yellowness is identical to external yellowness while also claiming that external yellowness is the disposition to evoke experiences that instantiate phenomenal yellowness.

Thus, externalist representationalists are well-advised not to consider colours as response dependent, but to embrace colour physicalism, according to which colours are identical to surface spectral reflectance profiles. However, as Gow notes, ‘the colours we experience do not map one-to-one onto particular surface reflectance profiles’ (2017: 695), but rather, we often experience two or even more different surface reflectance profiles as being exactly the same colour. Thus, colour physicalists do not simply identify colours with surface reflectance profiles, but rather with *disjunctions* of surface reflectance profiles. The property of being yellow then is identified with, say, the disjunctive property of having surface reflectance profile A *or* surface reflectance profile B *or* surface reflectance profile C.

As previously stated, none of these assumptions are controversial between Gow and us. Thus, for the sake of argument, let us agree with Gow that externalist representationalists are committed to the view that phenomenal yellowness is identical to the disjunctive property of *having surface reflectance profile A, B or C*.

We will now turn to the issues that *are* controversial between Gow and us.

To introduce the problem, Gow compares two situations: a normally caused veridical experience of a yellow plastic duck, and a hallucination of a yellow plastic duck. In both the veridical and the hallucinatory case, the experience in question represents that the property of *being yellow* is instantiated. Thus, in both cases the property of *being yellow* ‘makes it into the content’ of the subject’s experience (Gow 2017: 699). But *how*, Gow asks, does the property of *being yellow* make it into the content of the experience? After all, the property of *being yellow* is a *disjunctive* property! So the externalist representationalist owes us an explanation.

In the normally caused veridical case, says Gow, the explanation is straightforward. The duck seen by the subject has the property of *being yellow* in virtue of having one of the surface reflectance profiles listed in the disjunction, let us say it has surface reflectance profile *B*. Since the subject *sees* the duck, her experience is caused by the duck’s surface reflectance profile *B*. Hence, the subject is ‘relevantly related’ (Gow 2017: 699) to one of the disjuncts belonging to the property of *being yellow*.¹ Consequently, says Gow, the

¹ It is not entirely clear to us what ‘being relevantly related to’ means. However, as will become clear in a moment, Gow suggests that the said relation is present in cases of veridical perception at least. For example, when I *see* something yellow, then I am relevantly related to one of the disjuncts of yellowness. In contrast, when I *hallucinate* something yellow, then I am *not* relevantly related to one of the disjuncts of yellowness. Thus, it seems that the relation of *being relevantly related to* requires a causal link between the relata.

subject ‘is aware of the disjunctive property ‘yellow’ by being aware of the particular surface spectral reflectance property which is instantiated in her environment’ (2017: 699–700). According to Gow, this explains how the property of *being yellow* makes it into the content: ‘it piggy-backs on one of the disjuncts’ (2017: 699).

This kind of explanation, however, is not available in the case of hallucination — for, in this case, none of the relevant surface spectral reflectance properties *A*, *B* or *C* are instantiated in the subject’s environment. Consequently, the hallucinating subject is not relevantly related to any of the disjuncts belonging to the property of *being yellow*, so there is nothing on which the property of *being yellow* could piggy-back. This would seem to present a problem for externalist representationalists.

It should be noted, however, that this problem is based on the particular reading that Gow gives to externalist representationalism. Gow is not explicit about it, but given what she says in her paper, it looks as if she understands it to mean that the representational content of any token experience is determined by the external property by which the token in question is actually caused. In short, Gow seems to understand externalist representationalism as follows:

(Gow’s Thesis) The property represented by an experience token is determined by the external property by which the token in question is actually caused.

Now in our view, the problem for Gow is that Gow’s Thesis does not adequately reflect externalist representationalism. Neither Dretske (1995), Lycan (1996), Tye (1995, 2000),

nor any other externalist representationalist that we know of² claims that the representational content of a token experience is determined by the external property by which the token in question is caused. Thus, Gow's problem is based on a philosophical position which externalist representationalists do not hold. Even worse for Gow, if we instead take as a basis what externalist representationalists actually say about how experiences acquire their representational content, then the problem entirely evaporates.

Externalist representationalism is a claim about *types* of experiences, not *tokens*. A token experience, as externalist representationalism might be paraphrased, 'inherits' its content from the type to which it belongs. Abstracting from all the differences that may exist among the various authors, one might say that, according to externalist representationalism, the content of a given experience token of a certain type is determined not by its actual cause, but by the property which would have caused tokens of that type under certain conditions. Lycan's 'psychosemantic schema' is a good starting point to make this clear: a sensation 'represents greenness,' says Lycan, 'iff *this sort of sensation* is "normally caused by" green physical objects' (Lycan 1996: 74, our emphasis). Of course, this is not an elaborated theory of representation, and Lycan does not want it to be understood that way. It is merely a general scheme that awaits a more precise specification. For example, Tye's view could be rendered as replacing the schematic normality clause with a clause to the effect that the sort of sensation in

² One might also think here of authors commonly classified as externalist representationalists such as Fodor (1990), Millikan (1984), Neander (2017) and Shea (2018), who all endorse a theory of mental content according to which representation is a matter of detecting, carrying information about, or otherwise corresponding with external properties. However it is doubtful whether these authors count as externalist representationalists according to Gow's taxonomy. The reason is that (as far as we can see) these authors do not commit themselves to the view — characteristic of Dretske, Lycan and Tye — that the phenomenal character of a perceptual experience *e* is determined by (or even identical to) the external property represented by *e*. Consequently, these authors are not targeted by Gow's problem in the first place.

question is caused by green physical objects *under optimal conditions* (cf. Tye 1995: 101), whereas Dretske's view could be rendered as replacing the schematic normality clause with a clause to the effect that the sort of sensation in question is caused by green physical objects *under conditions for which the visual system was designed and in which it performs its biological function* (cf. Dretske 1995: 2–6).

However one specifies Lycan's scheme though, it should be clear that what determines content according to externalist representationalists is not the actual causal relations which exist between an experience token and the currently instantiated properties in the subject's actual surrounding, but the truth of certain counterfactuals regarding experience types and properties, the latter of which do not need to be currently instantiated in the subject's actual surrounding.

If the foregoing is correct, Gow's analysis of the normally caused veridical experience of a yellow plastic duck is already flawed from the outset. Recall that Gow claims that the property of *being yellow* makes it into the content of the normally caused veridical experience by virtue of the fact that the subject is relevantly related to the particular surface spectral reflectance property instantiated by the plastic duck. Thus, Gow suggests that the content of the normally caused veridical experience is determined *by the particular surface spectral reflectance property whose instantiation actually causes the experience token*. But in light of what has been said above, this is simply incorrect. According to externalist representationalism, the content of a normally caused veridical experience token is determined *by the property which would have caused tokens of the relevant type under such-and-such conditions*. Certainly, in the case of a normally caused experience, the property that actually causes the experience coincides with the

property that would have caused experiences of the same type under the relevant conditions. But one should not conclude from this that, in general, the content of any experience token is determined by the property that actually causes it. The property which enters into the content of a given experience token cannot be identified just by looking at the property by whose instantiation the experience token in question is actually caused. That is simply the wrong place to look. Rather, one must look at the property which is such that it would have caused tokens of the relevant type under favourable conditions — be they described as normal (Lycan), optimal (Tye) or such that the sensory system can successfully perform its biological function (Dretske).

Thus, our deeper diagnosis is that Gow confuses the properties that *actually cause* an experience token with the properties that *enter into its content*. Gow seems to think that externalist representationalists are committed to the view that the properties that enter into the content of an experience token are determined by the properties by whose instantiation the token in question is actually caused. But this does not adequately reflect the position of externalist representationalists. They do not claim that one's current experience token has the property of *being yellow* in its content *because* it is actually caused by something yellow. Rather, they claim that one's current experience token has the property of *being yellow* in its content *because it belongs to an experience type whose tokens would have been caused by something yellow if conditions had been favourable*.

Thus, the answer to Gow's question 'How does the property of *being yellow* make it into the content of a hallucination of a yellow plastic duck?' is quite simple: it makes its way into the content by virtue of the fact that the experience token in question belongs

to a type whose tokens, given favourable conditions, are caused by yellow physical objects. No piggy-backing required. Problem solved.³

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