A Reply to De Anna on the Simple View of Colour

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Gabriele de Anna[1] has defended John Campbell's so-called simple view of colours[2] against a problem which I raised.[3] I shall argue that his defence fails.

Campbell's simple view of colours is that a colour, for example green, is not the *response* of a standard observer to whom green objects look green in standard conditions, nor is it the *disposition* of objects to evoke that response, and nor is it the *microphysical* or *reflectance* properties of objects which form the categorical base of such a disposition, where this categorical base is quite unlike how the object appears to a naive observer. Rather, being green is a categorical property of objects which disposes them to look green to standard observers in standard conditions, where this property is as it appears to be to a naive observer. Whatever other differences there may be between secondary and primary qualities, secondary qualities are like primary qualities in this respect: green, for example, is a categorical property of objects, where that property is as it looks to be in favourable circumstances of observation, as being square is a categorical property of shape which is as it looks to be in favourable circumstances of observation—according to the simple view.

In my (1998) I raised a problem for the simple view. Briefly, it was this. Suppose a planet which is like earth, except that colours appear systematically inverted. Grass looks red and poppy flowers look green, and so on for other colours. Assume the simple view of colours, and suppose also that colours are not in fact inverted on this

[1] In his 'The Simple View of Colours and the Reference of Perceptual Terms', this journal 77, 2002, 87–108.

[2] John Campbell, 'A Simple View of Colour', in *Reality, Representation, Projection*, John Haldane and Crispin Wright (eds.) (New York, Oxford: Oxford University Press, 1993) 257–68.

[3] 'The Simple Theory of Colour and the Transparency of Sense Experience' in *Knowing Our Own Minds*, Crispin Wright, Barry C. Smith, Cynthia Macdonald (eds.) (New York, Oxford: Oxford University Press, 1998) 371–89.

doi:10.1017/S003181910300007X ©2003 The Royal Institute of Philosophy

https://doi.org/10.1017/S003181910300007X Published online by Cambridge University Press

planet. Nor are observers on this planet significantly different from observers on earth. The explanation of the apparent inversion is that this planet is illuminated by Z-rays, and Z-light makes red things look green and green things look red to normal observers, and similarly for the other colours. Now suppose that the inhabitants of Z-land have what appears to be a colour vocabulary, they call grass 'green*' and poppy flowers 'red*'. Suppose they take a simple view of colours*. What is the sense and what is the semantic value (reference) of, for example, their predicate 'green*'? Well, the things to which they canonically apply 'green*' are things they view by normal Z-light and which look plainly red to them. So, it seems, that the *sense* of the word 'green*' is that it truly applies to objects which have the simple property of redness. But, on an externalist view of how the *reference* of a predicate is determined, the semantic value of 'green*' is, it seems, being green, since it is canonically applied by them to things which have the simple property of greenness. Thus the apparent sense of their word 'green*' is that it presents the simple property of redness, but the apparent reference is the simple property of greenness. Such a mismatch of sense and reference is incoherent, I argued. 'This is green*' would be true according to its sense if and only if the object was red, but 'This is green*' would be true according to its semantic value (reference) if and only if the object is green. Nothing can be both red and green. So 'green*' does not after all have a sense or a reference. So a Z-lander's utterance of 'This is green*' does not have truth conditions, and so does not express a judgment, I argued. And similarly, of course, for her utterance of 'This is red*', and her use of colour* vocabulary generally.

The relevant thing to do, for the purposes of my dispute with De Anna, is to abandon the simple view of colours*. Instead, we might take the sense of 'green*' to be being disposed to look red to standard observers in Z-light, and now the reference of 'green*' will match its sense, since the objects to which they apply 'green*' are so disposed. Or alternatively, we might take the sense of 'green*' to be being whatever is the categorical base of the disposition to look red to standard observers in Z-light, and again its sense and reference will match because the objects to which they apply 'green*' have such a categorical base. Of course, in the latter case there is no assumption built into the sense of 'green*' as to the intrinsic nature of the relevant categorical base—that it is a simple colour property rather than a complex reflectance property, or a complex micro property, or whatever. Now Z-landers use colour* vocabulary to express judgments, indeed to express largely true judgments of

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colours* we may suppose. Then, if you agree that Z-landers and ourselves differ in our external circumstances—their standard condition is illumination by Z-light whereas ours is illumination by sunlight—but that Z-landers and ourselves are conceptually alike, you should abandon the simple view as an account of our colour vocabulary and of their corresponding colour properties.

De Anna accepts the bones of my thought experiment. We agree, I think, that the categorical bases of colour experiences are the same in Z-land as on earth, whether those bases be simple colour properties or complex reflectance properties or micro properties, or whatever. We agree that the responsive apparatus of the inhabitants of Z-land are as our own, and that things look to have inverted colours because of the properties of Z-light. But De Anna argues for two claims which, if accepted, preserve the simple view of colours and of colours* in the face of my thought experiment:-

(i) There is no special problem here for a simple theory of colours. Similar inversion stories apply to primary qualities such as shape, whereby square things look round and round things look square.
(ii) We can give an account of Z-land use of 'green*' and of 'red*' which allows them to express bona fide judgments, albeit erroneous judgments, concerning simple colour properties.

Clearly, if De Anna can substantiate (i) and (ii) the simple view of colours is safe from my thought experiment. By (i) abandoning the simple view would be too high a price to pay. For primary qualities we take an analogue of the simple view to be entrenched common sense. We take the categorical basis of why square things look square to standard observers in standard conditions to be their having a categorical property which is as it appears to be. And similarly for round things. Fortunately, by (ii) we do not have to abandon a simple view of colour* in the face of my inversion thought experiment.

I shall contest each of (i) and (ii) in turn. Regarding (i), De Anna writes:

> Let us suppose that, besides Z-land, in our universe there is another planet, let us call it V-land, which is exactly like Earth apart from the fact that its atmosphere contains V-rays. Because of some peculiar reflection properties they possess, V-rays have the characteristic to change systematically the direction of the refraction lines of photons in such a way that the polygonal shapes appear circular in perception and vice versa (op. cit. 104).

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V-landers, De Anna proceeds, employ a shape word 'square**' whose seeming sense is the concept of circularity, since that is how objects to which they standardly apply the word appear to them to be by V-light. But the seeming reference of 'square**' is being square, since that is the shape of the objects to which they standardly apply this word. De Anna concludes:

> Thus, the problem does not concern secondary qualities only, and is not generated by the simple view of colour, it presents itself also in the case of primary qualities and originates from the conjunction of semantic externalism with internalism about judgment warrant (op cit. 105).

I think De Anna's V-land thought experiment fails its purpose. It is a crucial feature of my Z-land example that Z-land practice with colour* words is *stable*. The inhabitants must not be able to discover, armed only with common sense resources, that grass only looks red but is really green. Otherwise they could resolve the mismatch. They could either follow the supposed sense of 'green*'—grass is not green*, i.e. red, they discover, but only appears to be—or follow the supposed reference—grass is green*, i.e. green, they discover, but does not appear to be. Either way, the mismatch is resolved and their former use of colour* words may be regarded as an aberration, not a meaning-determining practice. I did not discuss this in my paper, but it is plausible that Z-landers use of colour* words is stable.[4] But V-land practice with shape** words would not be stable. Square objects in V-land are supposed to look round to normal observers in normal conditions, and round objects to look square. What happens, one wonders, when the inhabitants of V-land try to draw a map of a city like Glasgow or Chicago whose streets form a square grid pattern? As De Anna remarks (ibid. p. 93), the points of a map ideally bear the same spatial relation one to another, but scaled down, as do the places they represent. So a good city map will be a grid of squares. But it will look to the inhabitants of V-land as an array of intersecting circles. Now suppose a V-lander, Vera, is standing at a cross roads, the common point of intersection of four square blocks. She sees roads leading off in *four* directions. But when she looks at her map she sees herself as at the intersection of

[4] It is a general feature of colour inversion thought experiments that all else, at the macro level of observable primary qualities, remains the same. This is made plausible by the relative causal autonomy of colour properties. We can suppose that green and red, for example, swap their causal roles *vis à vis* primary qualities. And the remaining causal relations among the primary qualities remain the same.

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what? Four circles I presume. But at the point of intersection of four circles she should see *eight* different roads leading off! So it would seem that she would readily discover that there was something amiss with her perceptions of shape. Or again, as De Anna notes ibid. pp. 96–7, circular and square objects are causally related: square pegs with sides 1cm won't go into round holes of diameter 1cm, but round pegs will go into square holes. Presumably Vera's geometry tells her this. So imagine her presented with a board containing a square hole with 1cm sides and a round peg of lcm diameter, which to her appears to be a round hole and a square peg. She measures their dimensions with a micrometer and finds them to be 1cm each. How does she explain why, to her surprise, the peg goes through the hole? Again her experience gives her clues that her perception of shapes is awry. Now perhaps further elaboration will hide these clues from Vera. But De Anna does not elaborate, and it is not clear how such elaboration should go. The prospects do not look good to me.

It seems then that V-land practice with shape** words is unstable. They may readily discover, armed only with common sense resources, that how shapes** look is not as they are. They would be led to resolve the mismatch either by following the supposed sense —the peg is not square**, i.e. round, but only appears to be—or by following the supposed reference—the peg is square**, i.e. square, but does not appear to be. We do not have a convincing case of an apparent but undetectable inversion of shapes induced by V-rays, as we do of an apparent but undetectable inversion of colours induced by Z-rays. The simple view of colours, I have argued, makes possible a stable mismatch between supposed sense and supposed reference of Z-land colour* vocabulary. De Anna has not shown that a stable mismatch may be visited upon V-land shape** vocabulary. Pace De Anna's claim (i), secondary and primary qualities seem unlike on this point.

De Anna's claim (ii) concerns my interpretation of the Z-land example itself. De Anna argues that the example does not have the dire consequences I claimed for the simple view of colours. I claimed that Z-land uses of 'green*' do not express judgments. 'This is green*', for example, does not have truth conditions: for judged by its supposed sense it would have one truth value, but judged its supposed reference it would have the opposite truth value. So no coherent truth conditions can be assigned to an utterance of 'This is green*'. Therefore it does not express a judgment. De Anna claims things are not that bad.

De Anna response is first is to claim that Z-landers possess the

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generic concept of colour, whilst seemingly conceding that they do not possess any specific colour concepts:

> [O]ne can claim that the concept green* is inadequate since [Z-landers] believe that it tracks red, whereas its semantic value is green (op. cit. 106).

However, de Anna's final position is that whilst their use of 'green*', 'red*', etc. is flawed, they do express specific colour* concepts thereby. He considers a Z-lander's utterance of:

> (1) It is green* if I am normal and the conditions of viewing are standard.

De Anna remarks:

> If we consider (1) again, we can conclude that Z-landers have the conceptual capacities required to formulate it meaningfully, even if their judgment is erroneous. They can understand the content of that judgment because they know, as we know, that green* is a colour, but they are erroneous because they do not know *what* colour it is (op. cit. 107, De Anna's emphasis).

This response is inadequate, because it presupposes that 'green*', as *used* by De Anna in the passage just quoted, does stand for a specific colour. But the problem is that *we* don't understand 'green*', *we* don't know what concept it expresses. So long as we cannot assign matching sense and reference to a Z-lander's canonical uses of 'green*', we cannot take her to express thereby a concept, so a fortiori we cannot take 'green*' to pick out any particular colour. And if we cannot, De Anna's own use of 'green*' in the last sentence quoted is improper. It has no sense and reference.[5] So the question as to '*what* colour it is' is itself meaningless.

I conclude that De Anna has not shown that the thought experiment I constructed against the simple view of colour can be extended to threaten a simple view of shapes and primary qualities generally. And I conclude that he has not rebutted the threat the thought experiment presents for the simple view of colour.[6]

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[5] Ask yourself what the truth value of (1) is, as an utterance by a Z-lander, as an utterance by De Anna?

[6] Thanks to Josep Prades and the Departament de Filologia i Filosofia, Universitat de Girona for their hospitality.

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