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## Did Wittgenstein have a Theory of Colour?

Philosophers are often concerned to describe the nature of things, and in particular the nature of colour. I've often been puzzled as to why it is assumed that there is a nature of colour to be described, as to why anyone would think that there is. So with the assistance of Wittgenstein, I will try to articulate why I think that there isn't such a thing.

Thus I am concerned with a somewhat different question about Wittgenstein's view or thinking about colour from those explored in the other essays in this volume. In particular, I will not add anything substantial to the various remarks and interpretations offered there of the *Remarks on Colour*. Actually my question presupposes or suggests much that Wittgenstein would have no part of: for I'm sure that Wittgenstein did not simply lack such a theory in the way that he lacked a theory of fly-fishing, in that he was unable or unwilling to formulate such a theory. My sense is that he thought that, although of course there are many true scientific propositions about colour, the idea of a *philosophical theory* of colour is just confused; there is no such thing as a true philosophical and informative proposition about the nature of colour, and indeed the whole idea doesn't really make sense. In a way that ought to be obvious to anyone who sympathises with such Wittgensteinian sayings as that 'if someone were to advance theses in philosophy, it would never be possible to debate them, because everyone would agree to them' (PI, §128); '...we may not advance any kind of theory' (PI, §109). For what it's worth, this anti-theoretical attitude is one that I share, at least on the present subject. And it is especially interesting to see how this attitude plays out in the case of colour, for it can seem quite wrong to suppose that there is no fact of the matter with respect to certain philosophical questions about colour.

Wittgenstein did suppose that there exists a 'grammar of colour', a 'language-game of colour'; these comprise such statements as 'red is darker than pink', 'the complement of blue is orange', and so on. These can be arranged to show their various relationships – as for example in the colour wheel – which constitute a 'logic of colour', in Wittgenstein's way of talking. These do have a special status; they seem to be conceptual truths, even if that must be understood with an enormous pinch of salt in the context of Wittgenstein exegesis. They are not analytic truths – unless the notion of analyticity is widened from a Fregean understanding of it as logical truths plus statements that can be converted into logical truths by substituting synonyms. They are rather truths such that acceptance of such a statement is a criterion for understanding the statement – or rather, more broadly, for speaking as we do, for taking part in our ordinary language-game of colour. Happily nothing I will say depends on how precisely Wittgenstein understands 'understanding', or on a precise exegesis of

the notion of grammatical propositions. For however these are explained, they do not determine answers to the philosophical questions about colour I have in mind.

If I had to say what what was my Wittgensteinian watchword, it would be – even though it was directed towards another subject – §79 of *Philosophical Investigations*: ‘say what you please, so long as it does not prevent you from seeing how things are’.

## 1 Shaping the Question Further

In asking about ‘theories of colour’ I mean the attempt to answer the philosophical question “What is colour?”; it is the attempt to elucidate the *nature* of colour, its *essence*. I’m going to sharpen the question in terms of a contemporary framework of possible worlds. This might be thought misleading in a paper primarily about Wittgenstein, who would presumably have taken a dim view of such talk. But for my purposes we have to allow the question to be formulated with some degree of precision, to give it some traction. I shall assume, however counterfactually, that Wittgenstein would not object to the very formulation of the issue. Thus if the answer to the question about colour is X, then that colour=X is (at least) a necessary truth, a proposition that is true in all possible worlds. This is familiar in recent times from the work of Saul Kripke and Hilary Putnam.

There are nowadays many, many competing accounts of the ‘nature of colour’. Most of them correctly predict our actual use of colour-terms in everyday, normal circumstances. They diverge in what they say about counterfactual circumstances, what they take to be possible, and so on. My view, roughly, is that any view that gets ordinary statements about the actual world right is as good as any other, and that beyond that rather low hurdle, there is no fact of the matter concerning which is right. Unfortunately I’m not going to *argue for* the view, because I doubt whether I could; I should be glad if I succeeded in explaining something of why the view is true if it is true.’ Perhaps it will be said that my task is therefore, at best, one of persuasion, of rhetoric. But I like to think that the view is the view of good sense, and I’ll try to make it plausible that it was Wittgenstein’s view (for hints of my subject: RC III, 251-265).

There are broadly speaking three sorts of answers to the question: (1) The fully objective, scientific essentialist answer; according to which the nature of colour is like that of magnetism, revealed by scientific investigation. (2) The phenomenalist or phenomenological answer, according to which the nature of colour is found out by introspection, or reflection on the experience of sensing colour, and the like. (3) The linguistic or conceptual answer. In Wittgenstein’s terms, of course, it is where one speaks of the logic or grammar of colour; the nature of colour is decided by answering such questions as: How is the word ‘red’ used? ‘What is the criterion of sameness of colour?’ – where this is determined by linguistic practice, by language-games.

I will not consider the possibility that these questions are more or less separate, or that the answer to one of these tells you the answer to the other, or that they interact more subtly. Another possibility is that they're not in competition, that they're concerned with different 'concepts' of colour; this possibility I'll return to briefly at the end.

My answer is going to be that Wittgenstein accepts neither scientific essentialism about the nature of colour, nor a phenomenalist account – but that neither does he accept that, in the sense relevant to my question, linguistic practice or language-games reveal the essence of colour or colours. It's true that 'Essence is expressed by grammar' was an important remark of Wittgenstein's. Maybe insofar as there are essences, they are according to Wittgenstein reflected or determined by grammar; but really there aren't any such things, at least not of the sort that would satisfy metaphysicians or philosophers of science today. I think when Wittgenstein said essence is expressed by grammar, he meant only that grammar reveals all there is to essence, not that the end of a grammatical investigation will reveal entities that retain their identities across counterfactual situations or possible worlds; on the contrary, I think that the vocabulary of colour falls apart when subject to such rigour. There are obvious truths about colour, and there are things that upon careful reflection we can see are true, but these are all there are about colour, and they fall far short of the essence of colour in the metaphysical sense.

## 2 Some Answers Rejected

I'll sketch an answer to the question about the nature of colour which I believe to be correct, before turning explicitly to Wittgenstein.

Thus let us look a little more closely into the first two views of colour. First, again, scientific essentialist views. Some are impressed with Kripke and Putnam's apparent derivation of the essence of water; and they will say that what it is to be red is necessarily to have a certain reflectance property (a disposition to reflect a certain wavelength of light; really I just use 'reflectance property' as a stand-in for any property that physics might single out as the colour-property of an object, what used to be called the primary qualities underlying colour). This is not to deny that if they had had different reflectance properties, it is still possible for things such as ripe strawberries to in some sense to have appeared to us as they actually appear. For we can embrace semantic Two-Dimensionalism, according to which there is Metaphysical Possibility – which Kripke taught us about – and there is also If-this-had-been Actual-Possibility. Suppose that colour tracks reflectance properties across possible worlds. Yet we seem to be able to describe a world with different reflectance properties but at which we – perhaps because we have different lenses in our eyes – still have the same chromatic sensation when looking at a ripe strawberry as we have in the actual world. Such

a world shows that different reflectance properties *might have been* denoted by the words, that the stereotypes associated with words might have determined different reflectance properties, different colours. According to the scientific essentialist outlook on colour, then, it is open to say that this does show possibility, though only in the second type of possibility.

Second, phenomenal views. Others will say that colour is not like that; ‘red’, for example, is not a rigid designator standing for a reflectance property. If R is the chromatic sensation actually caused by Red things, then ‘Red’ tracks across worlds the dispositions of objects to cause R. So it is with the idea of sweetness – a non-rigid, response-dependent but intersubjective property of objects. Redness, like sweetness, is multiply realisable; in particular it is multiply realisable with respect to reflectance properties. All that matters is how the strawberry looks and tastes.

Let us call the chromatic sensation we actually have when looking at red things or substances the R-sensation, and call the things and substances that are actually red, the R-stuff (ignore the complications induced by phenomenon of iridescence, and the colours of amorphous things like gas clouds or the sky). Likewise for G-sensations, G-stuff, and the colour green. Necessarily, something is an instance of R-stuff if and only if a fundamental molecular description applies to it that applies to actual R-stuff; similarly for G-stuff.<sup>1</sup>

In possible-world W1 there is a systematic change from the actual world W@ in the gasses making up the atmosphere on such planets as Earth, so that R-stuff does not give rise there to the R-sensation, but gives rise instead to a G-sensation (in language of the actual world, it ‘looks green’). It is not a difference in reflectance properties, but the gasses act as an inverting filter on the light reflected. Is the R-stuff – using the words with the same meanings as we do in the actual world – red, or green, or neither?

Now consider W2. It differs from W@ only in our retinas (or optic nerves, or anything so long as it is inside the bodily envelope): Looking at R-stuff, they send the signals downstream that in the actual world their analogues send when looking at G-stuff. The R-stuff thus retains its actual reflectance properties and effects in atmosphere. Yet still, there is strong temptation to say that in the actual world language, R-stuff ‘looks green’ (again, speaking English). But is it red, green, or neither?

I find I am pulled in the ‘subjective’ phenomenal direction by that thought that what normally appears green is green; that is, if it is normal in W1 and W2 to have R-stuff giving rise to a chromatic sensation which in the actual world is had when looking

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<sup>1</sup> Thanks to Barry Smith for drawing the point out. By a ‘fundamental molecular description’ I mean, for example, a description of water as comprising two hydrogen atoms covalently bound to one oxygen atom. Needless to say, a fundamental molecular description of all the R-stuff would be enormously complex. As an alternative partial characterisation, we could say that an object in a counterfactual situation is an example of R-stuff if it is identical at the molecular level to an actual example of R-stuff. The idea is that if you take an actually red object and consider it in alternative world, it will remain R-stuff, however it appears chromatically.

at G-stuff, then R-stuff, in W1 and W2, is green. But I am pulled the ‘objective’ scientific direction by the fact nothing in the objects, and nothing in the environment of W2, has changed; surely no fact about ourselves can bear on the colours of things. But if we’re taking this line, we cannot fail to be impressed by a certain affinity of W2 with W1: If R-stuff is green in W1-circumstances, then surely it is in W2; hence by *modus tollens* things that are not green in W2 – they remain red – are not green in W1.

Of course my view is that there is no fact of the matter; moreover, I cannot for the life of me see why anyone supposes there is. Our colour vocabulary is made possible by many interlocking contingencies. ‘Contingency’ makes it sound as if it might at any second all collapse into nonsense, but that is not so. There are of course *some* ‘facts of the matter’ about colour; describe all the facts that I gestured at above, and describe the facts underlying our use of colour-words, and you have described those facts: Certain substances or materials, their molecular configurations; the reflectance patterns, wavelengths of light travelling through space; the actions our lenses; the effect on our retinas; the amazingly intricate neurological processes in the optic nerves, the complicated events that take place in the brain; the ‘sensation’ or ‘experiences’ caused, the patterns of speech that form. A certain constellation of such facts, a whole sequence of circumstances, is involved. These arrangements and mechanisms evolved over a very long time, and now work with a very high degree of reliability. In the actual world, that sequence is rarely disturbed in a way that does not simply leave the person blind or colour-blind; certainly nothing like the scenarios described under W1 or W2 ever actually are encountered. So why think that even so, there must be an answer in respect to W1 or W2 (or any of the other variants on that theme)? Nothing, I suspect, except the curiosities and presumptions, and sometimes the obsessions, of (some) philosophers.

My claim, to repeat, is not there is no fact of the matter about colour. It is that there are no facts corresponding to (many of the) modal questions about colour that metaphysicians like to pose. In that sense, colour has no essence.

Before turning back to Wittgenstein, I should consider a certain response on the part of certain metaphysicians: ‘Aha! You’ve gestured at a list of what you call actual facts of the matter concerning redness, but unless you say which are counterfactual supporting, which are necessary and sufficient for the truth of colour-judgements, you haven’t specified the *property of redness*, and thus your claim that there is a fact of the matter about redness is unfounded. In fact, all properties remain the same in counterfactual circumstances, just as objects remain numerically the same if they exist at all. So you cannot say there is a fact of the matter about a property without saying that there are modal facts about it.’

To this I will say, conforming to the view of properties being assumed by the metaphysician, that colours, in the ordinary senses of the terms, are not properties. Properties are what we can speak confidently of across counterfactual situations; mostly these will be the properties that figure in physics and chemistry, such as *conducts electricity* or *is a noble gas*. A predicate like ‘is red’, could be described as standing for a *configuration* of properties (the ones figuring in my list), but this does not mean that

it does so in a counterfactual-supporting way: in counterfactual situations where the actual configuration of facts is not realized, the word's actual meaning does not – or does not always or as frequently as metaphysicians would like – determine its extension. To be more precise: Call a world in which the configuration of chromatic-relevant facts is crucially unlike the actual configuration a 'chromatically challenged' world. (I would say also that the line between the chromatically challenged worlds and the rest is indeterminate or vague.) Then we can put my thesis as this: The Kaplanian *character* of 'red' is such that it falls apart, lapses, fall silent, with respect to chromatically challenged worlds. Linguistic norms arise in the actual world, and have implications for alternative counterfactual situations only in certain dimensions.

### 3 Support from Wittgenstein

So why do I think Wittgenstein would agree? (Or, not to be too presumptuous: why do I think I am following Wittgenstein in taking such a view of the problem?)

One so easily thinks that one's grasp of concepts – one's thinking or understanding – is impermeable in a way that ordinary knowledge of matters of fact is not. We have an almost indefatigable allegiance or temptation to believe in hyper-certainty with respect to the conceptual realm, or to thought, or to the contents of one's mind – for something that remains the case whatever happens in the world. But there simply is no sublime realm of super-hard facts or rails to infinity; Wittgenstein at PI §80 (see also BB, p. 27):

I say, "There is a chair over there". What if I go to fetch it, and it suddenly disappears from sight?  
 – "So it wasn't a chair, but some kind of illusion." – But a few seconds later, we see it again and are able to touch it, and so on. – "So the chair was there after all, and its disappearance was some kind of illusion." – But suppose that after a time it disappears again or seems to disappear. What are we to say now? Have you rules ready for such cases a rules saying whether such a thing is still to be called a "chair"? But do we miss them when we use the word "chair"? And are we to say that we do not really attach any meaning to this word, because we are not equipped with rules for every possible application of it?

A sufficiently large disturbance in the world seems to infect the stability or determinacy of meaning, of concepts. One thought one knew what chairs were, one thought one's grasp of chairhood was secure, but in describable circumstances one finds that concept slipping through one's fingers. Of course what is described is not something that ever happens. The point is that concepts need only be as sharp as the world demands in practice. 'It is idle to brook definitions against implausible contingencies', wrote Quine (1992 p. 21); likewise at PI §87 Wittgenstein says 'The signpost is in order – if, under *normal circumstances*, it fulfils its purpose.' (emphasis added; see also PI, §85).

The same point can be extracted from another famous passage from the *Philosophical Investigations*; I quote it at some length:

If one says “Moses did not exist”, this may mean various things. It may mean: the Israelites did not have a single leader when they came out from Egypt – or: their leader was not called Moses – or: there wasn’t anyone who accomplished all that the Bible relates of Moses – or: ... – According to Russell, we may say: the name “Moses” can be defined by [37] means of various descriptions. For example, as “the man who led the Israelites through the wilderness”, “the man who lived at that time and place and was then called ‘Moses’”, “the man who as a child was taken out of the Nile by Pharaoh’s daughter”, and so on. And according as we accept one definition or another, the sentence “Moses did exist” acquired a different sense, and so does every other sentence about Moses. – And if we are told “N did not exist”, we do ask: “What do you mean? Do you want to say ...or ...and so on?”

But if I make a statement about Moses, am I always ready to substitute some *one* of these descriptions for “Moses”? I shall perhaps say: By “Moses” I mean the man who did what the Bible relates of Moses, or at any rate much of it. But how much? Have I decided how much must turn out to be false for give up my proposition as false? So is my use of the name “Moses” fixed and determined for all possible cases? – Isn’t it like this, that I have, so to speak, a whole series of props in readiness, and am ready to lean on one if another should be taken from under me, and vice versa? – Consider yet another case. If I say “N is dead”, then something like the following may hold for the meaning of the name “N”: I believe that a human being has lived, whom (1) I have seen in such-and-such places, who (2) looked like this (pictures), (3) has done such-and-such things, and (4) bore the name “N” in civic life. – Asked what I mean by “N”, I’d enumerate all or some of these points, and different ones on different occasions. So my definition of “N” would perhaps be “the mean of whom all this is true”. – But if some point were now to turn out to be false? – Would I be prepared to declare the proposition “N is dead” false – even if what has turned out to be false is only something which strikes me as insignificant? But where are the boundaries of what is insignificant? – If I had given an explanation of the name in such a case, I’d now be ready to alter it.

And this can be expressed as follows: I use the name “N” without a *fixed* meaning. (But that impairs its use as little as the use of a table is impaired by the fact that it stand on four legs instead of three and so sometimes wobbled.)

Should it be said that I’m using a word whose meaning I don’t know, and so am talking nonsense?

– Say what you please, so long as it does not prevent you from seeing how things are. (And when you see that, there will be some things that you won’t say.)

(The fluctuation of scientific definitions: what today counts as an [38] observed concomitant of phenomenon A will tomorrow be used to define “A”). (PI, §79)

Several interwoven themes emerge from this. One idea that has been extracted from it is that of a ‘Cluster Theory’ of proper names: Perhaps, rather than a name’s being synonymous with a simple definite description, it is to be equated with a more complicated description, something like ‘the object of which most of the following are true’, followed by a list of predicates, perhaps weighted in such a way that some combinations of them are more important than others for identifying the object. Alternatively, the cluster idea might be simply that the name is synonymous with a disjunction of conjunctions: N is the man who did either A, B and C, or A, B and D, or B, C and D, or .... But we need not stop over details, as this is definitely not the sort of thing that

Wittgenstein is suggesting. Wittgenstein is denying that there is any single rule governing the use of proper names: if we look carefully at how a (reasonable) speaker uses proper names, and the sorts of things he would say in response to various possibilities, the idea that there must be such a rule, or the idea that one is needed in order to characterise the correct use of proper names, evaporates. Again, Wittgenstein's lesson is that in *sufficiently unusual* circumstances, language, or meaning, falls apart, gives no hint as to how to go on. But since these are highly anomalous circumstances – the sort of fanciful things dreamed up by philosophers – it's no wonder that language lacks rules for them. The lesson is repeated in various contexts.

So if we apply that lesson to colour, it seems obvious that my statement that there is no fact of the matter concerning the colour of objects at W1 and W2 is according to Wittgenstein a thing that one ought to affirm: the scenarios are manifestly out of the ordinary, and language is going on holiday. I said above that our colour vocabulary is made possible by many interlocking contingencies, like a Rube Goldberg device. The fact of normally seeing red depends upon imponderably many such facts. If we try to remove or alter them in thought, and ask 'Would an apple still be red?', there needn't be an answer. The smooth operation of colour-language is like a skater dancing, oblivious to the complex objects and forces that make her skating possible. In the *Investigations*, the fact that words require a lot of stage-setting to have the significance they have is stressed throughout, from the beginning language games; only with a background of certain, somewhat sophisticated forms of life can an utterance of 'slab' have its significance.

In other possible worlds, or at least at other conceivable worlds, these contingencies break up. In one, different molecular configurations reflect different wavelengths of light; in another, the atmosphere shifts the reflected wavelengths; in another, the lens behaves differently; in another, the retina behaves differently; in another, events in the optic nerve are from the point of view of the actual world scrambled; in another, the brain responds differently; in another, perhaps, the experience is the only one that is different. Or there are more than two things that are different. Or three, and so on. But I don't see why, speaking of course our language, there has to be an answer as to colours of things in such situations, and I think it clear that Wittgenstein didn't either. There is no problem to which such an answer is addressed.

I said that another possibility is that the three methods appertain to different concepts of colour, or different sharpenings, or different Carnapian explications, of the ordinary concept of colour. I'm not dead set against this, provided that the phenomenological answer really makes sense (again, perhaps the private language argument undermines it; see RC III, 248). But I don't quite advocate this view because I can't see an ambiguity in colour concepts that demands resolution. We can *decide* what to say, but why? Such a move would be empty unless we had some definite purpose in mind. I say that things that don't matter, don't matter.

## 4 Remark on the Remarks

Of course there are many local, small-scale problems concerning colour which have the appearance of being genuine; some of those form the topics addressed by the *Remarks on Colour*. I leave off with a suggestion about a key topic of the *Remarks*.

It concerns Wittgenstein's interest in a mathematics or logic of colour. I for one think that the sort of attitude just canvassed does have some further, more specialised applications. Compare the grammar of the colour-vocabulary with the Peano axioms for 1st order arithmetic: it is hopeless to settle the standard model, but adequate in practice for solving arithmetical problems. Granted, the grammar of colour is, on the one hand, much richer than a set of axioms for the natural numbers, and on the other I suspect not nearly so determinate, and more variable and subject to outside influences. Can there really not be 'transparent white'? Wittgenstein, in the *Remarks on Colour*, was tortured by this, and for the very good reason that our language-game, the logic of colour concepts, seems here to falter, yet still it seems for all the world a well-formed question. I'm not sure why he thought there must be an answer to this, and why he seems persuaded that transparent white is impossible. One could challenge him with certain examples of white media that are not merely translucent but through which one can see images (mist, for example, or milk watered down). I am open to persuasion, but I don't think there need be an answer – not if one is looking to answer a question couched in our ordinary concepts. Some questions that puzzle us most deeply turn out not to have answers; they turn out in the end like 'What time is it on the North Pole?'.

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