Postgraduate English
www.dur.ac.uk/postgraduate.english
ISSN 1756-9761

Issue 06 September 2002

Editor: Richard Brewster

Colour, Seeing and Seeing Colour

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Postgraduate English, Issue 06, September 2002

Do not all charms fly at the mere touch of cold philosophy? There was an awful rainbow once in heaven…1

Foreward

This paper is offered as a curiosity for those sympathetic towards the aesthetic implications of colour experience and would have some grounds for confidence that science and philosophy cannot 'unweave' any rainbows. It is hoped that those especially interested in the role of colour in literature might find the general philosophical question to be of interest; those interested in the influence of philosophy at large upon literary figures may also find the work useful. (For example, a glance in the direction of Coleridge's *Biographia Literaria* will quickly reveal how much of an insight into contemporary philosophy can be gleaned from those with a more poetic understanding and experience of the imagination.)

1. Colour and Philosophy

Colour is a problem for philosophy.2 In this paper I wish to show:

- What is problematic for philosophy about colour.
- What has been suggested to resolve the problematic.
- What remains problematic despite the efforts of the contemporary visual scientist.
- How the colour problem is a vehicle for exposing the problematic in philosophy.
- A descriptive, phenomenological way forward.

The colour debate in philosophy is a microcosm of philosophy itself. This is not, I believe, a radical claim, but one that can be found in the literature, and is readily noticeable on consideration of the phenomenon itself. Colour gives us a miniature representation of philosophical thought and its problems. In virtue of this, I would claim that our efforts to understand colour encompass and evidence our efforts to grasp the problematic in philosophy. We find (in archetypal form) that the human demand for understanding and explanation is weighed against the nature of understanding and explanation themselves.

2. What is Colour?

If we ask the question 'What is colour?' we will find that in some sense of the word, we already *know*. The question invites us to make assumptions that will push us towards certain conclusions. If we take the question apart in an attempt to find out exactly what will constitute an answer, then we are liable to be disappointed. We will find that a judgment has to be made as to our interpretation of the question and its application. Our judgment will set us on the road to find an answer, by establishing what kind of answer we consider relevant. The nature of our answer is determined by our interpretation of the question, not by our acquisition of the infallible truth of what was meant thereby. As such, our answers are based upon assumptions. However, the temptation to make an assumption an independent measure of reality leads us astray; a way of thinking that was of particular concern for the later Wittgenstein 3 and, of course, still promotes confusion today. In order to talk about, or indeed 'see' colour in philosophy we are well served by considering the nature of thought, of mind, of knowledge and of language 'holistically'. Although these subjects are representational categories of an interdependent whole, the temptation to explain or 'measure' according to categorical representations must be met in order to unearth the applicability of specific claims made by particular theories that are based upon them. Such claims will have meaning within their mode of interpretative discourse. Thus the reading of the question, the determination of what is being asked, must be

examined, such that one can avoid discussion of an ‘answer’ that is at cross-purposes with another reading.

There are two general ways of reading the question. The first seeks a description of ‘aboutness’: we assume that we know what ‘existence’ means. The application of the term ‘colour’ invites us to seek the ‘aboutness’ of the ‘existence’ held by that which is called ‘colour’. Hence, part of our assumed meaning for the term ‘existence’ is that there are different kinds, that not everything that we think of as ‘existing’ exists in the same way. We have found our first problem or the potential for an assumption to be made to yield a problematic picture. Can we assume that our knowledge of ‘existences’ is capable of providing us with a complete range of individual ‘kinds’ (our ‘what’ assumption) such that we could slot colour into the appropriate one? If so, our task would be a matter of ‘proving’ it to be so in a way that attracts consent. The mandate of the empirical scientist would appear to fit the bill. However, is our prescriptive concept of what existence ‘is’ applicable here? We are in danger of using the same words from different contexts to paint alternative and potentially misleading pictures of what we are attempting to understand. By this approach we are tempted to utilize an objective view in approaching the matter (i.e., that colour ‘exists in’ the world, exterior to ourselves and independently of ourselves and we, as impartial observers, wish to be able to discern the nature of its independent existence.) We enter into a particular mode of discourse through this way of thinking. We wish to take an existence and turn it into ‘knowledge’ of a ‘thing’ in the same way as we hold ‘knowledge’ of other ‘things’ in the world. This move has analogy as its measure of justification. All our assertions will rest upon analogy and the persuasiveness of our analogies will rest upon our assumption of the whole being the product of its parts: i.e. that we avoid showing any telltale gaps, that might show that we had never justified the first representation we made, that from which all our analogies had been drawn. So what would we be saying? Colour, if it is indeed analogous to a ‘thing’ has an existence like a ‘thing’ and is analyzable like a ‘thing’? 4 Indeed, because we find that in some ways we believe we can analyze it like a ‘thing’ we are more

comfortable in assuming that the analogy is (or must be) justifiable. However, for it to be analyzable like a 'thing' and for us to be able to talk about it as being like a 'thing' we are tempted to believe that it is a 'thing'. Moreover, if colour is not found to fit as analogous to a 'thing' about which we 'know' already, then we can say that we have yet to find the exact 'kind of thing' to which it does analogously correspond, i.e., we don't know the correct category of 'thing' to which it does belong because we have yet to empirically 'discover' (or indeed categorize) all the categories from which our analogies can be drawn. We have presumed that we are able to differentiate between category and analogy despite it seeming as if all our categories were analogous to each other, and that what we refer to as analogies are, in fact, analogous representations of other analogies and vice-versa, *ad infinitum.*

How can we use the analogy between colour and other 'things'? To hold that colour exists in such a way, as our original assumption suggested, (What is colour? = Colour is something), is to assert the same view about 'existence' in the question that will be maintained in the 'answer'. We have an ontological circle. For the purposes of an empirical investigation this is not a problem and we can busy ourselves with experimental research, our methods of which yield theoretical explanation in terms of physical processes. However, when describing and explaining as such, we may find that these representational theories never seem to quite serve as an explanation of the phenomenon *as it is experienced by human beings*. What seems to be immediately perceptually accessible and meaningful about colour is irreconcilable with such theories and their rationale. Different theories produced via the same assumption cannot be compared in terms of the way they satisfy our perceptual 'understanding' of colour. In this they are analogous, for they respond (or fail to respond) in the same way, i.e. according to their interpretation of the question. Such theories seem to equally to miss out something 'essential'. The 'essential' here being the experience of the perceiving subject who 'knows about' colour in terms of how it is 'given' to them as a conscious being. 5

The second reading removes the 'aboutness' aspect of the question to reformulate the resultant 'Is colour?' into the more palatable 'Does colour exist?' This is to say that we would know whether colour *were* a 'something' that we could then approach with the 'What kind of something?' question. From this platform arises the subjective approach to the issue. Colour becomes a disputed entity that pertains either to the objective world or to the subject's experience of the world. 6 We come to see that our concepts of colour work in a very different way to those of extension and form, a recognition that aides this perspective. A qualitative ground for assessment replaces that of objectivity since colour experiences suggest a critical difference in the subject's relations to the world. This position encapsulates what is referred to as the 'primary/secondary' quality distinction. 7 However, approaching the matter in this way excludes the social meaningfulness of colour concepts. For example, our basic colour names merge with our social understanding of colour. Colour names found within the set of colours are used as both adjectives to describe objects, as nouns to refer to their identities within the set of colours, and as bothto describe themselves within their identities. (e.g., a 'yellowy green'.) However, some composite colours (e.g. pink and purple) present us with adjectivally used nouns that have attained specific names over and above other composite colours. Why? Our concepts of colour are still far from exhausted. 8 Colour names used as adjectives abound that depend upon specific objects or kinds of substance for their original reference and so are used seemingly entirely analogously: e.g. rose, charcoal, amber and the like. Descriptive terms are also used to express aspects of colour experience that involve an inextricable mixture of qualities. The texture and substance of an object are in some cases an inescapable part of our concept and defy the notion that an object is coloured in a certain, analyzable way: e.g. gold, bronze, leather. Other colours are known entirely through shared knowledge of a public phenomenon and its associations: e.g. British Racing Green, or those 'particular' shades of red and yellow that constitute the Macdonald's logo. If we try to see these incommensurables only via analogy with the spectral colours then we lose contact with everyday experience. In order to see colour in terms of a qualitative

distinction we have to ignore the indeterminacy of our concepts as they are linguistically used, and as such, of our socially intertwined experience of the world.

Ultimately, from our assumptions, we are tempted to take an either/or attitude to the problem. Either colour exists like an object (which we could analyze if perhaps we could 'extract' it and look at it closely enough), or it doesn't exist like an object and is a qualitative aspect of a subject's experience of the world. As such the skeptic can deny its existence altogether (using the same analogies), as being merely the epiphenomena of a runaway subjectivism or else a 'way of talking' about how certain physiological processes operate in the world and in the human being. These approaches to understanding colour should strike us as both flawed and in 'some way' (that is hard to define) wanting of what it is to perceive colour. These considerations will be further looked into and a possible connection articulated. However, for now, the immediate impression given by the terrain so far described and the implication of its alternating perspectives seems captured in the following line.

One might as well have thought one could buy a sunset by buying the fields from which one had seen it. 9

3. The Objective View

Is this somewhat ill-defined objection regarding the 'given experience of the conscious being' a serious problem for the contemporary visual scientist, i.e. one that falls within such a thinker's purview? If we turn to the literature we find that the work of Wittgenstein and that of the phenomenological tradition (Husserl, Merleau-Ponty, Sartre, Heidegger etc.) is alluded to, but not taken on board as an applicable avenue of criticism influential for the 'real' issue at hand. A work like C. Hardin's, *Colour for Philosophers: Unweaving the Rainbow* (1988), born as it is in the spirit of scientific reductionism, at least shows that there lies an ambiguous middle ground between our two assumptive modes of understanding – its response is to try and contain that middle ground beneath the auspices of an

extended objectivity. That the text is called 'Colour for Philosophers' (my emphasis) 10 and not simply 'Philosophy and Colour' or 'A Philosophical Theory of Colour' or something of the sort is very apt. Hardin sees himself as being in the business of giving back to (even teaching) philosophy the means of solving its problems in a particular field - that means being (for colour) contemporary visual science and its latest explanatory tool, the 'opponent process theory'. 11 He is a man convinced that objective assumptions about 'existence' are philosophically sound when seen in the light of the latest empirical data (and its interpretation) employed by the scientist. At root this perspective relies upon representational models of world/eye/brain structures and their relationships at work. The persuasiveness of such a work rests upon a division between what we know about colour from analysis of our linguistic concepts of colour, and what we know about those biophysical processes which constitute a perceiver of colour's ability to perceive it. Our linguistic concepts of colour are seen to be a determinable by-product of these processes – whereas the perception of colour *is* those processes, or for the functionalist, *is* the causal role fulfilled by those processes. This kind of thinking is convincing in its sense of certainty, a sense best expressed by Danto in the preface:

> How sweet it after all is to be in touch with truth! How profoundly refreshing to leave behind rules of designation, appeals to imaginary cases, or the cat's cradle of possible world semantics and to learn that the complexities are not in our language but in ourselves and in the world. 12

Hardin presents a version of the 'opponent process theory' not merely as an interpretation of certain physiological data, but also to settle what it 'is' to perceive colour. Danto reads Hardin's work to prove that the truth about colour is to be found in 'ourselves and the world', explicitly *not* in our language. Hence, what we understand about colour through investigation of the way our linguistic concepts operate, is ultimately an irrelevant source of information. It is merely a translation of the real facts that are at work (and can be explained) at source (i.e. in us and in the world) into a secondary medium. The temptation presented by

such a sophisticated science/philosophy text like Hardin's is to see a potentially problem-solving dialectic at work, but, to assume that one can stand back from it and give an objective representation of it. Thus objectifying (and so 'explaining') the subject/object dialectic. i.e., he shows that such dialectic is going on at the physical level. He recognizes that the phenomenological desire to 're-see' and so describe perception as it is consciously experienced, appeals to a dialectical understanding (as opposed to the problematic pictures of mind/body, subject/object dualisms), to account for the 'existence' of our mental life. However, underlying this perspective there remains the assumption that this dialectic is independently, objectively, observable and so explainable in such terms. Assuch, 'perception' (in general) and 'colour perception' (in particular) are again given up to the scientific story of conditional, biomechanical processes. (see fig.I)

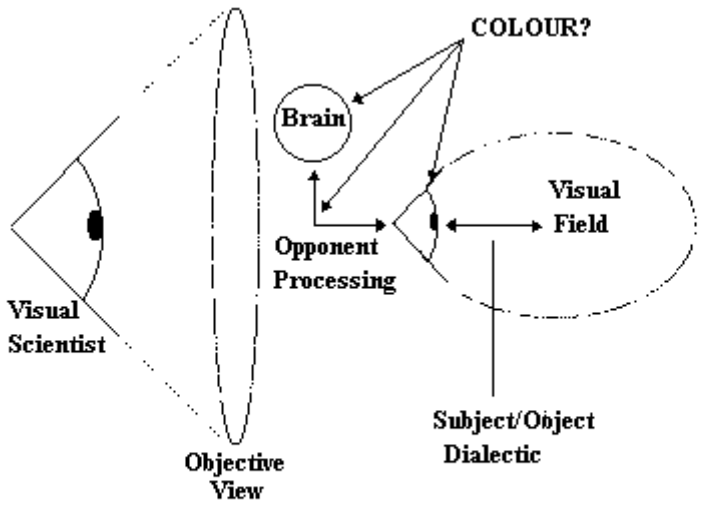

Figure 1

Hardin wants to use the details of a scientific theory to answer philosophical problems. The visual connection between individual and world (an aspect of the traditional subject/object debate), is presented in terms of light and its reflections being imposed upon the brain (via the eye), with 'interpretive processing' occurring at every stage of interface between these two sides of the same physiological coin. This is of course objective language springing from an

objective premise. Hence, the observer discovers the 'truth' about colour through observation of the physical relationship between subject and object. A causal understanding of physical processes obtains, and our psychological concepts of perception are to be causally understood as mirroring these same processes. The subject thus becomes an objectified-subject in an objectified-relationship with an objectified-object, and so the meaningfulness of colours, as they are given to and received by the conscious perceiver, is lost. This kind of maneuver is what Wittgenstein might have called a 'sleight-of-hand trick' working towards a 'chimerical' solution. 13 Ultimately Hardin tries to say that in his mode of understanding world and individual are returned to us unchanged and merely absolved from philosophical intrigue. However, the philosophical intrigue has been sidestepped in favour of an objective assumption. The 'opponent process' theory is subject to philosophical criticism when applied to a philosophical problem. Its failure to access the realm of the colour perceiver has its origin in these objective assumptions. These 'kind of' problems, which indicate the limitations of a purely scientific model of colour perception, are of the same form as those stimulating contemporary philosophy of mind. The colour debate crystallizes such difficulties, affording us ready access to a general area of dispute.

i. ..could one have grounds for supposing that sensations of red and green are identical to or reducible to brain processes? (Hardin, Colour: 134)

This is Hardin's recognition of a problem (the difficulty of making a claim about 'existence' from the auspices of the objective stance), leading to a solution in terms of the 'opponent process' theory. The 'conscious perceiver's' understanding of colour, rather than being a nebulous, indefinable thorn in the scientist's side, becomes but the researcher's database of roughly hewn expressions, which, in translation, mirror what it is to see colours, i.e. to be an opponent processor. The conscious perceiver's mental life thus divides into the experience of 'sensations' (of which colour is one example) and the consciousness of such sensations, i.e. our much disputed contentful or 'aboutness' thoughts, popularly referred to as the

'intentionality' of human mental life. 14 Colour, on this model, has its place firmly settled as one of 'sensation'. Thus the machinery of opponent processes can explain colour perception, because it is made up of causally derived sensations. The answer to Liebniz's analogy with the mill (i.e. that the machinery tells us nothing of how it feels to or what it *is* to grind corn) is to see the true complexity of that machinery, for it determines the human's functional existence. It is certainly a particularly complex system, for it is one that is capable of embracing a massive and diverse quantity of external stimuli. Hardin's position, in which the perception of colour amounts to the processing of light waves according to the opponency of sets of photosensitive cells, provides us with this kind of complexity. Thus for Hardin the answer to his question is 'yes', such that, "the psychophysically established map of colour phenomena is both modeled and explained by a set of opponent neural processes" (Hardin, Colour: 135). However, this can be shown to be an assumption, and as such, to break down in various ways.

ii. The Inverted Spectrum

The 'inverted spectrum' raises problems for any theory of perception grounded on an objective premise. On that note it is also something of a rallying flag for those dissatisfied with functionalist approaches to understanding human nature. The situation is as follows. Person 'A's' colour perception i.e. the hues of their visual field, are inverted in relation to person 'B'. Whenever A sees a particular colour (in terms of the visual spectrum), B sees the inverse, i.e. its complement. For Hardin, we can explain this entirely in terms of opponent processes: the examination of which yields the relative 'wirings' of the protagonists and the relative malfunction in person B. 15 However, we already 'know' how A perceives colour, (as it is for him, a conscious being, and our understanding of this entails our understanding of colour), by reference to our interpersonal experience. We might also know what it would be for the 'inverted' perception of B to agree in some cases with our shared understanding of colour and to disagree with it in others. In some cases the mere re-naming of an experience would pass without

issue. (i.e. to see all reds as greens would yield merely the situation in which the word red meant one thing for A and another to B, with no problematic confusion to deal with.) The whole inter-related web of our concepts could remain unaffected. Other cases might show the difference, however. The ability to perceive some relative colour differences 'better' or 'worse' than others, in contrast to another 'wiring', would bear testimony to the perceptually different realms of A and B. This, however, would not be born out by any contrast in the functional role of the structures of 'standard' versus 'non-standard' opponent processes. I.e. simply because we 'know' A is physically 'normal' and so akin to our own perceptual functioning does not entitle us to 'know' what their wiring 'means' in terms of how they perceive colour. Furthermore, we cannot 'know' what B perceives on the same grounds – not, that is, on grounds based upon an understanding of the physical differences between the perceivers. The colour experience determined by a 'malfunctioning' system is not meaningfully understood by the physiological analogy. In our experience we can come to understand that difference via conformities to and aberrations from our general concepts of colour. We know about the perceptual meaningfulness of colours without reference to that which enables us to perceive them. It is not just a problem that the 'perception' of inverted colour sensations is *missed out* by the 'opponent process' explanation of colour experience, but that *all* perception of colour, (including the 'normal', as it is, for one, in the moments of its experience), is missed out, to be, instead, assumed by it. The value of the inverted spectrum problem – when followed through properly – is thus seen in its ability to bring the whole agonizing difficulty of 'perceptual meaningfulness' to the fore.

Hardin claims two significant pieces of explanation from his work. Both of the following claims must however be seen to be (in general) misconceptions of what is entailed by philosophical interest in colour and (in particular) of what would be a true phenomenology of colour:

> ..visual science has delineated much of the phenomenology of colours, and, with the assistance of neurophysiology, has explained a good deal of

> that phenomenology while showing the promise of explaining more. (Hardin, Colour 22)

And,

> We will be able to suggest some conditions under which it would be reasonable to claim that the qualitative character of colour experience is reducible to neural processes..

The 'qualitative character of colour experience' may be 'reducible' to, or 'identical' with neural processes' if we employ the conditions of our representational spectrum; between whose extremes the subject (with his 'qualitative experiences') and the objective scientist (with his 'colour as object') irreconcilably shadow box each other until the waters cover the land. By the same scale, neural processes might be 'reducible to, or identical to' the (as we have categorized it), inaccessible realm of *qualia*. All we are in fact saying is that, the qualitative character of colour experience *is* 'the qualitative character of colour experience'. 'Neural processes' *are* neural processes. However, neither physiological knowledge of neural processes nor psychological knowledge pertaining to the causal relations constituting our subjective colour experiences are knowledge of, nor adequate means of knowing about, colour in terms of 'perception'. It is of the inextricable mixture of external and internal causality. This arena can only be addressed through description of how our concepts of colour actually work. The attitude behind the former kind of thinking fails to approach this complexity. However, that this complexity is entirely expressible within our language, as language users evidence, (without the need for some kind of essentialist, definitional underpinning*)*, slips by unremarked. That our concepts of colour include the scientific 'language games', 16 their expressions, representations and theories, does not mean it is subsumed or explained by them. It is rather the other way around. When we start to talk of colour in such a way we are merely invoking all that this area of the concept entails in linguistic practice. We, as it were, make a distinction, that we are here and now 'talking colour' in a

particular way – e.g. we are using the 'colour-as-scientific-object' concept. Hence, we start to talk about biophysical processes and the physics of light and use the word colour in amongst it all in a certain way, with a certain emphasis, as if to make a certain 'gesture' by its use. 17 To take that 'gesture' literally, (as Wittgenstein repeatedly points out), to give it the kind of import that notions of factual explanation seem to imply is a mistake; it is to play a futile and meaningless game. If we gesture in this way towards all our theories and findings and statistics and representations by declaring "*That* is colour!" we may as well have been using the term to indicate a collection of theories, findings, statistics and representations.

So what is philosophy's way forward here? If we follow Wittgenstein's lead then our task is one of description. 18 We are to describe the territory encompassed by our concepts of colour, to investigate from our language those ways of understanding that were there 'before our eyes' whilst we were using them daily in our language. 19 To undertake thinking in this way means giving up the quest for a unification of definitional explanations to 'existence' by recognizing that such an ambition is illusory - it has emerged from a misapprehension of how we create and use language. It is such a linguistically rooted conceptual tangle that is at the heart of a conviction like Hardin's, which leads him to reach out to scientific methodology for the provision of philosophical certainty. As we have seen however, such assertions can be traced back to a misleading use of assumptions stemming from an interpretation of language that is cultivated from outside the contexts of its meaningful use.

> ..it is the biological perspective which is the *via media* between the way that we would place colours in the extradermal physical world and the way which would have it that colours are properties of sense data.
> (Hardin, Colour: 58)

What would be more helpful would be a *via media* between the objectifying temptations of scientific 'knowledge' and out and out subjectivism. The tendency

to recoil from objectivism into subjectivism results from the same assumptive conditions for the discussion of 'existence' as we have already seen being employed in the application of science to philosophy. Subjectivism might seem to be the only alternative position available once objectivism is found wanting. We can be tempted to feel that we must embrace the subjective to reject the implication that philosophy can be nothing more than a metaphor for science. This would be a mistake however, in that the conflict between our perspectives could have no understandable 'victor'. The subjective approach to explaining colour, (i.e. that 'colour' is understandable only by the individual perceiver of colour), holds faith with the same representational scale as objectivism. It is the scale we need to oppose and the explanatory illusions it generates.

4. The Subjective View as Recoil from the Objective View

> iii. ..colour incompatibilities state necessary truths about visual consciousness, whereas shape incompatibilities state necessary truths about the experience independent objective world. (McGinn: 25)

We have made a mistake by going in one direction and it does not follow that we won't make another by going the opposite way. McGinn uses the above version of the primary/secondary quality distinction to make an appeal to the ultimately subjective character of colour experience. i.e., that the perceptual 'beingness' of such experience is not capturable in objective terms, because it is the exclusive property of the individual and their relation to their world. I should like to consider two problems with this position. First, regarding the qualitative distinction between shape and colour: we cannot separate the visual field into such categories without giving up perception and talking about a representation of perception. To the perceiver, an object's colour is as much a part of what it is, *(*when we attend, such that something stands out from its setting) as is its shape. Second, the difference between colour and shape incompatibilities, which is so important a matter for the subjective explanation of colour, is ultimately as chimerical a means of solving our philosophical problems as sets of opponent neural processes are for the objectivist. If we succumb to the explanatory illusion

of the quality distinction, then the incompatibility of something being both red and green is not a matter requiring a materialist platform but rather a ‘law of subjectivity’ (McGinn: 40). The perceiver is thus made out to be subject to these laws in the sense that their colour experience is determined by the specific context of their individual relationship to the world. Any incompatibility, (e.g., a humorous use of colour concepts in a bad joke such as "What is black and white and red all over? And the answer, meaningfully absurd - a newspaper.), is rendered simply meaningless. The danger here is to see perception from the false vantage point of a ‘thought about seeing’. 20 A ‘law’ of subjectivity invites fruitless debate as to its means of authority and subsequent verification or falsification. However, if such a ‘law’ is sympathetically regarded as a best-guess ‘gesture’ towards the inexpressible nature of what (in perception) it is for something to be seen as it *is,* claiming no more than that it has not been seen any other way, then we notice that the interrelation of the subject and the subject’s world is allowed re-admittance, to occupy its rightful place at the heartland of our concepts. The ‘is’ in this case being the perception by which we meaningfully ‘see’, as opposed to those representations of ‘seeing’ on which we speculate. We must be wary however. Colour incompatibilities, seen through the lens of subjective representation, hold out an olive branch tempting us to give up a descriptive project and accept a humanized (as in it smacks of true perception in contrast with the science of vision) version of the primary/secondary quality distinction. This, though, would again be to make an assumption a false measure of reality. To paraphrase Wittgenstein, this view of colour’s existence springs from misunderstanding the use of our grammar in the expression of parts of our concepts of colour. Consider these famous ‘puzzle propositions’ 21 from Wittgenstein’s *Remarks on Colour*:

> Why is it something can be transparent green but not transparent white?
>
> …The impression that the transparent medium makes is that something lies *behind* the medium. If the visual image is thoroughly monochromatic it cannot be transparent. (Wittgenstein, Remarks: 5e, para 19)

And,

> Why can't we imagine transparent-white glass, - even if there isn't any in actuality? Where does the analogy with transparent glass go wrong? (Wittgenstein, Remarks: 6e, para 31)

If we attempt to resolve the Wittgenstein's puzzle from the objective or the subjective perspective we come unstuck. Furthermore, we shall see that the way we come unstuck is the same; i.e. from our assumptions about existence and the temptation to misuse parts of our complex concepts of colour to support them. Firstly, the objective view answers by pointing out that opponent processes exclude something's being both white and transparent. 'Whiteness' in physical terms means reflectance of 80+% of light. Transparency means transmission of 80+% of light. Hence something cannot both reflect and transmit 80+% of the light acting on it. It is a tempting explanation, but has it solved Wittgenstein's problem? I.e. *why* is it so? Do the opposing processes by which Hardin says "the psychophysically established map of colour phenomena is both modeled and explained" (Hardin, Colour: 134) give us anything more than an emphatic declaration of 'what'is happening in terms of physical processes? If not, then reflection ≠ transmission says no more than white ≠ transparent. Could not something be both white and transparent if it held an 80/20 mixture of properties, as with a 50/50 split, seeing as these 'mixtures' do not of themselves suggest incompatibility? If we advise someone 'why don't you do X?' then we know that the possibility exists for him or her to do it or not do it. Their response will be set against this background. The 'why' about white has no such background and so the question gestures into an empty space, as if by it we could break free from our concept and set it against a range of other 'possible' concepts. We might wish to do so to justify why we have this one and not another, but this can't provide an explanation on its own. This form of questioning can have no explanatory

conclusion - explanation just has to ‘turn its spade’. 22 To employ another description, we see that what the objectivist offers as a ‘solution’ merely upholds Merleau-Ponty’s view that, the "physiological event is merely the abstract schema of the perceptual event." (Merleau-Ponty, Phenomenology of Perception: 350).

Moreover, if we wish to solve (or escape from) the problem by invoking the subjective view, i.e. that ‘transparent white’ is an incompatibility for the colour perceiver because it contradicts a ‘law of subjectivity’ - such that it cannot be "explained by reference to how things can be presented to a subject" (McGinn 40), then our explanation turns on what it is to be a subject, which is not a matter for either/or speculation but experience. Experience itself is a concept that turns on the existence of something to experience. As such, our ‘explanation’ is a representation of our assumption, and from it, our appeal to the special status of colour as the legitimization of a secondary quality distinction is but the re-postulation of thatrepresentational distinction - i.e., what it is to talk of colour in terms of it being a particular category of phenomena experienced by the subject. That we can’t even imagine transparent white reveals just this problem with the subjective view. Our actively ‘embodied, intersubjective’ concept of colour has nothing to offer us here and so we are thrown into speculations about what it is to be a subject. This is something that structures even our imagination. Our concepts of colour are given and maintained and used by the intersubjective fusion that mediates our consciousness of the world; and are revealed, no more, no less by the gesticulations of our language.

Seeing Colour

We have seen that scientific explanation of colour experience is flawed by its assumptions when presented as a philosophical solution. We have seen how the subjectivist response to this dilemma changes the assumptions merely to change the nature of the flaw in its solution. The failure of both approaches to engage with the complexity of our concepts of colour leads each to lose contact with what it is to be a perceiving, conscious being. We have heard Wittgenstein’s remark that we should be involved in a descriptive project, and seen a little of what that

might entail through his example. Wittgenstein's methodology bears a striking similarity of purpose to that of a phenomenologist like Merleau-Ponty. In order to find a new way of tackling the confusions generated by the subject/object debate (springing from representational thinking, the fuel for unending disagreements between scientists, psychologists and philosophers), Merleau-Ponty advocated a version of the 'phenomenological reduction'. In this reflection we hold back from our assumptive tendencies of thought, and (in this context), "discover vision…as a gaze at grips with a visible world" (Merleau-Ponty, Phenomenology of Perception: 351).(We enter into a different mode of discourse hereby, one which would embrace and describe the 'essence' or 'beingness' (as meaningfulness) of human colour experience. 23 Our benchmark for such description being our intention to remain free from the precursory belief that we can hold our concepts as 'knowledge', (either in analogy to that of factual states of affairs or to an independent, subjective truth about an individual's relationship with his or herworld.) Without such false certainties, 'seeing colour' becomes a facet of the 'style' in which the individual 'embodied subject' inhabits the 'intersubjective' world:

> To learn to see colours it is to acquire a certain style of seeing, a new use of one's own body: it is to enrich and recast the body image. (Merelau-Ponty, Phenomenology of Perception: 153).

To learn to see colour without assumptions is the key to this approach. How else could we begin to understand that there is a difference between the unlearnt 'seeing' of colours (meaningless sensations) and the learnt 'seeing' (perception in terms of meaningful concepts)? It is the latter perspective that cannot be explained by representational, causal theories. It is the former that leaves out part of the 'essential' nature of human consciousness, and by doing so distinguishes philosophy from science and psychology.

Endnotes

1. John Keats, 'Lamia' (Keats, 320).

2. Consider, for example, the entry for colour in the Oxford Companion to Philosophy, "..philosophy awaits a theory which satisfactorily combines colour's subjective and objective aspects"(Honderich: 141).

3. In his Philosophical Investigations, Wittgenstein sought to reveal just this sort of problem via a method of grammatical inquiry. For example, the work opens with a quotation from St. Augustine's Confessions, wherein a theory of the acquisition of language is expressed. Wittgenstein shows what is falsely assumed by the account and how such assumptions inevitably lead on to the generation of false pictures of reality. However, he does not explicitly state his contention with such specific cases; rather he seeks to draw out from them what is problematic. As such his pursuit of conceptual confusions rooted in the misunderstanding of how language is actually used within the stream of life moves his philosophy away from analysis and explanation (doomed to confusion) towards description. "Philosophy is a battle against the bewitchment of our intelligence by means of language." (Philosophical Investigation:109)

4. For example, we might find it tempting to regard colour as a 'thing' when looking at the sun. The sun 'is' something: it is also, meaningfully, inseparable from its 'colour'. However, the point is that to even think in such a way is absurd. We might thus conclude that our perception of the sun's 'colour' must be of its 'thingness', and as such could be explained independently from our perception of it, via analysis and experiment.

5. An expression taken from the English translation of Merleau-Ponty's The Phenomenology of Perception. See for example, p.x of the preface.

6. See C.McGinn's The Subjective View.

7. First entailed by Locke in An Essay Concerning Human Understanding, (1690).

8. I use the term 'colour concept' with increasing frequency in this paper, and so

would say something of its use. Broadly speaking, I use the term ‘colour concept’ to indicate a fusion of colour sensations with meaningful thoughts. As such their existence is typically evidenced in language and open to debate as to psychological, cultural and individual constitution. The primary focus of this essay is to mark their fundamental place in the philosophical colour question – not to fulfil an exhaustive description of their breadth and depth, or a full analysis of their grounds. As such I am, to an extent, knowingly guilty of the same fault I seek to point out in others: namely, that I assume the grounds of my argument and make them my conclusion. However, although I talk about ‘colour concepts’ as if they are self-explanatory, I do so believing that the quest to unearth determinate grounds for their type – and so ‘explain’ them in a certain, vacuous sense – to be a bogus activity.

9. A comment made by C.S. Lewis, with regard, however, to certain secular attitudes towards religious faith. (see Miracles: 282)

10. It is also extremely pertinent that Hardin refers to Keats’ line regarding the ‘unweaving’ of the rainbow. (See ‘Lamia’, II, lines 229-239) He willingly puts himself into the role once occupied (without choice) by Newton (for some of the later Romantics) as the ‘clipper of Angel’s wings’, the ‘conqueror’ of ‘all mysteries’. As we shall see, however, this is a false claim, since the objectivity of science is simply at explanatory cross-purposes with the meaningfulness of lived perception. It is ironic to note that someone like Hardin wants to be in this role of destroyer of ‘all charms’ and yet fails. Newton didn’t want to be in it – indeed he was profoundly opposed to the idea that his work could be employed in any way that addressed the mysteries of metaphysics – and is, of course, vindicated in this reluctance by the fact that charges such as Keats’ (that he ‘unweaves’ the ‘awful’ rainbow) are by the same token unfounded. He didn’t, and he recognised that he couldn’t. The difference is that (some) scientists of our age, unlike Newton and his ilk, genuinely wish to believe that they can and do ultimately ‘deal’ with perception.

11. Opponency theories are commonplaces in biology. In visual science the ‘opponent process theory’ has become an important explanatory tool, presented in

various versions, stemming from the pioneering work of Mach and (later) Hering. Hardin's interpretation emphasizes the significance of the 'eye-story' of the theory, its ability to determine the first steps of chromatic processing prior to the take over by neural processes. As such, the eye is considered to be "a bit of extruded brain." From the observation of the eye's processes he hopes to deduce something of the way in which the brain constructs chromatic experiences, that which he concludes will constitute a portion of its sensory representation of the world. It is the move from 'sensory representation' to 'meaningful perception' that is seen to be problematic in this essay. The basic tenets of the opponent process theory are as follows. Colour perception holds a two-tier structure. The first level is determined by the relative absorption responsiveness of the cones in the retina. (Cones being our chromatically sensitive cells.) Secondly, all the light sensitive cells in the eye, the rods and cones, are arranged in opponent pairs. The cross connections or referencing between these pairings forming a system that can be seen to determine our sensation in terms of four chromatic processes. Red sensitivity (i.e. cones excited by light of wavelengths between 600 and 700 nanometers) opposes green sensitivity, (480-560nm) blue opposes yellow. The opposing sensitivities of these cells produce a response which in turn, goes on to be neurally processed, so forming our overall visual sensation. Achromatic reception sees opponency between white 'excited' versus white 'inhibited' cells. This model experientially rules out impossible colours and colours sharing locations. I.e., the overall response of the cells cannot be in two directions. One direction will 'win out', or else equilibrium be maintained. E.g. the sensation of purple might be defined in terms of the joint occurrence of the red and blue processes, yellow in terms the yellow process occurring (at the expense of blue), whilst red and green remained in neutral balance.

12. From page xiii of the foreword to Colour for Philosophers by C.Hardin.

13, See, for example, Philosophical Investigations paras110-32 or the Lecture on Ethics (Wittgenstein: Philosophical Occasions: 40ff).. .

14. A phrase given its current value via Searle's, Intentionality. Cambridge: CUP,

1983.

15 ‘Wiring” here referring, with Hardin, to the pyschophysical constitution of an individual. (see p.137)

16. See para.7 of the Philosophical Investigations for what Wittgenstein meant by a ‘language game’.

17. See Wittgenstein, Philosophical Investigations, (paras 433&4), “The gesture - we should like to say - tries to portray, but cannot do it.” When could it? When we have the ‘perfect’ theory? When our knowledge of neurobiology is infinitely detailed? Never, for we are addressing the concept at cross-purposes.

18 See, for example Philosophical Investigations (para.109), “We must do away with explanation, and description alone must take its place.”

19. See Wittgenstein, Culture and Value, p.163, “May God grant to the philosopher insight into what lies before everyone’s eyes.”

20. A Cartesian expression examined and found wanting by Merleau-Ponty in his Phenomenology of Perception, 351.

21. A term used by Westphal in the introductory remarks to his Colour: Some Philosophical Problems For Wittgenstein.

22 See Wittgenstein, Philosophical Investigations para 217.

23. Merleau-Ponty defines phenomenology as “..the study of essences.” (The Phenomenology of Perception, Preface, p. vii.

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First Response

This is a lucid investigation into the philosophical issue of colour perception which has been a recurrent theme since the work of the neo-Platonists. The article takes this issue to reopen debates about language and perception in twentieth-century philosophy. Developing its position with reference to Wittgenstein's

'Philosophical Investigations' and the 'Colour for Philosophers' of C. Hardin, it concludes by recommending a phenomenological approach to colour along the lines of Merleau-Ponty's 'Phenomenology of Perception'. Impressively researched, the article brings a fresh perspective to a problem that has been dormant in recent times. Whether the article succeeds in showing how "the colour problem is a vehicle for exposing the problematic in philosophy" remains, to me, questionable, but this brave effort should be of general interest whilst possessing particular relevance to those working in aesthetics, the philosophy of perception and literary theory.