

## *Shades and concepts*

JÉRÔME DOKIC & ÉLISABETH PACHERIE

### *1. Introduction*

According to the conceptualist approach in the philosophy of perception, perceptual content is fully conceptual. Against this view non-conceptualists argue that perceptual experiences have a fineness of grain that far outstrips what can be captured in terms of concepts possessed by the perceiver. They claim, for instance, that the number of colour shades we perceptually discriminate far exceeds the number of colour concepts we have or could have. Both McDowell (1994) and Brewer (1999) acknowledge the fine-grainedness of perceptual experience and yet contend that it can perfectly be captured by concepts. According to them, the non-conceptualists' argument rests on an unduly restrictive view of concepts as necessarily corresponding with entirely context-independent classifications

of things. This amounts to restricting the concepts available to capture perceptual discriminations to those associated with verbal expression, which have context-independent norms of application. Once this restriction is lifted, it becomes possible for the conceptualist to argue that perceptual experience with all its fineness of grain can be fully captured by appropriate demonstrative concepts. Thus, the fact that a perceiver is capable of a perceptual discrimination between, say, two shades of red for which she lacks correspondingly different context-independent colour concepts does not make the content of her experience non-conceptual. It is perfectly possible for her to capture this difference in her perceptual experience of the two shades in terms of demonstrative concepts like *coloured thus* or *this shade*, that exploit the presence of samples of the shades in question.

For the conceptualist strategy to be successful it must meet two conditions of adequacy. First, it should be phenomenologically adequate, that is, provide a satisfactory account of all aspects of the phenomenology of colour perception. Second, the strategy should also be conceptually adequate. In other words, the conceptualists should demonstrate that the purported demonstrative colour concepts (DCCs for short) they claim can capture the fine-grained content of colour experience satisfy central criteria of concepthood and hence really qualify as concepts. We will start with some preliminary remarks regarding phenomenology (§2) but our main concern will be with the second condition of adequacy (§3 to §5). We will argue that DCCs fail to meet three related criteria for concepthood that form part of the conceptualist's own conception of concepts. First, these purported concepts have implausible conditions of individuation and violate an intuitive Criterion of Difference for concepts. Second, there are no recognitional capacities associated with DCCs and as a consequence their inferential potential is severely restricted. Third, DCCs cannot play the role the conceptualists want them to play in the justification of judgements by perception. Our conclusion will be that, as a consequence, we are left with no reason to admit that a judgement involving a DCC is really an exercise of a colour concept.

## 2. Colour shades and demonstrative colour concepts

One problem that confronts a conceptualist account of colour perception is that colour indiscriminability is non-transitive. Colour samples *a*, *b* and *c* can be found such that, for a normal observer, *b* is indiscriminable from *a* and *c* is indiscriminable from *b* and yet *c* is discriminable from *a*. As a result and as the conceptualists admit, the rule according to which two things fall under the same DCC if and only if they are indiscriminable in colour is incoherent. According to this rule, any coloured thing would fall under the DCC, for it is always possible to link the colour of that thing with

that of the perceived sample through a chain of things each of which is indiscriminable in colour from its neighbours. This would entail that everything has the same colour! What the conceptualists claim, though, is that a different rule underlies the application of a DCC. Grasp of a DCC is provided by the perception of a coloured sample, and its extension comprises anything that is indiscriminable in colour *from that sample* (at the time of its perception) (McDowell 1994: 170ff.; Brewer 1999: 174–75). Arguably, the latter rule, unlike the former one, does not suffer from incoherence.

It is worth considering two immediate implications of the new rule. First, as Brewer himself notes, any given thing is apt to fall under more than one DCC. Second, and conversely, a given DCC comprises in its extension things that are discriminable in colour. In the following table,  $C_x$  is the DCC which is grasped in perceiving a coloured thing  $x$ , and whose extension is described on the same line:

$C_a$	$a$	$b$		
$C_b$	$a$	$b$	$c$	
$C_c$		$b$	$c$	$d$
$C_d$			$c$	$d$

Suppose for instance that  $b$  is some red thing perceived through a demonstrative concept  $C_b$ . With regard to the first implication,  $b$  falls under the concept  $C_b$ , since, trivially, it is indiscriminable from itself. But  $b$  is also indiscriminable from two other red things, namely  $a$  and  $c$ , hence also falls under both  $C_a$  and  $C_c$ . Conversely, with respect to the second implication, the concept  $C_b$  equally characterizes  $a$  and  $c$ , which are indiscriminable in colour from  $b$ , although they are discriminable from each other (they appear to have two different shades of red).

This raises a difficulty, for isn't it incoherent to suppose that a given thing, although uniformly coloured, presents more than one shade at a given time to a given observer? As McDowell (1994: 56) puts it, a shade is less a band than a *line* on the spectrum. The relevant conception of a shade is roughly the one used by Russell (1921) and Goodman (1951), according to which two things  $x$  and  $y$  have the same shade (in given conditions) if and only if all things indiscriminable in colour from  $x$  are also indiscrimi-

nable in colour from  $y$ . Now colour shades, just as colours *tout court*, are mutually *exclusive*. As a uniformly coloured thing cannot be both red and green at the same time (in fixed conditions of observation), a given sample, say  $b$ , cannot have more than one shade at a given time (in fixed conditions of observation).

From the conceptualists' point of view the proper response to this difficulty should be to concede that a DCC itself is *not* a concept of a colour *shade*, precisely because its extension is composed of things that have different shades. Moreover, the conceptualists can claim that there are circumstances in which Russell-Goodman shades are perceived as such. Suppose that the subject perceives three red things, say  $a$ ,  $b$  and  $c$ , close together. The concept of the shade of  $b$  can be defined as the logical product of concepts  $C_a$ ,  $C_b$  and  $C_c$  which, by hypothesis, are grasped by the subject. Under this compound concept neither  $a$  nor  $c$  but only  $b$  falls. The conceptualist can argue that the conceptual content of such an experience is sophisticated enough to allow the subject to perceive the exclusive shade of  $b$ . DCCs themselves do not slice the phenomenal world as finely as they should (they correspond to *bands* on the spectrum), but their logical products do.

Of course, if there is only one sample around in the visual field, say  $b$ , its shade will necessarily be perceived in a somewhat indeterminate way. In such a situation, (by hypothesis) the concept  $C_b$  is grasped, but the concepts  $C_a$  and  $C_c$  themselves (and thus the relevant logical product) cannot be grasped, since this would require the perceptual presence of samples  $a$  and  $c$ . (More on this later.) This seems to imply that the introduction of a second sample, say  $a$  or  $c$ , in the visual field, changes the perceptual appearance of  $b$ , but this may be a conclusion that conceptualists can live with.

So let us suppose – perhaps generously – that the conceptualists' story about perception having a fully conceptual content is phenomenologically adequate, at least in the sense that it slices the phenomenal world finely enough. Moreover, we will continue to write, as the conceptualists do, as if a DCC is a concept of a colour *shade*, although we have just seen that this is not obvious. We now turn to our main concern, which is the conceptual adequacy of the conceptualists' account.

### 3. *The individuation of demonstrative colour concepts*

According to a plausible Criterion of Difference, two concepts (considered as the senses of predicates) are different if the subject who grasps them at the same time can rationally adopt different epistemic attitudes towards thoughts containing them (which are otherwise identical). For instance, if it is possible for a rational subject to believe (in a particular context) that everything which is thus <sub>$a$</sub>  is thus <sub>$a$</sub> , where both tokens of 'thus <sub>$a$</sub> ' express the

same DCC grounded on the perception of  $a$ , while not believing that everything which is  $\text{thus}_a$  is  $\text{thus}_b$ , where the token ' $\text{thus}_b$ ' expresses a DCC grounded on the perception of  $b$ , then the concept expressed by ' $\text{thus}_a$ ' is not the same as the concept expressed as ' $\text{thus}_b$ '.

The Criterion of Difference for concepts implies that, if a subject grasps two concepts at the same time, she is at least sometimes in a position to know that the concepts are different. That is, if she can rationally adopt different epistemic attitudes towards certain thoughts containing them, she knows that they are different. Note that this implication is compatible with the externalist view (accepted by McDowell) that we do not always know infallibly that we have really grasped a given concept, for here it is presupposed that the relevant DCCs are indeed grasped by the subject.

Now suppose that the subject perceives two samples of the same colour shade – say,  $a_1$  and  $a_2$ . It is natural to suppose that the DCCs grounded on the perception of these samples are the same. After all, not only do they *seem* to be coloured exactly alike, but they really do have the same colour shade. However, it seems always possible for a rational subject to believe that everything which is  $\text{thus}_{a_1}$  is  $\text{thus}_{a_1}$ , while doubting whether everything which is  $\text{thus}_{a_1}$  is  $\text{thus}_{a_2}$ . For all she knows on the basis of perceptual appearance, there might be a sample that is indiscriminable from  $a_2$  but discriminable from  $a_1$ . Such a sample would fall under  $\text{thus}_{a_2}$  but not under  $\text{thus}_{a_1}$ . This is a coherent epistemic possibility, which implies, according to the Criterion, that ' $\text{thus}_{a_1}$ ' and ' $\text{thus}_{a_2}$ ' express different concepts (in this context).

If we accept the Criterion of Difference for concepts, then, it seems impossible to grasp the same DCC through the perception of numerically distinct objects that look exactly the same as far as their most specific colour is concerned. In fact, there is an infinite number of DCCs for a given shade, since they are necessarily tied to particular samples. So either conceptualists admit that there are conceptual differences in the contents of perception which do not correspond to any phenomenological differences, or they slice the phenomenal world *too* finely. Beside the fact that neither option is intrinsically plausible, the common experience of perceiving internal relations between different shades presented at a given time (for instance, perceiving that two samples have exactly the same shade) has not been provided for.

#### 4. *Concepts, recognition and inference*

Another objection to the conceptualist strategy is that DCCs are not associated with any recognitional capacity. It seems plausible to suppose that mastery of an observational concept implies a capacity to identify and reidentify perceptual instances of the concept. This means that, to have a

concept of a given colour shade, one must be able to recognize coloured objects over time, not just to discriminate two simultaneously presented ones. McDowell acknowledges that possession of an observational concept presupposes a certain recognitional capacity. Indeed, he maintains that what ensures that 'that shade' can give expression to a concept of a shade 'is that the associated capacity can persist into the future, if only for a short time, and that, having persisted, it can be used also in thoughts about what is by then the past, if only the recent past' (1994: 57). Note though that this is an empirical claim for which McDowell adduces no evidence. For this claim to be falsified it would be enough to show that two shades of colour that are just over the threshold of perceptual discrimination when simultaneously presented would not be reliably discriminated if presented in succession. There is indeed plenty of empirical evidence that our capacity for perceptual discrimination far surpasses our capacity for perceptual identification and that colour is no exception (Burns and Ward 1977; Halsey and Chapanis 1951; Hardin 1988; Hurvich 1981). Raffman (1995) drives the point home most clearly. Obviously enough, one can recognize only what one can remember. Empirical evidence from psychophysics and perceptual psychology makes it clear that perceptual memory is limited and its grain much coarser than our perceptual discrimination thresholds. It follows that, if concept possession requires a certain recognitional capacity, the maximal fineness of grain of our perceptual concepts will correspond to the maximal fineness of grain of perceptual memory encoding. It is overwhelmingly unlikely that DCCs meet this constraint and hence are associated with a recognitional capacity.

One possible move for the conceptualists is to claim that the recognitional capacity underlying the mastery of a DCC is not based on a stored representation of the colour of the original sample (otherwise Raffman's objection would be well-taken), but on the more general capacity to keep track of the sample itself. Suppose that a man tries to keep track of a sample of a given shade by always carrying it in his pocket. Could we say that he has a recognitional capacity in so far as it is always possible for him to compare this sample with coloured objects in his environment? No, because there is no guarantee that the colour of the sample will not at least slightly alter with time without him noticing the change. There is no such guarantee, because there is no nomic relation between the property of the sample by means of which he keeps track of it and its shade property. Perhaps he could defer to the opinion of a colour expert to know whether his sample has retained its original shade, but this would make his concept a deferential concept. We see nothing wrong with the idea of deferential concepts in itself, but surely it would be a *reductio ad absurdum* of the conceptualist's strategy if his only way of preserving the claim that perceptual content is conceptual were to reconstrue paradigmatically

observational concepts such as shade concepts as socially deferential concepts.

A more radical move the conceptualists could make would be to deny that a recognitional requirement should be imposed on DCCs. Yet there is a price to pay for this move and one may doubt whether it is worth paying. One important reason for insisting that concept possession requires an associated identification or recognition capacity has to do with the inferential role of concepts. Concepts are plausibly thought to be what accounts for the inferential powers of our beliefs and other propositional attitudes (Crane 1992). In most cases, what explains the validity of an inference is the presence of certain conceptual constituents as parts as the content of the premiss. To borrow an example from Crane, a thinker who believes that *a is F* and *b is F* and that *a is not b* will be disposed to believe that *at least two things are F*. What is essential for the inference to be valid is that the same part of the content should occur in the first two premisses, in other words they should both contain the concept *F*. But suppose now that the relevant concepts are DCCs of the kind envisioned by Brewer and McDowell. In the absence of any genuine recognitional capacity associated with such concepts, how are we to ensure that the same demonstrative concept figures in both premisses? The only case in which such insurance can be given is when the contents *a is coloured thus* and *b is coloured thus* are simultaneously available to the thinker in perceptual experience in such a way that he can attend to both at once. As soon as the two premisses are obtained separately, the warrant disappears, since, for lack of recognitional capacity, the thinker will not be in a position to ascertain whether the demonstrative concepts involved in the two premisses are the same or different. The inferential potential of such concepts is therefore extremely restricted. These concepts have neither past nor future and their use in reasoning is confined to the here and now of perceptual experience. The conceptualists may well be willing to bite the bullet. However, as we shall see in the next section, this limitation also casts a shadow on their main project, namely showing how perceptions can provide reasons for judgements and beliefs.

### 5. *Perceptual justification*

The conceptualists take the claim that perceptual content is conceptual to be a consequence of the fact that perceptual experiences can provide reasons for making certain judgements or holding certain beliefs. Their first premiss makes explicit the link between reasons and inference. It states that giving reasons involves identifying certain relevant propositions, namely those contents that figure as the premisses and conclusions of inferences explicitly articulating the reasoning involved. Their second premiss states

that reasons must be reasons *for* the subject, that is, they must be internal reasons that the subject should be able to register at the personal level and to appreciate as reasons. Our final worry is that the ephemeral character of the DCCs by means of which the conceptualist intends to capture the content of perceptual experiences makes the reasons provided by these experiences equally ephemeral. Suppose, for instance, that a perceptual experience whose content is captured demonstratively, as the conceptualists suggest, as 'that is (coloured) thus' provides a reason for making a certain judgement or holding a certain belief. How long does the judgement or belief remain justified by this reason? Given the lack of recognitional capacity associated with DCCs, the subject ceases to possess them as soon as his perceptual relation to the relevant samples breaks off. As a consequence, when the reason for a certain judgement or belief is a perceptual experience with a strongly context-dependent conceptual content, the judgement or belief retains its justification only as long as the perceptual experience in question is enjoyed. The problem is that here we cannot have a transition from a perception-based to a memory-based reason for a given judgement or belief. In certain conditions, if the initial reason a subject has for a certain judgement is his perception that *p*, this reason can evolve into a memory reason for the judgement. The subject now remembers that *p* or remembers having perceived that *p*. But one condition for the transition to occur is that the subject be able to entertain the thought that *p* both initially, at the moment of perception, and later, when he is remembering. This in turn requires that the concepts that are the constituents of the thought that *p* be possessed by the subject both at the time of perception and later when he is remembering. But this condition does not hold when the constituents of the content of the perceptual experience are strongly context-dependent DCCs. The weaker requirement that the subject simply remembers having had a perceptual reason for making a certain judgement, without necessarily now having the conceptual means to entertain a thought with the same content as the reason, does not suffice to guarantee that the judgement remains justified. The problem is that if one remembers having had a reason for making a certain judgement but *cannot* remember what the reason was, since one has lost the concepts needed to articulate it, one will not always be in a position to recognize whether the newly presented evidence defeats one's initial reason for making the judgement. Suppose the reason a subject initially had for making a judgement was a perceptual experience with the content '*a* is thus<sub>1</sub>' and suppose he now has perceptual evidence that '*a* is thus<sub>2</sub>'. If he has not retained the capacity to think thoughts with the content '*x* is thus<sub>1</sub>', he will not be in a position to recognize whether or not his new evidence that '*a* is thus<sub>2</sub>' defeats his initial reason for making the judgement.



## 6. Conclusion

In this paper, we have put forward three main arguments against the claim that perceptual content is fully captured by demonstrative contents like *This is thus*. These arguments emphasize different facets of the same problem. Whereas the second argument shows that lack of diachronic recognition severely limits the inferential potential of demonstrative judgements, the first argument entails that even synchronic recognition is problematic; given the bizarre conditions of individuation of DCCs, a judgement that two coloured samples have exactly the same shade can never be perceptually justified. Finally, the third argument stresses that, even in cases where judgements involving DCCs are justified by perceptual experiences, the perceptual reasons last only as long as the experiences do.

In conclusion, let us make clear that we have said nothing against the coherence of context-dependent classifications. On the contrary, a judgement expressed by 'That is thus' in a given context can have a fully conceptual content. What we have claimed is that, although such a content is based on the perception of things and their qualities, it cannot substitute for the content of perceptual experience itself. The modes of presentation expressed by demonstrative predicates like 'is thus' cannot both satisfy the essential constraints on the individuation of concepts and capture the phenomenology of perceptual experience. So, if experience has a content, it cannot be fully captured by concepts, even if we allow for conceptual, context-dependent classifications of things.<sup>1</sup>

Institut Jean-Nicod  
1 bis, avenue de Lowendal  
75007 Paris, France  
dokic@ehess.fr  
pacherie@ehess.fr

## References

- Brewer, B. 1999. *Perception and Reason*. Oxford: Oxford University Press.
- Burns, E. and W. Ward. 1977. Categorical perception – phenomenon or epiphenomenon: evidence from experiments in the perception of musical intervals. *Journal of the Acoustical Society of America* 63: 456–68.
- Crane, T. 1992. The non-conceptual content of experience. In *The Contents of Experience*, ed. T. Crane, 136–57. Cambridge: Cambridge University Press.
- Goodman, N. 1951. *The Structure of Appearance*. Indianapolis: Bobbs-Merrill.
- Halsey, R. and A. Chapanis. 1951. Number of absolute identifiable hues. *Journal of the Optical Society of America* 41: 1057–58.
- Hardin, C. L. 1988. *Color for philosophers*. Indianapolis: Hackett.

<sup>1</sup> We would like to thank an anonymous referee for helpful comments.

- Hurvich, L. 1981. *Color vision*. Sunderland, MA: Sinauer Associates.
- McDowell, J. 1994 (second edition 1996). *Mind and World*. Cambridge, MA: Harvard University Press.
- Raffman, D. 1995. On the persistence of phenomenology. In *Conscious Experience*, ed. T. Metzinger, 292–308. Thorverton: Schöningh/Imprint Academic.
- Russell, B. 1921. *The Analysis of Mind*. New York: The Macmillan Company.