

Nonconceptual Content¹

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1. Introduction

The main debate about whether perceptual experience has nonconceptual content begins with agreement that experience represents the world and that an experience's content is the way it represents things as being. Assuming this much, the debate centers on the question: Is the range of content-bearing perceptual experiences a creature can enjoy independent of its conceptual resources? Conceptualists answer negatively, nonconceptualists affirmatively. Bill Brewer (1999, p.203) provides an example of conceptualism, claiming that “[perceptual] experiences ... have representational contents which are characterizable only in terms of concepts which the subject himself must possess.” John McDowell (1994, p.10; original emphases) proposes that “when we enjoy experience conceptual capacities are drawn on in receptivity, not exercised on some supposedly prior deliverances of receptivity”; receptivity is our capacity to be affected by and form representations of objects (Kant A19/B33). McDowell's remark indicates that conceptualism does not take concepts merely to impose a top-down constraint on the range of permissible experiential contents. They are intimately involved in the production of that content.

In contrast, nonconceptualists hold that creatures can have experiences with contents that are not limited by their arsenal of concepts. Michael Tye (2006, p.507) characterizes nonconceptualism in terms of the specification of correctness conditions. Tye's idea is that while

¹ I thank Mohan Matthen for much useful feedback on a draft of this paper. I am also grateful for discussions of these issues with Michael Tye, Gerald Vision, and the late David Welker.

concepts would have to be exercised in providing a (theory-relative) canonical statement of a given content's correctness conditions, having an experience with that content does not require possessing or deploying any of those concepts. Consider the fine-grained nature of the properties encountered in experience, which many nonconceptualists emphasize. Gareth Evans (1982, p.229) asked, "Do we really understand the proposal that we have as many colour concepts as there are shades of colour that we can sensibly discriminate?" Let us assume momentarily that re-identification by means of stored representations is a criterion of concept possession. Subjects simultaneously viewing two uniformly colored surfaces of similar shades of red (say, Munsell chips 2.5R 6/12 and 5R 5/14) can discriminate them from one another in terms of color despite not possessing a stored icon for the specific shade of either sample, being ignorant of the Munsell conceptual system or any other color order system, and so forth. If such performance depends on differences in how the surfaces' fine-grained colors are represented, experience has nonconceptual representational content. Endorsing nonconceptualism does not automatically commit one to claiming that a creature could have perceptual experiences with nonconceptual contents without possessing any concepts whatsoever or that perceptual experience cannot also have conceptual content.

Although the dispute between conceptualists and nonconceptualists looks easy to get a handle on, there are several complications. The debate turns on notions about which there is ample controversy: the nature of concepts and their possession conditions, the grounds for attributing states with representational content, and what counts as a perceptual experience. Another problem is that conceptualists and nonconceptualists often are motivated by different concerns. Adina Roskies (2008, p.634) notes that conceptualists such as Brewer and McDowell are chiefly wrangling with epistemological considerations. They charge that perceptual

experiences could not justify beliefs about the world if their contents were not fully conceptual. Nonconceptualists tend to stress either features of the relationship between concepts and experience besides justification (see Peacocke 1992, 2001; Roskies 2008, 2010) or a range of empirical findings and introspective observations that clash with the conceptualist's thesis (see Evans 1982; Kelly 2001a; Peacocke 1992 and 1998; Raftopoulos 2009; Tye 2006). The varied nature of the goals and motives in play raises the possibility that researchers are sometimes talking past one another or misjudging the resources available to their opponents.

There is also the appearance that central terms of the debate are unclear in a way that obscures the positions available. Richard Heck (2000) points out that there are two different ways of being nonconceptual (each with a corresponding way of being conceptual) and it is not always clear which is on the table (see also Crowther 2006; Speaks 2005). Content nonconceptualism is a matter of a state's representational content not being constituted by concepts. State nonconceptualism has it that being in a given representational state is independent of whether one possesses concepts that reflect the state's content. Perhaps there is one kind of content, but two kinds of content-bearing state. One kind of state (exemplified by belief) has a content-relative requirement of concept possession while the other (exemplified by experience) does not. While reasons to pare down the slate of choices might subsequently emerge, we initially have to recognize all four possible pairings of state and content views as options, rather than just simple conceptualism and nonconceptualism.

This chapter examines some of the arguments made on both sides of the nonconceptual content debate and the complications just introduced. The primary goal is to shed light on the motivations for and challenges facing both conceptualism and nonconceptualism. I also aim to show that each side has to grant significant concessions to the other. I suspect that this result

diminishes the significance of the debate, but the more ecumenically minded might interpret this as a situation in which the truth falls somewhere between opposing views.

2. State and content views

Brewer's and McDowell's aforementioned remarks reveal that conceptualism as typically understood encompasses both state and content conceptualism. According to this "pure" conceptualism, experiential content is constituted not just by concepts, but by concepts the experiencing creature possesses and which are deployed. This fits with a common approach to attributions of representational content to a range of states like belief and desire that we can group together as "thoughts": thought contents are constituted by concepts and content attributions must capture how things are from the point of view of the subject. The "point of view" requirement would be violated if a thinker were attributed a thought with a content featuring a concept she either did not possess or possessed but did not employ. For example, it would be wrong to use concepts from modern genetics to characterize an 18th Century farmer's beliefs about annual crop variation and MOTHER² ought not figure in the specification of Oedipus's thoughts about Iocasta prior to his encounter with the herdsman. If perceptual experience has the same sort of conceptual content as our thoughts about the world, we can literally believe what we see, see what we want, and so forth. In such a circumstance, it seems unproblematic to hold that perceptual experiences are capable of both justifying beliefs and feeding their contents into our decision making and action planning processes.

Matters with nonconceptualism are more complicated. Some nonconceptualist statements suggest a "pure" (i.e., state and content) nonconceptualism. Gareth Evans (1982, p.227) claimed

² I adopt the practice of entirely capitalizing words used to refer to concepts.

that “[the] process of conceptualization or judgement takes the subject from his being in one kind of informational state (with a content of a certain kind, namely, nonconceptual content) to his being in another kind of cognitive state (with a content of a different kind, namely, conceptual content).” Different accounts of a nonconceptual form of content have been offered; viz., Russellian propositions (Tye 2006), sets of possible worlds (Stalnaker 1998), and specifications of how the space around the perceiver is filled out in terms of surfaces and their properties (this is the scenario content of Peacocke 1992). However, arguments for nonconceptualism often neglect what constitutes the content of perceptual experience. Instead, they target what is required to have a content-bearing experience and are relevant only to state nonconceptualism. Recall the argument from fine-grained detail. Alex Byrne (2005, pp.235-236) notes that a conclusion about what constitutes experiential content does not directly follow from the claim that having an X-representing experience carries no demand that the perceiver is able to conceive of instances of X qua instances of X. This applies mutatis mutandis to other prominent arguments for nonconceptualism (Speaks 2005, p.366).

These points might be taken as exposing confusion or ineffectiveness in nonconceptualists’ opposition to conceptualism. However, Josefa Toribio (2008) argues that the distinction between state and content nonconceptualism is untenable for those who hold that content attributions must reflect the way the world seems to the subject. Toribio (2008, p.360) contends that content-talk earns its keep through its explanatory usefulness, such explanatory usefulness requires that content attributions capture how things seem to be from the perspective of the creature in question, and the range of ways things can seem to a creature is constrained by that creature’s cognitive abilities. This package of ideas appears essential to the relevance of how the world is represented in experience to explanations of intentional behavior, the formation of

perceptual beliefs, and discriminatory abilities. Toribio concludes that this perspective on content attribution makes the pairing of state nonconceptualism and content conceptualism incoherent, as it has the consequence that a creature could be attributed conceptual capacities (in order to fill out the content specification) that it does not possess. Thus should there be a convincing case for state nonconceptualism, there is a path to content (and “pure”) nonconceptualism.

While the thesis that content attributions must reflect the subject’s point of view has dissenters, conceptualists such as Brewer and McDowell embrace it. Hence the most interesting challenge to conceptualism would begin with agreement on that thesis and move to developing a case for there being a way of representing the world in experience that is not determined by the subject’s conceptual capacities but that can interact with such capacities in the requisite ways. Many nonconceptualists’ efforts fit this mold. This is certainly true of nonconceptualists who build their case on appeals to the empirical literature that are supposed to establish either that there is a species of perceptual output that is genuinely representational and encapsulated with respect to information from epistemic/semantic centers (Bermúdez 1995; Raftopoulos 2009) or that there is not the right sort of match between the conceptual capacities humans possess and the concepts necessary to characterize experiential content in a way that captures how things seem to the subject (Dokic & Pacherie 2001; Tye 2006).

3. Why be a conceptualist?

Since nonconceptualism is often positioned as reacting against conceptualism, it is routinely introduced in terms of what it is not (Vision 1997, p. 244; Bermúdez & Cahen 2011, section 2). So, it will be helpful to get a sense of conceptualism’s appeal. McDowell (1994) serves as a useful point of focus. His formulation of conceptualism turns on the axiom that perceptual belief

is justified by perceptual experience. Without an “external rational constraint” (p.25) on the beliefs we form about our surroundings, we are left with an unsatisfying view of our epistemic circumstances. What is sought is an account of our perceptual contact with the world that makes it a source of justification while standing outside the realm of thought. Unfortunately, the two positions commonly taken up regarding the epistemic relationship between experience and belief put us in bad straits. McDowell locates the failures of these different views in the same source: in the course of making experience distinct from thought, both place experience outside the conceptual realm.

On the one hand, we could acknowledge only causal relations between extra-conceptual experiences and beliefs while taking justification to come from some concept-involving source other than experience. Davidson’s coherentism is representative of this sort of thinking. This abandonment of “external friction” (McDowell 1994, p.11) faces worries about how thought can get any bearing on empirical reality, as on this approach we “cannot get outside our beliefs” (p.16). Thus the world’s impacts on our senses place no rational constraints on our thoughts about the state of the world. This view also offers an implausible picture of belief formation. Intuitively, beliefs are formed for reasons. However, on this account it is unavoidable that many of a subject’s beliefs are causally foisted on her, as though (for example) she had taken a pill that produces in her the belief that her spouse’s shirt is blue (Heck 2000, p.51).

These problems are significant enough to make the alternative tempting. This other approach has it that experience – understood as unstructured or unprocessed “bare presences” (McDowell 1994, p.19) – can justify belief despite being extra-conceptual. This extension of the “space of reasons” beyond the “space of concepts” is the Myth of the Given that Sellars (1956) is supposed to have demolished. The Myth is alluring because it promises the external grounding of

belief that is lacking in Davidson's coherentism, but it cannot deliver on that promise. We can make sense of an experience being a subject's reason for believing something about the state of the world, conceptualists say, only if there are conceptual relations between the experience and the belief (Brewer 1999, pp.149-152; McDowell 1994, pp.7-9). McDowell regards Evans' (1982) nonconceptualism as a post-1956 lapse back into the Myth.

McDowell (1994, p.46) presents his conceptualism as a way out of the problems facing the Myth of the Given and Davidsonian coherentism. The core of his proposal is that perceptual experience is able to justify belief because the same conceptual capacities are operative in both, despite experience and belief being distinct. For McDowell, experience draws on our conceptual capacities to impose the sort of order on the deliverances from our senses required for rational relations between experience and thought.

McDowell's rejection of the two traditional options and the motivation for his own view largely turn on his handling of a famous quote from Kant: "Thoughts without content are empty, intuitions without concepts are blind" (A51/B75). For Kant, intuitions are the outputs of the sensibility, the mind's faculty for being affected by the world, while thoughts are products of our faculty of understanding. According to McDowell's Kant, representational content requires the joint contribution of concepts and intuitions. Thoughts unconnected to intuitions are a mere shuffling around of concepts, making them incapable of representing anything (McDowell 1994, pp.3-4). As for intuitions not brought under concepts, their blindness is a failure to present to the subject something which is intelligible to her as a feature of an objective world (McDowell 1994, p.54). They lack representational significance and cannot justify beliefs about the world.

McDowell claims that while concepts are actively deployed in reflective thought, they operate

passively at the level at which external objects impinge on us. We can choose what we think, but not how things are conceptually represented in our experiences (McDowell 1994, p.11).

Kant's account of experience is supposed to offer “precisely the picture” McDowell recommends (1994, p.41), but McDowell breaks with Kant on matters of critical importance. McDowell’s interpretation of Kant’s dictum about concepts and intuitions leads him to state that “[we] should understand what Kant calls ‘intuition’ – experiential intake – not as a bare getting of an extra-conceptual Given, but as a kind of occurrence that already has conceptual content” (1994, p.9). Kant takes intuitions and concepts as cooperative with respect to achieving empirical knowledge, but he also portrays them as fundamentally distinct, as they have different relations to the objects that affect our senses. Intuitions have “immediate relations” to objects (A19/B33, A320/B377) while concepts are “never immediately related to an object” (A68/B92-93). This difference is irreconcilable with the idea that intuitions include a conceptual element.

The idea here is not to advance a Kantian refutation of conceptualism, but to point out that central features of Kant’s actual views do not square with what is supposed to be the most persuasive case for conceptualism. Thus it is unclear what Kantian basis there is for conceptualism. According to McDowell, his conceptualism alone offers a means of grounding justification for belief about the world in perceptual experience. However, Robert Hanna (2005, pp.262-265) argues that Kant held that extra-conceptual intuition has a structure that endows it with non-inferential “evidential force” and that intuition’s immediate relation to objects enables it to serve as the basis for fixing demonstrative reference. Consequently, the list of options McDowell considers – Davidsonian coherentism and the Myth of the Given – looks profoundly incomplete from the Kantian perspective.

Gerald Vision (1998) argues that empirical research also reveals McDowell has underestimated the range of options. The evidence at hand demonstrates that our perceptual faculties do not hand over to our cognitive centers an unstructured Given that is disconnected from the world. It is also compelling to think that at least some of the structured outputs of perceptual processes do not result from contributions of concepts that the perceiver is able to deploy in thought; i.e., at least some experiential content is cognitively encapsulated and not subject to top-down influences from stored semantic/epistemic resources. It will emerge later that this does not decisively refute conceptualism. For now, it suffices to note that the central defect of the Myth of the Given – its commitment to a bizarre picture on which a slurry of experiential intake could somehow provide reasons for beliefs about distinct objects, properties, and events in the world – does not obviously attach to an account of nonconceptual content developed around structured outputs of cognitively encapsulated perceptual processes. A story is required about how these perceptual contents might be connected with beliefs in the required ways, but there are no prima facie grounds for thinking such a story is impossible (Heck 2000, pp.511-520; Peacocke 1992, pp.74-80).

Additionally, perhaps McDowell's conceptualism does little more than push a bump under a rug from one spot to another. McDowell's solution to the epistemic challenge at hand is to put the same conceptual capacities to work in both thought and experience. However, more needs to be said about how conceptual capacities are recruited to do the work in experience McDowell assigns them. This concern is not about the psychological or neural plausibility of McDowell's proposal. Rather it targets how we can get a grip on the application conditions of concepts at the level of experience. While talk of "reasons for" might be reserved only for states like belief and judgment, something similar should apply when it comes to the deployment of

concepts in experience. Otherwise, it seems as though conceptual experiential content is produced in willy-nilly fashion and McDowell's account looks no better off than those he rejects. Certainly, if conceptual experiential contents are supposed to justify empirical beliefs, providing reasons for a perceiver to believe one thing or another, the relevant concepts must have some reason-conducting basis for figuring in those experiential contents. Let us call this basis the "grounds for" the application of a concept in the content of perceptual experience.

Consider a visual illusion like that induced by viewing the Müller-Lyer figure. Whatever concepts constitute the content of such an experience, conceptualism requires that the two lines are represented as having different lengths by means of those concepts. On what grounds are those concepts, rather than others, passively drawn into the content of that visual experience? Since the actual state of the world is that the lines are of the same length, it looks as though the answer cannot involve an appeal to how the world is (cf. McDowell 1994, pp.39 and 143). In fact, reflection on cases of veridical experience should suffice to reveal that an appeal to the state of the world will not immediately quell the current concern. Despite misgivings, I will grant McDowell that the state of the world can always be conceptualized. Even if the world does not stand outside the boundaries of what can be conceived, we would still require an account of how the world impresses on our senses in a way that allows it to serve as the grounds for the application of the concepts that figure in the content of experience.

Relevant here are McDowell's (1982/1988) epistemological disjunctivism and themes from the work of J.J. Gibson (1979) that find a place in McDowell's thinking. McDowell, like Gibson, takes our perception of the world to be direct and emphasizes that perceiving creatures (and not brains) inhabit an environment. Drawing on Dennett's (1969) distinction between sub-personal and personal levels, McDowell holds that the computational operations performed in

the visual system are no more than syntactic transformations carried out by physical processes. This sub-personal activity begins with the retinal stimulus and never makes contact with the environment itself. Consequently, the outputs of those processes cannot tell us anything that would bear on the justification of empirical beliefs. The world itself is what informs us of how things are (McDowell 1994/2002, p.450). McDowell states that an information-processing framework such as David Marr's (1982) is appropriate for studying a syntactic mechanism like the visual system. McDowell has no objection to talk of nonconceptual content for that purpose, but he regards such content attributions as merely "as if" (1994, p.55 and 1994/2002, p.452; see Bermúdez 1995 on nonconceptual content and sub-personal computational states). The processes and contents that figure in theories pitched at this level are claimed to be only causally relevant to the "real" (i.e., genuinely semantic or intentional) content that figures in perception and thought (McDowell 1994/2002, p.452). They play no role in constituting the contents of experiences of and thoughts about the world, as by their very nature they are blind to the world. Gibson's ecological approach, with its focus on the perceiving creature coming into unmediated contact with its environment, is apt for the study of vision, understood as a personal level achievement of finding out how things are in the world.

For McDowell, since vision puts us in direct contact with our environment there is no problem with the world itself serving as the grounds for the concepts that figure in the content of experience. Of course, the way the world appears to be in experience can be mistaken and we might be unable to distinguish deceptive and accurate experience on the basis of how things appear. Undetectable misperception has fueled many of the theories of perception McDowell sets himself against. McDowell (1994/2002, pp.450-451) explains misperception causally, in terms of things "going well" with the sub-personal processes that begin at the retina. If those processes do

not unfold appropriately, we have mere appearance rather than direct perception of the state of the environment. Since the epistemic differences between perception and misperception get a purely causal explanation, there is no room for a reason-conducting intermediate link between perception and the world (see also McDowell 1982/1988, p.218 n.15). Thus the above worry dissolves. Empirical thought is rationally constrained by facts about the world due to experience being conceptual and putting us directly in touch with our surroundings.

Appeals to epistemological disjunctivism and direct perception will not defuse the problem at hand. Heck (2000, pp.497-498) argues that the central thesis of epistemological disjunctivism – that from the standpoint of justification there are two kinds of experiential state, one veridical and the other nonveridical – cannot be extended to the representational content of experience. The content of an experiential state cannot depend on whether or not it is veridical, as the veridicality or nonveridicality of the experience depends on whether the world is as it is represented in the experience. The same reasoning also blocks disjunctivism about what fixes or grounds experiential content. Even if McDowell is correct that veridical and nonveridical experience are distinct states, there has to be a common content-fixing factor between them. That factor cannot be the state of the world itself, as the world is other than how it is represented when we misperceive it (see also Tye 2006, p.523). In that case, it is still unclear why an experience would have one conceptual content rather than another. This is a serious problem for McDowell, as the advertised chief advantage of his conceptualism is that it secures reason-based relations between experience and belief.

4. Motivations for nonconceptualism

Jeff Speaks (2005, pp.362-363) identifies seven kinds of arguments that have been offered for nonconceptualism and places them into two categories: “arguments from features of perception” and “arguments from general theses about the conceptual” (see also Bermúdez & Cahen 2011, section 4.1). In this section, I focus on one argument from each of the categories Speaks identifies: the arguments from fine-grained detail and concept acquisition.

The argument from fine-grained detail has already been introduced. Perceivers are able to perform discriminations, similarity judgments, and categorizations involving determinate features of their experiences that go well beyond their conceptual capacities. Granting that subject performance in these tasks depends on the representation of the determinate qualities in question, the representational content of experience is not constrained by the subject’s conceptual capacities. A related line of reasoning concerns the perceptual faculties of human infants and (some) nonhuman animals. It is compelling to think that these creatures have experiences much like our own in some respects, which should be reflected in continuities between (some of) the contents attributed to their experiences and to adult human experiences. However, infants and nonhuman animals, if they possess concepts at all (see Bermúdez 2003), do not have conceptual resources nearly as rich as those possessed by adult humans. If one is at all tempted by the fineness of grain argument to think that perceptual contents can outrun the conceptual resources of adult humans, the cases of infants and nonhuman animals offer further reason to suppose that a notion of nonconceptual content is needed. Leading conceptualists deny that animals and infants possess concepts and consequently hold that such creatures do not have experiences with genuine representational content (Brewer 1999, pp.177-179; McDowell 1994, pp.114-123,182-183).

Conceptualists have countered the argument from fine-grain by appealing to demonstrative concepts (Brewer 1999, pp.170-174; McDowell 1994, pp.56-60). Our capacity for demonstrative thought and general concepts that we antecedently possess are supposed to allow us to pick out fine-grained features for which we lack concepts as such. McDowell (1994, pp.56-57) offers the following regarding color experience:

In the throes of an experience of the kind that putatively transcends one's conceptual powers – an experience that ex hypothesi affords a suitable sample – one can give linguistic expression to a concept that is exactly as fine-grained as the experience, by uttering a phrase like “that shade”, in which the demonstrative exploits the presence of the sample.

McDowell contends that these resources are always available and that they are applicable to all features of experience. Thus constructions such as ‘that figure’, ‘that scent’, and ‘that texture’ should suffice for a conceptual representation of the detail present in experience.

Nonconceptualists have responded to the appeal to demonstrative concepts in a variety of ways (see Dokic & Pacherie 2001; Heck 2000; Kelly 2001b; Peacocke 2001; Roskies 2010; Tye 2006). One worry is that McDowell's way of putting things clashes with the claim that conceptual capacities are passively deployed in experience. What McDowell describes suggests the spontaneous engagement of conceptual resources in reflective judgment about what one is currently experiencing (cf. also Brewer 1999, pp.172 and 227 n.7). The invocation of linguistic expression and utterance, as well as the suggestion that the relevant conceptual resources are directed at an experience, is hard to reconcile with the idea that conceptual capacities are passively at work in experience.

This leads into a common reaction to the appeal to demonstrative concepts. It is natural to think that exposure to certain kinds of experiences is central to a causal explanation of the possession of demonstrative capacities. Heck (2000, p.493) stresses that one reason Evans was interested in nonconceptual content is that he saw it as essential to an account of demonstrative reference. Conceptualists look to be assuming that demonstratives can successfully point to their targets, without much consideration of what makes that possible. The idea shared by nonconceptualists who pursue this line is that a perceptual demonstrative concept gets a fix on its referent by means of a subject isolating that item in experience and displaying an appropriate sensitivity to information about that item gathered through experience (Heck *ibid.*; Levine 2010, p.191; Roskies 2010, pp.119-122). The challenge to the appeal to demonstrative concepts is that on pain of circularity one cannot account for the fine-grained details represented in experience by appealing to demonstrative concepts for those details while also claiming that possession of demonstrative concepts for fine-grained details depends on those details being present in experiential content. If experiential content is nonconceptual, the circularity can be avoided.

Brewer (2005) replies to the charge of circularity by rejecting the understandings of demonstrative concepts and experience it turns on. He takes the relation between experience and demonstrative concepts to be constitutive, not causal. Brewer claims that “experience of a color sample, R, just is a matter of entertaining a content in which the demonstrative ‘that_R shade’ figures as a constituent” (Brewer 2005, p.222). He goes on to offer an account of content fixation for demonstrative concepts that draws on ideas similar to those from McDowell discussed before. Instead of relying on the relevant fine-grained feature itself being isolated in experience by attention, Brewer contends that a demonstrative expression has the content it does because the subject is appropriately sensitive to the feature itself – out in the world – in a way that “in large

part depends upon [the perceiver's] normal neurophysiological perceptual processing" (*ibid.*). This obviates the need for nonconceptual content.

Brewer recognizes that his account has to deal with misperception. Heck (2000, pp.495-499) and Tye (2006, p.523) develop their misperception-based arguments with the demonstrative concepts gambit in mind, but the preceding section shows that their points apply equally well to general concerns about what fixes the conceptual content of experience. In responding to Heck's objection from misperception, Brewer (2005, p.223) fills in the details of how demonstrative content is fixed by appealing to Evans' views. He proposes that demonstrative reference requires the subject's ability to keep track of an item and suitably modify her attitudes toward it through changes over time due to its own movement, the perceiver's movement, alterations in ambient conditions, and so forth. There is veridical experience when this tracking succeeds. When it fails, we have misperception, which will be causally explained in terms of limitations or malfunction of the perceptual system. This reply misses the most important point of the misperception objection. McDowell and Brewer can, in some sense, give an account of what is supposed to make perceptual error possible. For both, it's attributable to purely causal processes. However, that does not address, at least consistently with the conceptualist's other commitments, why an instance of misperception has the particular content it does. As before, direct perception may help in dealing with certain issues that suggest a need for a notion of nonconceptual content, but it brings its own challenges for the conceptualist.

Nonconceptualists' arguments based on concept acquisition also bear on the conceptualists' appeal to demonstrative concepts. Christopher Peacocke (2001) argues that conceptualists are unable to account for the learning of new observational concepts, such as the shape concept PYRAMID. Peacocke reasons that in the course of acquiring this concept, the

subject must have experiences with contents that, for someone who already has PYRAMID, provide an appropriate basis for applying that concept. Suppose the representational contents of those experiences include PYRAMID. That would imply, in keeping with the discussion of content attribution in section 2, that the subject in question already had PYRAMID. In that case, learning does not occur. Unless one wants to abandon the idea that observational concepts are learned, it looks like the way to go is to “acknowledge that there is such a thing as having an experience of something as being pyramid shaped that does not involve already having the concept of being pyramid shaped” (Peacocke 2001, p.252). Hence, nonconceptualism should be endorsed.

To deal with concept acquisition, Brewer (2005) again invokes demonstrative concepts. Brewer grants Peacocke the claim just quoted, but offers a different conclusion: “What such an experience will have is a conceptual content involving the demonstrative concept, ‘that (shape),’ referring to the pyramid shape of the object in question” (p.224). The demonstrative expression’s content is fixed by means of the tracking relations introduced before. Over a sufficient run of learning opportunities, the demonstrative contents of those experiences become linked with a new observational concept, PYRAMID. Obviously, this response depends on the appeal to demonstrative concepts tackled above. Roskies (2010) has further argued that the demonstrative concepts implicated in this response require that experience has a nonconceptual content. As the earlier talk of “keeping track” indicates, attention is crucial to the intentional selection of the target of demonstration. At the core of Roskies’ argument is that such demonstration involves “delimiting ... the referent of the demonstrative by focusing attention” (2010, p.127). This delimiting can be plausibly explained only by taking experience to already be structured in terms of properties, boundaries, locations, and so forth. Otherwise, we are left with a “magic coloring

book” account of demonstrative concept formation: that someone could successfully pick out the intended object of demonstration without access to such properties is on a par with the suggestion that a child managed to “stay within the lines” by coloring as she wished on a blank page and, once she was done, lines magically appeared on the page in a manner that fit what the child produced (*ibid.*). The structuring of experiential content that Roskies and other nonconceptualists have in mind is further examined next.

5. Perceptual structure and concepts

In this concluding section, I introduce some further considerations and offer an appraisal of where the conceptualist/nonconceptualist debate stands. Instead of taking a side in the debate, I aim to show that neither view is fully satisfactory. Nonconceptualists might be heartened by empirical evidence (introduced presently) that supports the claim that there is a way of experiencing the world that is both genuinely representational and not determined by the conceptual capacities we bring to bear in thought. On the other hand, the same empirical evidence also strongly suggests that our most familiar way of experiencing the world is dependent on concept-involving cognitive resources. Moreover, there is room to argue that our perceptual systems, which generate the pre-cognitive experiential states mentioned above, have their own conceptual vocabulary and that the contents of those pre-cognitive experiential states are also conceptual. Although this point seems to favor conceptualism, it is unlikely to be welcomed by conceptualists such as Brewer and McDowell. Recall that they insist that the conceptual capacities which shape conceptual content are the same ones we spontaneously engage in thought. In short, the situation is much more complicated, and the significance of the debate is much more uncertain, than is usually appreciated.

The ensuing discussion of empirical findings focuses on vision and follows much of Athanassios Raftopoulos's (2009) synthesis of a diverse body of research, as he assembles the extant empirical evidence in a credible way. Also, the view he develops serves as a useful stepping-off point for the points I wish to advance. While an oversimplification in several respects, it suffices for now to say that the picture which emerges from this research is that as one moves through the stages of processing that begin with light striking the retina and culminate with full-blown visual experience, information about the retinal stimulus is progressively discarded in the service of generating structures that are ultimately interpretable in terms of three-dimensional objects and their properties. This is achieved by means of specialized neurons that take "measurements" of certain parameters (e.g., edges, direction of motion, faces) based on the input they receive and output only a verdict about their parameter of interest (Cavanagh 2011, p.1539; see also Matthen 2005, pp.44-54). Since these measurements provide only "hints at what might be out there" (Cavanagh *ibid.*), inference (or interpretation) is required to form from them the visual percept of a distal world.

The relevant operations begin with pre-attentive activity confined to the canonical visual system (see Lamme 2003). Initially, there is bottom-up processing, known as the feedforward sweep (FFS). The FFS is quick, parallel, and independent of feedback from higher visual areas or sources beyond the visual system. It extracts features using series of filters (cells with specialized receptive fields) into which is fed information about patterns of light intensity at the retina. Nothing at this point has cognitive significance.

After the FFS, top-down and horizontal interactions arise through recurrent processing (RP). RP integrates disparate pockets of information and enables more complex, highly structured information to be extracted. The first stage of RP takes place within the visual system

(hence its designation as local; LRP) and yields representations of shapes and spatial relations, individuation of objects or proto-objects (e.g., figure-ground segmentation), and the binding of some different features to the same object (“the binding problem”). These object segmentation processes are dominated by spatiotemporal information and produce object files for discrete objects, to which information about the object’s properties can subsequently be added. [See Rensink (2000) on proto-objects and Kahneman et al (1992) on object files.] Object files allow an object to be treated as the same across changes in its perceived qualities (e.g., color, shape, size), location, and relative position. The representations at the LRP stage are highly volatile, as they are not encoded “in any kind of memory other than the visual sensory memory” (Raftopoulos 2009, p.114). They are subject to overwriting as the changing pattern of retinal stimulation suggests new parsings into distinct objects.

Beyond LRP, the “attentional bottleneck” becomes relevant. Object-based attention selects some of the objects delivered by LRP for further, cognitively-informed processing. Focusing on tasks in which the subject voluntarily searches for a target, this is driven by top-down effects from working memory that allow pre-attentive objects to be registered as relevant or irrelevant. For relevant objects, the associated structures from the FFS and LRP receive enhanced activity and are subjected to further processing involving global RP (GRP). Irrelevant objects are suppressed and overwritten. GRP allows the object to be entered into working memory and connections to be established with epistemic/semantic centers. This both (i) makes the object available for report and use in further cognitive processes and (ii) gives it a coherence and stability that was lacking when only LRP was present. GRP thus facilitates object recognition/classification and representation of 3D object shape, as objects can be compared to representations included in the perceiver’s stored knowledge. Crucially, instead of including the

fine-grained detail of pre-attentive content, GRP-involving states have abstract contents; e.g., encoding object color in terms of categories rather than determinate shades. These states also represent properties beyond those extracted at prior stages; e.g., function. The transition from operations involving only LRP to those in which GRP figures can be thought of along the lines of moving from Marr's (1982) 2-1/2D sketch to 3D model or from Zenon Pylyshyn's (2003, 2007) "early vision" to "late vision" (see Raftopoulos 2009, p.51).

Following Victor Lamme (2003) and Ned Block (2007), Raftopoulos takes RP to be the neural marker of awareness and uses the two different kinds of RP to distinguish between two different kinds of awareness. Employing Block's phenomenal/access distinction, Raftopoulos aligns LRP with the former and GRP with the latter. The objects of phenomenal awareness are fleeting and unavailable for report. These representations also are nonconceptual, as they arise independently of resources employed in higher cognitive functions. Raftopoulos (2009, p.134) contends, understandably, that this phenomenal awareness is not our familiar mode of experience. Phenomenal awareness is the sort of awareness subjects in partial-report tasks (Sperling 1960) are supposed to be talking about when they claim to see all the stimuli in very brief displays. Our ordinary experience is due to late vision's stable representations. Because late vision requires contributions from concept-involving higher cognitive resources, its content is conceptual (Raftopoulos 2009, p.148). Additionally, this conceptual content turns not to simply be nonconceptual content that gets brought under concepts. Rather, the conceptual contents of late vision "reflect but do not record" the nonconceptual contents of early vision (*ibid.*, p.164); Heck (2000, pp.514-515) offers similar remarks. Thus not only are early and late vision different kinds of states, their contents are fundamentally different.

The interpretation of the empirical literature just sketched and the view Raftopoulos develops based on it appear to bolster nonconceptualism. However, setting aside a number of other issues worth exploring,³ the friendliness of this story to nonconceptualism can surely be questioned. Two points merit attention at this juncture. First, it is a major concession to the conceptualist to admit that our everyday experience is conceptual. The contents of early vision are inaccessible for report or any other voluntary cognitive task. We cannot form beliefs about the objects of early vision, because any attempt to isolate them brings in attention and concepts, resulting in late vision. As Raftopoulos points out, GRP radically transforms pre-attentive content along a number of dimensions. Beyond the differences between early and late vision when it comes to the stability of their representations, early vision deals with distinct objects qua distinct objects (i.e., in terms of individuated objects having generic surface shapes and without concern for their 3D shape, token identity or kind membership), while our beliefs based on experience tend to be about tokens of things like mountains, chickens, and hammers considered as such. Whatever evidential relation there is between phenomenal experience and empirical belief has to be indirect and not dependent on how perceivers cognitively grasp the former's content, as perceivers can do no such thing (see also Lyons 2010). Late vision does seem apt to

³ One issue is the debate about whether LRP alone forms the neural basis of phenomenal consciousness. This is brought out in several commentaries on the “mesh” argument of Block (2007) and by Phillips (2011). For now, I’ll note that whether (i) LRP is insufficient for awareness but provides the phenomenal aspect of awareness once GRP is established or (ii) GRP alone is the neural basis of phenomenal consciousness, the contents of early vision are likely still to be relevant to a nonconceptualist thesis. (i) is basically a variation on the “LRP alone” account. In the case of (ii), early vision states could be construed as subpersonal, pre-cognitive visual states with contents upon which the contents of experience are systematically dependent.

serve as the immediate evidential basis for empirical beliefs. Since late vision is conceptual, we have arrived at a position much like Brewer's and McDowell's conceptualism.

The other point is that one might object that demonstrating that (some) experiential content is independent of the conceptual resources deployed in thought is not sufficient for establishing that no conceptual resources whatsoever determine that content (see Laurence & Margolis forthcoming; Matthen 2005). As a start, consider what Raftopoulos says in fleshing out the evidential relationship between early and late vision, which is relevant to avoiding the charge that early vision content is just another form of the Given. Raftopoulos (2009, p.195) claims that "the structure of nonconceptual content renders possible the evidential relation between perceptual states with nonconceptual content and perceptual judgments made on the basis of those states." Our visual system by its very nature parses input from the world into objects and (certain of) their properties, and such structuring (presumably non-coincidentally) turns out to be well-suited for exploitation by our higher cognitive faculties. This point is made in varying ways by Heck (2000, p.522), Rainer Mausfeld (2003, pp.387-388), and Vision (1998, p.413). Suppose object recognition is a matter of template matching or matching to an internal description formed by decomposing objects into simpler generic components. In either case, the structured early vision content that feeds into recognition is highly relevant to the application conditions for the concepts that figure in late vision. Since (i) the stored representations of objects consist (at least in part) of the templates or descriptions to be matched to early vision content and (ii) early vision content is structured in terms of objects (or object parts) and their features, this relevance seems semantic or epistemic, not merely causal.

How does experiential content gets its structure? A persuasive answer is that the visual system imposes that structure through its own categories. The above discussion of visual

processing naturally lends itself to being understood in terms of classification, from the talk of neurons with receptive fields selective for particular features (the classificatory nature of which is emphasized by Matthen 2005), to the segmentation of figure from ground, to the creation of object files to which information about object properties can be added. This is not to say that the categories of the visual system are all hard-wired or permanently fixed, that they can be recruited for use in thought, or that they are arbitrary with respect to the nature of the mind-independent world. The idea only is that the visual system employs a set of proprietary classifications in building representations that are suitably structured to form the basis of useful inferences about the distal scene.

Should these classifications be counted as conceptual? Evans (1982, pp.100-105) argued that what distinguishes thought as conceptual and sensation as nonconceptual is that thought has compositional structure while sensation does not. Matthen (2005, pp.77-85), however, contends that perceivers can conceptually “grasp” features present in sensation (basically, Pylyshyn’s early vision), where such grasp is understood in terms of stimulus generalization and stimulus discrimination. Matthen’s point is that if we are to make sense of (for example) the disposition of a bird that has been trained to peck at blue squares to also peck at a blue disc, sensational content must be understood as consisting of separable and recombinable elements. In that case, an appeal to compositional structure will not support a conceptual/nonconceptual distinction between the contents of thought and sensation.

Matthen’s response to arguments based on compositional structure does not address other nonconceptualist reasons for rejecting that the visual system’s classifications are conceptual. For example, Tye (2006) contends that nonconceptual content is structured. However, he does not count the classificatory activity of the visual system as genuinely conceptual on the grounds that

perceivers might be unable to either recognize a previously encountered fine-grained perceptual quality when they experience it again or employ a representation of that fine-grained quality (as such) in thought (Tye 2000, p.75; 2006, pp.506-507). Pylyshyn's work on object tracking informs the account of the empirical literature presented herein and he is adamant that early vision is nonconceptual because it does not rely on top-down contributions from cognitive centers (Pylyshyn 2003, pp.214-215). Heck (2000, pp.487-489) points out that much of what Evans had to say in connection with the argument from compositional structure deals with the perceiver's cognitive resources. Note also that McDowell (1994, p.11) states that the capacities "in play in experience would not be recognized as conceptual capacities at all unless they could also be exercised in active thinking." One reply to Matthen, therefore, is that if concepts are restricted to the cognitive realm and the preceding account of early vision is on the mark, sensation is nonconceptual despite having compositional structure. Matthen, however, is unlikely to simply grant that sort of narrow understanding of concepts.

At this point, it is tempting to cast about for an account of concepts that would decide matters. Such an endeavor could prove unfruitful for any number of reasons (Laurence & Margolis forthcoming). Picking up on Vision's (1998, p.424) remark that "[it] is ... difficult to motivate [the conceptual/nonconceptual] distinction if ... we think of what we experience as already featured," I suggest that any effort along these lines will add little to the discussion. The empirical research discussed in this section shows that the concerns which stimulate so much of the interest in the conceptual/nonconceptual distinction can be addressed (and perhaps are close to resolution) independently of sorting out where, if at all, to draw the line between them. Where one places the conceptual/nonconceptual border is likely to affect the terms in which answers are stated to questions about, *inter alia*, the epistemic and semantic relationships between perception

and belief, continuities between human and animal perception, and the theory-ladenness of perception. Nothing about the substance of those answers, though, would change. One researcher might have perfectly legitimate reason to use a notion of concepts that prioritizes classification and shows little or no concern for a cognitive/noncognitive divide. Another researcher, driven to understand the nature and extent of influence of our cognitive faculties, may very well limit talk of concepts to the cognitive domain. It is hopeless to try to argue for one of these (or any number of others) as the single correct understanding of concepts.

It is also unmotivated. Whichever understanding one opts for, the classifications of early vision remain importantly distinct from the concepts employed in thought, as early vision content is not determined by top-down contributions from cognitive centers, perceivers are not able to directly cognitively access early vision contents, and GRP's involvement in late vision radically transforms early vision content. It also continues to be true that early vision content is structured in a way that underwrites semantic/epistemic connections with full-blown experience and thought. It is likely that many (admittedly, not all) parties to the nonconceptual content debate are much more interested in these results – fleshing them out, piecing them together, contesting them, and so forth – than they are in the question of how to mark a principled distinction between the conceptual and the nonconceptual. Thus the downbeat assessment offered here applies only to the significance of the nonconceptual/conceptual distinction, not to the significance of the issues that lead many researchers to engage in the nonconceptual content debate.

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