

## **The Argument from Animal and Infant Perception**

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### RESUMEN

En este trabajo planteo un argumento a favor el no-conceptualismo basado en la percepción animal e infantil. Dicho sucintamente, algunos animales y algunos niños que no poseen conceptos tienen sin embargo estados perceptivos con contenido *no-conceptual*. Las experiencias perceptivas de los seres humanos adultos tienen el mismo género de contenido que las experiencias de los animales y los niños; de manera que el contenido de las experiencias perceptivas de los seres humanos adultos es asimismo no-conceptual. Defiendo este argumento contra los posibles ataques de los conceptualistas. Aduzco que evidentemente existen criaturas que no poseen conceptos, aunque tienen experiencias perceptivas, y combato la opinión de McDowell de que compartimos sensibilidad perceptiva con animales y niños pero no contenidos perceptivos genuinos.

**PALABRAS CLAVE:** *no conceptualismo, John McDowell, filosofía de la percepción, mentalidad animal, conceptos.*

### ABSTRACT

I discuss an argument for non-conceptualism based on animal and infant perception. Crudely put, some animals and infants who possess no concepts nonetheless have perceptual states with *non-conceptual* content. Perceptual experiences of adult humans have the same kind of content as the experiences of animals and infants, so the content of the perceptual experiences of adult humans is also non-conceptual. I defend this argument against potential attacks from the conceptualist. I argue that there are indeed creatures which possess no concepts, but have perceptual experiences, and I attack McDowell's view that we share perceptual sensitivity with animals and infants, but not genuine perceptual contents.

**KEYWORDS:** *Non-Conceptualism, John McDowell, Philosophy of Perception, Animal Minds, Concepts.*

## I. INTRODUCTION

Conceptualists and non-conceptualists argue whether perceptual content is conceptual just like belief content, or whether it is non-conceptual. There are

two answers to the question: what it is for a content to be (non)-conceptual? According to the state view, the content of a mental state is conceptual if, in order to undergo a mental state, the subject has to possess the concepts (read ‘conceptual abilities’) that characterize its content and non-conceptual if the subject does not need to possess these concepts. According to the content view, the content of a mental state is conceptual if it is constituted by concepts (as in, for instance, Fregean senses) and non-conceptual if it is not constituted by concepts [cf. Byrne (2005)]. I cannot discuss these different readings of ‘conceptual’ and ‘non-conceptual’ here, but will simply assume that the state view entails the content view. The fact that I have to possess and employ certain conceptual abilities in order to undergo a mental state entails that the content of this state is conceptually structured. If I need not possess or employ the respective conceptual abilities, then the content of my mental state is not structured by concepts; it is non-conceptual.

In this paper, I will defend the argument from animal and infant perception for non-conceptualism. First, I will present the argument and motivate its premises. I will then defend it against two potential conceptualist objections.

## II. THE ARGUMENT

Let me introduce the argument from animal and infant perception: It seems plausible enough that some animals and very young children do not possess any concepts, but that they do have perceptual experiences.<sup>1</sup> If this is true, the content of their perceptual states cannot be structured by concepts. Next, it can be argued that adult human perception and animal and infant perception have the same kind of content, or at least that there is a *core* content that they share. (This qualification is needed because we should not exclude the possibility that a subject’s conceptual abilities partly transform the content of her perceptual experiences via feedback from the conceptual system.) It follows that the content of adult human perception is at least partly non-conceptual.

1. There are animals and infants who do not possess any concepts, but have perceptual experiences with genuine content.
2. The content of their perceptual experiences is non-conceptual (by (1)).
3. This content and the content of adult human perception are partially identical.
4. Therefore, the content of adult human perception is, at least in part, non-conceptual. (by (2) and (3)).

The main proponents of this argument are Peacocke, Evans and Bermúdez [cf. Peacocke (2001a, 2001b), Evans (1982), Bermúdez (1998, 2003a, 2003b)]. Different steps of the argument are attacked by Byrne, Brewer and McDowell [cf. Byrne (2005), Brewer (2002), McDowell (1994)]. Let us examine the premises of the argument in more detail before turning to possible conceptualist objections.

Let's start with premise (1). It seems clear enough that there are some animals that do not have any conceptual powers at all, for instance snails or amoeba. The same might be argued for very young infants, for instance, newborn babies. But premise (1) also claims that these animals and infants have perceptual experiences with genuine content. This claim is intuitively plausible for animals such as cats and dogs and for older infants, but with respect to these, the claim that they do not possess any conceptual abilities at all might seem questionable. The underlying problem is that there exists a tension between the two assumptions that premise (1) combines: on the one hand, the relevant animals and infants lack certain demanding cognitive (viz. conceptual) powers, but, on the other hand, they have other relatively demanding mental (viz. perceptual) abilities.

To see how this tension can be resolved we need to get clear on what it is to possess a concept. For a subject to possess a concept is for her to have certain cognitive abilities: recognitional and inferential abilities as well as the ability to form certain thoughts. The subject has to be able to reidentify the corresponding objects and properties, she has to be able to draw inferences involving the concepts she possesses and she has to meet the Generality Constraint [cf. Evans (1982), p. 102]. The Generality Constraint asserts that, in order to possess a concept *b* of an object, I have to be able to combine, in thought, my concept *b* with any other concept *F* I possess to form new thoughts *Fb*. In other words, to possess *b*, I must be able to know what it is for *b* to have all those properties *F* for which I possess concepts. It follows that I need to have a full understanding of what *bs* are (analogous things are true for possessing the concept *F* of a property).<sup>2</sup>

What makes premise (1) plausible is the Generality Constraint. While it is, *prima facie*, debatable whether, for example, a dog can reidentify its owner in certain contexts or whether it can draw limited inferences about its owner, it is out of the question to ascribe fully general thought to a dog. Let me give an example. Let's assume that the dog possesses the general concepts *tall* and *my owner*. If so, it has to be able to entertain the thought that its owner is tall, even in situations in which no object is tall and in which its owner is not present. This is highly implausible for an animal such as a dog, as it is for younger infants. At least *prima facie*, accepting the Generality Constraint as a condition for concept possession guarantees that animals and infants do not possess concepts.

Let me briefly reply to the objection that the Generality Constraint is threatening to the conceptualist only when talking about general concepts, but unproblematic when it comes to *demonstrative* concepts. It might be argued that, since a subject has to be able to apply demonstrative concepts only in the presence of what is demonstrated, even dogs and infants are able to meet the Generality Constraint for these kinds of concepts. For instance, the dog has to be able to contemplate the thought that *this* (its owner) *is thus* (tall), but only in the presence of its owner and, say, a tall building. The conceptualist might claim that the animals and infants in question possess only demonstrative concepts, and argue that they obviously meet the Generality Constraint for these kinds of concepts.

This is not convincing. For one, it is highly questionable that animals or infants can entertain demonstrative thoughts of this kind even in contexts in which the relevant objects and properties are present. It is not plausible that the dog is able to entertain the thought that *this* (its owner) *is thus* (tall) in a situation in which its short owner is standing in front of a tall building.

For another, even demonstrative concepts are not completely context-dependent. To possess such a concept, the subject has to be able to exercise it beyond the times in which the object or property demonstrated is present. A demonstrative concept has to enable the thinker to keep the demonstrated object or property in mind, even if it is just for a limited amount of time. To think that a demonstrative concept “can be exercised only when the instance that it is supposed to enable its possessor to embrace in thought is available for use as a sample in giving linguistic expression to it [...] would cast doubt on its being recognizable as a conceptual capacity at all,” as McDowell concedes [McDowell (1994), p. 57]. Such a capacity is merely linguistic, it is an ability to exploit the presence of a sample to refer to it in speech. To make sure that it is a conceptual ability, an ability to *think* about the world, it has to be true that the subject is able to employ this ability in the absence of the sample. This problem is aggravated for non-linguistic creatures such as animals and infants. For in their cases, we lack even the linguistic evidence for fully context-dependent conceptual abilities that we have in the case of adult humans.

To conclude, the Generality Constraint as a condition for concept possession requires us to ascribe thoughts to animals and infants that they certainly cannot entertain. Thus, the constraint is a strong *prima facie* motivation for the claim that the animals and infants in question do not possess concepts.

How about the content of animal and infant perception? Bermúdez provides empirical evidence for the claim that animals and infants have perceptual experiences with genuine content [cf. Bermúdez (1998), pp. 62-66; Bermúdez (2003c), pp. 85-87]. Let me summarize the studies he presents concerning human infants – similar things could be said with respect to animals. Recent research in developmental psychology disproves the older view that, for human infants, the world is almost completely undifferentiated until

the end of the sensorimotor period, which is to say that their perceptual states have no content. Even three-month-old babies have certain expectations concerning the behavior of objects. They have certain principles by which they parse their visual fields. For instance, they show surprise when a solid object apparently moves through a solid surface. Their perceptual experiences must have some sort of content which explains these expectations. Yet at the age of three months, it is plausible that these infants do not meet the Generality Constraint.

Note that subscribing to the first premise requires the non-conceptualist to accept the so-called Autonomy Thesis, the claim that it is possible for a subject to undergo perceptual experiences with genuine content even if she possesses no concepts whatsoever [cf. Peacocke (1992), p. 90; Bermúdez (1998), p. 61]. The Autonomy Thesis is controversial even among non-conceptualists. It was originally rejected by Peacocke [cf. Peacocke (1992), pp. 90-91] and is still rejected by Tye. According to him, one precondition of perceptual states having genuine content is that there is a cognitive system (including states with conceptual content) that these perceptual states can have an impact on [cf. Tye (1995), p. 138].

A weaker version of premise (1) (which does not entail the Autonomy Thesis) does not support the argument from animal and infant perception, however. If we deny the Autonomy Thesis, all we can say is that there are animals and infants who have only limited conceptual powers, but who have perceptions with genuine content. The most we can conclude for (2), then, is that this content can be, at most, partly conceptual. But since premise (3) states that adult human perception and animal and infant perception have only *partly* the same content, it is not clear that it follows that adult human perception has any non-conceptual content at all. For it might be that the overlapping contents of adult human perception and animal and infant perception are conceptual contents.

The disadvantage of embracing the Autonomy Thesis (as opposed to accepting a view similar to Tye's) is that it might be seen to face the following problem: A subject who completely lacks the ability to conceptualize any aspect of her environment is not able to *appreciate* anything in her environment. To use a Kantian phrase, her perceptions are blind to her surroundings. So we should not say that her perceptual states have any content at all. The proponent of the Autonomy Thesis can reply that this is to conflate two senses of 'appreciate': a subject can appreciate that something is the case at the level of thought, or merely at the level of experience. This criticism of the Autonomy Thesis is just another version of the conceptualist claim which is under debate here – that there is no genuine content-involving perceptual experience without conceptual awareness. As long as there is no independent argument for this claim, there is no obstacle for the truth of the Autonomy Thesis. So I will assume for now that premise (1) is true. There are animals

and infants who do not meet the Generality Constraint and therefore possess no concepts, but who have perceptual experiences with genuine content.

On the understanding of ‘non-conceptual’ I introduced above, premise (2) follows from premise (1). If a subject possesses no conceptual abilities that she could exercise in undergoing her perceptual experiences and if her experiences have genuine content, then this content must be non-conceptual.

The controversial claim involved in premise (3) is that not only do the respective animals and infants have perceptual experiences with genuine content, this content is supposedly of the same kind as the content of the perceptual experiences of adult humans. Peacocke tries to provide support for this claim by appeal to intuition. He finds the denial of these premises just too hard to swallow, for it comes down to the claim that other species, for example cats and dogs, whose brain structures and perceptual organs are very similar to ours, cannot have perceptual experiences just like ours. The denial of premise (3) entails that the following cannot be literally true: that the animal has a visual experience as of a surface at a certain orientation, and at a certain distance and direction from itself, in exactly the same sense in which an adult human can have a visual experience with that as part of its content [Peacocke (2001a), p. 260].

Common sense indeed seems to tell us that animals can perceive their environment just as humans can. When I am looking at the same tree from the same perspective as a cat, most people would agree that the cat and I have the same kind of visual experience.

Unfortunately, our intuitions might simply be wrong. We cannot ask animals whether they have conscious perceptual experiences just like humans since they cannot speak. Maybe they just have some sort of “perceptual sensitivity” [McDowell (1994), p. 64].

But there is a stronger point underlying Peacocke’s argument. We normally use *empirical* methods to test whether an animal’s perception is similar to that of an adult. The perceptual organs and brain structures underlying adult human perception and the perception of higher animals are very similar; this is normally taken to be evidence for how similar their perceptual states and their contents are. An example for the role of empirical research in this context is that scientists argue that dogs cannot perceive the differences between some colors that humans can experience based on behavioral tests with dogs and on the make-up of their eyes [cf. Lindsay (2000), pp. 128-132].

By contrast, the conceptualist argues that animals cannot have perceptual experiences with the same kind of content as humans just because there is an *a priori* connection between concept possession and the possibility of perceptual states with genuine content. Thereby, he implies that actual similarities or differences between human and animal perception, which can be studied by empirical investigation, are completely irrelevant to the similarity of human and animal perceptual content. This is extremely implausible. The

question whether animals, infants and adult humans have the same perceptual states with the same kind of content cannot be decided by *a priori* reasoning alone. If there are empirical studies showing that the brain structures and behavior involved in animal, infant and human perception are very similar, then our theories of perceptual content have to accommodate these results. That is to say, if there is sufficient empirical evidence for shared perceptual content, then premise (3) is true.

Bermúdez presents what might seem to be *empirical* evidence against premise (3) [cf. Bermúdez (2003c) pp. 84-85]. He cites empirical research pertaining to both animals and human infants showing that they have different expectations of object behavior than adult humans and therefore different underlying principles of what counts as an object. Contrary to what Bermúdez suggests, this does not show that animal and infant perception has a different *kind* of content than adult human perception. Even if the visual field is parsed differently in animal and infant perception and in adult human perception, this is compatible with infant, animal and adult human perceptual content being of the same kind. For all the latter claim amounts to is that they are constituted by the same kind of non-conceptual elements, e.g. objects or properties, as opposed to, say, Fregean senses. Further, what the studies cited by Bermúdez show is that animals, infants and adult humans all perceive objects, even if they have slightly differing expectations concerning the objects' behavior.

Given the empirical evidence, we have strong reasons to believe that conclusion (4) is true. Animals and infants have perceptual states with non-conceptual content; adult human perception has, in part, the same kind of content; so adult human perception must have at least partly non-conceptual content.

### III. OBJECTIONS

Now, let us turn to objections against the argument. First, the conceptualist might argue that premise (1) is false. He might claim that animals and infants who have genuine perceptual experiences also possess concepts. He can combine the following two claims: Animals and infants who have genuine perceptual experience have limited inferential and recognitional abilities. Limited inferential and recognitional abilities without full generality of thought are sufficient for concept possession. That is, the conceptualist can oppose my acceptance of the Generality Constraint.

I concede that, without the Generality Constraint, it is unclear whether premise (1) is true (cf. my exposition of premise (1) above). As a defense of the first premise, we need an argument for this constraint. Several possible lines of argument come to mind:

- (a) It is essential for something to be a property that it can be instantiated by different objects; a concept of a property has to reflect the property's independence of its instances. What makes such a concept a concept of a property is the fact that it can (in principle without limits) be combined with concepts of objects to form new thoughts (corresponding things can be said of the concept of an *object*).
- (b) If a subject cannot distinguish an object or a property from others independent of context, she cannot be said to be able to reidentify the object or property. For instance, to possess the concept of *being a kin-group member*, I have to be able to reidentify the corresponding property in different situations, whether a chimpanzee instantiates it or a cat. So, to have the ability to reidentify a property in different situations, I have to be able to think about it independently of its instantiations. It follows that the Generality Constraint is a precondition for having recognitional abilities, which the conceptualist accepts as a condition for concept possession [cf. Priest (1991), p. 176].
- (c) Similarly, the ability to draw inferences presupposes the Generality Constraint: How do concepts make a thinker's ability to draw inferences possible? A single concept can appear and reappear in different premises and in the conclusion that a reasoning process is based on. An inference can lead the thinker to beliefs involving states of affairs that are not currently instantiated in her presence. But this is to say that concepts have to be reusable and recombinable independently of whether the corresponding properties are instantiated or whether the corresponding objects have the properties in question. To meet the inferential constraint, a thinker has to meet the Generality Constraint as well.
- (d) Full understanding of what an *F* is – and therefore possession of a concept *F* – requires that the subject understand what it would be for different objects to be *F*. If a subject can (apparently) apply *F* only in one context to one object, she obviously does not understand what it is to be *F* and therefore does not possess the concept. To possess a concept therefore is to meet the Generality Constraint.

The conceptualist can reply that this defense is problematic, first, because it equates thought with language, and second, because it requires full generality where partial generality is sufficient. The view of concepts behind part (a) of the defense assumes that thought is just like language. This line of thought was inspired by Evans's argument [cf. Evans (1982), pp. 102-103], which in turn is based on Strawson's statement that "the idea of a predicate is correla-



tive with that of a range of distinguishable individuals of which the predicate can be significantly, though not necessarily truly, affirmed” [Strawson (1959), p. 99]. Strawson makes a purely linguistic point. He speaks of characteristics of predicates, which are linguistic entities and should not be confused with concepts. Clearly, a predicate has to be applicable to more than just one object (even if this does not yield true sentences). This is how language works. But in language we literally have reusable items that can be moved and recombined to form new sentences, and once they can be recombined at all, they can be recombined without limits. This is not necessarily the case in thought. All we literally have is conceptual abilities, and it is an open question whether we can use them in all possible contexts.

Second, the conceptualist might concede that concept possession requires some generality, but not the full generality that the Generality Constraint demands. He could then go on to claim that the relevant animals and infants have cognitive abilities with the required limited generality. A subject has to be able to reidentify an object or a property only in some, but not in all situations (defense (b)). She has to be able to draw certain, but not unlimited inferences (defense (c)). Finally, it is good enough for concept possession that the subject has an *incomplete* understanding of what a certain object or property is, i.e., she only has to know what it would be for a certain object to have some, but not all properties, and *vice versa* (defense (d)). Alva Noë, for example, suggests that a monkey possesses the concept of a kin-group member in virtue of treating its relatives in a differential way even if it does not possess any concepts that are inferentially related to kinship, such as a concept of the biological basis of kinship (contra the inferential constraint). Nor does the monkey have to be able to apply its concept of a kin-group member to humans or other animals to possess the concept (contra the recognitional constraint). The fact that the monkey can identify its kin-group members and act appropriately towards them is sufficient for it to possess a limited concept of a kin-group member [cf. Noë (2004), p. 187].

Concept possession, on this view, is a matter of degree. There is a whole spectrum of concept possessors, ranging from very sophisticated adult humans to infants and other animals with only limited conceptual capacities. If this is true, the argument from animal and infant perception fails. For premise (1) is false: those animals and infants who clearly have perceptual content similar to ours will have conceptual abilities, however limited. In order to defend the argument, the non-conceptualist has to give a reason why concept possession is an all or nothing affair – as it is if we accept the Generality Constraint.

The conceptualist’s reply neutralizes most of the non-conceptualist defenses. However, I believe that there is no way to explain the ability of adult humans to draw inferences that does not involve the full generality of concepts which is required by the Generality Constraint. What constitutes the in-

ference from *this man is tall* to *someone is tall*, for instance, is that the concept *tall* shows up in different combinations in the premise and the conclusion. Nothing can count as a concept unless it is reusable in this way. But once a concept is able to show up in more than one place, there can be no limits at all to the premises, conclusions or combinations it can be used in. If a concept shows up in genuine inferences, it thereby has to be untied from its instances. So a subject's meeting the inferential constraint presupposes her meeting the Generality Constraint as well. There might be some practical hindrances to full generality, such as problems with a subject's brain chemistry that prevent conclusions from being drawn or propositions from being contemplated [cf. Peacocke (1992), p. 43]. But once we have a genuine conceptual capacity – an ability to draw certain inferences – there cannot be any principled limits to the thoughts it can be used to form.

This reply leaves the problem of what we should say of animals and infants who are apparently capable of reidentifying objects or of drawing limited inferences. This is not an insurmountable problem, as there are theories of the cognitive abilities of animals that do not involve appeal to concepts. Bermúdez, for instance, tries to explain animal reasoning from excluded alternative, *modus ponens* and *modus tollens* without presupposing that they possess basic logical concepts [cf. Bermúdez (2003c)]. In a similar vein, Susan Hurley suggests that subjects who possess no concepts may nonetheless be restricted by rational constraints [cf. Hurley (2001)].

So, the conceptualist objection to premise (1) fails. At any rate, only philosophers with a very liberal view of concept possession would be willing to attack this premise. But the central proponents of conceptualism have rather high demands on what it takes to possess a concept. McDowell, for instance, thinks that without full rationality or the full-fledged ability to draw inferences and reassess her judgments, a subject is not a possessor of concepts. He tries to counter the argument by attacking the claim inherent in premises (1) and (3) that the animals and infants under consideration have experiences with genuine content. He attempts to account for the perceptual similarities between animals and infants, on the one hand, and adult humans, on the other, by appeal to a perceptual sensitivity that we all have in common. He claims,

[w]e do not need to say that we have what mere animals have, non-conceptual content, and we have something else as well, since we can conceptualize that content and they cannot. Instead we can say that we have what mere animals have, perceptual sensitivity to features of our environment, but we have it in a special form. Our perceptual sensitivity to our environment is taken up into the ambit of the faculty of spontaneity, which is what distinguishes us from them [McDowell (1994), p. 64].

According to the non-conceptualist, there is only one possible explanation for the fact that adult humans, human infants and non-human animals all undergo the same kind of perceptual states: all of these states have the same kind of content. McDowell's alternative explanation is that adult humans have *perceptual sensitivity* in common with human infants and with non-human animals. But the perceptual sensitivity of adult humans is transformed by their conceptual abilities – instead of being a mere mechanism that enables subjects to react to their environments appropriately (but nothing more), their perceptual sensitivity produces mental states with a conceptual content. He claims that human infants, as they grow older, turn from “mere animals” into concept possessors [McDowell (1994), p. 125].

As adult humans, we are able to critically reflect on our perceptual states and revise our beliefs in their light if necessary. Thanks to our conceptual abilities and our rationality we can build up an objective picture of the world. This is to say that our perceptual states have content; we can truly appreciate what is happening in the world. Without conceptual abilities, animals and human infants can do nothing more than react to their environments; they are so tied up in them that they cannot be said to have more than simple perceptual sensitivity [cf. McDowell (1994), pp. 114-123].

According to McDowell, then, animal and human infant perception has no content, and *a fortiori* it does not have the same kind of content as adult human perception. My conclusion (4) – the content of adult human perception is partially non-conceptual – does not follow.

I have two objections to McDowell's notion of perceptual sensitivity. First, if animals and infants do not have experiences as we do, what else does their perceptual sensitivity amount to, especially seeing that they are not supposed to be mere Cartesian automata? Imagine a scale which orders live beings with respect to how sophisticated their sensitivity to their environments is. We can plausibly place plants at one end of the scale and adult humans at the other. The – albeit limited – sensitivity of plants towards their environment is evidenced by the fact that they grow towards the light. At the other end of the scale, adult humans have highly advanced perceptual and even conceptual awareness of the world around them. Animals and infants should – intuitively – be placed somewhere in the middle between these extremes. My worry is that McDowell cannot do this. He does not provide us with a detailed account of what perceptual sensitivity without genuine content consists in. So it is hard to conceive of what is supposed to distinguish animals from plants, or what is supposed to make it true that animals, but not plants, have perceptual sensitivity to their environment in common with adult humans.

Second, there is a tension between two of McDowell's claims. On the one hand, adult humans share perceptual sensitivity with animals and infants. On the other hand, there is a stark contrast between both sides. While adult humans have perceptual experiences with genuine content, all animals and

infants have is the ability to react appropriately to current needs. It seems to be nothing more than a terminological maneuver to call both of these things ‘perceptual sensitivity’. The problem is aggravated by another claim of McDowell’s – he emphasizes that perception “does not even make a notionally separable contribution to the co-operation” between perception and thought [McDowell (1994), p. 9]. That is to say that, in the case of adult humans, we cannot even *conceptually* distinguish between perception and thought and their contents. Perceiving is simply a different way of actualizing one’s conceptual abilities. If this is true, perceiving (in human adults) cannot *also* be a kind of perceptual sensitivity just like the one that animals and infants have, for the perceptual sensitivity of animals and infants does not involve content, much less conceptual content.

So, McDowell fails to give a convincing conceptualist account of the similarities between adult human, animal and infant perception. If the conceptualist wants to accommodate the intuition that adult humans, human infants and animals have something in common with respect to perception, he has to concede that they must share the same kind of perceptual content.

Let me summarize my discussion of the argument from animal and infant perception. The non-conceptualist appeals to animals and infants to show that adult humans have perceptual states with non-conceptual content. His argument relies on the combination of the following claims: there are subjects of whom it is true that they have no conceptual abilities whatsoever and have perceptual experiences with genuine content. Moreover, their perceptual contents are partly identical with the contents of adult human perception. The weakest point of the non-conceptualist argument consists in the tension between these claims. To say that animals and infants possess no concepts is to say that they are very dissimilar from adult humans; it is to grant them only very limited mental capacities. To say that animals and infants have perceptual contents, and even stronger, contents that are just like those of adult humans, is to say that they are very similar to adult humans; it is to grant them very high-level mental capacities.

Correspondingly, the conceptualist can attempt to attack the argument by resolving the tension in one of two directions. McDowell’s emphasis on the differences between adult human perception and infant and animal perception – his denial of the claim that infants and animals have perceptual experiences with genuine content – is not very promising exactly because, at the same time, he tries to maintain a semblance of commonality between animal, infant and adult human perception. To make the conceptualist view more consistent, he could give up on his notion of shared perceptual sensitivity, but would then be left with the implausible Cartesian view that animals and infants are mere automata.

The other conceptualist option is to abandon the demanding view of concept possession as tied to full-fledged rationality. He can argue that ani-

imals and infants resemble adult humans not just with respect to perception, but also with respect to concept possession. As I have shown, the only condition on concept possession that animals and infants clearly cannot meet is the Generality Constraint. Concept possession stands and falls with this constraint. The most compelling argument for this claim is that our ability to draw inferences, which is a necessary condition for concept possession, entails full generality of thought. What enables adult humans to draw inferences is their ability to employ one concept in different premises and conclusions. But once a concept can be separated from the concept it was originally combined with to play this role, there can be no limits to the combinations it can be used in, so it can be applied in a fully general way\*.

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NOTES

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<sup>1</sup> When speaking of animals, I thereby mean non-human animals. When I speak of adults and infants, I mean human adults and infants. The infants of interest in this paper are infants at a very young age, before it is uncontroversial that they possess concepts. I will not add these qualifications every time in what follows.

<sup>2</sup> Let me add one restriction to be completely clear. The Generality Constraint should not be taken to mean that, e.g., when a subject possesses the concepts *green* and *justice*, she has to be able to think that *justice is green*. More plausibly, possessing and fully understanding a concept involves knowing with which concepts it cannot be combined.

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