

## **Nonconceptual Content and the Nature of Perceptual Experience**

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### **Introduction**

[1] Recent philosophy of mind and epistemology has seen an important and influential trend towards accounting for at least some features of experiences in content-involving terms. It is a contested point whether ascribing content to experiences can account for all the intrinsic properties of experiences, but on many theories of experiences there are close links between the ascription of content and the ways in which experiences are ascribed and typed. The issues here have both epistemological and psychological dimensions. On the one hand, a theory of experiential content has a fundamental role in explaining how knowledge of the world can be acquired through experience. On the other hand, there are important psychological questions about the phenomenology of experiences and the conditions under which content ascriptions are made.

[2] The debate about whether experiences have conceptual or nonconceptual content is highly relevant to both the epistemological and psychological issues. This is apparent in the work of Gareth Evans who is often cited as the first philosopher to propose a theory of nonconceptual content. This paper will explicate and examine Evans' theory. In particular, attention will be paid to Evans' claim that perceptually-derived information with nonconceptual content can only qualify as a perceptual experience when it serves as input to a thinking, concept-applying, and reasoning system. We will sketch out a theoretical approach to the nature of nonconceptual content that builds on Evans' insight but does not follow him in this restrictive claim.

### **Conceptual and Nonconceptual Content**

[3] The paradigm case of a state with content is a propositional attitude -- having a propositional attitude requires one to stand in a certain relation to a content. The content is demarcated by the clause which states what is believed, desired or wished. Contents have correctness conditions -- conditions under which they represent the world correctly. Although the content of propositional attitudes represent certain objects, properties and/or relations they are standardly taken (within a broadly Fregean tradition) to consist of concepts in such a way that a given content cannot be ascribed to an individual who does not possess the concepts employed in the canonical specification of that content.

[4] This notion of conceptual content can be applied to perceptual experiences. When someone has a visual experience, for example, it will seem to that person as if something is seen. The proposition that specifies what seems to be seen, demarcates the content of the experience. This approach is demanded by any theory of perception that analyses perceptual states in terms of inclinations to believe (e.g. Armstrong 1968). There are reasons for thinking, however, that visual experiences or informational states have a different type of content, namely, nonconceptual content.

In so far as a creature can have an experience that represents the world and has correctness conditions, while not possessing the concepts required to specify how the world is represented in the experience, then one can say that the content of the experience or informational state is nonconceptual.<sup>1</sup> Three main reasons for thinking this have been endorsed in the recent literature.

[5] First, experiences are more fine-grained than conceptual contents. For example, one can see more shades of colour than one can name. Second, experiences are belief independent (Evans 1982: 123). One can continue to undergo an illusion even when one knows that things are not as they appear. It is equally possible not to believe what one seems to see. Lastly, describing and explaining a subject's behaviour may demand attributing a visual experience when the subject lacks the concepts required to specify the content of the experience in virtue of not being a concept-user at all.

[6] It is important to distinguish these three motivations -- and in particular to keep the first two separate from the third. Many theorists who are prepared to accept the notion of non-conceptual content deny that creatures who possess no concepts at all can be in content-bearing states. That is to say, they deny what Christopher Peacocke has called the Autonomy Thesis, but which we prefer to call the Autonomy Principle:

*The Autonomy Principle* It is possible for a creature to be in states with nonconceptual content, even though that creature possesses no concepts at all.<sup>2</sup>

Nonconceptual contents can only fulfil the third explanatory role if the principle is true. The Autonomy Principle was first affirmed by Evans. As will emerge below, however, Evans' position is equivocal. He maintained the Autonomy Principle but denied that non-concept-users could have experiences. The main burden of this paper will be that Evans' position is inherently unstable. The Autonomy Principle is true and does not require Evans' qualification.

[7] The significance of this depends, of course, on how widely the domain of concepts is held to extend. Consider the following principle:

*The Priority Principle* Conceptual abilities are constitutively linked with linguistic abilities in such a way that conceptual abilities cannot be possessed by non-linguistic creatures.

The constitutive connection between concepts and language emerges from the conditions upon the individuation of concepts -- which in turn are conditions upon what it is to possess or grasp a concept. Any acceptable account of what it is to possess a concept will have to include certain specifications of circumstances in which it is appropriate to apply that concept. But this is not all. Concepts form part of, and are individuated by their role in, the contents of propositional attitudes. Part of what it is to possess a given concept is that one should be able to recognise that certain circumstances give one good reasons to take particular attitudes to contents containing that concept. Moreover, concept mastery is also evidenced in dispositions to make and to accept as legitimate or justified certain inferential transitions between judgements.

[8] The plausibility of the Priority Principle emerges from the constraints upon being able to appreciate rational grounds for certain inferences. It is certainly true that it is possible to be justified (or warranted) in making a certain inferential transition without being able to provide a justification (or warrant ) for that inferential transition. It is a familiar epistemological point, after all, that there is a difference between being justified in holding a belief and justifying that belief. What does not seem to be true is that it is possible to distinguish between justified and unjustified inferential transition if one is not capable of providing any justifications at all for any inferential transitions. But providing justifications is a paradigmatically linguistic activity. Providing justifications is a matter of identifying and articulating the reasons for a given classification, inference or judgement. It is because prelinguistic creatures are in principle incapable of providing such justifications that the Priority Principle is true. Mere sensitivity to the truth of inferential transitions involving a given concept is not enough for possession of that concept. Rational sensitivity is required, and rational sensitivity comes only with language mastery.

[9] If the Priority Principle is accepted then the truth of the Autonomy Principle will follow if it is thought that the behaviour of nonlinguistic creatures requires explanation in intentional terms, since intentional explanation requires the ascription of content-involving states and (by the Priority Principle) those states will necessarily be nonconceptual. We shall not attempt to make the case here. One of us has argued the point elsewhere at some length (Bermúdez 1998). We shall take it that the Autonomy Thesis is true. Our main concern will be whether it needs to be qualified in the way that Evans proposed.

### **Evans' Theory**

[10] Evans begins his account by taking the notion of *being in an informational state* with such-and-such content as being a primitive notion, not to be analysed in other terms (particularly not in terms of inclinations to believe):

A certain mechanism produces things which have a certain informational *content*... The mechanism is a mechanism of information storage because the properties that figure in the content of its output are (to a degree determined by the accuracy of the mechanism) the properties possessed by the objects which are the input to it. And we can say that the product of such a mechanism is *of* the objects that were the input to the mechanism when the product was produced. (1982: 125)

Perception and memory both involve informational states. So too does testimony. Belief, judgement and reasoning, in contrast, are more sophisticated activities than information-gathering.

[11] Evans' paradigm example of informational content is the spatial element in auditory experiences (Evans 1982: section 6.3). This spatial element is given in terms of directions in egocentric space -- up, down, in front, behind etc. Evans claims that an informational state might *loosely* be thought to have such spatial content just if it embodies purported information about the environment in virtue of belonging to a set of inputs which vary systematically with some spatial facts. However, he says that in order for an organism to be in a state that has spatial significance for that organism --

that is in order for it to contain spatial content in a *strict* sense -- more is required. The organism must exhibit complex input-output connections of a certain type. It is not enough that an organism can merely discriminate between the relevant stimuli. An organism must exhibit input-output connections that are connected to spatial behaviour:

We can say, then, that auditory input -- or rather that complex property of auditory input which encodes the direction of sound -- acquires a (non-conceptual) spatial *content* for an organism by being linked with behavioural output in, presumably, an advantageous way. (Evans 1982: 156)

Many of his examples involve animals that have the right kind of complex input-output behaviour (such as rats swimming to a particular location where a sound is heard), and throughout the discussion he talks of what organisms and animals must be able to do (which clearly some can) to satisfy his constraints.

[12] Nonetheless, Evans' commitment to what we earlier termed the Autonomy Principle is highly circumscribed. He argues that not all informational states with nonconceptual content count as experiences:

It seems abundantly clear that evolution could throw up an organism in which such advantageous links were established [the input-output links required in order for a creature to have informational states with nonconceptual content], long before it had provided us with a conscious subject of experience. (1982: 157-158)

The actual example he gives of informational states that are not experiences is blindsight.<sup>3</sup> He says that people who suffer from blindsight may have the right input-output connections regarding their behaviour. The performance of blindsight patients on certain matching and other tasks shows that they are capable of performing certain perceptual discriminations in their blindfield, and hence that at some level they are picking up visual information about a portion of the distal environment that they claim not to be able to see. Nonetheless, as is well-known, blindsight patients report themselves to be merely guessing in the tasks on which they perform significantly above chance -- and they tend to be incapable of using the information which they seem nonetheless to be picking up to initiate actions. It is equally well-known that blindsight patients report themselves as lacking any sort of phenomenal consciousness of what is going on in their blindfields.

[13] Things become clearer, however, when we remember that for Evans an informational state can only count as a conscious experience if it:

serves as the input to a thinking, concept-applying and reasoning system; so that the subject's thoughts, plans and deliberations are also systematically dependent on the informational properties of the input. When there is such a link we can say that the person, rather than some part of his brain, receives and processes the information. (Evans 1982: 158)

The interesting feature of blindsight patients is that their residual abilities are evidenced only in forced-choice situations in which they take themselves to be

guessing. They can make discriminations at a level substantially above chance, but not in a way that feeds into their practical deliberations and intentional actions. It is tempting to explain this by holding that the discriminative abilities are not experientially-based.

[14] But even granting this interpretation of the behaviour of blindsight patients, it is not clear that it dictates the general principle that experiences are only available to concept-applying creatures. The direction of explanation is important. The blindsight case warrants the claim that there may be forms of perceptual sensitivity that are not experiential and that their not being experiential explains why they do not feed into the subject's 'concept-applying and reasoning system'. This is a long way from the claim that, when a subject has a concept-applying and reasoning system, no form of perceptual sensitivity will count as experiential unless it is in principle capable of feeding into that system -- a claim that in any case seems problematic in virtue of the well-known cognitive impenetrability of optical illusions. And it is hard to see how to get from either of those to the claim that nothing can count as an experience unless it feeds into a concept-applying and reasoning system.

[15] Evans suggests that "our intuitive concept requires a subject of experience to have *thoughts*" (Evans 1982: 158). This would yield the desired conclusion on the assumption that no subject can have thoughts unless it is a concept-user -- alternatively, that there can be no reasoning without concepts. The proposal, however, is doubly flawed. In the first place the appeal to intuition seems misplaced (even allowing that there is an intuitive concept associated with what seems clearly to be a philosophical term of art). To the extent that common-sense makes a clear distinction between thinking and sentience it seems to imply their potential separability.

[16] More significantly, the claim seems to be either trivial or unwarranted. If it is being claimed that there can be no conceptual thought without concepts then it is trivial. But on the other hand there seems to be no reason to believe (and considerable reason not to believe) that thinking is only possible for concept-possessors/language-users. The evidence from developmental psychology and cognitive ethology seems clearly against Evans, on the plausible assumption that the applicability of intentional explanations to a creature implies that the creature is capable of thinking.<sup>4</sup> To hold that a creature's behaviour is to be explained in intentional terms is to credit that creature with the capacity to reason about how best to satisfy its desires in the light of the information it possesses about the environment.

[17] One might combine these two points by saying that the claimed intuitive connection between being a subject of experience and being a thinker holds only when the requirements for a creature to be a thinker have been weakened so that they will not be able to do the work for which Evans tries to employ them. The plausible sense in which an experiencer must be a thinker is not going to yield the requirement that a thinker be a concept possessor.

[18] It is interesting that Evans seems to be pulled in opposite directions on this issue. A certain residual neo-Kantianism (no doubt inherited from Strawson) drives him towards a package of views that runs through *The Varieties of Reference*, although more often presupposed than argued for directly. The strictures which he places on the notion of a subject of experience fall very naturally out of this neo-Kantianism.

Prominent within this package is a deep-seated belief that consciousness cannot exist without self-consciousness and awareness of an objective world. He also firmly believed in the distinctiveness of persons and a corresponding need to keep the "realm of the rational" separate from the "realm of the natural". It is eminently natural, then, for him to make a distinction between, on the one hand, the personal level of rational, deliberating, language-using agents, employing concepts and sensitive to the rational relations holding between them and, on the other, the subpersonal level at which we are dealing with mechanisms and systems whose states, although they carry content, carry only a form of informational content insufficiently rich to underwrite genuine cognition. Once this step has been taken it is a natural next step to apply this thin conception of informational content to those cognitive agents that do not display the linguistic and conceptual skills characteristic of persons. Such cognitive agents represent the world, but not in a way that allows them to be genuinely conscious of it or to think about it.

[19] This neo-Kantian strand in his thought sits uneasily, however, with the naturalistic thread that also runs through *The Varieties of Reference*. In part this naturalism reveals itself in the significance he attaches to the notion of causality and in his sensitivity to empirical work. Most importantly, however, it reveals itself in what is probably his most fundamental philosophical innovation, namely, his recasting of the Fregean notion of the sense or mode of presentation of a singular term. As classically understood the sense of a singular term is given in terms of a cluster of definite descriptions serving to identify the object picked out by the singular term. Evans' great innovation was to replace this way of understanding the notion of sense with one based more on abilities, dispositions and capacities. The mode of presentation of a particular point in space is given in terms of the subject's ability to locate it in both egocentric and absolute space -- and hence ultimately in terms of his navigational skills. The mode of presentation of a perceived object is given in terms of the subject's ability to keep track of it. The mode of presentation of the self is given by the subject's sensitivity to particular forms of self-specifying information (from proprioception, autobiographical memories etc.). This second naturalistic strand in Evans' thought militates against the isolationism of the first strand. These abilities, dispositions and capacities do not seem constitutively linked with the high-level conceptual, reasoning and linguistic skills characteristic of the domain of persons. Certainly the least convincing sections of *The Varieties of Reference* are those where Evans tries to bring his innovations into line with his neo-Kantian isolationism.<sup>5</sup>

[20] Evans' thinking about experience and nonconceptual content reflects the strains imposed by these two conflicting pressures. His espousal of what we have termed the Autonomy Principle is motivated by the naturalistic strand in his thought, but his denial that experience is possible in the absence of conceptual thought and reasoning is clearly motivated by the isolationism that comes with his neo-Kantianism. As we have tried to bring out, the position that emerged is inherently unstable. In the next section we will develop further a view intended to restore stability by side-lining the unhelpful isolationism and foregrounding the innovative variety of naturalism that we believe to be Evans' greatest contribution to analytical philosophy.

### **Nonconceptual Content and Perceptual Experience: Some Further Thoughts**

[21] As we have seen, Evans' view that perceptually-derived information states with nonconceptual content only become perceptual experiences when they serve as input into a concept-applying and reasoning system seems to get the direction of explanation the wrong way round in the only example he gives. The residual abilities of blindsight patients seem to suggest the presence of perceptual states with nonconceptual content which do not feed into the concept-applying and reasoning system because they are not experientially-based. In this final section we sketch out a way of thinking about the content of experience that generalises this interpretation of blindsight.

[22] We start with some reflections about the nature and functional role of phenomenal consciousness made by Robert Van Gulick. Van Gulick's position is based upon an articulation of three different aspects of phenomenally conscious states. He holds that these three different aspects can be identified and distinguished in all normal cases of psychological states with phenomenal character. They are:

- (a) phenomenal consciousness
- (b) capacities for perceptually-based discriminations
- (c) semantic transparency

Of these only (c) is likely to be unfamiliar. Here are a couple of passages in which he explains what he means by 'semantic transparency':

The extent to which a representation is semantically transparent is a matter of how readily and completely its content or meaning is accessible to the user of the representation. . . . When we have a conscious visual experience, we normally know and understand what is being represented to us, and with almost no effort can make appropriate links to a vast amount of background knowledge. (Van Gulick 1994: 29)

Phenomenal representations, of the sort associated with normal conscious experience, involve a very high degree of semantic transparency. Indeed, they are so transparent that we normally 'look' right through them. Our experience is the experience of a world of familiar objects -- of desks, chairs, coffee cups and beech trees. Moreover, this transparency is to some extent *an immediately experienced feature of our conscious life* (Van Gulick 1993: 149).

The key is the relation between semantic transparency and the initiation and control of action. It is the semantic transparency of phenomenal consciousness that makes information about the distal environment picked up through perception available to the subject in a form that will allow it to be used in the initiation and control of action.

[23] Van Gulick makes this point very interestingly in the context of blindsight patients:

Are there any features of phenomenal representation that help to explain why we should need it to bring information to bear on our intentional action? Recall what we noted above about the high degree to which phenomenal representations are semantically transparent; their content is readily accessible and capable of being applied in a wide range of contexts. . . . Because the

information blindsighted patients extract from visual stimuli fails to be incorporated into their phenomenal representation of the world, it remains disconnected from and inaccessible to the action-guiding systems that lie at the core of their personalities. It cannot be brought to bear on any of the self-conscious or deliberate choices or actions that they undertake as persons. (34-5)

The generalisation seems to lie ready to hand. Perceptually-derived information states with nonconceptual content only become perceptual experiences when they offer a mode of presentation of perceptually derived information that allows it to feed into the initiation and control of action.<sup>6</sup>

[24] Reflection on the nature of conscious experience brings out how phenomenal consciousness is organised to secure the implementation of this functional role. Phenomenal consciousness is essentially integrative. It brings together disparate items of information from a range of sources and binds them together into a unified structure (see Lowe 1996 for further discussion). Van Gulick himself stresses that phenomenal consciousness "represents the unity and continuity of space by the unified continuous manifold of the subjective visual field" (1994: 35). It also presents objects in the distal environment as bearing spatial relations to each other. Moreover, and this is something that is less frequently stressed, it presents objects in the perceived environment as bearing spatial relations to the perceiving subject. This last feature offers a particularly clear illustration of why phenomenal consciousness might be thought essential for the initiation of environment-directed action. It seems plausible to hold that one cannot determine to act in an environment-directed manner without an understanding of the spatial relations in which one stands to the relevant features of the environment.

[25] Van Gulick essentially stops at this point -- which is unfortunate because it is here that things get difficult and interesting. Everything that he says about the nature of perceptual experience seems right. It is hard to disagree with any of these points about the integrative role of phenomenal consciousness. Unfortunately, the real problems are just about to start. Because the most pressing question that all of this raises is how we are supposed to come up with a theory of the content of perceptual experience which will allow us to capture and explain these integrative features of phenomenal consciousness.

[26] The basic idea that we would like to put across is that without a suitably worked out theory of nonconceptual content we will simply not be able to give an account of what it is about phenomenal consciousness that allows it to exercise its functional role. The semantic transparency which Van Gulick latches on to is a function of the application of higher-level conceptual abilities. Van Gulick's notion of semantic transparency is a matter of how *meaningful* the subject finds the perceived environment and is constitutively tied to classificatory and recognitional abilities which are best understood in terms of concept mastery. These classificatory and recognitional abilities presuppose, however, an organisation of conscious experience which is both logically and ontogenetically (and indeed phylogenetically) more primitive than concept mastery (Bermúdez 1995b, 1998). Certain aspects of the theory of the nonconceptual representational content of phenomenal consciousness are peculiarly appropriate to explaining how phenomenal consciousness can fulfil the functional role of presenting perceptually derived information in a way in which it can

directly feed into the initiation and control of action. We would like to make two points in support of this general thesis -- the first illustrative and second programmatic.

[27] It is a familiar point that the explanation of action requires attributing indexical thoughts to agents -- thoughts which fix their temporal and spatial locations and which explain the immediate salience of what they perceive to what they actually do. This has been accommodated by several theorists at the conceptual level. John Perry has employed an argument from "the essential indexical" against standard construals of the Fregean notion of sense (Perry 1977, 1979).<sup>7</sup> Peacocke has also argued that any rationally intelligible explanation of an agent's actions must have a demonstrative component (Peacocke 1986). Yet this indexicality can equally be accommodated at the level of nonconceptual content.

[28] Indeed, what we find when we compare conceptual content and nonconceptual content is that nonconceptual content is always indexical. Whether conceptual content is understood in terms of sets of possible worlds, Russellian compounds of individuals and properties or Fregean senses it is nonetheless the case that the actual specification of any content that is not explicitly indexical will contain no reference to any relations in which a thinker might stand to the content in question. The relation between thinker and this content comes with the attitudes that the thinker takes to the content. It is *external* to the content itself. This is not, however, the case with nonconceptual content. Here the relation between thinker and content is *always internal* to the content. It is part of the way in which objects are represented that the perceiver stands in certain relations to them. In other words, one could say that while conceptual content may or may not be indexical, nonconceptual content always contains an indexical element. The indexical element provides one reason for why the nonconceptual content of experiences is such that it can feed directly into the control of actions -- because it provides information about the relationship between the perceiver and the world.

[29] This emerges particularly in the account of perception developed by the psychologist J. J. Gibson. A recurrent theme in Gibson's experimental and theoretical work is that self-specifying information is an integral part of the content of perceptual experience. We can identify three different types of such self-specifying information (for further details see Gibson 1979 and Bermúdez 1998 Ch.5):

(1) *Information about bodily invariants that bound the field of vision.* The outline and contours of the body impose a higher-order invariant structure on the field of vision. All objects, bodily and nonbodily, can present a range of solid angles in the field of vision (where a solid angle is an angle with its apex at the eye and its base at some perceived object), with the size of those angles varying according to the distance of the object from the point of observation. The further away the object the smaller the angle. Bodily parts are distinctive in that the range of solid angles they present is very limited.

(2) *Information from visual kinesthesia about the movement of the perceiver.* How can the mass of constantly changing visual information generated by the subject's motion be decoded so that subjects perceive themselves to be moving through a stable environment. Gibson's insight is that information about the subject's

movement is already contained in the patterns of flow in the optic array and relations between variant and invariant features in the visual field. Striking illustrations of this are provided by the "moving-room" experiments (Lishman and Lee 1973) in which subjects compensate for an illusion of movement generated by moving the walls of the room while keeping the floor stationary.

(3) *Information about the possibilities for action and reaction that the environment affords the perceiver.* Objects and surfaces in the environment have properties that are relevant to the abilities of particular animals, that allow different animals to act and react in different ways. On Gibson's analysis, information specifying affordances is directly available in the structure of the light to be picked up by animals as they move around the world. Affordances are higher-order perceptual invariants.

These features of perceptual experience must be accommodated at the nonconceptual level. Indeed, the experimental evidence that perceptual sensitivity to self-specifying information in visual perception is present widely in the animal kingdom and from the first days of infancy in humans.

[30] Another feature of the indexicality of perceptual content that has been stressed by Christopher Peacocke in this context is its analogue nature (Peacocke 1986). The term analogue has been used to express many different qualities of perception. It is fine-grained and carries lots of detailed information. It varies in a way that analogue devices, such as the hands of a clock that tell the time do, as opposed to the discrete intervals that a digital watch displays, which is more akin to the manner in which conceptual content represents. One particular notion of analogue experiential content is concerned with the way in which magnitudes are represented. When we see a distance or length, although we see the length it is, we do not see the length it is in miles, kilometres, inches or centimetres -- we do not come to know what the length is in any units unless, for example, there is a measuring device around. This is not simply a fact about phenomenology, but also an essential part of explaining how we can act on distal objects without any propositional knowledge of their distance from us.

[31] The unit-free nature of perception seems capturable only at the level of nonconceptual content. First, it seems plausible (although Peacocke would deny this) that unit-free perceptions are available to non-concept-possessing creatures. Indeed, this seems to follow straightforwardly from the essential indexicality of intentional explanations of behaviour together with the fact that intentional explanations are applicable to non-concept-possessors. But second, even in creatures who do possess concepts, the unit-free nature of perception cannot be captured at the level of conceptual content. The only candidate at the conceptual level would be some form of demonstrative content such as "that length" or "that direction". Yet, as Peacocke notes, a subject could have an experience in which two lengths looked the same to them. Associated with each of these lengths could be a unique demonstrative mode of presentation -- "that length". The subject might nonetheless wonder whether the two lengths are actually the same and it is possible that they might come to find out that in fact they were the same length. Thus, it would be informative for the subject to know that the first "that length" was the same as the second "that length", and therefore the two demonstrative modes of presentation would not be the same, according to Frege's criterion for the identity of modes of presentation. So, in order to characterise the

content of the perception that the two lengths look to the subject to be the same we need to move to the level of nonconceptual content.

[32] One question now becomes pressing. Does a perceptually-derived informational state become an experiential state (become phenomenally conscious) just in virtue of providing information about the relationship between the subject and the environment in the ways just specified? The answer might be thought to be no because of sleepwalking and associated phenomena. People have been known to navigate their way through an environment, perform quite complex tasks and even drive cars. If this is so, and (as seems overwhelmingly plausible) these people are not conscious of their actions, then it follows that being in perceptual nonconceptual states that allow for complex environment-related actions is not sufficient for being conscious.

[33] These and related examples, however, only show that the above is only the first part of a full story of how the content of phenomenal consciousness allows it to fulfil its functional role of presenting perceptual information in a manner that allows it to feed directly into the initiation and control of action. We end this paper programmatically by gesturing to how such a full story might be achieved. Whether sleepwalkers have some conscious awareness of their environment or not is unclear. They are certainly not, however, in states that are fully-integrated in time, either before or after the episode, with the rest of their mental lives. This brings out that we also need to consider the contents of perception *over* time. The fact that a body takes a single trajectory through the world is reflected in the changing contents of the normal perceptually-based experiential events associated with that body. This series of perceptually-based states reflects a point of view, a perspective on the world (to use two rather overworked terms). Here too, it is a fact about the content of the perceptually-based events within a psychological life that they reflect a point of view upon the world. This is something that we might also expect to receive theoretical articulation in a fully-developed theory of nonconceptual content. Such a theory will bring together an understanding of different forms of navigational skills, their concomitant nonconceptual representations of the spatial properties of the environment and the integration of associated states over time.

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## Notes

<sup>1</sup>Evans (1982), Peacocke (1994), Tye (1995) and Bermúdez (1998) are amongst those who postulate nonconceptual content.

<sup>2</sup> For a discussion of the autonomy of nonconceptual content see Bermúdez (1994), Peacocke (1994), Bermúdez (1995) and Bermúdez (1998).

<sup>3</sup> The blindsight example is itself odd in at least one respect. Evans seems to want to disqualify most, if not all, animals as potential subjects of experience and we surely do not think of any animals on the model of those humans who have blindsight. Indeed, some of the work carried out by psychologists on blindsight has been to experiment with animals by removing part of their visual cortex to induce blindsight in them (Humphrey 1993: 68). Thus, if we can distinguish between animals with blindsight and those without, animals should not in general be compared to human blindsighted subjects.

<sup>4</sup> For further discussion see Bermúdez (1998).

<sup>5</sup> The appendix to chapter 7 is a case in point. Unfortunately the least convincing sections of the book are often the most celebrated.

<sup>6</sup> We say this without committing ourselves on the question of whether the nature of perceptual experiences is exhausted by their information-presenting role.

<sup>7</sup> Evans himself responded to Perry's attack on Frege in his (1985) which is a useful source for his reconstrual of the Fregean conception of sense. For comments on the debate see Dummett (1991).

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