

# Sense Experiences and their Contents: a Defence of the Propositional Account

Michael Pendlebury

University of the Witwatersrand

A number of philosophers are committed to the view that sense experiences, in so far as they have contents, have propositional contents, but this is more often tacitly accepted than argued for in the literature. This paper explains the propositional account and presents a basic case in support of it in a simple and straightforward way which does not involve commitment to any specific philosophical theory of perception.

The central claim of my paper is this:

Sense experiences, in so far as they have contents, have propositional contents.

I will refer to this claim (which I clarify and elaborate in section II) as 'the propositional account of sense experience'.

A number of philosophers are committed to the propositional account,<sup>1</sup> but it is more often assumed or tacitly accepted than argued for in the literature. Furthermore, the arguments I am aware of are usually buried in work which is concerned mainly with other matters, and they are often presented in ways which presuppose the acceptance of views which ought to be more contentious than the propositional account itself. For it will become evident that what I am calling the propositional account is a relatively modest claim which can be embellished in a variety of ways and which is compatible with several general approaches to the philosophy of perception. The purpose of this paper is to present a basic case for the propositional account in a simple and straightforward way which involves a minimum of excess baggage.<sup>2</sup>

## I. Background

Let me begin by noting that I use the term 'sense experience' broadly, applying it not only to experiences of the kind normally involved in perception of the external world, but also to those involved in self-perception, and to bodily sensations such as pains and tickles. I think that far

more sensations have content than is often supposed, but recognize that others may have none at all. For example, some distinctive bodily pleasures may lack content because, from the point of view of the subject, they do not represent anything. They none the less have a *feel* to them, or, to borrow Nagel's phrase, there is 'something that it is like' to have them.<sup>3</sup> I will refer to this quality of every sense experience as its *character*.

The character of a sense experience cannot be explained away in terms of its content.<sup>4</sup> As we have just seen, there may be sense experiences which have character but not content. More significantly, in the case of a sense experience which does have content, its character and content are in principle different and mutually irreducible. Let me just mention three considerations which support this view.

To start with, some aspects of the character of a sense experience may not be associated with any aspect of its content. For example, the blurred character of some visual experiences may have no 'meaning' or representational significance, for it may be dysfunctional and add nothing whatever to what is seen.

Next there is the fact that experiences involving different sense modalities can overlap in their contents while remaining completely different in their characters. For example, a visual and a tactile experience could both represent something square before one without these two experiences being at all similar in character. Of course there will be differences in their contents, since the visual experience, but not the tactile experience, will represent the object as being shaded in a certain way, and the tactile experience may represent it as having a certain texture not represented by the visual experience. But these differences in content surely fail to explain all the differences in character between the two modes of experience, for there is a residual difference of character which is associated with difference of mode itself and is completely independent of specific content. All visual experience (as we know it) has a distinctive feel which is different from the distinctive feel of tactile experience. Or, in other words, what it is like to have a visual experience is very different from what it is like to have a tactile experience.

Finally, the content of a sense experience with a given character may vary with factors which are not intrinsic to the experience itself. A certain distinctive aural experience, e.g., only comes to have the content 'trumpet blast' after the subject has learned something about trumpets, or has developed the capacity to recognize them. I am inclined to think that sense experiences acquire more and more content as an infant develops to maturity and learns more about the world, without these changes in content being matched by equivalent changes in character. Even if this does not happen, the mere possibility that it might is enough to support the claim that character and content are mutually irreducible.

None of this, however, can gainsay the fact that the character and content of a sense experience are intimately connected. There are three excellent reasons for thinking this.

First, the internal complexity of the character of a sense experience places constraints on what its content can be. Consider a typical visual experience which represents a complex, three-dimensional spatial array of things, surfaces, and textures in very minute detail. It is very implausible to suppose that such a content could be carried by a sense experience which is considerably less rich and variegated in character than the visual experience. For example, the haptic experience of a finger striking a key on a computer keyboard is just too impoverished in character for it to carry so much meaning.

Second, a sense experience could not represent something of a given type unless sense experiences with relevant similar characters are normally caused, or are apt to be caused, by something of that type (or by something relevantly like things of that type). For example, the characteristic olfactory experience which we have when we smell coffee would not represent coffee unless it were normally caused by coffee. Because there must be a connection between the normal causes of sense experiences and their characters, it follows once again that the character of a sense experience places limitations on what its content can be.

Third, I suggest that the content of a sense experience can affect its felt character. I think that this happens in the case of ambiguous stimuli such as the duck-rabbit, for as one wavers between the alternative interpretations the character of the sense experience itself undergoes a subtle change.

None of this, however, affects the mutual irreducibility of character and content. Sense experiences cannot therefore be reduced to beliefs, dispositions to acquire beliefs, or to any other mental states which need not have a qualitative character. Exactly what their ultimate nature is is not a question for this paper.

The next set of points I want to make can be grouped around the notion of *representation*.

I have spoken of sense experiences as being representational. What I mean by this is that they have the function of standing for or indicating something else.<sup>5</sup> What they represent is what it is their function to stand for or indicate. 'Representation' in this sense covers such things as maps, realistic works of art, proper names, declarative sentences, ideas, thoughts, and acts of imagination. It may cover some natural information-states, like the colouration of a male African Masked Weaver (if it is the function of the bird's colouration to indicate whether or not it is ready for breeding); it does not cover other natural information-states like the number of rings in a tree trunk (since even though they happen to indicate the age of the

tree, it is not their function to do so). For us the important point is simply that something is a representation if and only if it has intentional content. Representation talk and content talk are interchangeable.

Thus when I say that sense experience is representational, I do not mean to endorse the Lockean 'Representational Theory of Perception' (even though it is possible to develop a version of it which is compatible with the propositional account of sense experience). The central claim of the Representational Theory (or Indirect Realism) is that we perceive external objects only indirectly, by directly perceiving internal representations of them (be those representations impressions, sense data, neurally realized sensory fields, or whatever). This is a view which I reject in favour of Direct Realism, which holds that in the standard case we perceive external objects directly. Of course we perceive them *by means of* sense experiences, which are the *vehicles* of representation and thus of perception. But to say this is to say only that sense experiences are what do the representing. In the standard case they are not also represented. In other words, they are not themselves objects of consciousness.

This is not to deny that we can be aware of and think about our sense experiences as we have them, but this awareness is not sensory, and it is not required for perception. Furthermore, it is absent most of the time. Usually when talking on the telephone you are aware of your caller's voice and what she is saying, not your aural experience of it. Likewise, when preparing a meal in your kitchen, you are aware of the stove, work-surface, cooking equipment, plates, food, and a whole lot more, but you are not usually aware of your visual experience of it all. You nonetheless have the capacity to be aware of your sense experiences and to think about them. I suspect that brutes and infants do not share that capacity, but this is no reason to think that they do not have sense experiences.

An Indirect Realist might accept these reasons for saying that sense experiences need not be objects of awareness, and then go on to insist that having a sense experience is to be analysed as a relational situation involving the subject's standing in the relation of *sensing* to a sense datum. I think there are many reasons to reject this view, but only one of them appears in my paper, right at the very end. However, the issue I raise there does hint at something which I believe to be correct, viz. that anyone who accepts my main thesis does not need to posit sense data.

## II. The Thesis

My thesis, to repeat, is that sense experiences, in so far as they have contents, have propositional contents. It should by now be evident that this in no way concerns the qualitative character of sense experience. In this

section I clarify what I mean by saying that something has propositional content, and also make some brief remarks about the kinds of propositional contents which sense experiences have.

There are five main points to be made about what it is for something to have propositional content:

1. What has propositional content is either true or false, or could be either true or false.<sup>6</sup>
2. What has propositional content can stand in logical relations to other things with propositional content. It is essential that they stand in entailment relations and have logical properties which can be defined in terms of entailment. If their contents are sufficiently rich and structured, then they may also possess further logical properties such as having existential or conjunctive form.
3. What has propositional content represents a (possible) state of affairs.<sup>7</sup>
4. What has propositional content is informational. That is to say, it is a vehicle of either information or misinformation. Its content is just the information or misinformation which it carries.
5. What has propositional content is something which can in principle be accepted or rejected, or to which one can be indifferent.

In the minimal sense of propositional content defined by these five connected conditions, numerous kinds of things can have it: a sentence, a picture, a series of beeps, the dance of a bee, a map, a gesture, a roadsign, the mercury level in a thermometer, the orientation of a speedometer pointer, and so on. I am not saying that such things always have propositional contents, only that they sometimes do. Furthermore, when they do express propositions the nature of these propositions might vary. For example, they might have or lack a certain level of logical structure. But whenever such things are informational they satisfy all five of our conditions and so qualify as propositional.

This should make it fairly clear what the propositional account of sense experience is positively committed to. I would now like to mention some things which it does *not* involve, and also say a little about the specific nature of the propositional contents of sense experiences.

To start with, note that when I say that something is propositional I am commenting on the nature of its representational content, not the nature of the vehicle which bears that content or the nature of the code (if any) in virtue of which it bears that content. This is a crucially important point, and those who do not appreciate it may be inclined to reject the propositional account for completely spurious reasons. The propositional account of sense experience does *not* claim that sense experiences are

verbal, pictorial, diagrammatic, or holographic, even though they might share some representationally significant features with these or other vehicles of representation.

Nor does the propositional account claim that the content of a sense experience can be expressed, or expressed in full, by a sentence or set of sentences – or for that matter by any other vehicles of propositional content. I doubt whether the content of *any* sense experience, no matter how simple, can be expressed exactly by a sentence. Furthermore, it is certain that all the precise details of content of a typically rich visual or aural experience go far beyond the limits of language. An important part of the difference between sense experiences and sentences is that the mode of representation involved in the former is analogue while that involved in the latter is digital.<sup>8</sup> Of course in this paper I must use words, despite their limitations, to get at the contents of sense experiences. In doing so I take it for granted that my readers are willing to use their sensory imaginations to fill in the huge gaps which I leave. With respect to verbal expressibility of sensory contents, all that the propositional account is committed to is this: to the extent that the content of a sense experience can be expressed verbally at all, it is most adequately expressed by propositional constructions such as sentences and clauses.

Without further supplementation, the propositional account does not tell us what kinds of propositions can be expressed by sense experiences. Many propositions obviously cannot be, including logical truths, highly theoretical propositions, unrestricted universal propositions, and propositions about the remote future. On the other hand, all sensory propositions must be indexical, since their truth or falsity is relative to the circumstances of the subject of experience. Furthermore, I suggest that they are always existential propositions or conjunctions of existential propositions. Conjunctions because a sense experience may carry several, perhaps indefinitely many, separable 'pieces of information'. Existentials because, as all my examples illustrate, acceptance of a sense experience always involves existential commitments.<sup>9</sup>

With respect to the kinds of properties which can figure in sensory propositions, common sense, philosophical tradition, and Psychology of Perception tell us a great deal. A visual experience may represent colour, shape, layout, and surface texture, but not odour or Carbon 14 content; an olfactory experience may represent odour, but not colour, shape, or Carbon 14 content. I think, however, that these are contingent facts which depend in part on the normal causes of sense experiences. If the causal order were such that information about the odours of things were carried by light rays reflected from them in such a way that the visual apparatus of some animal were responsive to this information, then that animal might very well have visual experiences of odours.

Finally, as almost all my examples suggest, sense experiences can represent properties, characteristics and kinds other than traditional sensory qualities. We see not only colours, shapes, textures, and layouts, but also earth, water, men, women, birds, trees, tables, and cars. We smell not only odours, but also food and filth. I think that this must be granted in order to make sense of our immediate and automatic behavioural responses to our sense experiences. But how is it possible? In brief, the answer is that the information carried by a sense experience is not an intrinsic property of it, but is relative to the nature, history, and accumulated knowledge of the animal which has it. Very roughly, if a sense experience of a certain general character is normally caused by, say, a predator, and the nature and background of the animal which has it is such that the experience tends to cause it to behave in a way which is appropriate to the presence of a predator, then the experience represents a predator, and no act of inference or interpretation is required for this to be the case.

### III. Some Arguments

I now offer six piecemeal arguments in support of the propositional view. With one exception, all of these arguments are indirect. In other words, they are so-called arguments to the best explanation. Taken individually such arguments can be easy to resist. Their cumulative force should, however, be persuasive.

#### *Argument 1*

This is my most direct argument. In a nutshell, it goes like this. If we reflect carefully on the contents of our own sense experiences, it will soon become evident that those contents are indeed propositional.

Ask yourself what you see *right now*. Perhaps your answer is that you see a sheet of paper. But is that all? Of course not. You see a white, blue-lined sheet of paper half-covered with doodles on top of a closed pink folder which is lying on a scratched brown wooden surface. Near the bottom right-hand side of the paper is a hand which is moving a pencil which is leaving a squiggly mark. Beyond the edge of the brown surface is the top of a chair back, and above it (and behind it) is part of a grey herring-bone sports jacket, apparently being worn by a man. You see all this, and you see that all of it is *right there before you*, not behind you or in the next room. Indeed, you see a great deal more – much, much more than you could ever hope to articulate explicitly. And even if you had the time, words would completely fail you because of their limitations and not your own. But that point is not at issue. What matters is this.

First, your answer is best understood as a partial specification of the

content of your visual experience. It might also happen to specify some things, states of affairs, and events in the outside world which are *objects* of your perception in the sense that they cause your experience in an appropriate way. But this is accidental, for your answer would be the same even if you were dreaming or hallucinating. It is therefore best taken as a guide to content.

Second, it is clear that what it is that your answer specifies must be propositional, for it could not be as adequately expressed in language without the use of sentences and clauses. A mere list of phrases which are not apt for expressing propositions leaves something essential out. Test this yourself. Ask what you now see and answer with this list:

- (1) A sheet of paper; (2) being white; (3) being blue-lined; (4) being half-covered with doodles; (5) being on top of; (6) a pink folder; (7) lying on; (8) a scratched brown wooden surface, . . . and so on.

Bearing in mind that the order in which the items are listed is meant to be of no significance, it is clear that this list leaves something important out which is not left out by your first, sentential answer to the question ‘What do you see?’ What it leaves out is that what is being specified is propositional. It goes without saying that the sentential answer itself leaves other things out, especially precise details of shape, colour, and texture, but in this it is no different from the list, and these other things do not in any case affect my argument.

We have it, then, that your answer is a partial specification of the content of your visual experience, and that what it specifies is propositional. We therefore conclude that your visual experience has propositional content.

Let us now consider a number of possible objections to this line of argument:

*Objection 1:* ‘Your reasoning does not show that the content of my visual experience is *totally* propositional, for the phrase “A piece of paper” itself specifies a significant part of that content without expressing a proposition.’

*Reply:* The propositional account is not committed to the view that every element of the content of a sense experience is propositional, but only to the weaker claim that every such element of content is part of a propositional content. You cannot have a visual experience which just has the content ‘a piece of paper’. Whenever you have a visual experience of a piece of paper, you also experience it as having some properties or other, and as having a certain location relative to its surroundings and to yourself. This brings in as much propositionality as the propositional account requires.

*Objection 2:* ‘The example you discuss is an extremely rich visual experi-

ence, and it is quite plausible that the content of such an experience is propositional. You have not, however, shown that more impoverished visual experiences also have propositional contents. Consider, e.g., the kind of experience a young child might have when looking at an isolated star completely surrounded by darkness which fills the rest of her visual field. Where’s the proposition?’

*Reply:* What does the child see? At the very least, something in the darkness which is shining more or less brightly, which is white (or almost white), and which is, as she might put it, *over there*. Of course I might have left something out here, or got something wrong, but my use of an essentially propositional construction to get at the child’s visual content was no error. You can tinker with the details as much as you please without getting rid of such a construction, and if you decide simply to discard it you will be left with a mere list which leaves something essential out.

*Objection 3:* ‘The propositional account is meant to apply to all sense experiences, not just visual experiences. However, it is not obvious that experiences belonging to every sense modality have propositional contents. Which propositions, e.g., are involved in an olfactory experience of household gas, or a gustatory experience of chocolate ice cream?’<sup>10</sup>

*Reply:* These are good questions, and a fully adequate reply would take more space than I have. But in each case I would want to start by asking the objector to specify the content of the relevant sense experience himself. I would then try to show that his specification, if it is purely nominal, leaves something out which a propositional specification can capture. For example, the content of the olfactory experience of cooking gas is not just ‘Gas’ but ‘There is gas *around here*’.

The case of the gustatory experience of chocolate ice cream seems harder to handle, especially if the subject has never tasted ice cream or chocolate before. But if this is a hard case, it is hard because we don’t know how to specify the content of the experience *at all*, not because we don’t know how to specify it *propositionally*. In fact it seems easier to come up with a propositional specification of an appropriate content than a nominal specification. Perhaps it is not quite right to say that the content is that something in the subject’s mouth is sweet and cold, and has certain other hard to describe properties which are jointly delightful. But this is not bad as a first try, and I doubt that the opposition can do as well.

*Objection 4:* ‘Your argument assumes that we have ready access to the contents of our sense experiences. However, as you have insisted, sense experiences are not normally objects of awareness as well as vehicles of awareness. This suggests that subjects of sense experiences do *not* usually have access to the contents of those experiences. Thus all your argument

shows is that the contents of a very limited class of sense experiences are propositional.

*Reply:* It is true that our sense experiences and their contents are not normally objects of awareness. But there is no special reason to believe that relevant considerations applying to sense experiences of which we are aware do not apply to the others too. Think of the visual experiences you must have had as you drove home from a conference, totally absorbed in a philosophical discussion. I say you must have had them, for how else did you avoid an accident, and how else are we to explain the visual familiarity of the road when some time later you drive on it for only the second time? If in retrospect you try to say something about what the contents of those experiences must have been, I bet you will find that you do better with propositional than with nominal constructions. You did not experience just a road and a car, but a road curving thus and so in front of you, and a car approaching rapidly on the right. Objection 4 gives no reason to reject the generalization involved in my argument.

*Objection 5:* 'Recent work on intentionality by Putnam and others suggests that you are wrong to suppose that we have access to any of our intentional contents.'<sup>11</sup> After all, if I am a brain in a vat, then whatever the content of the visual experience you discuss at the start of your argument, it is not an experience representing a piece of paper before me.'

*Reply:* Maybe, maybe not – I want to duck the general issue. But even if the radical externalists are right, I don't think that this harms my argument. Suppose, e.g., that you are a brain in a vat and that your visual experience represents not a piece of paper on a brown surface but a complex internal state of the super computer which supplies you with neural inputs and responds to your neural outputs. Well, if *that* is what your visual experience represents, then it represents the computer as *being in that state*, and this again is an obviously propositional content.

#### Argument 2

In Philosophy we often talk of sense experiences being either *veridical* or *non-veridical*. These are technical terms, but it is clear from the ease with which beginning students can learn to apply them that they answer to a genuine distinction. But what do they mean? The propositional account of sense experience makes immediate sense of them by treating them as meaning simply *true* and *false*. I cannot think of any alternative which is half as good as this.

#### Argument 3<sup>12</sup>

This argument is simply that the propositional account is needed to make

sense of the application of certain justificational and logical concepts to sense experiences in Epistemology. Almost all Epistemologists, whether they are foundationalists, coherentists, or whatever, want to be able to say such things as this:

These sense experiences *support* (or: *do not support*) this belief;

This set of sense experiences is *incoherent* (or: *coherent*);

These beliefs *cohere* (or: *do not cohere*) with those sense experiences;

These sense experiences are *consistent* (or: *inconsistent*) with those beliefs.

How do we make sense of the possibility of sense experiences standing in relations of support, coherence, and consistency to beliefs and other sense experiences? There is no problem here for anyone who accepts the propositional account of sense experience, for support, coherence, and consistency just are relations which hold between propositions or things with propositional contents. For those who reject the propositional account there is a genuine problem, and I don't see much hope of a satisfying solution.

#### Argument 4

The propositional account should be accepted, according to Argument 4, because it provides the best explanation of the fact that sense experiences are the sorts of things which can be accepted and rejected—something which most Philosophers of Perception and Epistemologists take for granted.

If the contents of sense experiences were *not* propositional, acceptance of a sense experience would have to be a matter of believing or judging that it fits or applies to some appropriate thing or things in the world. But this implies that all sense experiences which are accepted are themselves objects of thought. This is very implausible, for we do not normally think about the sense experiences by means of which we are perceiving even when we accept them. Furthermore, as I remarked earlier, it is possible that brutes and infants lack the capacity to think about their sense experiences. Despite this, they can still perceive that something is the case, which requires acceptance of a sense experience.

On the propositional account these problems do not arise. For if the contents of sense experiences are propositional, then those contents are especially apt for acceptance (or rejection) *in their own right*. It is therefore no longer necessary to suppose that their acceptance requires them to be objects of thought.

But this still leaves open the question of exactly what acceptance of a sense experience amounts to. The answer which I find most attractive is

that it is a matter of the sense experience itself functioning as a belief – of its *being* a belief in virtue of the role it plays or is apt to play in the mental life and overt behaviour of the subject. Briefly, if your experience that *P* disposes you to act in a way which is appropriate to the truth of *P* given your beliefs, desires, and intentions, then you accept that experience. And this, incidentally, helps to make sense of explanations of behaviour in terms of sense experiences – yet another virtue of the propositional account.

It should be emphasized that humans and other animals accept the vast majority of their sense experiences, and that they do so automatically and unthinkingly. Everyday sense experiences generally have the powers and effects of beliefs. The frog's visual experience of a fly hovering nearby automatically causes him to zap it with his tongue. The dog's olfactory experience of raw meat automatically causes him to run to the kitchen to beg for some. My aural experience of the telephone ringing automatically causes me to go and answer it. It is only when we have special reason to suspect our sense experiences because they do not cohere with our beliefs and other sense experiences that we resist them. It is non-acceptance rather than acceptance which requires the extra work – which requires something more than mere having and its normal concomitants. For what non-acceptance involves is the isolation of the sense experience from its normal connections and the suppression of its normal effects. It is no doubt because of this that we are more apt to be aware of sense experiences which we do not accept than of those which we do accept.

#### *Argument 5*

My next argument is that the propositional account of sense experience is needed to make sense of current theory and research in the Psychology of Perception. There are three main approaches to perception in Psychology and Cognitive Science. I claim that all of them presuppose that the contents of sense experiences are propositional.

The first and oldest approach, which goes back to Helmholtz,<sup>13</sup> in effect treats sense experiences as having very impoverished contents in their own right, and attempts to explain our perceptions of the external world, and our perceptual judgments about it, by treating them as the products of unconscious inferences. But where there are inferences there must be premises and conclusions, and premises and conclusions are always propositional. Thus sense experiences, the ultimate premises of these alleged inferences, must themselves have propositional contents.

The second approach has its roots in Gestalt Psychology and achieves its most sophisticated form in the work of J. J. Gibson, who describes it as 'the ecological approach to perception'.<sup>14</sup> The central thesis is that the biological function of perception is the non-inferential pick-up of eco-

logically significant information from the environment. Thus in the basic case of normal perception, animals extract information relevant to their survival and well-being from the environment without drawing any inferences. Practitioners of this approach are mainly concerned with the question of how such information is 'specified' in the media of perception (e.g. ambient light and air) in such a way that it is accessible to the senses. They are not usually concerned with the *mechanisms* of perception, no doubt because they associate such a concern with the inferential approach. But this is an unnecessary error, for the operations of these mechanisms are not inferences or perceptual processes, but sub-perceptual processes. Furthermore, coming to grips with them may lead to greater understanding of how ecologically significant information is specified in perceptual media and extracted by perceivers.

I have said quite a bit about the ecological approach because I think that it is essentially right. However, the crucial point is simply that the approach presupposes that sense experiences, the vehicles of perception, are *informational*. This is just as claimed by the propositional account.

The third and most recent approach to the Psychology of Perception is the information-processing approach which is especially favoured by workers in Artificial Intelligence.<sup>15</sup> The basic aim is to specify non-inferential information-transforming processes which, when applied in the appropriate order to input representations such as retinal images (which are taken to have very impoverished contents), eventually yield full-blown perceptual representations of the world. It is not clear to me where sense experiences are meant to fit in, if at all. If, as I think, they are best identified either with final outputs or with complexes of inputs, processes and outputs, then it turns out that the processes concerned are sub-perceptual. In that case there is no reason why the research results of practitioners of the information-processing approach should not be assimilated by the ecological approach. However that may be, it is clear that the information-processing approach does take it for granted that perceptual and sub-perceptual representations are informational. In other words, they have propositional contents.

#### *Argument 6*

My final argument in favour of the propositional account is that it enables us to accommodate so-called contradictory sense experiences in a straightforward and satisfying way. Here are three well-known examples of the sorts of experiences I mean:

*Example 1:* You are a subject in a psychological experiment and are viewing a cunning wooden construction through a specially located peephole. You have a visual experience of a cubical wooden frame in

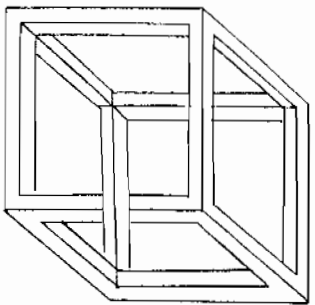


Figure 1

which the bottom, rear horizontal strut passes in *front* of the right, front vertical strut, as illustrated by Figure 1.

*Example 2 (The Waterfall Illusion):* If you stare at a waterfall for a minute or so and then immediately fixate on a nearby object such as a rock, you are likely to have a visual experience of the object's moving upwards while it remains in exactly the same place.

*Example 3:* Viewing three very similar colour samples, *A*, *B*, and *C*, you may have a compound visual experience which includes visual experiences of *A* and *B* being the same colour, *B* and *C* being the same colour, and *A* and *C* being different in colour.

Sense-datum accounts of sense experiences and their contents have great difficulty handling such experiences. This is most easily seen in the case of Example 3. On a standard sense-datum theory this case would involve the sensing of three sense data,  $S(A)$ ,  $S(B)$ , and  $S(C)$ , such that  $S(A)$  and  $S(B)$  are literally the same colour,  $S(B)$  and  $S(C)$  are literally the same colour, and  $S(A)$  and  $S(C)$  are literally different in colour. This is a logically impossible situation.

The sense-datum theorist is therefore left with two undesirable options. One is to fly in the face of reality and deny the possibility of contradictory experiences. I don't think that this is an acceptable way out.

The sense-datum theorist's other option is to sacrifice her view that the most basic contents of sense experiences are satisfied by the sense data involved. But this seems to be an absolutely central element of her position, for it is merely a generalized statement of familiar claims such as these:

Someone who has a visual experience of a yellow circle is aware of a visual sense datum which is *itself* a yellow circle;

Someone who has a gustatory experience of something very sweet is aware of a gustatory sense datum which is *itself* very sweet; . . . and so on.

Of course the sense-datum theorist does not want to say this sort of thing with respect to richer sense contents such as 'There is a man standing in front of a truck over there', for she does not want to populate the world of sense data with men and trucks as well as sensory qualities such as colours, shapes, and smells. This is why I formulated my generalization of the sorts of claims I have just mentioned by saying that the sense-datum theorist holds that *the most basic contents* of sense experiences are satisfied by the sense data involved.

If she admits contradictory sense experiences the sense-datum theorist must sacrifice this principle. This means that she can no longer reduce the basic contents of sense experiences to properties of the sense data which they allegedly involve. One wonders what alternative account of content she has in the offing, and whether sense data need figure in it at all.

The propositional account of the contents of sense experiences, in contrast to the sense-datum account, has no problem whatever with the possibility of contradictory experiences. In terms of the propositional account they are simply experiences with propositional contents which are quite literally contradictory. In the case of the waterfall illusion, e.g., the crucial part of the content of the experience is just that a certain object is both moving upwards and remaining in the same place. Of course any such experience must be false because what it represents is impossible. That is why anyone who has such an experience will reject it immediately. But the fact that a sense experience represents something impossible does not mean that the experience itself is impossible. It is indeed no less possible than the statement that something is both moving and standing still. For in neither the case of the experience nor the case of the statement does the mere possession of a contradictory propositional content require the existence of a contradictory state of affairs in the world, or in anyone's mind.

That completes my final argument in favour of the propositional account of sense experience. There is much more evidence which supports it, but it is time to rest my case.<sup>16</sup>

#### NOTES

1 See, e.g., David Armstrong, *A Materialist Theory of Mind* (London: Routledge, 1968), chs. 10 and 11; Hector-Neri Castañeda, 'Perception, Belief, and the Structure of Physical Objects and Consciousness', *Synthese* 35 (1977), pp. 285–351; Romane Clark, 'Sensuous Judgments', *Notas* 7 (1973), pp. 45–56, and 'Sensing, Perceiving, Thinking', in E. Sosa (ed.), *Essays on the Philosophy of Roderick M. Chisholm: Grazer philosophische Studien* 12 (1981), pp. 273–95; J. Christopher Maloney 'Sensuous Content', *Philosophical Papers*

- 15 (1986), pp. 131–54; Christopher Peacocke, *Sense and Content: Experience, Thought, and their Relations* (Oxford, Clarendon Press, 1983); and John Searle, *Intentionality* (Cambridge University Press, 1983), chs. 1, 2, and 4.
- 2 Some of the arguments to be developed are mentioned more briefly in my 'Perceptual Representation', *Proceedings of the Aristotelian Society* 87 (1986–7), pp. 91–106, which also outlines a comprehensive theory of perception in which the propositional account of sense experience plays an essential part. Some aspects of this theory are developed in 'Content and Causation in Perception' (typescript), which complements the present paper.
- 3 See Thomas Nagel, 'What is it Like to be a Bat?', *Philosophical Review* 83 (1974), pp. 435–50.
- 4 Here I agree with Peacocke (op. cit., ch. 1) and disagree with Armstrong (loc. cit.).
- 5 This account of the relevant sense of 'representation' is due to Fred Dretske. See his *Explaining Behaviour: Reasons in a World of Causes* (Cambridge, Mass.: MIT Press/Bradford Books, 1988), ch. 3.
- 6 This point is expressed in a slightly roundabout way in order to ensure that logical truths, contradictions, and thoughts/statements which are subject to truth-value gaps in virtue of presupposition failure all fall within the realm of the propositional.
- 7 More accurately, it represents a possible state of affairs *as obtaining*. See my paper, 'Against the Power of Force: Reflections on the Meaning of Mood', *Mind* 95 (1986), pp. 361–72.
- 8 For an account of the distinction between analogue and digital coding, see Fred Dretske, *Knowledge and the Flow of Information* (Oxford, Basil Blackwell, 1981), pp. 135–41.
- 9 The supposition that sense experiences have existential contents also has theoretical attractions, e.g. it allows for an attractive account of the difference between thing perception (perceiving  $x$ ), event perception (perceiving  $x$  F-ing), and state of affairs perception (perceiving that  $P$ ). See 'Content and Causation in Perception', op. cit., pp. 9–10.
- 10 Perhaps a slightly more challenging case is that of an aural experience of the first few seconds of a piece of music. However, although it is a bit more complicated and would take longer to discuss than the case of the gustatory experience of chocolate ice cream, I do not think it introduces any problems which are not already raised by this case.
- 11 See, e.g., Hilary Putnam, *Reason, Truth and History* (Cambridge: Cambridge University Press, 1981), ch. 1.
- 12 Here I am indebted to Ernest Sosa and John Greco.
- 13 See H. von Helmholtz, *Treatise on Physiological Optics*, vol. III (New York: Dover, 1962), esp. pp. 1–35.
- 14 See James J. Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin, 1979).
- 15 A good example of this approach is to be found in J. Marr, *Vision: A Computational Investigation into the Human Representation and Processing of Visual Information* (San Francisco: W. H. Freeman, 1982).
- 16 I am grateful to a number of people for discussion and correspondence about my views on perception, including William Alston, Romane Clark, John Greco, John Heil, Jaegwon Kim, Mark Leon, David Lewis, Christopher Maloney, Jim van Cleve, and especially Ernest Sosa. I am also grateful to the Human Sciences Research Council for a Senior Researcher's Grant, and to the University of the Witwatersrand for University Council Overseas Fellowship and a year's study leave in 1987. The Human Sciences Research Council requires me to make the following declaration, which I am pleased to do: 'The financial assistance of the Institute for Research Development of the Human Sciences Research Council towards this research is hereby acknowledged. Opinions expressed in this paper and conclusions arrived at are those of the author and do not necessarily represent the views of the Institute for Research Development or the Human Sciences Research Council.'

Received 24 November 1989

Michael Pendlebury, Department of Philosophy, University of the Witwatersrand, P. O. Wits, Johannesburg, 2050 South Africa