

7 *Visual qualia and visual content*

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Many philosophers take it to be evident that visual experiences have, over and above their representational contents, intrinsic, introspectively accessible properties in virtue of which they have those contents. Such properties, which are held to ground the subjective character or phenomenal 'feel' of the experiences, I shall call 'visual qualia'. Many an argument there has been about whether qualia, visual and otherwise, can be accommodated within a physicalist view of the mental or whether they are special, irreducible properties. I have come to think that at least as far as visual experience is concerned these arguments are badly misguided. I now believe that there are no visual qualia.¹ So the question as to whether they are physical or irreducible simply does not arise.

This position will undoubtedly strike those (including my erstwhile self: Tye 1986; Tye 1989, chapter 6) who have engaged in debate about the nature of qualia as puzzling indeed. Isn't it just *obvious* from introspection that there are visual qualia? Surely the only real question, many will say, concerns the *status* of such qualia. Challenges to their existence are no more worthy of serious consideration than challenges to the existence of tables and chairs. In what follows, I shall try to show not only that no good reasons have been adduced for believing in visual qualia but also that, upon proper reflection, the most natural view is that there are none.

The paper is divided into three sections. In Section I, I say some more about what sorts of properties of visual experience visual qualia are

¹Actually I hold the broader view that there are no perceptual qualia, since I believe that the arguments I give below may be extended *mutatis mutandis* to the other senses. The outright rejection of qualia, both perceptual and nonperceptual, is defended by Dennett 1988; also by Harman 1989. I am sympathetic with the general views expressed in these articles (and in several places I am indebted to Harman's discussion in particular) but there are many aspects of each with which I disagree (e.g., I do not wish to deny that there are pain qualia).

supposed to be and what it is I am committed to in denying their existence. In Section II, I discuss a variety of arguments and examples that purport to show that there are visual qualia. Finally, in Section III, I make some brief comments on the overall significance of my attempt to account for visual experience without qualia.

I

Consider a painting of a tiger. Viewers of the painting can apprehend not only its content (i.e., its representing a tiger) but also the colours, shapes, and spatial relations obtaining among blobs of paint by virtue of which it has that content. It is sometimes supposed that being aware or conscious of a visual experience is like viewing an inner picture. So, e.g., on this conception of vision, if I train my eyes on a tiger in good light, I am subject to a mental picture-like representation of a tiger, introspection of which reveals to me both its content and its intrinsic, nonintentional features by virtue of which it has that content. These intrinsic, nonintentional features are not literally colours and shapes of parts of my mental quasi-picture, as in the case of a real picture. After all, it would obviously be absurd to suppose that parts of my brain are orange and black striped when I see a tiger and it is surely no less absurd to suppose that parts of my soul are. So whether visual experiences are physical or not, even on a pictorial conception, their introspectible, intrinsic properties are not colours and shapes.

Anyone who believes that there are visual qualia must at least believe that visual experiences are like pictures to the extent that they have intrinsic, nonintentional features which are accessible to introspection and by virtue of which the experiences represent what they do.² In denying that visual experiences have qualia what I am denying is that there are any intrinsic, nonintentional features of which the subjects of the experiences can be aware and by virtue of which the experiences have their contents. This is not to say, of course, that the contents of the experiences are not themselves introspectible. Nor is it to say that visual experiences do not have intrinsic, nonintentional features. If, as is widely believed, visual experiences are

²By virtue of which' here does not mean *solely* by virtue of which. No-one holds that the content of a visual experience is completely fixed by its qualia just as no-one holds that the content of a picture is completely fixed by the colours and shapes of its parts.

neural items, they will certainly have intrinsic physico-chemical properties.³

The rejection of visual qualia is *not* tantamount to a rejection of the view that there is nothing it is like for the subjects of visual experiences. On the contrary, the view, at least as I accept it, is that what it is like to have a visual experience (what I earlier called the 'subjective character' of the experience) is determined by aspects of its representational content.⁴ So, I maintain that any two visual experiences that are alike in all their intentional properties are alike in their subjective characters. To refute my position it suffices to specify a clear counter-example to this generalization. I know of no such counter-examples. In the next section I shall consider a variety of putative counter-examples together with a number of other objections.

II

The argument from introspection

Standing on the beach in Santa Barbara a couple of summers ago on a bright sunny day, I found myself transfixed by the intense blue of the Pacific Ocean. Was I not here delighting in the phenomenal aspects of my visual experience? And if I was, doesn't this show that there are visual qualia?

I am not convinced. It seems to me that what I found so pleasing in the above instance, what I was focussing on, as it were, were a certain shade and intensity of the colour blue. I experienced blue as a property of the ocean not as a property of my experience. My experience itself certainly wasn't blue. Rather it was an experience that represented the ocean as blue. What I was really delighting in, then, were specific aspects of the content of my experience. It was the content, not anything else, that was immediately accessible to my consciousness and that had aspects I found so pleasing (see Shoemaker forthcoming). This point, I might note, seems to be the sort of thing G. E. Moore had in mind when he remarked that the sensation of blue is diaphanous (see Moore 1922, p. 22). When one tries to focus on it in introspection one cannot help but see right through it so that what one actually ends up attending to is the real colour blue.

There is another rather different way in which a straightforward appeal to introspection might be made on behalf of qualia. The visual experience I

³In my view, subpersonal processing of (some of) these introspectively inaccessible properties plays a role in the awareness of content.

⁴This is to oversimplify a little. See my discussion of blind 'sight' in Section II below.

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had that day in Santa Barbara, as I stood entranced by the colour of the sea, was, to my consciousness, very similar to a colour photograph I might have taken of the same scene. My experience, then, was a picture-like representation of the sea, and my awareness of it was something like my viewing a picture. Since, as I noted in the last section, pictures evidently have accessible intrinsic qualities by virtue of which they represent the world, so too, by analogy, do visual experiences.

The most obvious problem with this appeal is that it is not at all clear that my visual experience, while viewing the ocean, was *really* similar to a colour photograph of the ocean. The only undeniable similarity here is between my experience and the experience I would have undergone had I viewed an appropriate photograph. The fact that these experiences are similar shows nothing about the way in which their contents are encoded. What I deny, then, is that the *format* of visual representations – the way in which they encode their contents – is given in introspection. What introspection reveals are simply aspects of the contents themselves.

The second objection I have is simply that even if visual experiences are, in an important sense, picture-like, it evidently does not follow that they have qualia. One could hold, e.g., that visual experiences have intrinsic qualities by virtue of which they represent while denying that these qualities are introspectively accessible (see Harman 1989). Such a position still permits the possibility that visual experiences are picture-like, e.g., with respect to the representation of spatial relations.⁵ But it leaves no room for qualia.

The argument from hallucination

Suppose that Paul hallucinates a pink square object. Then there is something that Paul hallucinates. But what Paul hallucinates is not a real pink, square, physical object – Paul, after all, is hallucinating not seeing. So what Paul hallucinates must be a mental object, an idea or an appearance. Now mental objects are not literally coloured nor do they literally have shape. So the terms 'pink' and 'square' in application to what Paul hallucinates must pick out special properties of which Paul is directly aware. These properties are qualia. Since seeing can be indistinguishable from hallucinating, visual experiences generally relate their subjects to mental objects, the intrinsic,

⁵In something like the manner suggested by Stephen Kosslyn for mental images. For a summary of Kosslyn's views here, see Tye 1988 and Tye 1991.

introspective properties of which are responsible for the subjective character of the experiences.

I lack the space to comment on all that is wrong with this argument. When Paul hallucinates in the above case he has an experience of a pink square object. This experience has content – it represents a pink square object. *There is*, then, a definite content to Paul's hallucinatory experience. But there is no object, mental or otherwise, that Paul hallucinates. Furthermore the fact that Paul's experience has a certain content no more requires that there really be a pink square object than a picture's representing a three-headed monster, say, requires that there really be any monsters.

Consider the following parallel. Paul wants a blue emerald to give to his wife. There are no blue emeralds. It does not follow that Paul wants the idea of a blue emerald to give to his wife. That he already has. What he wants is that his wife be given a blue emerald (by him). His desire, then, is the desire it is in virtue of its having a specific content. When Paul reflects upon or introspects his desire what he is aware of is this content rather than any peculiar qualities of a special mental particular upon which his desire is directed. Likewise when Paul hallucinates a pink square what he introspects, I maintain, is the content of his hallucinatory experience. This, it seems to me, is the common-sense view. The idea that the terms 'pink' and 'square' in the context 'Paul hallucinates a pink square' stand for special, phenomenal qualities of which Paul is aware and hence have entirely different meanings from those they have in, say, 'The piece of glass is pink and square' is, on the face of it, very strange indeed. The argument from hallucination does nothing to make this idea palatable.

Visual qualia without visual content

Here is a related argument. Suppose you look at a bright light and turn away. You have an after-image that is red and round, say. In this case you are subject to a visual experience but your experience has no representational content. What it is like for you, then, cannot be determined by aspects of the content of your experience. Rather it must be due to visual qualia (see Jackson 1976).

It seems to me no more plausible to take the terms 'red' and 'round', as they apply to an after-image, as denoting intrinsic qualities of the image than it is to take the terms 'loud' and 'high-pitched', as they are employed in connection with the graphical representations of sounds, as denoting

intrinsic qualities of oscilloscope readings. People who work with such readings frequently use terms like 'loud' and 'high-pitched' in application to the readings themselves. (This example is due to Ned Block 1983, pp. 516–517.) It is obvious that in this usage what the terms really mean are 'represents loud' and 'represents high-pitched' respectively. Analogously it seems to me that what the terms 'red' and 'round' signify, in application to an after-image, are representational properties of the after-image experience. One who has a red, round after-image is subject to a visual experience produced by looking at a bright light, the content of which is that something – typically a region of space – is red and round. There is, then, I claim, a definite content to the visual experience after all.

What it is that Shoemaker likes

Sydney Shoemaker presents an interesting argument for the existence of gustatory qualia (see Shoemaker forthcoming). Although my concern is with visual experience, I shall consider Shoemaker's argument since it applies *mutatis mutandis* to the visual case.

Shoemaker tells us that he likes the taste of Cabernet Sauvignon wine. This, however, is not all that he likes when he sips the wine. For the taste is some chemical property of the wine – some combination of esters, acids, and oils – and this chemical property could be detected visually with suitable laboratory equipment. In *these* circumstances using his visual sense, Shoemaker opines, he wouldn't like the taste. What, then, is it about the taste that he really likes? Well, perhaps it is the fact that he has a gustatory experience of that taste, i.e., an experience in a certain sense-modality that represents the relevant chemical property. Shoemaker concedes that he does like having such experiences and that his liking them is crucial to his liking the taste. But what he likes about them, he insists, is not that they have a certain content (this, he thinks, is established by the visual case above in which he has visual experiences with the same content) nor that they are produced by certain sense-organs. Rather, according to Shoemaker, what it is he likes about those experiences is what it is like to have them, in other words, he claims, their qualia.

One way of attacking the above argument is to try to show that it requires an illegitimate substitution of terms within an intensional context. Suppose that I am drinking Cabernet Sauvignon and that I react in the same way as Shoemaker. I might state my satisfaction as follows:

(1) What I like about these experiences is that they represent this taste.

If (1) is taken to assert that what I like about certain experiences and a certain taste is that the former represent the latter then Shoemaker is justified in rejecting (1) for his own case on the grounds that he finds the relevant taste unappealing when presented visually. (Assuming that the taste is indeed a chemical property of the wine. I am prepared to grant this assumption *arguendo* but it is contentious.)

(1), however, may also be taken to be referentially opaque with respect to the occurrence of 'this taste'. And if it is so taken then Shoemaker's appeal to the visual unattractiveness of the taste is irrelevant. That such an interpretation of (1) is possible is evidenced by examples such as the following: Oedipus, after having decided to marry his mother without knowing who she was, might have said truly

(2) What I like about my forthcoming marriage is that it will unite me with this woman.

Clearly (2) would be transformed into a falsehood by the substitution of 'my mother' for 'this woman'.

Shoemaker concedes that this reply to his argument is a reasonable one. Nonetheless, a question arises as to how (1) is to be understood under a referentially opaque reading of 'this taste'. For, as Shoemaker certainly realizes, if qualia are to be avoided, (1) had better not be taken to assert that what is liked about the relevant gustatory experiences is that they represent the taste of Cabernet Sauvignon via their having certain qualia (see Shoemaker forthcoming).

How, then, is (1) to be understood? This question is best answered in the context of my second criticism of Shoemaker's argument, which is that he fails to rule out a further possible alternative account of what it is that he likes about his gustatory experiences while drinking Cabernet Sauvignon. Granting now that what he likes about those experiences is not just their content – this, by the way, is not obvious even putting aside the point above since there will inevitably be a number of straightforward differences in content between the visual and gustatory cases (e.g., in the former the relevant chemical property will be represented as being instantiated outside the mouth some distance away from Shoemaker's body) – and granting also that what he likes is not just that the experiences are produced by certain

sense-organs, still it does not follow that what he really likes here are gustatory qualia. For it seems to me reasonable to claim that what Shoemaker likes about the experiences is that they are gustatory experiences having a certain content. It is this package of content plus species which he finds so appealing – the presentation of a certain content in a certain mode of experience. In proposing this alternative I am assuming that a sufficient condition for an experience's being gustatory is that it have an appropriate functional role.⁶ Of course, this functional role is not given to one in introspection. Introspection, I maintain, reveals nothing about the inner nature of the property of being gustatory. (Just as hearing reveals to one nothing about the nature of sound, for example.) It merely informs one that the property is being tokened just as, for example, it sometimes informs one that the properties of being a thought or being a desire are tokened.

We are now in a position to specify what it is that (1) asserts, when 'this taste' is read opaquely, without appeal to qualia. In my view, (1) may be taken to say that what I like about certain experiences is that they represent a certain taste gustatorily, that is, that they are gustatory experiences representing that particular taste.

Shoemaker (in personal correspondence) rejects this proposal of mine on the grounds that 'the way Cabernet Sauvignon tastes to me might change in such a way that, once I have accommodated to the change, my Cabernet Sauvignon-produced gustatory experiences have the same representational content as my earlier Cabernet Sauvignon-produced gustatory experiences did but are ones I find very unpleasant – and this might happen without my ceasing to like the way Cabernet Sauvignon *now* tastes to me'. I am not persuaded by this reply, however. If the way Cabernet Sauvignon tastes to me changes, the gustatory experiences it produces in me will, I claim, represent it as having a *different* taste from the one it had earlier. So, contra Shoemaker, there *will* be a change in the intentional content of my gustatory experiences. (For more on alleged cases of qualia inversion, see the example of the Inverted Spectrum discussed below.)

The conclusion I reach, then, is that the Cabernet Sauvignon example can be handled without admitting that gustatory states have qualia.⁷

⁶In my view, this functional role can only be fully specified by a *posteriori* scientific investigation. I should add here that Shoemaker does quickly reject the view that what he likes is a combination of the content of the relevant experiences and their being produced by certain sense-organs. This view is similar to my proposal, but it is one that I too reject.

⁷In fairness to Shoemaker, I should note that he does not himself view the example as decisive. See his comments in Shoemaker forthcoming.

Blind 'sight'

Albert is a very remarkable man. He is blind and he has been so since birth. Nevertheless when he faces objects and concentrates fiercely, thoughts pop into his head – he knows not where they come from – about the visual properties and relations of the objects. These thoughts are so detailed that *content-wise* they are just as rich as the visual experiences sighted people have in the same circumstances. Indeed were one to pay attention merely to the contents of Albert's thoughts, as expressed in his verbal descriptions of what is before him, one would be convinced that he is seeing. But Albert has no visual experiences. For Albert there is experientially no difference between his thoughts on such occasions and his thoughts when he ruminates on mathematics or art or life in general. In each case thoughts just occur and he is introspectively aware of no more than the contents of his thoughts. There is, then, an enormous felt difference between Albert and his sighted fellows at the times at which Albert seems to be seeing. This difference is one that Albert himself would come to appreciate in detail were he to gain sight. It is a difference that can only be explained on the assumption that Albert's inner states lack visual qualia.⁸

Not so. There is another explanation. In my view, what introspection tells me when I see something is not only the content of my visual experience but also the kind of experience it is. The crucial difference between Albert and myself when we face the same scene is that I am introspectively aware that I am undergoing a *visual experience* with a certain content whereas Albert is introspectively aware that he is undergoing *thoughts* with that content. This difference is a felt difference – it is given in introspection – and it is why I, on the basis of my experience, believe that I am seeing something whereas Albert does not. What makes my experience a visual experience is not, I maintain, its having certain visual qualia. After all, there is surely no short straightforward list of the relevant qualia even if there are such entities as qualia. The property of being a visual experience is not itself classifiable as a visual quale either. For one thing, it is certainly not a property in virtue of which its tokens have their contents; for another, in my view, ontologically it is on a par with the properties of being a thought and being a desire. What is sufficient for my experience to be a visual experience is, I believe, that it have the

⁸A case like that of Albert was suggested to me in conversation by Stephen Stich.

right functional role.⁹ Albert has no inner states that token *this* functional role but if he gains sight he will, and thereby he will come to appreciate what it was he lacked before.¹⁰

What, I think, the case of Albert does show is that the remarks of G. E. Moore I mentioned earlier about the visual experience of blue being diaphanous are in one respect inaccurate. When one introspects this experience one is aware not only of the real colour blue upon which it is directed but also of the fact that it is a visual experience. This is why in reporting what one is introspecting one will say that one has a *visual experience* of blue. Were qualia presented to one on such occasions there would surely be words to describe them. But our reports cite only the contents of our inner states and their species. Qualia are never mentioned.

The inverted spectrum

Tom has a very peculiar visual system. His visual experiences are systematically inverted with respect to those of his fellows. When Tom looks at red objects, for example, what it is like for him is the same as what it is like for other people when they look at green objects and vice versa. This peculiarity is one of which neither he nor others are aware. Tom has learnt the meanings of colour words in the usual way and he applies these words correctly. Moreover his nonlinguistic behaviour is standard.

Now when Tom views a tomato, say, in good light his experience is phenomenally, subjectively different from the experiences you and I undergo. But his experience has the same representational content as ours. For his experience is the sort that is usually produced in him by viewing red objects and that usually leads him to believe that a red object is present. So he, like you and me, in viewing the tomato has an experience that represents the tomato as *red* (see Shoemaker 1975; Churchland 1984, pp. 39–40). The only way that Tom's experience can be subjectively different from yours and mine, then, is if it has a different visual quale. The intrinsic phenomenal quality in virtue of which his experience represents the tomato as red cannot be the one in virtue of which our experiences represent it as red. Rather his

⁹As in the earlier case of the property of being gustatory, a full specification of the relevant functional role is a matter for scientific psychology. Aspects of this role depend, I believe, on visual experiences having a special format (which is itself, of course, a matter for scientific investigation).

¹⁰Knowing what it is like to see things requires that one undergo visual experiences. This is why Albert doesn't know what it is like to see.

is the one in virtue of which other experiences of ours represent grass and leaves, for example, as green.

One might respond to this argument by denying that a behaviourally undetectable inverted spectrum is possible.¹¹ There is another response available, however, that seems to me intuitively very satisfying. Contrary to what is claimed above, I believe that the difference between Tom and the rest of us when he views a tomato is that his experience, unlike ours, represents it as *green*. How is this possible? After all, the content of Tom's experience must be given to him, for the difference is a subjective one. But if the content is given to him then he must be introspectively aware that his experience represents the tomato as green. Unfortunately he is aware of no such thing. He sincerely asserts that the tomato is red and even that it looks red to him. Moreover, as was noted above, his experience is the sort that in him is typically produced by viewing red objects.

The answer, I maintain, is as follows: Introspection leads Tom astray. He forms a false belief about the content of his experience.¹² This content is certainly something of which he is introspectively aware but it is a content which he misclassifies. He takes it to be the content *red* and so he believes, on the basis of introspection, that he is undergoing an experience that represents red. In reality his experience represents green. This representational difference is what is responsible for the subjective difference between his experience and ours. Tom's mistake is due, of course, to the fact that he is unaware of his peculiarity. He does not know that his visual system is producing experiences with atypical contents. He thinks he is normal and he knows that the experience he undergoes viewing the tomato is subjectively like those he undergoes viewing other red objects. So he thinks that his experience represents red.

Perhaps it will be said that I haven't explained how Tom's experience can represent green when it is an experience of the subjective sort that is

¹¹This is the line taken by Gilbert Harman 1989. One problem that confronts such a line is that even if Tom's peculiarity is ultimately behaviourally detectable, it appears that some possible inversions are not, e.g., inversions pertaining to the experiences of creatures who see the world in black, white, and varying shades of grey. See here Shoemaker 1975.

¹²This position, together with an internalist conception of knowledge which requires Tom to cite the belief that his experience represents a red object in any adequate justification of the claim that the tomato before him is red, entails that he does not know that the tomato is red. Indeed, more generally, it entails that he does not know the colour of anything on the basis of vision despite his excellent performance. (I owe this point to Sydney Shoemaker.) Since the conclusion reached here is obviously false, I maintain that the above internalist conception of knowledge must be rejected.

normally produced in him by viewing red objects and which normally produces in him the belief that something red is present. My reply is that his experience is also of the subjective sort that is normally produced in people generally by viewing green objects and that normally produces in them the belief that something green is present. Why should the former fact outweigh the latter in assessing what the content of his experience is? If we wish to pay equal attention to both facts, perhaps the most natural thing to say is that, relative to humans generally, Tom's experience represents green but, tomato, represent red for humans generally, there is, as before, a representational difference between Tom and us upon which to ground the subjective difference.

It is important to realize that I am not implicitly offering a reductive analysis of properties of the type, representing *F* (for group *X*), in my comments above in terms of properties of the type, being of the subjective sort that is normally brought about (in group *X*) by viewing *F* objects etc. Since the relevant subjective sorts are, on my view, themselves properties of the type, being a visual sensation that represents *F* (for group *X*), this would create a vicious circularity. I assume that properties such as representing green (for humans) have a complex causal/relational basis in nature, but I deny that this basis requires for its specification the concept of a subjective sort. This is easily illustrated by reference to the case of Tom.

In my view, visual experiences are constituted by brain states. So, Tom's visual experience, when he views a tomato, has various intrinsic physical properties. Now since I deny that there are visual qualia, I deny that any of these properties are introspectively accessible. But I hold that among them is some property *P* which is standardly tokened in humans generally as a result of their viewing green objects and which is standardly caused in Tom as a result of his viewing red objects. So I hold that Tom's experience has the property of having an intrinsic physical property that is appropriately caused in the relevant populations by both red and green objects. This is sufficient, I claim (in crude, first approximation and ignoring relevant behavioural effects of *P*), for Tom's experience to represent green relative to humans generally and red relative to Tom.¹³

¹³Let me stress that the condition sketched here is *only* intended to be sufficient for Tom's experience to represent these things; it is *not* intended to be necessary. In general, I doubt that illuminating, naturalistic, necessary and sufficient conditions can be given for representational content.

It is important to realize that even given the population relativity of content, on the above approach, the property of representing F (for population X) cannot be identified with any of the intrinsic properties of the experiences that are its tokens. For the former property is both introspectively accessible and F -involving while the latter are neither.

I want now to turn to another version of the inverted spectrum argument for visual qualia. Suppose that there is a species of creatures half of whom have visual experiences that are the inverses of the other half. These differences arise as a result of naturally evolved differences in the retinas of the two groups. Surely, in this case, it is implausible to maintain that when two of the creatures (one from each group) view a tomato in good light one has an experience that represents the tomato as green. But if both creatures' experiences represent the tomato as red then the phenomenal difference in their experiences cannot be accounted for representationally. So visual qualia must be postulated.

Once properties of the form representing so-and-so are taken to be population-relative,¹⁴ this argument loses its force. Both of the creatures' visual experiences represent the tomato as red *but only relative to their own groups*.¹⁵ There is, then, a difference in content. So the inverted spectrum still does not compel us to accept visual qualia.

The same conclusion holds, I maintain, for cases of intra-subjective inversion. If my visual apparatus is systematically tampered with so that objects that earlier looked red to me now come to look the way green objects used to look (and vice versa), my experiences will change from representing those objects as red to representing them as green (and vice versa). In this case, the relevant background population for these attributions of content is myself prior to the operation on my visual system.

Let us now move still further afield from the commonplace realm.

Twin Earth

Jones is watching a cat. On Putnam's planet, Twin Earth, Jones' doppelgänger is watching a creature that looks just like a cat but is genetically and biologically very different (see Putnam 1975). Jones and

Twin Jones are subject to retinal images that exactly match and their brains are in exactly the same physico-chemical states. Intuitively, then, their visual sensations are phenomenally identical. But the contents of their sensations are different. Since Twin Jones has never seen or heard of cats (there aren't any cats on Twin Earth only twin cats) and the beliefs he forms on the basis of his visual experiences are never of the type 'This is a cat', Twin Jones' experience represents not that there is a cat but rather that there is a twin cat present. So the phenomenal sameness obtaining between Jones' and Twin Jones' visual experiences cannot be grounded in a sameness of content. Rather it must be grounded in the experiences sharing identical qualia.

This argument forgets that Twin Jones' visual experience represents much more than just that a twin cat is present. It also represents the location of the twin cat relative to the viewer, its shape, colour, orientation, and a myriad of other surface details. These aspects of the content of Twin Jones' visual experience will also be found in the content of Jones' experience. I maintain that the phenomenal sameness obtaining between their visual experiences is traceable to these shared aspects.

It may seem that if our conception of the phenomenal is one which ties it to aspects of representational content then we must reject the widely held view that subjective, phenomenal states of consciousness supervene on brain activity (as is implicitly supposed in the above Twin Earth argument). The matter is complex, however. The relevant aspects of content, as far as the phenomenal is concerned, are those that pertain to *directly* visible features, e.g., colour and shape. If it is supposed that a visual experience that (relative to normal perceivers) represents red, say, is an experience that bears some complex relation R to normal perceivers and red objects then, on my view, a person who lives in a world without red objects, and whose brain is artificially stimulated so that it is in exactly the same overall brain state as that of a normal human being on earth who is viewing a red object in daylight, will *not* be subject to a phenomenally identical visual experience. But if it is held instead that a visual experience that represents red (relative to normal perceivers) is an experience that, given normal perceivers, would bear relation R to them and red objects were there such objects, then, on my view, in the case just described, the absence of red objects will not generate the same result. So, on the former approach to content, my position requires a rejection of the thesis that physically

¹⁴There are, I might add, any number of properties of this sort. Consider, e.g., the property of being the loser.

¹⁵In making these remarks as well as the earlier ones on population relativity I am influenced by David Lewis 1980. I do not endorse Lewis' combination of functionalism and type physicalism, however. For criticism of Lewis here, see Tye 1983.

identical brains must support phenomenally identical states of consciousness; but this is not required on the latter approach.

Which of the two approaches is to be preferred? It is evident that the latter will not do for *all* aspects of the content of visual experience. For, as applied to the earlier case of Jones, it entails the falsehood that Jones' experience represents not just a cat but also a twin cat.¹⁶ The former, however, seems intuitively too restrictive. Furthermore, both approaches make the dubious preliminary assumption that naturalistic necessary and sufficient conditions can be stated for the case of a visual experience's representing red. So, I am actually inclined to accept a weaker alternative, namely that a visual experience represents red if and only if it stands in the representation relation to redness, whether or not redness is instantiated, relative to the appropriate perceivers. There is, I believe, a naturalistic sufficient condition associated with this of the sort I sketched earlier; but I do not believe that there is anything stronger. Nothing in the final approach entails that in a world without red objects *no* visual experiences (including those produced by artificial stimulation of the brain) will ever represent red. So I do not see that the phenomenal-neural supervenience thesis is directly threatened by my position.

Peacocke's puzzle cases

In *Sense and Content* (Peacocke 1983), Christopher Peacocke presents a number of ingenious cases designed to show that sensory experiences have qualia or, as he calls them, 'sensational properties'.¹⁷ Peacocke's first case is as follows: Suppose I view two trees of the same size, one twice as close as the other. My visual experience will represent the two trees as being of the same size – assuming, as will normally be the case, that the more distant tree does not really look smaller to me. But there is surely a sense in which the trees look different. This, according to Peacocke, can only be accounted for by supposing that the two trees have a different size in the visual field. And size in the visual field is, so Peacocke claims, a sensational quality or quale.

¹⁶ Assuming, of course, that the internal differences between cats and twin cats do not bear on relation *R* (as seems plausible).

¹⁷ There is one difference between Peacocke's 'sensational qualities' and perceptual qualia. According to Peacocke, sensational qualities are not qualities in virtue of which perceptual experiences have their contents. (Peacocke does not say what the relationship is between sensational qualities and content.) This difference, however, does not make a difference as far as my criticisms are concerned.

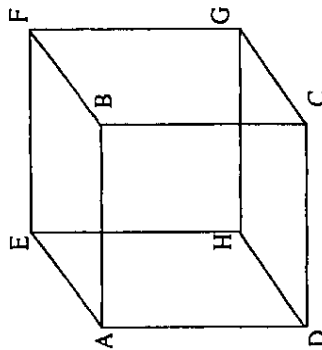


Figure 1

There is another possibility. The reason that the trees look different is, I believe, that it visually appears to me that if the trees were moved into line, the nearer one would completely obscure the other but not vice versa. This, in turn, is because my visual experience represents the nearer tree as being larger from here (the viewing position), that is, it represents it as subtending a larger visual angle. The difference Peacocke alleges to be due to different qualia, then, is, I maintain, due to aspects of the experience's representational content.

Peacocke rejects this proposal on the grounds that experiences like mine can be had by people who lack the concept of a visual angle. If by this Peacocke means to assert that people who lack the linguistic capacity to apply correctly the term 'visual angle' or who have never heard of the term can have experiences like mine then we may quickly agree. But it surely does not follow that *these* people cannot be subject to experiences that represent certain facts about visual angles. If Peacocke has something else in mind by the concept of a visual angle then he must *show* (a) that lacking the concept precludes a person from undergoing a visual experience that represents anything about visual angles and (b) that lacking the concept does not preclude a person from undergoing an experience like mine. Without such a demonstration it seems to me that Peacocke's first case is indecisive.

Peacocke's second case appeals to a contrast between binocular and monocular vision. If I view a situation with both eyes and then close an eye, things will appear different to me. This difference, according to Peacocke, is not representational. The one experience represents things as being just as

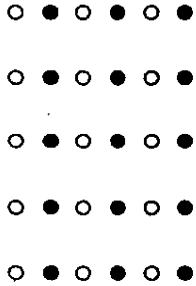


Figure 2

they are represented as being by the other. So the difference must be due to a difference in qualia.

The claim I reject here (not surprisingly) is the claim that there is no representational difference. When I view the situation with both eyes I see a little more of the objects and there is an increase in the determinacy of my representation of object distances. An appeal to qualia is not required.

Peacocke's third example is a case in which a wire cube is seen first as having one face in front of the other and then with the relative positions of the two faces reversed (see Figure 1). Although there is a change in the experience here something in the experience remains the same. This constant feature of the experience is, Peacocke maintains, a sensational quality.

The obvious response to this example is that the experience represents the cube as having a variety of unchanging spatial properties relative to the point of view and that this is really all that remains constant in the experience. For example, both before and after the 'aspect' switch side ABCD is represented as being lower than and somewhat to the left of side EFGH, side AEHD is represented as being level with and wholly to the left of side BFGC, and so on.

Other aspect switches are no more problematic for my position, I might add. Consider, for example, the pattern in Figure 2 (which Peacocke mentions a little later). We may see this pattern either with the dots running from the bottom to the top or from the left to the right. How is this to be accounted for? Answer: There is a difference in content in the two experiences. Each experience represents the pattern as being composed of certain groups of dots. In the one case the groups form rows while in the other they form columns. It is because the experiences represent the pattern as falling into these groups that the perceiver will judge the pattern similar to Figure 3(a) in the former instance and similar to Figure 3(b) in the

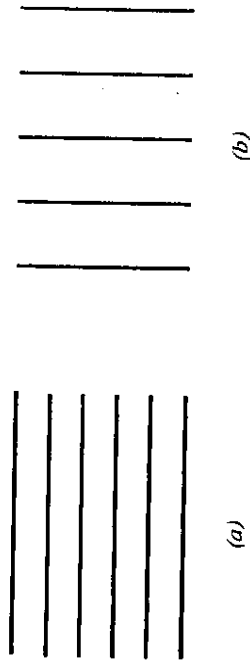


Figure 3

latter. The overall conclusion I reach, then, is that there is no need to postulate visual qualia in order to account for the subjective aspects of our visual experiences. It suffices to admit that such experiences are visual and that they have contents. Qualia may be eliminated.

III

Why does it matter whether visual qualia can be avoided? The answer, I suggest, is that with the rejection of visual qualia certain aspects of visual experience become less puzzling. Let me explain.

Any adequate account of the subjective or phenomenal aspects of our visual states ought to yield an understanding of why those states have those aspects. Why, for example, does having a visual experience of blue 'feel' the way it does and not some other way? It is hard to see how any satisfying answer can be given to this question if the phenomenal aspects of such experiences derive from visual qualia.

Suppose, e.g., that there are visual qualia and that such qualia are non-physical and irreducible. Then the 'felt' aspect of the visual experience of blue is a matter of its having a special, nonphysical property. It is the presence of this property that gives the visual experience its distinctive 'feel'. Does this really offer us any enlightenment? Apart from the usual concerns about the emergence and causal role of such properties we may still wonder why the visual experience that has the content blue is associated with this irreducible felt quality rather than some other – why, for example, it does not have the felt quality of experiences that represent red. This surely is an impenetrable mystery.

Suppose now that visual qualia are physically reducible. Then the 'felt' aspect of the visual sensation of blue is a matter of its having a certain physico-chemical property. This is, I think, an improvement on the above alternative – it dissolves the worry about the causal role of qualia, for example – but again it does not begin to explain why the visual experience that represents blue should 'feel' as it does.

On the proposal I have made there is a simple explanation. Introspection tells us that the visual experience that represents blue differs from the visual experience that represents red. This 'felt' difference is, I claim, solely a matter of content. Since the colours represented by the two experiences are different, the experiences themselves are introspectively distinguishable. The reason, then, that the visual experience of blue 'feels' as it does is that it could not 'feel' any other way. The 'felt' aspect simply cannot be divorced from the representational aspect.

The onus now lies with the advocate of qualia. I have tried to show that the rejection of visual qualia is defensible against a variety of objections and that it is not only intuitively satisfying but also well motivated.¹⁸ From the present perspective it is not surprising that debates about the nature of visual qualia have not come to any clear resolution. The disputants in these debates have been trapped by a mistaken picture of visual experience, a picture that has led them to disagreements that lack any real substance.^{19, 20}

¹⁸For a discussion of the relationship between the elimination of visual qualia and the nature of imagistic representation, see Tye 1991, chapter 7.

¹⁹I have been asked whether the views I defend in this paper are incompatible with the basic framework of the adverbial approach to visual experience which I have defended elsewhere (see, e.g., Tye 1989 and Tye 1984). The answer, in brief, is 'No'. Although I speak above as if there are visual experiences, I believe that it is possible to analyse this talk without quantification over sensory objects or events along adverbial lines.

²⁰I would like to thank Justin Brookes, Tim Crane, Jim Hopkins, Terry Horgan, Christopher Peacocke, and Sydney Shoemaker for helpful comments.