Sensory and Perceptual Consciousness

Austen Clark, University of Connecticut

Forthcoming in Blackwell's *Companion to Consciousness*
Edited by Susan Schneider and Max Velmans
April 2006

Asked on the Dick Cavett show about her former Stalinist comrade Lillian Hellman, Mary McCarthy replied, "Every word she says is a lie, including 'and' and 'the'." The language used to describe sensory and perceptual consciousness is worthy of about the same level of trust. One must adapt oneself to the fact that every ordinary word used to describe this domain is ambiguous; that different theoreticians use the same words in very different ways; and that every speaker naturally thinks that his or her usage is, of course, *the* correct one. Notice that we have already partially vindicated Mary McCarthy: even the word "the" cannot always be trusted.

The goal of this chapter is to describe--gingerly--some of the old and intricate familial relations between Sensation, Perception, and Consciousness. Like Hellman and McCarthy, they share a history, and sometimes the tensions in it flare up in vivid ways.

Sensation and Perception

The first contrast is one that is largely avoided by contemporary psychologists, but still found in the philosophical literature. The title suggests a difference between "sensory consciousness" and "perceptual consciousness". What might this difference be? As Ryle (1949) argued, in ordinary language "sensations" are mostly confined to proprioceptive events, such as pains, throbs, gnawings, tickles, cramps, qualms, aches, itches, and so on. But philosophers speak readily of the "sensation of red" or of "color sensations" and treat them as paradigmatic states of consciousness (see Chalmers 1996, 6). This usage perhaps derives from older psychological models, in which every sensory modality was thought to be organized with some initial stages that are "sensory", followed at some point with stages of a more sophisticated kind called "perceptual". So even vision would start with "visual sensations" and proceed through various levels of processing until it arrives at "visual perceptions". Sensations were thought to be "raw", uninterpreted, pre-conceptual mental stuff, while perceptions were states organizing such inchoate elements into representations of determinate content that could underwrite judgements. Some theoretical traditions (such as the introspectionists) added the assumption that trained observers were, or could become, conscious of the elemental sensations, and could delineate their kinds (see Herrnstein & Boring 1965).

This picture of a progression in which perceptions are constructed out of elemental sensations has been mostly abandoned in experimental psychology, and many psychologists now prefer to avoid the term "sensation" altogether, perhaps because of its introspectionist connotations. But the contrast lives on

in philosophical discussion. Even there, the contrast can be divorced from many of the problematic claims of old psychological models (including constructionism, conceptual involvement, and consciousness), so that "sensory" comes to mean something close to "sensor": the registration of information from transducers (see Dretske 1995). On this reading, sensory processes are just the states that come earliest in the series that culminates in perceptual judgements. So what a philosopher calls "visual sensation" a psychologist might call a state of "early vision" or "pre-attentive vision": visual processes that occur before any selections are made by selective attention. The only assumptions from earlier models that remain are that sensory processes are earlier than, and simpler than, perceptual processes. But other than that, there may be no essential difference in their kinds.

Sensation and Consciousness

The assumption that every sensation is a state of consciousness is much more problematic, but also deeply rooted in the etymology of the terms. To be "sensible of" something is, in one sense of the word, to be conscious of it; "insensible" can mean "unconscious". The co-mingled etymology makes the contrast problematic.

To start with the latter term: one useful way to disambiguate two major uses of the word "conscious" is to ask: when we use a sentence frame of the form "*x* is conscious", what are the values over which *x* can range? In one category, the *x's* are creatures; in another they are particular mental states of creatures. In the first sense we saying of an animal or a person, or of some animal-or-person-like entity, that it is conscious, as opposed to unconscious or comatose. David Rosenthal (1997) calls this "creature consciousness"; David Armstrong (1997) called it "minimal" consciousness. It implies that the organism or system is sentient and awake: that it is at least somewhat mentally active, and responsive to its environment, as opposed to being insensible, unconscious, asleep, or comatose.

One connection between sensation and (creature) consciousness seems relatively robust. Creature consciousness is just the presence of some mental processes in a sentient creature. If *S* is a creature that is actually sensing something, then it is clearly sentient; and likewise, it has at least some minimal mental responsiveness. So if creature *S* senses something, *S* is (at that moment) a conscious creature. Sensing things entails creature consciousness.

The much more complicated case involves state consciousness. Is every sensation a conscious mental state? This is quite distinct from wondering whether the creature involved is conscious, since that is already established by its activity of sensing something, yet it does not settle this new question. Even though the creature is (clearly) conscious, only some of its mental states are conscious states, or states of which the creature is conscious. All the others are unconscious. So are sensations always in the first category, or sometimes in the second?

Implicit Perception

In many philosophical dialects, the word "sensation" is read so as to dictate an answer to this question: a creature cannot have a sensation of which it is unconscious. For these philosophers the sensation of red and the sensation of pain serve as paradigm examples of conscious mental states. (In one sense, of course, they clearly are "states of consciousness": they are states that suffice to show their bearer is a conscious creature.) It is fruitless to argue over the language; everyone has Humpty Dumpty's right to use a word however they like, even though unmitigated exercize of that right can make communication difficult.

If we think of sensory processes in the way that psychologists do, it is clear that there can be, and in fact are, sensory processes of whose occurrence the creature in question is not conscious. Psychologists call these episodes "perception without awareness" or "implicit perception": they are episodes in which a person or other creature perceives something without being conscious of what it perceives. Various neuropsychological syndromes provide dramatic illustrations. For example, in "hemineglect" a patient who has suffered a lesion in a particular area of the right parietal cortex will find it difficult or impossible to shift attention to anything on the left side (of space, or of a given object) if there is also something on the right side (see Driver & Vuilleumier 2001). These subjects will (often) ignore the food on the left side of their plate, will not groom the left side of their body, will not draw the numbers on the left side of a clock face, and in general will be unresponsive to stimuli on the left side if there is competition on the right. (The sides switch if the lesion is on the left side of the brain.) Yet this is not a sensory deficit: if there is no competition on the right side, such a patient can describe and respond to the stimulus on the left in a fairly normal way. The loss of sensitivity to stimuli on one side when competition is introduced on the other is called "extinction"; it suggests that the problem in hemineglect is not sensory, but rather an inability to shift attention when there are competing stimuli on both sides. The stimulus on the right side "grabs" attention, and thereafter, the patient cannot shift attention to anything on the left. Yet behaviorally the result is difficult to distinguish from simple loss of sensitivity; the inability to shift attention renders the patient "insensible" to events on the affected side. Even to be able to neglect the left side of the dinner plate (for example), these patients must sense its leftmost edge, so as to locate its centerline. Otherwise, how could their attentional systems know where the "left side" begins? They must therefore sense stimuli to which they cannot shift attention.

Other startling examples of perception without awareness are found in the large literature on the contrast between dorsal and ventral channels in vision. Goodale and Milner (2003) describe a patient, called "DF", who became severely agnosic after an episode of carbon monoxide poisoning. She could not recognize objects visually, could not draw their shapes or indicate their orientation. But if the task shifted from one of description or identification to visual guidance of motion, she could respond well. For example, when asked

to grasp an object whose shape she could not draw or describe, her anticipatory hand movements were appropriate for picking up the particular object. Even though she could not describe or indicate the direction of a slot in a wood frame in front of her, if asked to "post" a letter through the slot she could it do it without fumbling and with few errors. Goodale and Milner suggest that the dorsal channel is intact in DF, and that it is devoted to the visual guidance of movement. It does not contribute directly to a person's awareness of the objects around them. So DF's ability to post the letter shows that she has the sensory capacity to register the orientation of the slot, even though she is not aware of that orientation.

Perception without awareness can also be demonstrated in normal subjects using various experimental paradigms. One needs to show that the subject has picked up information that could only be registered perceptually, but that nevertheless the subject is not aware of what was perceived. The hard part is to show the latter. Paradigms that demonstrate that a stimulus has a "pre-attentive" effect show both that the stimulus has been sensed (because it has an effect) but that at the time of that effect the subject is not aware of it (because it is pre-attentive). The idea is that these effects are demonstrated to occur before any stimuli have been selected by selective attention.

A good example of a preattentive effect is "pop out", which is demonstrated in visual (or other kinds of) search tasks (see Treisman 1998). A target is defined by some feature or combination of features, and varying numbers of distractors are displayed along with the target. The dependent variable is the speed with which the target is found among the distractors. "Pop out" occurs if the target can be found in more or less constant time, no matter how many distractors are present. A unique color cue (one red target among a bunch of green distractors, for example) will "pop out" no matter how many distractors are present; while if the color of the target is not unique, and it determines the target only in combination with some other feature which is also not unique, then finding the target is much harder. In such cases the speed of response is a linear function of the number of distractors, as if each one must be examined in turn.

Pop out shows that the contrast between the target feature and the distractor features is one that can be registered pre-attentively. One of its effects is precisely to guide selective attention, in constant time, to the target. So the pop out of red among many greens shows that the system can register the difference between red and all those greens and use it to guide attention to select the red target. In that brief interval before attention has been directed to the red target, the difference between red and green has been sensed, but the red target has yet to be attended to. It is plausible to think that the subject is not aware of that stimulus until he or she attends to it. So any example of preattentive exogenous direction of attention to novel targets is, at least briefly, an example in which something is perceived but the subject is, at the moment, unaware of it.

Phenomenal Properties

There are many sources of resistance to the suggestion that it is possible for subjects to perceive things, or sense things, of which they are unaware (or unconscious). One of the oldest and most deeply rooted points to a prominent feature of the sensory/perceptual domain: appearances therein do not always correspond to reality. Sometimes things are not as they appear: the shirt in the closet looks dark in this light (before dawn), but is really bright red; the water feels slimy, but is merely full of minerals; the voice seems to be coming from the dummy, but is really produced by the ventriloquist, and so on. The Greek word for "appearance" became "phenomenon", and these examples can all be described as presenting "phenomenal properties" or "properties of appearance" to the hapless percipient. The intuitive tie to consciousness is a simple one: how can the shirt "look dark" unless it looks dark *to* someone, who is furthermore conscious of it as looking dark? It takes some work to understand what these phenomenal properties are, and how they relate to consciousness.

A large part of the interest in phenomenal properties arises because in many cases they are not properties of anything that is perceived. The shirt merely *looks* dark, but in fact is bright red. (This effect is called the "Purkinje shift". Under conditions of low illumination, red things will look much darker than blue things, but then, as the light increases, the red things will come to seem brighter). The apparent darkness of the shirt is not real. So what is it a property of? That is, in that situation what is the *x* if any such that *x* is dark? It certainly seems as if you see one! This has been a puzzle since ancient times, and there are many different lines of response. They bifurcate at the topmost level into two categories: those that agree that there is an entity *x* that has those properties, and those that do not. In the twentieth century the entities *x* alleged actually to have the properties which things merely appear to have were called "sense data". The other line denies that there are any such entities: if the shirt merely *looks* dark, there need not be an entity in the closet, or anywhere else, that actually *is* dark. Instead (says one crowd that hangs out in this group) one is merely representing there to be something dark in the closet, but that representation is a misrepresentation; it is inaccurate, or less than fully truthful ("non-veridical", as philosophers say). The dark appearance is an illusion; it is not real. The fact that one suffers such illusions is part of what has for millennia attracted philosophical interest to the topics of sensation and perception. It shows them to be characterized by "intentional inexistence": the capacity to represent something that is not so.

Ordinary language contains various locutions that invoke or characterize phenomenal properties, and one very useful step forward was to characterize them (semantically) as "verbs of appearance" (see Chisholm 1957). These verbs are found in locutions with forms such as "*x* looks *P*", "*x* appears to be *P*", "*x* feels *P*", "*x* seems to be *P*", and so on, where what characterizes them all is that all such sentence frames can yield true sentences even though *x* in fact is not *P*. It merely looks *P*. We have many such "verbs of appearance", and in all those contexts, *P* is a predicate that characterizes the appearance, and so can be

thought of as attributing a "phenomenal" property in that context. Chisholm used "being appeared-to" as a kind of generic verb of appearance, and turned the predicates into adverbs so as to emphasize the fact that they characterize a manner of being appeared-to. So, when one looks in the closet before dawn, one is being appeared-to darkly. It is a funny way of talking, but it makes the point that "dark" here characterizes *how* the shirt appears, its *manner* of appearance. Adverbs befit manners.

Since the red shirt is brighter than the blue shirt, how is it possible for it to appear to be darker when one looks at it before dawn? Another root assumption is that this feat demonstrates the presence of mentality: intentional inexistence is the hallmark of the mental. So to be appeared-to darkly is to be in a mental state representing there to be a dark thing thereabouts. The situation is in a certain way like those situations in which one sees a shirt that *is* dark: in both one represents there to be a dark shirt in the closet, but only in one of them is that representation veridical. How does one do this? The natural intuition is that darkness characterizes how the shirt seems at the time. But it only *seems* dark if (a) there is someone to whom it seems dark, and (b) that someone is aware of its seeming darkness. Phenomenal properties betoken mentality (because of their intentional character) and hence (on this line) consciousness.

This last step is one that relies on ancient presuppositions, reiterated in the early modern period by Descartes: that in order to be appeared-to, there must a subject to whom the appearance is presented; and that the appearance has a determinate content only if the subject is aware of it as having that content. One might be wrong about how things are, but (on this line) one cannot be wrong about how things seem. The reality of these properties is, then, constituted by the subject's awareness: how they seem to the one who apprehends them is the way they are. If something seems to be *P*, it is only because the subject is aware of it as seeming to be *P*. Were the subject aware of it seeming to be *Q*, then the phenomenal property would be *Q*, not *P*. Phenomenal properties were in this way creatures of consciousness: born of consciousness, and, like dust mites, surviving only under the protective mantle of consciousness. The sole arbiter of their content is the subject who is aware of them, and however they seem to be to that subject is the way they are (see Searle 2004, 111, 135). Descendants of these old premises underwrite the modern claims that "phenomenal consciousness" is a kind of consciousness (see Block 1997); or that phenomenological properties are subjective phenomena that cannot be understood apart from the point of the view of the subject who is conscious of how things appear.

What it is Like *v.* How it Appears

The formulation just mentioned alludes to Thomas Nagel's famous article "What is it like to be a bat?", which is a redolent contemporary source for the idea that phenomenal properties are somehow tied to consciousness. Nagel states explicitly that his target is consciousness: it is consciousness that makes

the mind-body problem interesting, he says, but no available accounts are adequate even to characterize what it is. He offers two proposals. One: the fact that *S* "has conscious experiences at all" *means* that "There is something it is like to be" *S*--something it is like *for S*. (Nagel 1979, 166) Two: that to say "*M* is a conscious state of *S*" is to say "There is something it is like for *S* to have *M*".

Nagel uses the "what it is like" formulation to point to what he calls the "subjective character" of experience. To understand "what it is like for the bat to echolocate" we have to understand something from the "point of view" of the bat. The question concerns what it is like *for* the bat; these phenomena are *pour-soi*, not *en-soi*, he says (Nagel 1979, 168). So the emphasis in "subjective" should be on the word "subject"; subjective features are those that require reference to the point of view of the *subject,* or to what it is *for* the subject. Lycan (1996) usefully dubs these "perspectival" features. Nagel goes on to argue that unless one can adopt, or at least understand, the point of view of the bat, one cannot understand "what it is like to be" a bat; and that the minds of different species might have structures that are sufficiently distinct to preclude this possibility. So, he suggests, there are facts that can only be understood from a particular point of view.

Much of this argument broaches other chapters in this volume. What concerns this chapter is the suggestion that the echolocatory perceptual experiences of a bat have a "subjective" or "perspectival" character; that facts about that experience are facts "for" the subject, requiring reference to the point of view of that subject. In two places Nagel notes that "phenomenological features" of experience are subjective in this sense. (Nagel 1979, 167 and 175, footnote 11). In another article he argues directly that appearances are "irreducibly subjective"; to acknowledge their subjectivity is, he says, to acknowledge "the fact that each is essentially an appearance *to* someone" (Nagel 1979, 207).

The idea is enormously useful, because it could explain why so many people think that phenomenal properties implicate consciousness. "How something seems" seems always to mean how something seems *for* a subject. "Being appeared-to" appears to require a subject to whom the appearances are presented. The appearances have a determinate content only if they have a determinate content for that subject. This is exactly Nagel's "subjective character". So we get from "being appeared-to" to subjective character; and the latter, according to Nagel, is equivalent to "having conscious experience".

The tug of the rhetoric is powerful, but before we are entirely swept away it is wise to stop and take stock. One seemingly minor problem is that "what it is like" and "how it appears" pick out distinct subject matters; the "it" for one cannot be the "it" for the other. Consider the echolocating bat: if we ask what it is like for the bat to have its echolocatory experiences, we confine the question to those experiences of which the bat is conscious. The question is how the bat apprehends certain of its own mental states: what it is like for it to have those mental states. (This was Nagel's point: the locution picks out the

conscious mental states. With this we can agree.) But if we switch to "how it appears", and ask for example how a Luna moth appears to the bat, the "it" is no longer a mental state of the bat, but a moth that it perceives. Perhaps that moth presents a particular appearance to the bat ("it" appears a particular way) only if the bat is conscious of one of its own mental states, but the two locutions describe distinct existences, so it will take some argument to show a necessity in their connection.

The point is often obscured by the tendency to read "what it is like" to mean "what it resembles", so that "what it is like for the bat to echolocate a Luna moth" is read as "what the bat takes the Luna moth to resemble". This latter formulation *is* one way to characterize how the moth appears to the bat. But Nagel explicitly denies this interpretation of subjectivity: "what it is like" should *not* be read as "what it resembles" (Nagel 1979, 170 (footnote 6)).

How it Feels *v.* How it Appears

We can add a third idiom to the already confusing mix. This one defines the phenomenal character of mental states as *how they feel*. States with phenomenal character have a "phenomenal feel". "On the phenomenal concept", says David Chalmers, "mind is characterized by the way it *feels*..." (Chalmers 1996, 11). He proceeds to equate this with "what it is like":

> what it *means* for a state to be phenomenal is for it to feel a certain way. ... in general, a phenomenal feature of mind is characterized by what it is like for a subject to have that feature (Chalmers 1996, 12)

Many more examples of this usage could be produced. For example, Tyler Burge: "To be phenomenally conscious, phenomenal states, or their phenomenal qualities, must be sensed or felt by the individual subject." (Burge 1997, 427) And John Searle:

> Every conscious state has a qualitative feel to it. Conscious states are in that sense always qualitative. ... If you think there is no qualitative feel to thinking two plus two equals four, try thinking it in French or German. To me it feels completely different to think "*zwei und zwei sind vier*" even though the intentional content is the same in German as it is in English. (Searle 2004, 134)

Instead of saying "all sensations are conscious", this line would say "all sensations have a feel". All sensations are felt by their bearer. You not only feel the pebble in your shoe, you also feel your sensation of the pebble. The latter feel makes you aware of the former one.

The English verb "to feel" is extraordinarily complex; it *does* have senses in which "*S* feels *x*" implies "*S* is conscious of *x*". And these days we all have our precious "feelings". Nevertheless, the usage under which every conscious mental state has a "phenomenal feel" does introduce a Humpty-Dumpty-like strain on the language. The "feel of a mental state" would be grammatically analogous to the feel of cotton: that which is felt when one feels the thing. The sensible qualities perceptible by touch; the texture, smoothness, and so on. For mental states to have a "feel" we must be using "feel" not in the sense of

tactile perception, but rather in the sense in which we are aware (for example) of our precious feelings. So the phenomenal "feel" of a mental state would be that which is apprehended when one is aware of that mental state.

But if this is so, then "how it feels" applies to a mental state only if one is conscious of that mental state, and the difficulties noted above for "what it is like" apply here as well. "How it appears" allows "it" to range over any perceptible phenomena at all, while "how it feels" (in the intended sense) would apply only to the results of apprehending some of one's own mental states: the ones of which one is conscious. Unless whenever one perceives something one also apprehends one of one's own mental states, these two locutions will on occasion fly apart. Any episode of implicit perception will provide an example.

Qualia Circa 1929

All this analysis is preparatory to Hamlet finally making his appearance on the stage. The troubled prince in this drama is called "Qualia". Strictly speaking the word is plural, so in fact it names a gaggle of troubled princes. In one sense or another they are all qualities of perceptual experience, or the consciousness thereof; but there are at least three major families, three princely lines, that need to be distinguished.

The first is the oldest and simplest, and it is already familiar, since it is basically just a phenomenal property: a characteristic of how things appear. These are particularly interesting when found in episodes of what one might call *mere* appearance: episodes in which something merely looks elliptical, for example, but in fact is round. C. D. Broad made liberal use of the verbs of appearance to identify what he called the "facts of Sensible Appearance":

> we constantly make such judgements as "This *seems to me* elliptical, or red, or hot", as the case may be, and that about the truth of these judgments we do not feel the least doubt. We may, however, at the same time doubt or positively disbelieve that this *is* elliptical, or red, or hot. I may be perfectly certain at one and the same time that I have the peculiar experience expressed by the judgment: "This looks elliptical to me" and that in fact the object is not elliptical but is round. Appearance is *not* merely mistaken *judgment* about physical objects. (Broad 1927, 236-7)

C. I. Lewis (1929) was one of the first philosophers to stipulate a use of the term "qualia", as follows:

> There are recognizable qualitative characters of the given, which may be repeated in different experiences, and are thus a sort of universals; I call these 'qualia'. (Lewis 1929, 121)

(The "given" is the raw unconceptualized input to the system, described in the first section.) An example of a quale is an elliptical appearance, understood as that which is common to experiences in which things are seen to be elliptical and to those in which some things merely *look* elliptical.

Within this family there are various distinct analyses (rivalrous siblings) for what qualia are, dependent on what one understands a property of sensible appearance to be. I mentioned sense data as one account of sensible

appearance, and indeed one historically important notion of "qualia" treats them as properties of sense data (see Moore 1953, 30-34). But as noted above, there are other accounts of sensible appearance. Most contemporary accounts are representational: that something looks elliptical is a matter of it being visually represented *as* elliptical. If qualia are characteristics of sensible appearance, then on this account they would be characteristics of objects as represented perceptually. This is the view of William Lycan (1996). Vision represents what seem to be individuals (including such things as patches and spots), and qualia appear to be first-order properties of those individuals: such properties as "pointy" and "light green". Sometimes these representations are veridical, sometimes not. Lycan says:

> What are we to make of color qualia, the apparently first-order properties of apparent phenomenal individuals? ... Apparent singular reference to phenomenal individuals, such as pointy light-green spots in one's visual field, remains to be accounted for, and the obvious explanation is that the apparent singular reference is genuine. (Lycan 1996, 70-71)

So qualia are properties that individuals are represented to have; they are properties of the "intentional object" of the perceptual representation. If the representation is veridical, then they are also properties of some real individual, and one can see that individual to have those properties.

Qualia Kicked Indoors

While it is fair to say that qualia are "properties of sensation" or "experiential properties", notice that both these formulations are ambiguous. They could mean either: (a) qualia are properties of the things sensed, or of that which one experiences; or (b) qualia are properties of the sensings of things, or of the experiencing of things. While (a) allows for the possibility that qualia could be real properties of things in the real world--properties such as saltiness, being pointy, or even being light-green--option (b) kicks them indoors definitively, firmly ensconcing them as properties of mental states--properties not of things, but of the sensings or experiencings or representings of things. The latter became the dominant interpretation by the end of the twentieth century. It is common now to think of qualia as the "qualitative character" of perceptual or sensory states: properties of such states that help to explain why the things one perceives appear as they do. On this line, qualia no longer include properties such as greenness or pointiness, which one might actually see; instead they are those properties of one's visual states that can explain why the thing one sees appears to be green or pointy. Visual qualitative character is not something that is visible, but it helps to explain why visible things present the appearances they do.

We still need to characterize those appearances somehow; phenomenal property talk and the verbs of appearance will be with us still. This line changes our access to qualia: no longer are they properties one can observe, but instead they are theoretical, postulated so as to explain characteristics of perception or sensation. So our access to them is indirect and hypothetical.

They are part of a model aiming to explain the facts of sensible appearance, and the properties of states and processes postulated in such models need not be introspectible.

Qualia Kicked Upstairs

The third of the family lines treats qualia not just as properties of mental states, but properties exclusively of those mental states of which one is conscious. The same ambiguity between properties sensed *v.* properties of sensings recurs here again, at a higher level. That is, one can treat qualia as characterizing the appearance of mental states to the subject who is conscious of them, or one can treat them as properties of the experiencings of those mental states, which help to explain their appearances.

If we treat qualia as characterizing "what it is like" to have a mental state, then they have been kicked both indoors and upstairs in just this way. Remember that there is something it is like to have a given mental state if and only that mental state is a conscious mental state. If *S* is not conscious of having state *M*, then there is nothing it is like for *S* to have *M*. To characterize what it is like to have that mental state is therefore to characterize what it is like to be conscious of it. We have gone upstairs. These appearances now comprise how one's own mental states appear to oneself when one is conscious of them.

If something looks triangular to me, then the thing that looks triangular resembles a triangle. But "what it is like" to have a sensory state in virtue of which something looks triangular to me is a different subject matter altogether. In particular, what it is like to have that state does not in any sense resemble a triangle. Notice also that the reference of the pronoun "it" shifts in the two phrases.

It might sound odd to talk of how mental states appear to one who has them, but such talk is now common:

> It is difficult to understand what could be meant by the objective character of an experience, apart from the particular point of view from which its subject apprehends it. (Nagel 1979, 173)

Notice that here the subject is apprehending its own experience. Likewise:

> Does it make sense, in other words, to ask what my experiences are *really* like, as opposed to how they appear to me? (Nagel 1979, 178).

The question presumes that one's own experiences appear somehow to oneself. The same implication follows from the idea that mental states are "felt" or have a "phenomenal feel". Recall that Chalmers says "what it means for a state to be phenomenal is for it to feel a certain way" (Chalmers 1996, 11-12). "The way it feels" characterizes an appearance, and here the thing apprehended is one of one's own mental states. These appearances are "higher order" because they are not simply appearances of quotidian things such as the shape of the moth or the texture of cotton: instead they are appearances of one's *perception* of the shape of the moth, or of how the *sensation* of the texture of cotton feels.

"Cottony" would not be an appropriate answer.

Conclusion

The language we use to describe sensory and perceptual consciousness is full of traps for the unwary. I have described some of the distinctions between sensing and perceiving; between conscious creatures and conscious mental states; between "how it appears", "what it is like", and "how it feels"; between various accounts of phenomenal properties, and between various accounts of the now infamous qualia. Armed with these distinctions, I hope the reader can avoid some of the traps. This would be all to the good, for it would allow future explorers to expend a greater portion of their efforts on the large, genuine puzzles that remain.

Suggested Readings

Block, Flanagan & Güzeldere (1997) and Baars, Banks, & Newman (2003) are anthologies providing good coverage of the topics of this chapter. Weiskrantz (1997) and Goodale & Milner (2003) are excellent examples of how the neurosciences have recently made these questions even more interesting.

References

Armstrong, David (1997). What is consciousness? In Block, Flanagan, and Güzeldere (1997), 721-728. Originally published in David Armstrong, *The Nature of Mind* (Ithaca: Cornell University Press, 1981), 55-67.

Baars, Bernard, Banks, William and Newman, James B. (eds). (2003). *Essential Sources in the Scientific Study of Consciousness* (Cambridge, Mass.: MIT Press.

Bennett, M. R. and Hacker, P. M. S. (2003). *Philosophical Foundations of Neuroscience.* Oxford: Blackwell Publishing.

Block, Ned (1997). On a confusion about a function of consciousness. In Block, Flanagan, and Güzeldere (1997), 375-415. Originally published in *Behavioral and Brain Sciences 15* (1992): 183-247.

Block, Ned, Flanagan, Owen, and Güzeldere, Güven (eds.) (1997). *The Nature of Consciousness: Philosophical Debates.* Cambridge, Massachusetts: MIT Press.

Broad, C. D. (1927). *Scientific Thought*. New York: Harcourt, Brace & Company Inc.

Broad, C. D. (1965). Some elementary reflexions on sense-perception. In Swartz 1965: 29-48. Originally published in *Philosophy* (1952), 27: 3-17.

Burge, Tyler (1997). Two kinds of consciousness. In Block, Flanagan, and Güzeldere (1997), 427-33.

Chalmers, David J. (1996). *The Conscious Mind.* New York: Oxford University Press.

Chisholm, Roderick (1957). *Perceiving: A Philosophical Study.* Ithaca: Cornell University Press.

Dretske, Fred (1995). *Naturalizing the Mind.* Cambridge, Massachusetts: MIT Press.

Driver, Jon and Vuilleumier, Patrik (2001). Perceptual awareness and its loss in unilateral neglect and extinction. *Cognition 79*: 39-88.

Goodale, Melvyn & Milner, A. David (2003). *Sight Unseen: An exploration of conscious and unconscious vision.* Oxford: Oxford University Press.

Herrnstein, Richard J. and Boring, Edwin G. (eds.) (1965). *A Source Book in the History of Psychology.* Cambridge, Massachusetts: Harvard University Press.

Lewis, Clarence Irving. (1929). *Mind and the World Order*. New York: Charles Scribner's Sons.

Lycan, William G. (1996). *Consciousness and Experience*. Cambridge, Massachusetts: MIT Press.

Moore, G. E. (1953). Sense-data. In his *Some Main Problems of Philosophy*. London: George Allen & Unwin Ltd., 28-40. Reprinted in Moore 1993, 45-58.

Moore, G. E. (1993). *G. E. Moore: Selected Writings*. Ed. Thomas Baldwin. London: Routledge.

Nagel, Thomas (1979). *Mortal Questions*. Cambridge: Cambridge University Press.

Nagel, Thomas (1979*a*). Subjective and Objective. In Nagel 1979, 196-213.

Nagel, Thomas (1979*b*). What is it like to be a bat? In Nagel 1979, 165-80. Originally published in *Philosophical Review* (1974) *83*: 435-50. Reprinted in Block, Flanagan, and Güzeldere (1997), 519-527.

Rosenthal, David (1997). A Theory of Consciousness. In Block, Flanagan, and Güzeldere (1997), 729-753.

Ryle, Gilbert (1949). *The Concept of Mind*. London: Hutchinson and Company, Ltd.

Searle, John R. (2004). *Mind: A Brief Introduction.* Oxford: Oxford University Press.

Swartz, Robert J. (ed.) (1965). *Perceiving, Sensing, and Knowing*. Garden City, New York: Anchor Books.

Treisman, Anne (1998). Feature binding, attention and object perception.

Philosophical Transactions of the Royal Society of London B 353: 1295-1306.

Weiskrantz, Lawrence (1997). *Consciousness Lost and Found.* Oxford: Oxford University Press.