Sensory Quality and the Relocation Story

David M. Rosenthal
City University of New York, Graduate School

I. FUNCTIONALISM AND QUALITATIVE STATES

More than any other aspect of mental functioning, the qualitative dimension of mind has stubbornly and persistently resisted informative explanation. Not only is there little convergence about what would count as a good theoretical approach; many believe that no satisfactory theoretical treatment of sensory states and their qualitative properties is possible at all. This emerges especially vividly in connection with functionalist theories of mind. Whatever merits functionalism may have in dealing with intentionality, qualitative mental phenomena seem to many to pose insurmountable difficulties to functionalist theories.

Perhaps the most compelling of these apparent difficulties is the claim, compellingly advanced by Ned Block and Jerry A. Fodor,1 that functionalist accounts inevitably leave open the possibilities of so-called inverted and absent qualia. On this challenge, no functionalist specification of a creature's mental life can ensure that its sensory states exhibit any particular qualitative properties as opposed to others, nor even that it has qualia at all.2 If so, functionalism fails as an account of the qualitative dimension of mind.

In an important series of articles, Sydney Shoemaker has explored with great subtlety and in impressive depth and detail whether functionalism can
meet this pair of challenges. Shoemaker argues that things are not uniform; we get different results for each of the two challenges. Functionalism cannot, he concedes, preclude quality inversion, but a suitable functionalist description can ensure that the creature described does have qualia. Shoemaker concludes that, because functionalism can dispel the difficulty about absent qualia, it can account for “what it is for mental states to have qualitative character.” And, although the possibility of qualia inversion remains, a functionalist account can also explain “what it is for mental states to be in greater or lesser degree similar in qualitative character” (FPP, 121).

These apparent difficulties for functionalism outstrip in intuitive force any that arise in connection with intentional states. Behavior, both verbal and nonverbal, reflects and manifests our beliefs, desires, and other intentional states, enabling a functionalist account to get considerable purchase on what it is to be in one or another type of intentional state. By contrast, what qualitative states one is in—and, indeed, whether one is in any at all—seem, intuitively, to be entirely independent of behavior and even stimuli.

Shoemaker’s treatment of the argument from absent qualia capitalizes on connections qualitative states have with intentional states, which, he argues, make possible a functionalist specification of sufficient conditions for qualitative states to occur. These arguments are, I believe, wholly convincing, though many have remained unpersuaded. More important, such arguments tend to leave wholly undiminished the intuitive force of the idea that functionalism leaves open the possibilities of absent and inverted qualia. So it is worth asking what it is that makes these apparent possibilities seem so compelling as challenges to functionalism and related theories of mind. Why, argument aside, does it seem to many so obvious that a functionalist specification cannot preclude our mental states’ having gerrymandered qualitative properties and even lacking such properties altogether?

The standard answer to this question appeals to the first-person access we have to our own qualitative states. Functionalist descriptions specify sufficient conditions for being in the various types of mental state. So such descriptions trump whatever subjective, first-person impressions we have about what states we are in. A functional description could, of course, advert to whether one believes one is in a particular type of state; but it need not, and other factors will also figure in the sufficient conditions.

This does not cause difficulty for a functionalist account of belief and desire, since we are used to the idea that our first-person access to these states is not the last word and is sometimes mistaken. But with qualitative states it is tempting to think that one’s first-person access to qualitative states overrides any possible functionalist specification for the occurrence of these states. If so, no functionalist connections that qualitative states might have with stimuli, behavior, and other mental states could guarantee
the occurrence of those qualitative states. If our first-person access is truly authoritative about when we are in the various types of qualitative state, functionalist ties could hold among stimulations, behavior, and nonqualitative mental states without benefit of qualitative states at all. So our intuitions seem to tell us.

This intuitive difficulty for functionalism is compelling, however, only for states with respect to which our first-person access is fully authoritative. Otherwise, a functionalist account could, after all, be decisive. This has implications about the way we think about qualitative states. We have first-person access only to mental states that are conscious. And, since the intuitive difficulty for functionalism would arise only for states for which our first-person access is authoritative, no intuitive difficulty should arise for functionalism about states that are not conscious in the first place.

This seems to fit well with the intuition that qualitative states resist functionalist treatment, since qualitative states are also often held to be states that cannot occur without being conscious. I shall shortly turn to the question of whether that is so. But suppose, for the moment without argument, that qualitative states can, after all, occur without being conscious. Only the conscious cases of such states could then sustain our strong intuitive sense that no functionalist description can guarantee the occurrence of qualitative states of particular kinds, or even any qualitative states at all. Suppose, for example, that sensations of red and green can occur nonconsciously. There is no compelling intuition that a functionalist specification of such nonconscious states cannot succeed. This does not show, of course, that a functionalist description can preclude the inversion or absence of nonconscious qualitative states, only that we have no intuitively forceful reason to doubt that this is so. Our intuitions are mute about the nonconscious cases.

We sometimes talk about a qualitative state’s being conscious in terms of the metaphor of a quality’s being lighted up. Put in these terms, the intuition under consideration is that no functionalist description ensures that any qualities will light up, or that, if any do, a functionalist description will correctly specify the right ones. But qualitative states do not light up unless they are conscious. And there is little if any intuitive underpinning for the claim that a functionalist description could not guarantee the occurrence of nonconscious states, of whatever sort. After all, it may well be that, for a nonconscious mental state, causal considerations are all that determine whether one is in the state.

It is tempting to insist that, whatever nonconscious qualitative states might be, such states are at best mere shadows of full-bodied, conscious qualitative states. If so, consideration of such nonconscious states would show nothing about the alleged possibilities of absent and inverted qualities.
Even if these difficulties do not arise for such ersatz qualitative states, they might for genuinely qualitative states.

We cannot, therefore, assess these objections to functionalism without determining whether qualitative states can occur without being conscious. The occurrence of nonconscious states that are genuinely qualitative diminishes the intuitive force of the idea that functionalist descriptions cannot guarantee the occurrence of qualitative character, or the right qualitative character. We have little if any intuitive grasp of when nonconscious qualitative states would or would not occur, and if functionalism secures the nonconscious cases, why not those which are conscious as well? But if qualitative states are always conscious, any nonconscious states would be mere simulations of qualitative states and would leave our intuitions untouched.

If qualitative states were invariably conscious, their being conscious would then presumably be internal, or intrinsic, to their having qualitative character at all; take away the property of their being conscious and you take away whatever qualities they have. But this is not the only model of what it is for qualitative states to be conscious, and it may well not be the right model. It may instead be that a qualitative state’s being conscious is a property distinct from and independent of its qualitative character. Conscious qualitative states have two mental properties: they have qualitative properties and, in addition, the property of their being conscious. A state could lack the second property, that of being conscious, without lacking qualitative character.

Unless there is some special tie between the property of a state’s being conscious and its qualitative character, moreover, our first-person access to what states we are in presumably cannot be authoritative about that qualitative character. So there could be no intuitive basis for trusting our subjective impressions about what qualitative states we are in over the dictates of a well-confirmed functionalist description. And again, the objections from absent and inverted qualities will lose their intuitive power.

Showing that a qualitative state’s being conscious is independent of that state’s qualitative properties would not suffice to defend functionalism against those objections. But I am less concerned here to assess these objections than to isolate the source of their compelling intuitive character. Why do the intuitions about absent and inverted qualia seem so compelling, even dispositive? Why do those intuitions appear to remain untouched by arguments of Shoemaker and others? Because the answer seems to hinge on our first-person authority about qualitative states, we must determine whether such states can occur without being conscious. Section II addresses that question.
II. MUST QUALITATIVE STATES BE CONSCIOUS?

Qualitative states differ, of course, from intentional states in virtue of their distinctive mental properties. But they differ also in our intuitions about what it is for such states to be conscious. Whereas few would deny the occurrence of nonconscious intentional states, such a denial is common in the case of qualitative states.

One reason for this different attitude about states’ being conscious has to do with the interests we have in ascribing the two kinds of states to ourselves and to others, even when those states are not conscious states. Plainly it is often useful to ascribe intentional states, such as beliefs, desires, fears, hopes, expectations, and the like, even when those states are not conscious, since such ascriptions figure in explanations of behavior. Similarly for ascribing emotions, such as joy, fear, or anger, which also exhibit intentional content. By contrast, there may seem to be relatively little reason to ascribe qualitative states that are not conscious, whether to oneself or others. It may seem as though nonconscious perceptual and bodily sensations seldom if ever explain behavior we cannot readily explain in other terms, as least where folk-psychological explanation is concerned.

Beliefs, desires, emotions, and other intentional states figure so centrally in explaining behavior even when they are not conscious that the contrast with qualitative states encourages the conclusion that folk-psychological explanations never appeal to nonconscious versions of these types of state. But the difference is one of degree, not kind. Even apart from clinical and experimental situations, we often have compelling explanatory reason to invoke nonconscious qualitative states.

Aches or pains often last for considerable periods without, however, being strong enough to intrude into consciousness for the entire time they last. It is natural to describe this by saying that the pain or ache is sometimes conscious and sometimes not. One could simply insist that the bodily sensation stops existing whenever we cease to be aware of it. But without some independent reason for thinking that this is what happens, such an insistence begs the question at hand. Nor is it easy to see what an independent reason for that claim could consist in.

Subliminal perception and peripheral vision are also examples of nonconscious qualitative states. In driving my car I may rapidly adjust to avoid a looming truck, which I may be wholly unaware of seeing. I must, however, have seen it nonconsciously, since my adjustment is often quite finely calibrated to just where the truck is. Similarly, one sometimes turns one’s head to focus on somebody whose presence in one’s field of vision had made it impossible to see the person consciously. In such cases one must
first see nonconsciously that the person was known to one, since otherwise one would not turn, and also where that person was, since one typically turns to foveate on just the right place.

Such commonsense examples are hardly decisive. Just as one can insist that pains cease when we are for a while not conscious of them, so one could maintain here that no distinctively mental state is involved. We can try to explain peripheral vision and subliminal perception by appeal not to nonconscious qualitative states but to bodily stimulations instead. But there is no reason to do so except to uphold the view that qualitative states never occur without being conscious, and once again that begs the question at hand.6

An objector might insist that we have no idea what kinds of states nonconscious qualitative states could be. We understand qualitative states, it might be held, only in terms of what it’s like to be in those states. And if a qualitative state failed to be conscious, there would be nothing at all that it’s like to be in it. So the explanatory appeal to alleged nonconscious qualitative states is empty.

But this objection is not correct. When our qualitative states are conscious and there is something it’s like to be in them, we have access to specific properties of those states. We tell in that way the difference, for example, between visual sensations of red and green, and locate them within a space of mental color properties. In so doing, we appeal to our sense that the property of mental red that characterizes some visual sensations is, for example, more similar than mental green is to both mental purple and mental orange, and to many other things of that sort.

Taxonomizing visual sensations this way appeals to the way we are conscious of these sensations. But that is no reason to conclude that visual sensations cannot have these very same qualitative properties even without being conscious. We classify sensations in terms of similarities and differences among their qualitative properties. Our setting up a taxonomy by appeal to the cases we are conscious of cannot show that consciousness and sensory quality have any intimate tie. We invariably rely on the cases we are aware of when we classify and describe things.7

It is often assumed that pre-theoretic intuition shows that qualitative states cannot occur without being conscious. But intuition cannot help here at all. Intuitions about mental functioning are a function of what we are aware of. If qualitative states do occur without being conscious, we will remain unaware of them, at least in any way that is relevant to our pre-theoretic intuitions. Intuition would therefore be blind to any nonconscious qualitative states that may occur. Introspection is similarly irrelevant here, since we have introspective access only to those mental states which are conscious. Introspection would never reveal nonconscious qualitative states, whether or not such states actually occur.
Everyday examples of the sort described above help establish the existence of nonconscious qualitative states. But there is a more indirect, theoretical consideration that helps as well. Suppose I am in pain and that my pain is conscious, but I am not aware of whether the pain is throbbing or dull or sharp. I am aware of the pain, but not aware of it as throbbing or dull or sharp. Because the pain is conscious, there is something it's like to be in it; so there is no question about whether a qualitative state exists. Suppose, now, there is some physiological reason to suppose that the pain is throbbing, as opposed to dull or sharp. So what it's like to be in this pain actually leaves out one of its qualitative properties: that of being a throbbing pain. Similar things happen all the time with our perceptual sensations; I may have a red sensation without being conscious of my sensation as being of any particular shade of red, even though we have ample indirect reason to hold that the sensation does have some particular shade.8

There is no question here about whether the state under consideration is truly qualitative. Nonetheless, we fail to be in any way whatever conscious of some of the qualitative properties we have reason to suppose the state exhibits. So mental qualities can occur nonconsciously, that is, without our being at all conscious of them. And if qualitative states can occur without one's being conscious of all their mental qualities, what reason can there be to deny that such states can occur without our being conscious of any of those qualities?

We can conclude that the property of a qualitative state's being conscious is distinct from and independent of that state's qualitative properties. This has implications about what account we can give of the consciousness of qualitative states. To see this, consider a view recently advanced by Fred Dretske, on which a state's being conscious is a matter of its being a state in virtue of which one is conscious of something or other or conscious that something is the case.9 But qualitative states enable us to be conscious of things at least in part because of the particular qualitative properties those states have. When I see a red object in front of me, I am conscious of that object in part because of the qualitative properties of my sensory state. So, if what it means for that state to be a conscious state were simply that it makes me conscious of the object, the property of that state's being conscious would not, after all, be independent of its qualitative properties.

Dretske maintains that a state's being conscious consists in its making us conscious of something or conscious that something is the case in part because he believes that the alternative is unacceptable. The only reasonable alternative, he correctly sees, is that a mental state's being conscious consists instead in one's being conscious of that state in some suitable way. And he regards that as indefensible, since he believes he has examples of states we are in no way conscious of but which nonetheless are indisputably
conscious. But there are difficulties with Dretske's examples. Although we are not conscious of the states he describes in the particular way he specifies, it does not follow that we are not conscious of those states in any relevant way. And it is arguable that we are.

In the kind of case Dretske has in mind, we have conscious visual experiences of two scenes that differ in some single way, but without our noticing consciously that they differ at all. Since we fail to notice that two scenes differ, we cannot notice the difference between our conscious visual experiences of them. We can assume that every experience has parts, and we can regard each part as itself a conscious experience; the aspect of the experiences of the two scenes is just such a part. Dretske concludes that, since we do not consciously notice the difference between the two experiences, we are not conscious of that aspect of the experiences that makes the difference between them. That part of the experiences is a conscious experience of which we are not conscious. But this is too fast. We might be conscious of the parts of the experiences that make the difference between them without thereby being conscious of those aspects as the aspects that make that difference. Dretske's argument is a non sequitur.10

There is, in any case, reason to reject the idea that a state is conscious if, in virtue of one's being in that state, one is conscious of something or conscious that something is the case. All our thoughts and sensations satisfy this condition; we are conscious of whatever our thoughts are about, and also conscious of everything that we sense. So it follows from Dretske's account that every mental state is conscious; this is widely recognized as implausible for intentional states, and we have seen that it is arguably incorrect for qualitative states as well.

The alternative, as Dretske recognizes, is that a mental state's being conscious consists in one's being conscious of it in some suitable way. Indeed, we never count a mental state conscious if we are in no way conscious of it; being conscious of a mental state is a necessary condition for it to be a conscious state. Such an account, moreover, very likely provides the only way to explain how the property of a state's being conscious can be distinct from and independent of whatever intentional and qualitative properties the state may have.

There are, of course, different ways one can be conscious of mental states. So a principal task of a theory of consciousness is to specify exactly how one must be conscious of a mental state for that state to be conscious. Elsewhere I have argued that, when a mental state is conscious, we are conscious of it by having a suitably noninferential thought about that state, what I have called a higher-order thought.11 We can for now bracket the question of the specific way we are conscious of our conscious sensations, though that issue will turn out to be relevant toward the end of section IV. For pre-
sent purposes all that matters is that, whatever a qualitative state’s being conscious consists in, that property is independent of the state’s qualitative properties.

Ned Block has argued for a position that may seem to split the difference between these two views of what it is for a mental state to be conscious. According to Block, there are two distinct things we mean in calling a mental state conscious. We call a state conscious when its content is “poised to be used as a premise in reasoning, . . . [and] for [the] rational control of action and . . . speech.” This property Block calls access consciousness. But we also call a state conscious when there is something it’s like for one to be in that state; Block calls this second property phenomenal consciousness. And he maintains that these two properties are, conceptually at least, independent. Moreover, all qualitative states, according to Block, are phenomenally conscious, though some fail to be access conscious.

There are questions that could be raised about whether Block’s distinction between access and phenomenal consciousness works in the way he suggests. It is arguable, for example, that the two notions are not independent, even conceptually, and that the two notions are best understood as referring not to two ways mental states can be conscious, but to two kinds of mental states, which are conscious in exactly the same way.

But these questions aside, Block’s distinction causes no difficulty for the present argument. The intuitions that absent and inverted qualia are possible derive their force from the idea that our first-person access to qualitative properties is authoritative. But we have first-person access to a state only when, in Block’s terminology, that state is access conscious. Moreover, Block agrees with the foregoing argument that states can have qualitative properties even when those states are not access conscious; those are the states Block describes as phenomenally but not access conscious. Because we have no first-person access to these qualitative states—that is, no conscious access, intuitions about absent and inverted qualities get no purchase with them. Still, those nonconscious states have the same qualitative properties as the conscious cases. And if intuitions about absent and inverted qualities lack force with those states, they will lack force with the conscious cases as well.

III. CONSCIOUS QUALITIES AND THE RELOCATION STORY

Let us take stock of the argument so far. Intuitions about absent and inverted qualia form the basis of a challenge to functionalism and related views. These intuitions derive their force from our first-person access to qualitative
states. But qualitative states sometimes occur without being conscious, and there is no intuitive reason to think that functionalism leaves open the possibility of inverted or absent qualities for states that are not conscious. And, if quality inversion or absence are not intuitive worries for the nonconscious cases, why should they be for cases that are conscious?

It is worth stressing that the present concern is not about whether absent or inverted qualities are real possibilities or, if so, whether functionalism can preclude them. It is simply to find out the source of the stubborn intuitive insistence that absence or inversion of qualities are possible, and not ruled out by functionalism. On the foregoing argument, that intuitive insistence is largely or entirely the result of our sense that our first-person access to the conscious cases is authoritative. This intuitive idea leaves the nonconscious cases untouched.

One could, of course, argue that the apparent possibility of absent or inverted qualities in the conscious cases should carry over to states that are not conscious. But the intuitions do not directly apply to those cases. And it is equally open to argue instead in the reverse direction. Since no intuitive case can be made that these possibilities obtain in the nonconscious cases, why take seriously the intuitions that they obtain when the states are conscious?

The force of our intuition that absent or inverted qualities are possibilities that functionalism leaves open hinges on the idea that our first-person access to qualitative states is dispositive. And that rests on the idea that such states are invariably conscious. But, insofar as we are concerned with the force of intuitions, this seems only to push the difficulty one step back. Whatever the arguments of the previous section, there is a strong intuitive appeal to the claim that qualitative states are invariably conscious. Whatever the case for intentional states, many will doubtless continue to insist sensory states simply cannot occur without being conscious. What would it be, they will ask, for a state to have sensory qualities if that state is not conscious? What could such qualities be in the absence of consciousness?

Argument often leaves intuition untouched. I have urged that Shoemaker’s arguments leave unaffected intuitions about absent and inverted qualia. Similarly, arguments that qualitative states occur nonconsciously may, by themselves, have little effect on contrary intuitions. Often intuitions are undercut only when we understand their source and see that that source gives us no reason to hold the beliefs that strike us with such intuitive force.

Intuitions about absent and inverted qualities rely on another intuitive idea, namely, that qualitative states are always conscious. So we cannot uncover the source of the intuition about absent and inverted qualities without explaining the intuitive conviction that qualitative states always occur consciously. We must try to explain why this underlying intuition is so
resilient in the face of argument. What assumptions underlie the way we think about the qualitative states which make it so difficult to conceive of those qualities occurring nonconsciously?

However unyielding our intuitions on that score, it is worth noting that it would be somewhat surprising if sensory qualities were always conscious. Sensory qualities are the distinguishing properties of qualitative states, the properties in virtue of which we sort those states into types. And the properties of things standardly occur even when nobody is conscious of them. What sort of property could it be that cannot occur unless somebody is conscious of it? It cannot help to say that they are mental properties, since mental properties sometimes occur without our being in any way conscious of the instantiating states.

When we think about things in ordinary, commonsense terms, we take it for granted that physical objects have color properties, such as red and green. And we assume that these color properties are physical properties of some sort. These mundane assumptions notoriously conflict with our scientific picture of physical reality. Since Galileo, that picture has been dominated by the idea of mathematically formulable laws. The properties of physical objects and processes must all be able to figure in laws that can be formulated in mathematical terms; in Galileo’s vivid metaphor, the book of nature is “written in the language of mathematics.” The color properties of physical objects, however, seem to be irreducibly qualitative in a way that defies description in mathematical terms.

It is often concluded that physical objects do not literally have the properties of being red and green or, if they do have such properties, they are not as common sense conceives of them. But if physical objects do not have the color properties they appear to have, how can we explain those appearances? One standard answer is that the qualitative properties physical objects seem to have belong not to those objects, but rather to sensory mental states. Physical objects appear to have qualitative properties because, when we consciously perceive those objects, those very qualitative properties do characterize the sensory states that figure in our conscious perceptual experiences. Common sense attributes qualitative properties to physical objects, properties that resist scientific treatment. We solve that problem by recasting those qualitative properties as properties of sensory states. We relocate the problematic properties from physical reality to the mind.

But that is not the end of the difficulties. Although this maneuver may success in banishing qualitative properties from the realm of physical objects and processes, the relocated mental properties cause problems for theories of mind. It is sometimes held that these difficulties are unavoidable. Relocating qualitative properties to the mind was meant to avoid conflict with the dictates of mathematical physics. But how can that succeed unless
the relocated mental properties are nonphysical? If the relocated mental properties are physical properties of some special sort, the conflict with the Galilean paradigm will persist; we would simply have exchanged one difficulty for another. It does not help that mental qualities are qualities of states, rather than objects; if qualitative properties resist mathematical description, they will do so whatever they are properties of. And, as is often noted, there is no place to relocate these properties once they are recast as mental properties.

I shall call this account the relocation story.\(^{17}\) It is familiar and standard, as is the dualist picture that underlies it. But, dualism aside, the story turns out to have important implications about consciousness that seem surprisingly to have gone unnoticed, implications that emerge once we focus on exactly what it is about qualitative properties that appears to resist mathematical treatment.

On our commonsense conception, physical objects have their color properties independently of whether anybody sees the objects. But the qualitative aspect of these properties that seems to resist mathematical formulation emerges only when the colors are consciously seen. It is only the red and green of physical objects as these are consciously perceived that we seem to have to relocate as mental properties.\(^{18}\) What intuitively resists description in mathematical terms is the qualitative aspect of physical color properties as we are conscious of it. When these properties are not consciously perceived, there is nothing about them that resists mathematical description. We have no intuitive sense that something is lost if we describe the color properties objects have independently of being seen in terms of surface reflectance properties and the like.

So the apparent need to relocate physical color properties arises only insofar as we consciously perceive those properties. And this affects in important ways our conception of the mental products of this relocation. On this account, we conceive of the qualitative color properties of visual sensations as relocated versions of commonsense physical colors. But we conceive of them not simply as relocated versions of physical colors, but as relocated versions of physical colors as we are conscious of them. Seeing the mental properties of qualitative states means conceiving them on the model of the relocated physical qualities. The properties undergoing relocation, moreover, are not physical qualities tout court, but physical qualities as we are conscious of them. So the product of such relocation will be mental qualities as we are conscious of them. Having modeled these mental qualities on physical qualities insofar as we are conscious of them, consciousness will be built into the relocated mental qualities themselves.

I argued in section II that the property some qualities have of being conscious is independent from whatever qualitative properties those states
may have. Qualitative properties are simply the distinguishing properties of qualitative states, the properties in virtue of which we classify them into mental kinds. In the conscious cases these properties allow us to discriminate states of these various kinds on the basis of our first-person access to those states. Even when they are not conscious, however, the states differ in these characteristic mental ways. But then we have no first-person access to their nature or existence. We can classify nonconscious qualitative states in respect of the same qualitative properties we use in taxonomizing conscious qualitative states, though in these cases we must pick the states our by way of theoretical or other third-person means.

The qualitative properties of these states will not, however, be independent of the states’ being conscious if we conceive of qualitative properties as relocated versions of physical qualities as they are consciously perceived. If we model mental qualities on physical qualities insofar as we are conscious of them, we end up conceiving of those mental qualities as being intrinsically conscious.

This relocation story about the nature of mental qualities has other consequences about consciousness as well. I argued in section II that a mental state’s being conscious consists in one’s being conscious of that state in some suitable way. There are, broadly speaking, two ways we are conscious of things: by perceiving them and by having thoughts about them. And there are, correspondingly, two competing theories about how we are conscious of our conscious states. On one theory, we are conscious of those states by some kind of “inner sense”;²⁹ on the other, we have higher-order thoughts about those states.

I have argued elsewhere that inner-sense theories, which posit some kind of higher-order sensing of our conscious states, face insurmountable difficulties. Briefly, sensing something requires being in a state with qualitative properties characteristic of some sensory modality. But there is no qualitative aspect characteristic of the way we are conscious of our conscious states. This is obvious when the states we are conscious of are intentional states. But it is true when we are conscious of our conscious qualitative states. Qualities do figure in our being conscious of those states. But the qualities that occur vary with the kind of state we are conscious of; there is no characteristic range of qualities corresponding to our being conscious of those states. The qualities that occur belong to the state we are conscious of rather than to the higher-order state in virtue of which we are conscious of it.²⁰

Despite these considerations, the inner-sense model is the dominant account of how we are conscious of our conscious states, both traditionally and in current thinking. The relocation story helps explain why. Mental qualities, on that story, are relocated versions of certain physical properties
insofar as we consciously perceive those properties. Because we are conscious of the physical properties by sensing them, it is natural to suppose that we are conscious also of the mental results of this relocation by some sort of inner sensing. Conceiving of mental qualities as products of this relocation, we think of them not only as properties we are automatically conscious of, but also as properties we are perceptually conscious of. Adopting the relocation story leads to thinking not just that qualitative states are all conscious, but that we are conscious of them by way of inner sense.

The effect the relocation story has on how we think about the mental qualities of visual sensations plainly applies equally to the qualitative properties of auditory, gustatory, and olfactory sensations. That story represents the mental properties of all these types of sensation as relocated versions of problematic physical qualities, qualities that appear problematic only insofar as we are perceptually conscious of them. Modeling the relocated properties on physical properties as we are conscious of them leads to our conceiving of the mental properties of sound, taste, and smell as all necessarily conscious.

But what about the qualitative properties of bodily sensations, such as pains, aches, tickles, and itches? These qualities, it may seem, lend themselves less well to the foregoing analysis. Indeed, it may be obvious how the relocation story applies at all to the qualitative properties of pains; what relevant physical properties might we relocate as pains or other bodily sensations? This is not a small matter. Bodily sensations are prime material for the intuition that sensory qualities are invariably conscious. If the relocation story does not apply to these cases, that story cannot explain why the intuition is so unyielding.21

But the relocation model does apply to bodily sensations. Just as perceptual sensations make us aware of various physical objects and processes, so pains and other bodily sensations make us aware of certain conditions of our own bodies. In standard cases of feeling pain, we are aware of a bodily condition located where the pain seems phenomenologically to be located. It is, we say, the foot that hurts when we have the relevant pain. And in standard cases we describe that bodily condition using qualitative words, such as painful, burning, stabbing, and so forth. Descartes’s famous Sixth Meditation appeal to phantom pains reminds us that pains are purely mental states. But we need not, on that account, detach them from the bodily conditions they reveal in standard, nonhallucinatory cases.

But if it is the foot that hurts, how do we describe that hurting in a way consonant with the constraints of mathematical physics? The relocation story has an answer. On that account, the bodily conditions our bodily sensations make us aware of have no qualitative properties at all. The foot itself does not hurt, nor are any bodily conditions properly described as painful,
burning, or itchy; bodily conditions are exhaustively described mathematically. We must, on this account, recast the qualities common sense ascribes to these bodily conditions as purely mental qualities.

But the qualities of bodily states that resist mathematical description do so only insofar as we are conscious of them. Whatever the condition of one’s foot when it hurts, nothing resists mathematical formulation insofar as one remains unaware of that condition of the foot. Since we model the mental qualities of pains on bodily qualities insofar as we are conscious of those qualities, we will again conceive of the relocated mental qualities as necessarily conscious. With bodily sensations no less than with perceptual sensations, the relocation story explains why the intuition that sensory qualities are invariably conscious is so stubbornly recalcitrant to argument.

IV. AN ALTERNATIVE ACCOUNT OF MENTAL QUALITIES

It is of course mandatory that we reconcile somehow our commonsense conceptions of colors, painfulness, and other such qualities with our best scientific picture of physical reality. The relocation story is a familiar and widely accepted way to try to do this. More important, this need to reconcile science with common sense will plainly outweigh any arguments of the sort advanced earlier in support of the occurrence of nonconscious qualitative states. Once we have settled on the best way to achieve this reconciliation, we must swallow its implications, and those implications will trump whatever considerations could show that qualitative states occur without being conscious. So if the relocation story is the only way or the best way to reconcile science with common sense, arguments that qualitative states are not all conscious will have little force. We will conclude that consciousness is built into sensory qualities after all.

But despite its widespread acceptance, the relocation story is not the only way to square Galilean science with common sense, nor the best way. Physical objects have various color properties. But we need not conceive of these properties, even in common sense terms, as actually being the way they appear to us when we are conscious of them. Rather, we can regard them simply as being whatever properties physical objects have that enable us to see those objects. When we consciously see a physical object, the properties in virtue of which we discriminate that object seem to have a qualitative aspect. But that may be due not to the nature of the object’s properties, but only to the nature of our conscious perceptions. We consciously respond to physical color properties qualitatively, but the physical properties themselves need not, on that account, have any intrinsic qualitative aspect.
This way of thinking of physical colors and other ostensibly qualitative physical properties avoids some of the theoretical preconceptions that figure in the relocation story. And it accords more successfully with common sense, since it recognizes that the properties of physical objects are the same whether we perceive them or not. The relocation story, by contrast, splits physical color properties into relocated mental qualities that reflect the qualitative aspect of physical color as we are conscious of it and an unproblematic remainder that lends itself to scientific treatment. This divided account distorts both the physical color properties and the mental color qualities modeled on them; similarly for other qualities.

I shall refer to this alternative account as the neutral account. On it, the colors of physical objects are whatever properties enable us to see those objects, whether consciously or not. When we fail to see these properties or we see them nonconsciously, there is nothing about the objects that in any way seems to resist mathematical description. Physical objects have the very same properties, whether we consciously see the objects or not. Since nothing about their properties resists mathematical treatment when we do not consciously see the objects, nothing resists such treatment when we do.

Pressure to relocate physical properties exists only if we tie the very nature of physical colors to the special circumstance of our consciously perceiving them. Once we recognize that the relevant physical properties are the same whether or not they are consciously perceived, no motive remains to relocate them as mental properties. And then there is temptation to model the qualitative properties of sensory states on physical properties as consciously perceived, and hence no temptation to think of mental qualities as themselves invariably conscious. The distinguishing properties of qualitative states and the perceptible properties of physical objects are both independent of our being conscious of them.

Similar considerations apply to pains and other bodily sensations. The properties of bodily conditions that pains make us aware of are whatever properties enable us to be aware in a first-person way of the relevant bodily conditions and to discriminate among types of these conditions. These properties resist mathematical description only insofar as we model them on conscious cases. Once again, recognizing that the same properties occur whether or not we are conscious of them dispels the need to relocate the properties we are conscious of. And if we do not conceive of the mental qualities of pains as relocated versions of properties of bodily conditions insofar as we are conscious of those properties, there is no temptation to hold that those mental qualities cannot occur unless we are conscious of them.

The neutral account squares with our commonsense intuitions about the perceptible properties of physical objects. But does it do justice to our com-
monsense convictions about the qualitative properties of sensory states? The color properties of physical objects are whatever properties of those objects enable us to see those objects, whether consciously or not. How, then, should we describe the corresponding mental qualities of visual sensations?

A parallel account applies. The color properties of physical objects are whatever properties enable us to see those objects. Similarly, the mental qualities of visual sensations are whatever properties the sensations have which enable us to discriminate visually among physical objects in respect of their colors. These mental properties enable to us to make such discriminations both consciously and nonconsciously; the qualitative properties of our visual sensations that figure in consciously seeing red or green objects are also responsible for our seeing those physical properties nonconsciously.

When visual sensations are conscious, however, their qualitative properties play a second role, beyond that of enabling us to discriminate among differently colored physical objects. When our sensations are conscious, we discriminate among them introspectively and sort them into types, and we do this in terms of their qualitative properties. The qualitative properties of sensory states enable us not only to discriminate among physical objects perceptually, but also to discriminate among our qualitative states themselves when they are conscious. This parallels the role played by the perceptible properties of physical objects, which enable us to discriminate perceptually among those objects.

Not all sensations are conscious, and the neutral account allows for that. Its neutrality consists in assigning the same properties to objects whether or not we are conscious of them, and the same mental qualities to sensations whether or not those states are conscious. Similar considerations hold once again for pains and other bodily sensations. Pains have the same distinguishing qualitative properties whether the pains are conscious or not, but when they are conscious we can distinguish among them by reference to those qualitative properties.

Physical colors are whatever properties enable us to discriminate visually among physical objects. But that does not mean that we never misperceive physical objects in respect of those colors. The same holds for the mental qualities of visual sensations. Though these qualities enable us to discriminate among different types of sensation when those sensations are conscious, such discrimination need not always be accurate.

A mental state's being conscious is an extrinsic property of that state, consisting in our being conscious of that state in some suitable way. So the possibility is open that the way we are conscious of our conscious states sometimes misrepresents them. This is no mere theoretical possibility; there is compelling reason to think that it sometimes actually happens. We are sometimes conscious in an inaccurate way of the qualitative properties of...
our visual sensations, and the same happens with bodily sensations. When it does happen, we are conscious of our sensations as though they have qualitative properties that they do not in fact have. The qualitative properties we are conscious of the sensations as having are not the actual properties of the sensations. Still, the qualitative properties of sensations are the kinds of properties in terms of which we discriminate from a first-person point of view among the various types of sensation. And again the same is true of pains and other bodily sensations. We will examine these possibilities more closely in section V.

When we describe a physical object as red, we say something different about that object from what we say about a visual sensation when we characterize it as red. Similarly, when we describe a condition of the foot and a bodily sensation as both painful. It is natural to think that when describe a visual sensation as red, we use the word “red” in an extended sense, derived from the case in which we characterize red physical objects.

This suggests that the relocation story may, after all, have merit. How better to explain this double use of words for the perceptible properties of physical objects and for the introspectible properties of our sensations than by the relocation story itself? If the mental red of visual sensations is the product of relocating the red of physical objects, we would expect “red” as applied to sensations to be derived from “red” as applied to physical objects. But the neutral account explains this double use just as easily. Since the mental red of visual sensations is whatever property of those sensations enables us to discriminate red physical objects, we would again expect the word for the mental property to be derived from the word for physical red.

The neutral account does greater justice to our commonsense intuitions than the relocation story because it holds that the color properties of physical objects are the same whether or not we perceive them. But the neutral account has another advantage as well. The relocation story, by taking physical color properties to be the way our visual consciousness represents them, in effect endorses a certain theory about the nature of these properties. It represents their reality in terms of their appearance. The neutral account, by contrast, embodies no particular theory about the color properties of physical objects, construing them simply as whatever properties of those objects play a certain role. By eschewing special commitments about the nature of those properties, the neutral account coincides more closely to pre-theoretic common sense.

V. CONSCIOUSNESS AND IDENTIFYING SENSORY QUALITIES

The relocation story distorts the perceptible properties of physical objects by conceiving of them as they appear to conscious perception, rather than as
independent properties of those objects. And it distorts the mental qualities modeled on those physical properties as well, by representing them as necessarily conscious. Properties are necessarily conscious if it is in their nature that we are invariably conscious of them. It is a strikingly odd view that there should be any properties whatever that satisfy that condition. Why should being conscious of a property be necessary for that property even to exist? The relocation story explains why mental properties seem to have consciousness built in.

But the relocation story is itself gratuitous. When mathematical physics was young and its implications new, it doubtless seemed sensible to be eliminativist about those physical properties which seemed to resist mathematical description. The relocation story is just such an eliminativist view. But the temptation to be eliminativist derives from a distorted view about those relocated physical properties, on which their very nature reflects the way they appear to us. But the relocation induces further distortions in the nature of the resulting mental qualities.

Rather than eliminate such commonsense physical properties, however, we can instead simply drop the distorted view about their nature. They are responsible for the appearances caused in us, though their nature need not, on that account, reflect those very appearances. So construing the perceptible properties of physical objects squares both with common sense and with the constraints of mathematical physics. We retain the properties, dispensing only with an outmoded theory about them. Here as elsewhere, the eliminativist strategy is avoidable.

Our ability to discriminate visually among physical objects allows us, on the neutral account, to identify both physical and mental color properties. They are whatever properties of physical objects and visual sensations, respectively, make it possible for us to perform such discriminations. And, when our visual sensations are conscious, their mental qualities are also the properties in virtue of which we discriminate introspectively among the various types of visual sensation. Similarly for other modalities.

The relocation story encourages the familiar idea that each mental quality resembles some corresponding physical property. Relocated versions of perceptible physical properties would surely resemble the properties on which they are modeled. But it is widely recognized that such resemblance cannot hold. For one thing, visual sensations are states, not objects. So the qualitative properties of visual sensations are properties of states of objects, rather than properties of the objects themselves. They are the wrong sort of property to resemble properties of physical objects.

Some connection plainly holds between mental qualities and the corresponding perceptible properties of physical objects. And it is tempting to think of that connection as holding property by property. That makes the idea of resemblance appealing; it is difficult to see what other kind of connection might hold one by one between mental and physical properties. But
the connection need not hold one by one; it can hold instead between entire families of properties. As a first pass, we can describe the family of color properties of visual sensations as resembling and differing from one another in ways homomorphic to the ways the color properties of physical objects resemble and differ from one another.28

One might object, however, that this modestly holistic approach cannot succeed. Human color perception is a function of the ratio of activation that occurs among the three light-sensitive elements in the daylight visual system. An object looks red, for example, if its spectral reflectance results in a suitable distribution of wavelengths under reasonably standard conditions. But, since different combinations of wavelengths can produce the same ratio, an object's looking red in standard conditions of illumination can result from widely disparate reflectance properties.29 Each physical color property is therefore a class of physical properties whose members produce the right ratio of wavelengths, determined as a function of the human visual system rather than anything intrinsic to the physical objects themselves. But if physical colors are such gerrymandered properties, how can they resemble and differ from one another in ways homomorphic to the ways the qualitative properties of visual sensations resemble and differ?

Plainly, therefore, similarities and differences among specific reflectance properties are not homomorphic to those among the color qualities of visual sensations. But suitable equivalence classes of them are. Reference to commonsense taxonomies of physical color properties is necessary to determine the right equivalence classes, but that is neither surprising nor a cause for concern. Theories about macroscopic phenomena must typically appeal to commonsense classifications.30

An advocate of the relocation story might object that this appeal to homomorphisms presupposes the relocation model itself. We can understand why these homomorphisms would obtain if mental qualities are relocated versions of perceptible physical properties. But what else could explain such a remarkable correspondence between distinct families of properties?

Once again, however, an alternative explanation is possible. We identify the mental color qualities of visual sensations by appeal to the perceptible colors of physical objects. A visual sensation has the mental quality red, for example, if, in standard conditions of illumination, perceivers typically have sensations of that type when they see an object as red.31 A crucial part of seeing an object as being red is that one have a perceptual thought that a red object is present to one. And having such thoughts rarely if ever occurs unless one is seeing an object as red. So visual sensations with the mental quality of red are those which typically accompany perceptual thoughts that a red object is present to one.

Particular types of sensation typically accompany perceptual thoughts...
that have specifiable perceptual content because they typically cause such thoughts. Which perceptual thoughts a sensation typically accompanies therefore determines how we taxonomize our perceptual sensations. For that reason, qualitative states are qualitatively similar if they typically cause perceptual thoughts that perceived objects are qualitatively similar in respect of their perceptible properties. So, as Shoemaker argues:

[W]hat makes a relationship between experiences the relationship of qualitative (phenomenological) similarity is precisely its playing a certain "functional" role in the perceptual awareness of objective similarities, namely, its tending to produce perceptual beliefs to the effect that such similarities hold ("Functionalism and Qualia," ICM, 199–200).

We identify sensations as being qualitatively similar or different by reference to the perceptual thoughts they cause.32

These considerations explain why the similarities and differences among mental qualities are homomorphic to those among the corresponding perceptible properties of physical objects. We classify a visual sensation as red when it is the type of sensation that normally accompanies thoughts that a red object is present to one. So our taxonomy of visual sensations reflects the way we taxonomize the color properties of physical objects. Sensations of red and green are those sorts of visual sensation which typically accompany our perceptual thoughts that a red or green object is present to one. It is in this way that the terms for physical color properties get extended to talk about and classify those visual sensations in virtue of which we see those physical colors. So classifying our visual sensations ensures that the similarities and differences among their mental colors of visual sensations will reflect those which hold among the perceptible colors of physical objects, as those perceptible colors are taxonomized by common sense. Similarly for other sensory modalities. We can explain these homomorphisms without appeal to the relocation story.

These homomorphisms help not only in understanding how we identify sensory qualities, but also in another connection as well. The relocation story is one way in which the Galilean reconception of physical reality has encouraged an intuitively unyielding conviction that sensory qualities are invariably conscious, but it is not the only way. Commonsense explanations of learning and psychological development rely on the idea that thinking and sensing are essentially connected and, indeed, that thinking arises in some way from sensing.33 This results in a certain tension with the demand to describe physical reality in exclusively mathematical terms. Sensations exhibit geometrical properties such as shape only in conjunction with specific content properties; visual shape is the boundary of distinct colors, and tactile shape the boundary of differences in sensed pressure or texture. So
sensing resists the Galilean dissociation between mathematically describable properties and qualitative properties such as color. For thinking to capture that dissociation, therefore, intentional content must, as Descartes argued, be independent of sensory quality. Thinking must represent the mathematically describable properties of physical objects independently of the way sensing represents them.

But, if thinking is independent of sensing, sensing and its sensory qualities will seem arbitrary with respect to the cognitive functions of thought, suggesting the possibility of inverted or even absent qualities. Moreover, if sensing is unconnected to the cognitive functions of thought, it will seem that the only tie sensing has with the rest of our mental functioning would be the distinctively first-person way we are conscious of sensing. Sensing would be nothing if it is not conscious. Describing physical reality in exclusively mathematical terms leads again to the idea that sensing is necessarily conscious.

The homomorphism between the perceptible properties of physical objects and the corresponding sensory qualities of our perceptual sensations helps here, by restoring the connection between thinking and sensing. If, for example, the mental qualities of color are homomorphic with the perceptible color properties of physical objects, those mental qualities will be related in turn to our concepts of those physical colors and, hence, to our thoughts that physical objects have particular colors. So a sensation's being conscious will not be the only way it can have robust ties to the rest of our mental functioning.

Frank Jackson has argued that words such as “red” and “round” apply to one property only, and are not equivocal as between perceptible properties of physical objects and the mental qualities of our sensations. Such a double use, he holds, would be “a linguistic accident, a fantastic fluke.” But the homomorphisms between corresponding families of mental and physical properties make these double uses systematic. It would be a linguistic accident that “red” refers to both a mental quality and a perceptible physical property only if the concept that figures in thoughts about red physical objects were unrelated to the sensory quality of red that figures in perceiving those objects. The idea that words such as “red” refer only to one kind of property is of a piece with the assumption that intentional content is unconnected to sensory quality.

Because the qualitative properties of sensations are homomorphic with the perceptible properties of physical objects, we can identify and taxonomize the mental qualities of qualitative states by reference to the perceptual thoughts these states typically accompany. But how does that square with the familiar idea that we identify and taxonomize qualitative states by reference to what it’s like to be in them? What it’s like for one to be in a qual-
itative state may well intuitively seem to be wholly independent of the perceptual thoughts that state typically accompanies. Indeed, if the way we are conscious of our qualitative states trumps their cognitive connections, intuitions about absent and inverted qualities result.

A slight detour will be useful here. It is sometimes held that what it’s like to be in a qualitative state reveals, exhaustively and infallibly, the qualitative nature of that state. What it’s like to be in a qualitative state would not, of course, reveal the state’s nonqualitative properties, but it is decisive about its qualitative properties.

But as argued toward the end of the last section, consciousness need not reveal all the qualitative properties a state has, and may even get wrong those it does reveal. That consciousness fails to reveal all the qualitative properties of our qualitative states is a corollary of the occurrence of qualitative states that are not conscious at all. Qualitative states occur without being conscious—without, that is, there being anything at all it’s like to be in those states. So there is no reason to suppose that, when there is something it’s like to be in a qualitative state, what it’s like to be in it reveals all its qualitative character.

Thus, what it’s like to have a conscious pain may sometimes involve the quality of painfulness, but may reveal nothing about whether that pain is throbbing, sharp, or burning. Similarly, what it’s like to have a particular sensation of red may say nothing about any particular shade. In these cases, the sensation is conscious as a pain or a sensation of red without being conscious as a particular type of pain, or as a sensation of any particular shade of red.39 This can shift, perhaps by attending to a sensation more or less carefully; what it’s like for one to have some particular sensation can come to involve qualitative character that is more or less fine grained.

In the extreme, one can seem to be in a conscious state that does not occur at all. Dental patients occasionally report pain when physiological factors make it clear that no pain could occur. The usual explanation is that fear and the nonpainful sensation of vibration cause the patient to confabulate feeling pain. When the patient learns this explanation, what it’s like for the patient no longer involves anything painful. But the patient’s memory of what it was like before learning the explanation remains unchanged. Even when what it’s like for one results from confabulation, it may be no less vivid and convincing than a nonconfabulatory case.

How can there be different things that it’s like for one to be in one and the same qualitative state? Indeed, how can there be something it’s like for one to be in a qualitative state that does not even occur? When there is something it’s like for one to be in some qualitative state, consciousness represents that state in a particular way. When what it’s like for one involves the quality of red but no particular shade, or painfulness but no particular
kind of pain, that is how consciousness represents the state. If the way it’s like for one to be in a particular state involves some qualitative property, the way one is conscious of that state represents it as having that quality. In the extreme, as in the dental case, one may be conscious of a state that does not even occur.

It is likely that an account of consciousness that appeals to higher-order thoughts (HOTS) provides the best explanation of this. Conscious states are states that one is conscious of, in some suitable way. On the HOT model, one is conscious of a conscious state by having a thought to the effect that one is in that state. This readily allows for the needed variability in the way consciousness represents one’s conscious states, since thoughts can represent things in respect of a range of different properties. And thoughts can, of course, represent things inaccurately, and even represent nonoccurrent things as occurring.

Does typing qualitative states by reference to the perceptual thoughts they accompany conflict with typing those states by what it’s like for us to be in them? The foregoing considerations strongly suggest not. What it’s like for us to be in a specific qualitative state is determined by the way consciousness represents that state, on the HOT model, by the content of the HOT about that state. When what it’s like for me is that I have a red visual sensation, my HOT represents me as having such a sensation. But how, specifically, does my HOT represent the sensation? What is that content of that HOT? The foregoing considerations suggest that my HOT represents me as being in a state of that type normally accompanied by perceptual thoughts of red physical objects. The HOT in virtue of which my sensation is conscious characterizes it in terms of typically accompanying perceptual thoughts. And that very HOT also determines what it’s like for me to have the sensation. Similar considerations again apply to the other perceptual modalities and to the case of bodily sensations.

The relocation story was intended to avoid apparent conflict between the qualitative properties of physical objects and the demands of mathematical physics. Such conflict seems to emerge only when we are perceptually conscious of those physical properties. But perceiving something does not change its nature. So unperceived properties can occasion no conflict, either. Still, the appearance of conflict is a function of the way the physical properties appear to us and that, in turn, is a matter of the character of the sensory states in virtue of which we perceive the relevant physical properties. The traditional conclusion is that the qualitative character of those states actually does conflict with the dictates of mathematical physics in just the way that the physical properties appeared to conflict. Whether or not we conceive of sensory qualities as the relocation story urges, we seem simply to have traded one difficulty in for another.
If we think of mental qualities as relocated versions of physical qualities, the story stops there; if problems persist with the mental qualities, no further relocation is possible. But if we avoid appeal to the relocation story, we avoid difficulty with mental qualities in just the way we do with physical qualities.

Physical qualities seem to resist mathematical description because of the way we are perceptually conscious of them. But the same may hold for mental qualities, as well. The way we are conscious of the qualitative properties of sensory states when those states are conscious need not reflect the character of the mental qualities. So it may well be that mental qualities appear recalcitrant to mathematical description only because of the way we are conscious of those qualities when the relevant qualitative states are conscious.

Consider the “ultimate homogeneity,” in Wilfrid Sellars’s useful phrase, that mental qualities appear to have, which appears to set qualitative states apart from the particulate character of ordinary physical properties. But even though sensory qualities appear to us as ultimately homogeneous, they may not actually be so. They might be particulate, as the dependence of qualitative states on neural processes suggests, even though we are conscious of them as ultimately homogeneous. The mental properties of our sensations appear ultimately homogeneous to us simply because the way we are conscious of them smooths them out, so to speak, and elides the details of their particulate, bit-map nature.

Shoemaker has sought to contain the problem about quality inversion by appealing to the connection qualitative states have with perceptual thoughts. Because the qualitative similarities and differences that hold among our qualitative states is a function of the connection those states have with perceptual thoughts, quality inversion cannot occur without preserving these similarities and differences.

As Shoemaker notes, this does not show that no quality inversion can occur. We identify mental qualities by what it’s like for us to be in states with those qualities. And we cannot preclude the possibility that what it’s like for us could determine distinct sets of qualitative properties that preserve the relevant similarities and differences. But the connection HOTS have with what it’s like for one to be in a qualitative state underwrites a stronger result. The HOT that determines what it’s like for one to be in a particular qualitative state arguably represents that state by reference to typically accompanying perceptual thoughts. So those perceptual thoughts anchor what it’s like for one to be in that state. Quality inversion could occur only if the relevant set of perceptual thoughts changed, which by hypothesis does not happen.

Adoption of the relocation story would undercut this result, since the
relocation story supports the intuition that qualitative states are invariably conscious. Fortunately, the relocation story, however inviting it may once have been as an initial accommodation to Galilean science, is avoidable, and the intuitions that story encouraged are very likely not warranted.42

NOTES


2. I include as qualitative states and sensations all states with the relevant qualitative properties, whether or not they are caused distally by external objects.


4. It is likely that the terms “quale” and “qualia” are predominantly used in the literature as tacitly presupposing the view that qualitative states are invariably conscious. So it is perhaps more accurate in talking about nonconscious qualitative states to speak of absent and inverted qualities, rather than qualia.

5. I refer to the area within which one can see distal stimuli as the field of view, in contrast with the visual field, which is one’s array of visual sensations. See Austen Clark’s closely related distinctions in “Three Varieties of Visual Field,” Philosophical Psychology 9 (4) (December 1996): 477–95, and his A Theory of Sentience (Oxford: Clarendon Press, forthcoming), chap. 3, section 2.

6. Explaining these occurrences by physiological processes cannot, moreover, establish by itself that no qualitative state occurs. We would need in addition to show that those physiological processes are not themselves qualitative states. We cannot assume without argument that qualitative states cannot be physiological or that the processes invoked are of the wrong kind to be qualitative states.

7. We typically use the same words for color and other qualities to characterize qualitative mental states and to characterize physical objects and processes. But it is important to note that these two uses ascribe distinct properties. We use “red,” “green,” “round,” and “square” for both visual sensations and the physical objects and processes that typically cause them, just as we use “sharp” and “dull” for both pains and the objects that typically cause those pains. It is indisputable that sensations cannot have the same properties of being round and square as physical objects. And, since the shape properties of visual sen-

Shoemaker claims that "we apply color predicates to physical objects and never to sensations, ideas, experiences, etc." ("Qualities and Qualia," 98). But this seems not to be so. We seldom talk about our visual sensations at all, as against the things we see. But we do occasionally describe visual sensations as red or green, especially, though not exclusively, in cases of illusion or hallucination. Perhaps Shoemaker has in mind that we apply color terms to visual sensations in only an extended sense, and that may well be so. It may be, i.e., that the primary application of color terms is to physical objects and processes, and they apply in an extended way to those sensations which are typically caused by the relevant objects and processes.

8. Note that the qualitative property at issue is the shade of red that characterizes the visual sensation, not the sensed physical object (see n. 7). It is, once again, question begging to deny the force of indirect reasons for holding that a pain is throbbing even though one is not conscious of it as throbbing, or that a visual sensation is of some shade even though one is not conscious of it as having that particular shade.


14. This conclusion rests on Block’s contention that we may fail to be access conscious of qualitative states. Things get more complicated, however, when we focus closely on just what phenomenal consciousness consists in. A state is phenomenally conscious if there is something it’s like for one to be in that state.

But there are two ways we might understand this well-used rubric. It might mean simply that the state has qualitative properties, in which case things are exactly as described in the text. But it might instead mean having some mental access to those qualities, since the qualities in question will lack any subjective aspect unless we have such access. With no such subjective aspect, there is arguably nothing it’s like to be in such a state. Phenomenal consciousness thus construed would therefore fail to correspond to anything we intuitively count as consciousness.

On this reading, moreover, phenomenal consciousness literally entails access consciousness; the two properties would no longer be conceptually independent. Still, the argument in the text would remain unaffected, since Block agrees that qualitative properties occur in the absence of access consciousness. And, however we understand phenomenal consciousness, access consciousness is what matters to the force of our intuitions about inverted and absent qualia.


16. There are different things mathematical description might amount to here. Galilean considerations led Descartes to insist that physical reality can be described only in geometrical terms, though of course most theorists adopt a far more relaxed constraint. Moreover, it is immediately obvious which notions of mathematical description produce difficulties for qualitative properties. We need not settle these questions here, however, since the present concern is simply that the compelling intuitive sense that qualitative properties cannot be caught in whatever mathematical net is required. (I am grateful to Sidney Morgenbesser for pressing this issue.)

17. Shoemaker’s term is “displacement maneuver.” See “Qualities and Qualia,” 99.

18. Thus Shoemaker remarks: “colors, tastes, etc., as we experience them, exist only in the mind” (“Qualities and Qualia,” 98; emphasis in the original).


The higher-order state in virtue of which we are conscious of our conscious states is typically not, itself, a conscious state. So an inner-sense advocate might urge that higher-order qualities occur of which we are unaware. But when we introspect, we are conscious not only of the state we introspect, but of the higher-order state in virtue of which we are conscious of that target state. And we remain unaware of any higher-order qualities even when we are introspectively conscious of our qualitative states.

21. I am grateful to Jennifer Church for pointing out shortcomings in an earlier account of how the relocation story applies to bodily sensations.

22. Shoemaker aptly characterizes the relocation story as “one of the cliches of the history of philosophy” (“Qualities and Qualia,” 98).

23. Physical colors might simply be various light-reflecting and -emitting properties, though any such identification is independent of the present argument.
24. This recalls D. M. Armstrong’s useful idea that we conceive of bodily sensations on the model of our perceptual sensations; see Bodily Sensations (London: Routledge and Kegan Paul, 1962). (Independently, Armstrong also held there that both sorts of sensation are invariably conscious, but he has since repudiated that view.)

25. See n. 7 above.

26. The traditional, Aristotelian conception prevalent when Galileo wrote held that unseen physical color properties exist only potentially and are actualized only when we are perceptually conscious of them. Holding that light is the action color has on a transparent medium when we see, Aristotle writes, “[I]n a manner light, too, converts colors which are potential into actual colors” (De Anima III, 5, 430a16–17; trans. R. D. Hicks [Cambridge: Cambridge University Press, 1907]), cf. II 7, 419a9–11.


28. See my “The Colors and Shapes of Visual Experiences” and “The Independence of Consciousness and Sensory Quality” for an elaboration and defense of this approach.


29. When the conditions of illumination vary, radically different reflectance properties will produce the same ratio. So objects that look the same color in daytime sunlight, e.g., may look quite different when seen in other conditions of illumination.


31. And if they are normal perceivers for red objects, determined by their success in visually discriminating objects as other people do.

32. Our perceptual sensations cause perceptual thoughts that objects with particular perceptible properties are perceptually present to one whether or not the objects have those properties and, indeed, whether or not any such objects are present to one. So, as Sellars argues, the occurrence of such sensations explains the occurrence of both veridical and nonveridical perceptual thoughts.

Indeed, we conceive of perceptual sensations, according to Sellars, as states that explain the occurrence of perceptual thoughts whether or not those thoughts are veridical. So the properties in terms of which we taxonomize sensations must correspond to the various types of physical object those thoughts are about, and correspond to those objects in respect of their perceptible properties. See references in n. 28 above.

33. Perhaps by a process along the lines of Aristotle’s epagoge (An. Post. II, 19, 99b35–100b5). Aristotle held that thinking is not just associated with sensory qualities, but literally involves them: “[N]oetic objects are in the sensible objects” (De Anima III, 8, 432a5; cf. III, 7, 431a16–7, b2, 1, 1, 403a9–10, III, 8, 432a9, 14; De Mem. 1, 449b31).

34. The idea of nonconceptual content provides another path for bridging that gulf; see, e.g., Christopher Peacocke, A Study of Concepts (Cambridge, Mass.: MIT Press/Bradford

35. I develop this argument in “Sensation, Consciousness, and the Detachment Assumption,” unpublished MS.


38. Aristotle’s view that perceiving consists of the organism’s literally taking on the perceptible properties of the object (De Anima II, 5, 418a4, II, 11, 423b31, II, 12, 424a18, III, 2, 425b23) constitutes a kind of exception, since then the object and the organism both have the same property. There would then be only one property for “red” to refer to. And, since the sensory quality is the same property that our thoughts of red objects are about, this allows for the robust connection Aristotle recognizes between intentional content and sensory quality. See n. 33.

39. Such considerations figured in the argument against Dretske in section II above.

40. One might argue that the higher-order sensing could also represent our conscious states with the required variability. But as we have seen, there are other reasons to reject that inner-sense model.

For more on the connection between HOTS and what it’s like to be in qualitative states, and especially on how HOTS could be responsible for there being anything it’s like for one to be in qualitative states, see “State Consciousness and What It’s Like,” esp. secs. iii and iv, and “The Kinds of Consciousness,” section iv.


Some such view is not uncommon; cf. Peter Carruthers’s claim that “perceptual information is analogue (that is, ‘filled in’ and continuous),” as against belief-contents, which “are digital, or chunked” (*Language, Thought, and Consciousness: An Essay in Philosophical Psychology* [Cambridge: Cambridge University Press, 1996], 167).

42. Much of this paper was written during a stay at the Center for Interdisciplinary Research (ZiF), University of Bielefeld, Germany. I am grateful to the Center for providing stimulating and congenial surroundings, and to a PSC-CUNY Research Award for supporting my stay.