

The Representational Character of Mental Qualities

Dissertation Prospectus

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§1 Introduction

Common sense, as well as most traditional and contemporary theorizing, distinguishes mental states in terms of distinct qualitative and intentional properties. According to this taxonomy, some states exhibit intentional content such as a belief's content that the dog barks. Other states, by contrast, exhibit mental qualities such as a visual sensation's bluish quality.¹ And some states, such as perceptions and emotions, exhibit both intentional content and mental qualities. Most theorists hold that if a state exhibits intentional content then the state represents things to be a certain way. The belief that the dog barks represents the state of affairs that the dog is barking. But what role, if any, do mental qualities play in our mental lives?

As Loar observes, most maintain that mental qualities “are not in themselves, not intrinsically, representational or intentional” (2003, p. 78). And though mental qualities are typically distinguished from intentional properties, whether and in what ways these mental properties are related, and even whether mental qualities exist, has been subject to debate. Many historical figures, such as Aristotle (1968), Berkeley (1948), and Hume (1739/2000), sought to build intentional content out of mental qualities. Kant

¹ As Dennett notes, there are various terms for the qualitative dimensions of mental states, including “‘raw feels’, ‘sensa’, ‘phenomenal qualities’, ‘intrinsic properties of conscious experiences’, the ‘qualitative content of mental states’ and of course ‘qualia’” (1991, p. 372). I use ‘mental qualities’ rather than these more common expressions because, as I’ll argue in chapter 5, these terms often tacitly import various undefended assumptions about the phenomena under discussion.

(1787/1998) then distinguished mental qualities from intentional properties in the way that most contemporary thinkers do (e.g., Nagel 1974, Peacocke 1983, Block and Fodor 1972). Recently, so-called intentionalists have argued that all mental properties are intentional (e.g., Armstrong 1968, Harman 1990, Tye 1995, Lycan 1996), while others have argued that mental qualities are related to intentional properties in various ways (e.g., Byrne 2001, Horgan and Tienson 2002, Chalmers 2004).

Many thus regard questions about the existence and nature of mental qualities to comprise some of the most pressing issues in the philosophy of mind. Block writes,

The greatest chasm in the philosophy of mind--maybe even all of philosophy--divides... on whether there is anything in the phenomenal character of conscious experience that goes beyond the intentional, the cognitive... (2003, p. 533).

According to the view that I'll defend in my dissertation, each mental quality represents a particular perceptible property. It is plain that objects exhibit a range of perceptible properties such as colors, smells, and tastes. A red apple, for example, exhibits the perceptible color red. And it is also clear that, if mental qualities exist, they are distinct from these perceptible properties. For one thing, perceptible properties are properties of objects, whereas mental qualities are properties of mental states. For ease, I'll refer to the perceptible properties that objects exhibit as perceptible properties and I'll refer to the corresponding mental qualities that mental states exhibit as mental

qualities.² In my terminology, a sensation of perceptible red is a state that exhibits mental red. And I'll argue that mental red represents perceptible red.

Since most have assumed that if mental qualities exist they are nonrepresentational, many arguments in favor of mental qualities involve putative examples of representationally identical states that differ qualitatively (e.g., Peacocke 1992, Block 2003, Burge 2003, Millar 2011). Boghossian and Velleman (1989, p. 94), for example, assert that blurry vision and normal vision can represent the same thing, though they are qualitatively distinct. But many, and most prominently many intentionalists, have persuasively replied that such states do involve representational differences. Blurry vision, for example, arguably represents things as having indistinct contours (e.g., Tye 2003a, pp. 17-20).

I thus agree with intentionalists who maintain, as Dretske puts it, that “[a]ll mental facts are representational facts” (1995, p. xiii). My view in so doing may seem to commit what Block (1990, p. 512) calls the “fallacy of intentionalizing qualia,” which he sees as amounting to the elimination of mental qualities. But Block’s conclusion depends on the assumption that all representational properties are intentional. Though most do assume this without argument,³ this assumption is groundless. Plainly all intentional properties are representational, but it hardly follows that all representational properties are intentional. And I’ll argue that this assumption is false in chapter 5. I’ll

² Indeed, many argue that the predicates for the perceptible properties such as ‘red’ ambiguously refer both to those perceptible properties and the corresponding mental qualities (e.g., Moore 1952, Reid 1969, Peacocke 1983). Reid, for instance, writes that “[a]ll the names we have for smells, tastes, sounds, and for the various degrees of heat and cold, have a like ambiguity.... They signify both a sensation, and a quality perceived by means of that sensation” (1969, p. 244).

³ McGinn, for instance, writes that “[t]he way in which experience represents the world constitutes its [intentional] content, the way it makes things seem” (1989, p. 58).

argue that mental qualities represent perceptible properties in a way that is distinct from the way that intentional properties represent things: Mental red represents perceptible red in a nonintentional and distinctively qualitative way.

As noted above, there are many extant views about the existence and nature of mental qualities. It is indeed crucial to wonder why has there been so much disagreement. Naturally, one's position regarding mental qualities and how they relate to other mental properties depends on how one initially characterizes these phenomena. What we need first, of course, is a way of understanding mental qualities that avoids, as far as possible, begging the very questions that are relevant to deciding between the various positions outlined above.

In my first chapter, I'll sketch what I believe is an underlying narrative in contemporary philosophy of mind. Those who think consciousness is the only or main source of evidence about mental qualities often regard mental qualities as intrinsic, resistant to functional or naturalistic explanation, and thus nonrepresentational. Such views, I'll argue, render mental qualities quite mysterious. By contrast, those who deny that consciousness is the last word about mental properties typically also deny that there are any intrinsic or nonrepresentational mental properties. And since most assume if mental qualities exist they are intrinsic, these theorists also typically deny that there are mental qualities. This position, I maintain, throws the baby out with the bath water. In their effort to avoid positing mysterious mental properties, these views deny what seems so obvious to most--namely, that we have access to our own mental qualities via consciousness.

Indeed, many so-called qualophiles think that we can know nothing more intimately than our own mental qualities. Thus Block asks, “[w]hat is it that philosophers have called qualitative states? I answer, only half in jest: As Louis Armstrong said when asked what jazz is, ‘If you got to ask, you ain’t never gonna get to know’” (1978, p. 73). Block claims, and many agree, that we know about our own mental qualities via consciousness, and that there may not be much more that we can say about them.

But though it is not often openly admitted, many assume that we only know about mental qualities via consciousness. Horgan and Graham, for example, explicitly claim that “[p]henomenal character, of course, is something that directly manifests itself only from within a first-person perspective on the world” (forthcoming, p. xxx). If how mental qualities appear in consciousness exhausts our knowledge of them, it follows that “in the case of phenomenal consciousness there is no gap between appearance and reality, because the appearance just is the reality: how the phenomenal character seems, to the agent, is how it is” (Horgan, forthcoming, p. xxx). Since many claim that it appears from the first-person perspective that mental qualities are intrinsic, if the way mental qualities seem is the way they are, mental qualities are nonrepresentational.

Whatever its credibility at first blush, the view that mental qualities are only known from the first-person perspective is a consequence of many commonly held intuitions about mental qualities. And many hold that the starting point of any account of mental qualities is to accommodate these sorts of intuitions. For instance, many maintain that undetectable quality inversion (e.g., Locke 1700/1975, Block 1990), so-called philosophical zombies (e.g., Chalmers 1996), or the scenario involving the so-called super-scientist Mary (e.g., Jackson 1982) are possible or at least conceivable.

These considerations motivate what Chalmers (1996) calls the hard problem and what Levine (2001) calls the explanatory gap--issues which form the core of what is known as the mind-body problem. Many take these considerations to show not only that mental qualities are only directly apprehensible from consciousness, but also that mental qualities lack causal powers or resist functionalist or physicalist explanation.

But the sorts of intuitions that I discussed above are questionable and several deny that the scenarios they characterize are possible or even conceivable (e.g., Harman 1996a, p. 12; Tye 2002, p. 452). Many even deny that the first-person perspective is a good guide to mental properties at all. Instead, they hold that the only considerations relevant to explaining mental properties are the third-person data relevant to explaining and predicting behavior. According to one such view, Dennett's (1991, chapter 4) so-called heterophenomenological approach, we need not take people's reports about mental qualities at face value, but rather leave open the possibility that people may make inaccurate reports about their own minds. And, on Dennett's view, we can explain and predict peoples' behavior without positing any intrinsic or nonrepresentational mental properties at all.

But both proponents and opponents of mental qualities typically define mental qualities as those mental properties that are intrinsic and nonintentional (e.g., Dennett 1988, p. 229; Block 2007a, p. 501). And since most assume without argument that all representational properties are intentional, defining mental qualities in these ways effectively assumes that mental qualities, if they exist, are nonrepresentational. But the question remains whether this is the most neutral way to characterize mental qualities.

After discussing in chapter 1 some introductory issues about the debate over the nature of mental qualities, I'll argue that proponents of mental qualities are correct to deny that all mental properties are intentional. This is the mistake of intentionalism, which I'll argue is problematic in chapter 2. But, like intentionalism, the view that I'll defend in chapter 5 renders undetectable quality inversion without misrepresentation impossible. And in chapter 3 I'll show that several views that hold that we can accommodate both the possibility of undetectable quality inversion as well as the idea that mental qualities are somehow representational cannot be sustained. I'll argue in chapter 5 that the right thing to conclude is that quality inversion is impossible.

If, however, inversion is possible or mental qualities are nonrepresentational for some other reason, then we require some account of the role they play in our mental lives. And many argue that mental qualities function in our cognitive economies by being related to a special class of representations, so-called phenomenal concepts, which are constituted by or depend on mental qualities for their instantiation. In chapter 4, I'll argue that several versions of this approach are unworkable.

In chapter 5, I'll argue that the most neutral way to characterize mental qualities arises from our commonsense folk-psychological claims about them. I'll argue that though the folk understanding is silent regarding whether mental qualities are representational, it is consistent with that possibility. I'll then propose several reasons to think mental qualities are representational and develop a theory that best captures these facts. And I'll conclude that this account of mental qualities enables us to do justice to our first-person impressions of them, understand their roles in our mental lives, and see how they fit in nature.

§2 Chapter 1: The Problem of Qualitative Representation

In this introductory chapter, I'll begin by discussing some distinctions that are relevant to the question of whether mental qualities are representational. I'll then catalogue several ways in which many have denied that mental qualities represent perceptible properties. As stated in my Introduction, I'll argue that the disagreement over mental qualities stems from disagreement regarding the proper way to determine and describe the phenomena that we seek to explain.

First, what does it mean to say that mental qualities, or any mental properties, are representational? Adapting a proposal from Siegel (2010, p. 30), I hold that a mental property is representational if it is assessable for accuracy. And I'll argue this notion of representation is preferable over several theories of representation. Dretske (1981), for example, claims that something is representational if it carries information. But this proposal is problematic because all representation requires the possibility of misrepresentation. And, as Fodor (1984) argues, some things can carry information and yet cannot misrepresent.

I'll also explore other issues concerning the nature of representation. For example, many hold that the only genuinely representational things are intentional mental states and that if anything purports to be representational (e.g., a painting) it is only derivatively representational in virtue of being suitably related to intentional states (e.g., Searle 1992, Haugeland 1998). But I'll argue that, since most assume without grounds that all genuinely representational properties are intentional, the question remains whether any nonintentional mental properties are also genuinely representational.

As noted in the Introduction, there are several kinds of reasons why one might deny that mental qualities represent perceptible properties. I'll discuss not only the issues I discussed there, but also explore additional ways in which people deny that mental qualities are representational. Some, for example, deny mental qualities represent perceptible properties not because they deny that mental qualities exist, but because they deny that perceptible properties exist. Since it seems to many from the first-person perspective that properties such as colors are irreducibly qualitative, many claim that colors cannot be identical to physical properties such as the reflectance properties of surfaces. Thus many subscribe to the so-called primary/secondary quality distinction, on which primary qualities such as shape and number are properties of objects, whereas secondary qualities such as color and taste are properties of mental states, which only seem to be properties of objects (e.g., Locke 1700/1975, Hume 1739/2000, Boghossian and Velleman 1989). Common sense, however, holds that perceptible properties are mind-independent properties of objects. Thus it would be preferable to accommodate perceptible properties if we can do so.

Those who deny mental qualities exist, by contrast, typically do hold that perceptible properties exist. Many thus claim that the difficulty (if there is one) for this kind of view is explaining how perceptible properties, which seem irreducibly qualitative, can be identical to physical properties. As Byrne puts it, using Sellars' famous terms, on this view "there is no "mind-body problem," or "hard problem of consciousness;" if there is a hard problem of something, it is the problem of reconciling the manifest and scientific images" (2006, p. 223).

In chapter 5, I'll argue that the problems about perceptible properties or mental qualities can be diffused if we understand that mental qualities and perceptible properties are distinct kinds of properties and that the mental qualities represent the perceptible ones.

§3 Chapter 2: Intentionalism

Intentionalism is the view that mental states exhibit intentional properties only (e.g., Armstrong 1968, Harman 1990, Lycan 1996, Thau 2002, Jackson 2006) or the view that mental qualities supervene on intentional content (e.g., Byrne 2001). Intentionalism thus threatens my view that mental qualities are representational in a nonintentional way. In this chapter, I'll undermine intentionalism by challenging three prominent arguments in support of it. I'll conclude by arguing that intentionalism is problematic for several reasons.

At the onset, it is important to note that intentionalists are split on the issue of whether all intentional contents are conceptual. Some maintain that states like perceptions exhibit so-called nonconceptual content in addition to whatever conceptual content they may exhibit (e.g., Dretske 1995, Tye 1995, Crane 2009). In this chapter, I'll thus focus only on versions of intentionalism that hold that all contents are conceptual (e.g., Harman 1990, Mandik forthcoming) and I'll discuss views that countenance nonconceptual content in chapter 5.

Perhaps the most common argument for intentionalism is what I will call the Argument from Transparency (cf. Lycan 2006, §3.3). Following Moore (1903), many claim that experience is "transparent" or "diaphanous" (p. 446 and p. 450 respectively). As Harman (1996b, p. 75) puts it, we're never "directly" or "introspectively" aware of

mental qualities.⁴ The only qualities we are aware of, Harman claims, are qualities of what our experiences are experiences of. If our only or main source of evidence for mental qualities is our first-person awareness of them, and if experience is transparent in this way, then it seems there no mental qualities.

Naturally, if one shifts from a perception of red to a perception of green, there is a change in the perceptible properties of which one is aware. Harman claims, by contrast, that when one shifts from a perception of red to the introspection of one's perception of red, there seems to be no change in the qualities of which one is aware. The introspection of one's perception of red results in one's awareness that one perceives red. But Harman maintains that this is to become introspectively aware only of the perception's intentional properties, not of any mental qualities.

Harman's claim, however, depends on several implicit assumptions for which he gives no argument. First, Harman assumes that, if there were mental qualities, the shift from a perception to the introspection of that perception would be akin to the shift from one perception to a qualitatively distinct perception. But this assumes that we're aware of mental qualities and perceptible properties in the same way. This in turn assumes that mental qualities are the same kind of properties as perceptible properties.

But these assumptions are groundless. Common sense holds, for instance, that perceptible colors are properties of objects. But mental colors, if they exist, are properties of states. Moreover, if mental qualities exist, they arguably figure in the

⁴ Harman glosses this as saying we're never noninferentially of mental qualities, which I'll interpret as at least seemingly noninferentially. Rock (1997), for instance, defends the notion that nonconscious inference is ubiquitous in perception. According to this view, even if it appears as though we have noninferential awareness of anything, it could be that such access is mediated by inferences of which we are unaware.

perception of perceptible properties. But since mental qualities and perceptible properties are distinct, it remains an open question whether the way we are introspectively aware of mental qualities is or is not perceptual. If we are aware of mental qualities and perceptible properties via distinct kinds of mental processes, then we cannot be aware of both kinds of properties simultaneously in order to distinguish them. And the fact that we can never simultaneously compare a perceptible property to a mental quality via the same mental process may mislead one into thinking there's only one kind of property. So The Argument from Transparency fails to show that we are never directly aware of mental qualities.

Byrne (2001) develops another common argument for intentionalism, which I'll call the Argument from Seeming (cf. Lycan 2006, §3.4; for a similar argument, see also Thau 2002, pp. 32-33). Byrne observes that whenever one's perceptions change, the way things seem to one changes as well.⁵ And Byrne assumes that how things seem to one is a matter of how one represents things to be and that all representational properties are intentional. Byrne concludes that there can be no change in one's perceptions without a change in the contents of those perceptions. Byrne's view thus is compatible with the existence of mental qualities--if they exist they supervene on content. If so, however, things' seeming a way to one can be due only to one's contents and not the mental qualities that supervene on that content. The argument therefore suggests either that mental qualities do not exist or that they are not representational.

⁵ This is a reconstruction of Byrne's argument because he puts the argument in terms of noticing one's perceptions' changing. Unless noticing is factive, I argue that Byrne's version needlessly complicates things.

Some have objected that Byrne's argument equivocates because phrases like 'how things seem' or 'how things look' are ambiguous between an intentional sense that tracks the way the state represents things to be and a qualitative sense that tracks the state's mental qualities (e.g., Block 2003, pp. 560-561; Crane 2007, pp. 484-486). But whether or not phrases like 'how things seem' are equivocal in this way, Byrne's argument succeeds only on the assumption that all representational properties are intentional. But Byrne offers no reason for this assumption. Things' seeming a way arguably can be due to states' mental qualities and mental qualities thus need not supervene on content.

I may consider other arguments for intentionalism as well, such as what I'll call the Argument from Grounding. As Pautz (2010a, p. 266) observes, perception grounds thought--that is, perceptions enable us to form perceptual thoughts about the things we perceive. And Pautz argues perception can do this only if it exhibits the same kind of content as thought. But I'll argue that Pautz's argument, like Byrne's, succeeds only given the baseless assumption that mental qualities are not representational and thus cannot ground representational states.

Intentionalism is thus unsupported. But I'll also argue that it is problematic in various ways. First, intentionalism arguably cannot give an explanation of the difference between perception and thought. Consider, for instance, the belief and the perception that there's something red. Traditional theorizing holds that both states exhibit the content that there's something red and that the difference between them is that only the perception exhibits mental qualities. Intentionalists, by contrast, typically argue that the perception but not the belief exhibits additional content such as that red occupies some

of one's visual field (e.g., Pautz 2007, p. 509). But this proposal fails because arguably any intentional content can figure in any kind of intentional state; a belief can exhibit this or any content without thereby being a perception (e.g., Sellars 1975, pp. 306-307; cf. Coates 2007, pp. 14-16).

Since most agree that intentional states exhibit both contents and mental attitudes towards those contents, many intentionalists maintain that perceptions but not thoughts exhibit sensory attitudes towards their contents. Since there are no words in English for such relations, Byrne (2009, p. 437), for instance, calls these attitudes *ex-ing* relations and Pautz (2010a, p. 258) calls them the *sensorily entertaining* relations.

But whatever these sensory attitudes are, they are presumably assertoric. When one asserts some content, however, that content is typically open to revision in light of one's other attitudes. But, as examples of various visual illusions such as the Müller-Lyer figure or the so-called waterfall illusion (e.g., Mather et al 1998) illustrate, there are aspects of perception that are immune to revision by one's beliefs (cf. Crane 1992, pp. 149-154). Moreover, the mental attitudes of thoughts in general correspond to the illocutionary forces of the speech acts that express those thoughts (e.g., Vendler 1972, Searle 1983). It is unclear, however, what distinctive illocutionary forces could correspond to the sensory attitudes. Without an informative account of these sensory attitudes, this proposal is at best an effort to save intentionalism.

Lastly, I argue that intentionalism not only cannot distinguish thought from perception, but also cannot distinguish perception from sensation. Intentional contents are typically described with sentence-sized descriptions such as 'that a is F'. An intentional state therefore represents that something is the case. And perceptions, such

as the perception that there's a red apple, are typically described with these sorts of sentential descriptions--and so arguably always do exhibit at least some intentional content. But suppose one has a brief hallucination of something red when awakening from sleep. Unlike a perception, we do not describe this kind of sensation of red with any sentential description. Rather, we describe it with term-sized predicates corresponding to the predicates for perceptible properties such as 'red' or 'reddish'. The sensation thus arguably does not represent that anything is the case and so does not exhibit any content. Though such sensations might be rare, the intentionalist cannot explain them.

§4 Chapter 3: Undetectable Quality Inversion

Many believe that any account of mental qualities must accommodate the possibility, or at least the conceivability, of undetectable quality inversion without misrepresentation. Because intentionalists hold that all mental properties are representational, they typically deny quality inversion without misrepresentation is possible (e.g., Harman 1996a, p. 12; Tye 2002, p. 452). And according to the view of mental qualities that I'll defend in chapter 5, undetectable quality inversion is inconceivable. Some, however, believe that we can accommodate both the possibility of undetectable quality inversion as well as the idea that mental qualities are somehow representational. In this chapter, I'll argue against three such proposals: Block's (1996, 2003, 2007a, 2007b, 2010), Shoemaker's (1994, 2000, 2001, 2006), and Chalmers's (2004, 2006a, 2010).

Block hypothesizes that certain mental qualities, which he calls mental paint, represent perceptible properties in a way that accommodates undetectable inversion.

Consider the following standard example of inversion: Luke and Leia both represent a red apple as being red, but the apple looks red to Luke and looks green to Leia. That is, the apple looks to Leia the way a green lime looks to Luke. Block explains this sort of scenario by claiming that Luke represents the apple's redness by a kind of mental paint, mental red, whereas Leia represents it by a different kind of mental paint, mental green. Luke and Leia represent the same perceptible property, but via distinct mental qualities.

One might think that Block holds that any kind of mental quality can represent any perceptible property. But Block denies this. Block (2007a, p. 227) argues that reflection on, for example, one's mental square qualities reveals that perceptible squares exhibit what he calls packability, which means they can be fit together without gaps. Perceptible circles, by contrast, are not packable. But if one can tell introspectively that one's sensation is of a packable perceptible shape, then one's mental shape quality cannot represent a nonpackable perceptible shape or a nonshape perceptible property. Block concludes that inversion applies only to mental qualities of secondary qualities such as color and not to primary qualities such as shape.

But I'll argue that the kinds of consideration that Block adduces in favor of thinking that mental qualities of primary qualities represent only particular properties also apply to mental qualities of secondary qualities. It's well-known that the perceptible colors vary along the dimensions of hue, saturation, and brightness (see, e.g., Hardin 1993). And just as reflection on mental square reveals that perceptible squares are packable, I'll argue that reflection on one's mental color qualities reveals that a certain perceptible color has a particular level of saturation or brightness. Thus it is reasonable

to think that mental saturated blue represents a saturated color and so cannot represent an unsaturated perceptible hue such as perceptible unsaturated red.

To accommodate undetectable inversion, then, I'll argue that Block must hold that any mental quality can represent any perceptible property. If Block accepts this, then he owes an account of what makes a mental quality represent a perceptible property on a given occasion. But Block offers no good explanation of why mental red represents perceptible red, let alone why mental square could not represent perceptible red. Indeed, besides his desire to accommodate the possibility of undetectable inversion without misrepresentation, Block offers no other reason to think that mental qualities represent perceptible properties in the first place. Block hence renders mysterious the role mental qualities play in our mental lives.

Shoemaker attempts to develop a view that accommodates both Harman's claim that we're never directly aware of mental qualities and the possibility of quality inversion. Shoemaker argues that Luke and Leia each represent a red apple not only as being red, but also as having distinct properties in addition to its perceptible color. Shoemaker calls these additional properties appearance or phenomenal properties, which he claims are the ways things look to observers under certain viewing conditions (for other accounts of appearance properties, see, e.g., Kriegel 2009 or Hill 2009). The red apple looks red to Luke because he also represents it as having phenomenal red and the red apple looks green to Leia because she represents it as having phenomenal green. Because Shoemaker claims that how something looks is distinct from its perceptible color, Shoemaker maintains that "we see the color of a thing by seeing a phenomenal

property it presents" (1994, p. 35). Leia sees that the apple exhibits perceptible red in virtue of seeing that it exhibits phenomenal green.

Shoemaker has offered several different proposals about how to understand phenomenal properties. Roughly, Shoemaker holds that phenomenal properties are the properties that cause experiences with certain kinds of mental qualities. Though we are never directly aware of mental qualities, Shoemaker thinks we have a sort of displaced access to them by reflection on the possibility of inversion (cf. Dretske 1995, p. 41).

But I'll argue that Shoemaker's account renders it impossible to give any informative account of perceptible properties such as colors. We typically fix the reference of our perceptible-color terms by how a perceptible color looks under normal lighting conditions to normal perceivers. Since Shoemaker rejects this commonsense idea, he owes an account of how to individuate the perceptible colors--at least because he must explain how it is that one sees an object's perceptible color in virtue of seeing its phenomenal color. And though Shoemaker himself does not offer any positive proposal about how to identify the perceptible colors, the most promising route is to explain the perceptible colors in terms of the phenomenal colors. I'll argue, however, that there is no relationship between an object's phenomenal colors and its perceptible color on any of Shoemaker's successive accounts of the phenomenal colors.

Shoemaker's (1994) proposal is that phenomenal red is the property of currently causing mental red in some perceiver under some lighting conditions. But this entails that objects do not have their phenomenal colors when unseen. And since objects have perceptible colors even when unseen, this account entails there is no relationship between an object's perceptible color and its phenomenal colors. Because Shoemaker

found the idea that objects do not possess their phenomenal colors when unseen independently objectionable, his (2000) proposal instead holds that phenomenal colors are the dispositional properties of objects to cause the corresponding mental colors in some perceiver under some lighting conditions.

One natural suggestion, then, is that perceptible red is the categorical base of phenomenal red, which is the disposition to cause mental red in some perceiver under some lighting conditions. But since any object has the disposition to cause mental red in some perceiver under some circumstances, this view entails that every object exhibits every phenomenal color. Presuming that objects exhibit only one perceptible color, this view also entails that there is no relationship between an object's phenomenal colors and its perceptible color. And I'll argue that similar problems plague Shoemaker's (2001) and (2006) accounts of phenomenal properties. Since Shoemaker requires but cannot provide an account of the perceptible colors, his view is unworkable.

Chalmers argues that a state's mental qualities determine what he calls Fregean contents, which are descriptive conditions that are the perceptual analogues of Frege's senses or modes of presentations of terms. Suppose Luke sees something perceptible red and his perception exhibits mental red. Chalmers claims that Luke's mental quality determines that his perception has the Fregean content that, roughly, there is the property that normally causes perceptions with mental red in him. If that property is perceptible red, then Luke's perception is veridical; otherwise, it is misrepresentational. Similarly, if Leia perceives something perceptible red and her perception exhibits mental green, Leia's mental quality determines that her perception has the Fregean content that there is the property that normally causes perceptions with mental green in her. If

that property is perceptible red, then Leia veridically represents the same perceptible property as Luke, despite the fact that their mental qualities are inverted.

The main problem with Chalmers's view is that he offers no reason to think that one's mental qualities and Fregean contents cannot come apart. For instance, why couldn't mental green determine the Fregean content that there is the property that normally causes perceptions with mental red? Chalmers (personal communication) asserts that it's plausible that two states with the same mental quality will have the same Fregean content, but he provides no reason to think so. Moreover, Chalmers's account entails that mental qualities at best accompany representational properties--that is, the Fregean contents--but are not themselves representational. The representational work is done by the Fregean content, and the mental quality functions only as a property mentioned in the content's description (cf. Levine 2010, p. 214). Chalmers thus smuggles in mental qualities without giving any informative account of their role in our mental lives (cf. Shoemaker 2003, p. 260).

None of the above accounts is capable of explaining how undetectable quality inversion works. The best explanation is that no informative account of mental qualities accommodates this possibility.

§5 Chapter 4: Phenomenal Concepts

As noted in the Introduction, it is a consequence of the conceivability of undetectable quality inversion, as well as many other intuitions about mental qualities, that mental qualities are only known from the first-person perspective. And even if one does not accept that strong claim, many do hold that we have some sort of special knowledge--so-called phenomenal knowledge--of our own current mental qualities. But

if mental qualities are not or need not be representational, then how do they function in our mental lives? How do we know about our own mental qualities, even from the first-person perspective?

Recently, many have argued that mental qualities function in our cognitive economies by being related to a special class of representations, which are known as phenomenal concepts (“p-concepts”) (e.g., Loar 1997, Hill and McLaughlin 1999, Perry 2001, Papineau 2002, Chalmers 2003, Tye 2003b, Carruthers 2004, Aydede and Güzeldere 2005, Block 2006, Levin 2006, and Balog forthcoming). P-concepts are a special class of concepts, which are unusual insofar as they refer to one’s own current mental qualities in a direct and nondescriptive way because the qualities they refer to are somehow partially constitutive of the p-concepts themselves. On this sort of view, we acquire phenomenal knowledge by forming thoughts involving these special concepts, which are constituted by or depend on mental qualities for their instantiation.⁶

These accounts of p-concepts present an alternative understanding of the role that mental qualities play in our psychological functioning to the account that I’ll develop in chapter 5. In this chapter, I’ll argue that none of the major theories of p-concepts successfully explain how p-concepts refer to mental qualities and so do not constitute viable alternatives--and I doubt a viable account of p-concepts can be developed.

There are various ways to unpack the proposal that we conceptualize our mental qualities via p-concepts. Loar (1997) holds that p-concepts are a subclass of what he

⁶ P-concepts are typically posited to protect physicalism from various antiphysicalist thought experiments such as Jackson’s Mary. According to what Stoljar (2005) calls the phenomenal-concept strategy, physicalism is safe because we deploy p-concepts that we could not deploy unless we have been in states with those qualities. Some posit p-concepts and nonetheless hold that physicalism is false (e.g., Chalmers 2006b).

calls recognitional concepts, which are “type demonstratives... grounded in dispositions to classify, by way of perceptual discriminations, certain objects, events, situations” (p. 600) (for similar theories, see, e.g., Tye 2003b, Carruthers 2004, Levin 2006). When I see a dog, I possess a recognitional concept of it if am disposed to recognize it as being of that type (i.e., dog) as opposed to some other type. Loar’s recognitional p-concepts similarly demonstratively pick out a particular current mental quality as being of the type that it is and do so because that very quality is also the concept’s mode of presentation.

There is considerable debate regarding whether there are recognitional concepts to begin with.⁷ But a serious difficulty for Loar’s account is that there is no way to specify the mechanism by which a p-concept refers to the relevant mental quality. In the case of linguistic demonstratives, there are at least two ways to explain how they might refer: One might fix the reference of a linguistic demonstrative by either perception or by background beliefs. If I say, “that is red,” the referent of ‘that’ might be determined by the fact that I am currently perceiving whatever is red; I point perceptually to the referent of ‘that’. But perception cannot explain how p-concepts demonstratively refer because, as noted in chapter 2, we arguably do not perceive our mental qualities. It may be, then, that the referent of the demonstrative is determined by my background beliefs about the referent. But background beliefs cannot be what fix the referents of p-concepts because p-concepts by hypothesis refer directly, whereas background beliefs would determine the referent of a p-concept descriptively. Thus it is unclear how p-concepts refer directly on Loar’s account.

⁷ Fodor (1998), e.g., argues that there are no recognitional concepts because concepts are compositional, whereas recognitional capacities are not. For replies, see, e.g., Horgan 1998 and Recanati 2002. I cannot settle this issue here; I merely note that it is not obvious that there are recognitional concepts.

Several theorists attempt to explain how mental qualities function both as the mode of presentation and the referent of p-concepts on the model of linguistic quotation (e.g., Papineau 2002, Papineau 2006, Block 2006, Balog forthcoming). If we quote a word in order to mention it but not to use it, it would seem the word literally constitutes the quoted expression. Some theorists argue that a p-concept likewise refers to a quality by involving that quality in a manner somehow analogous to quotation.

But it is unclear how linguistic quotation works (cf. Cappelen and Lepore 2007), and therefore how these p-concepts refer. Papineau adopts something akin to Davidson's theory of quotation; Papineau writes that "[l]inguistic quotation marks, after all, are a species of demonstrative construction: a use of quotation marks will refer to that word, whatever it is, that happens to be made salient by being placed within the quotation marks" (2006, p. 121, emphasis his; cf. Davidson 1979, p. 90).

Balog, by contrast, argues that a p-concept refers to the quality it quotes because of the conceptual role of that concept. In other words, a p-concept refers to the quality of an experience because users of that concept are disposed to accept instances of disquotational schemas such as: "M1: *experience x* REFERS-TO experience x" (forthcoming, p. xxx), where 'M1' refers to a thought about an experience x (or quality of the experience x), '*experience x*' refers to a p-concept quoting the experience (or quality of the experience), and 'experience x' refers to the experience (or quality of the experience) itself.

But there are problems with appealing to quotation to understand p-concepts. Quine, for instance, held that quotations are syntactically atomistic. Quine claims that "[f]rom the standpoint of logical analysis each whole quotation must be regarded as a

single word or sign, whose parts count for no more than serifs or syllables” (1940, p. 26). So it is equally unclear that a quoted mental quality is constituted by a mental quality at all. Unless mental qualities literally constitute these p-concept mental quotations, as Papineau’s and Balog’s accounts require, it is not obvious that a mental quotation refers directly to a particular mental quality.

Elsewhere Papineau (2006) offers an account of p-concepts which differs from his initial proposal. Papineau argues that p-concepts are a subclass of so-called perceptual concepts, which are “stored sensory templates” that refer to whatever they are templates of because they have acquired the functional role of doing so (2006, p. 114). If I see a particular bird, I form a sensory template of that bird which is reactivated upon seeing the bird on other occasions. The sensory template, my perceptual concept, can accumulate further sensory information about that bird because it has the functional role of nondemonstratively referring to that bird. A p-concept, then, is a sensory template of itself--a mental quality that has acquired the role of referring to qualities of its type.

It follows from this account, however, that the fact that the p-concept is constituted by the mental quality is not what accounts for the concept’s referring to the quality. Rather, it is the functional role of the concept that accounts for its referential properties. It is thus consistent with Papineau’s new view that, as he himself acknowledges, “other states with a different or no phenomenology, but with the same cognitive function, would refer to the same experiences for the same reasons” (2006, p. 125). Since it is possible either for mental red or for a nonqualitative mental item to function to represent mental green, it seems that Papineau reduces p-concepts to

ordinary, nonphenomenal concepts. And Papineau provides no reason to think that we ever refer to our mental qualities by p-concepts that are constituted by qualities.

A related view is Prinz's (2007) proposal that we refer to mental qualities not via p-concepts but by "mentally pointing" to them via nondescriptive demonstrative acts of top-down attention. Prinz's view has in common with the p-concepts approach that we refer to mental qualities in a direct way that requires the presence of the mental quality. But top-down attention is arguably not sufficient for referring to conscious mental qualities because there is significant evidence for top-down attention in the absence of consciousness (e.g., Koch and Tsuchiya 2007, van Boxtel et al 2010). And top-down attention is arguably not necessary for being aware of conscious qualities either. We often think about or are aware of mental qualities without attending to them in a top-down way, such as in the case of the qualities on the peripheries of our conscious experience. Prinz might reply that we do not have phenomenal knowledge of our peripheral qualities, but there is no independent reason to think so.

I may consider some other accounts of or objections to p-concepts as well (e.g., Tye 2009). But I think much of the motivation for thinking that our concepts of mental qualities must refer in a direct or nondescriptive way depends on the assumptions that mental qualities do not admit of third-person access or of any informative description. But, as I'll argue in chapter 5, these assumptions are unfounded.

§6 Chapter 5: Representational Mental Qualities

In chapter 2, I argued that several arguments for intentionalism either fail to establish it or beg the question against the view that mental qualities are themselves representational in a nonintentional way. I also argued that denying the existence of

mental qualities is problematic. In chapter 3, I argued that no account of mental qualities is capable of accommodating both undetectable quality inversion and capable of providing an informative account of mental qualities' role in our psychological functioning. In chapter 4, I argued that the prominent approach to explaining the role mental qualities play in our mental lives if they are not themselves representational--the p-concepts approach--is unworkable. So how are we to make progress on the issue of mental qualities?

In this chapter, I'll develop and defend a view according to which mental qualities are representational in a nonintentional way. As noted in chapter 1, most build into the characterization of mental qualities that they are not themselves representational because, for instance, it appears from the first-person perspective that they are intrinsic. But this follows only given the assumption that the way mental qualities seem from the first-person perspective exhausts how they are. This assumption, however, is a highly substantive claim and therefore requires argument--and I'll argue that no good argument supports it. The intuitions that entail it reflect commitment to this claim, rather than provide support for it (cf. Hilbert and Kalderon 2000 on the conceivability of undetectable quality inversion).

Instead, I'll argue that the most neutral way to characterize mental qualities comes from our commonsense folk-psychological claims about mentality. According to the sort of folk-psychological functionalism as championed by Lewis (1972), the goal of

an account of mentality is to accommodate as many folk-psychological platitudes as possible, although one need not treat any of them as sacrosanct.⁸

Folk psychology naturally holds that we often have first-person access to our own mental qualities. But folk psychology also holds that we often have third-person access to others' qualities via their behavior in virtue of the roles those qualities play in perception. Sensations of red, for instance, are typically caused by red stimuli and typically cause discriminatory behaviors involving red stimuli.

Moreover, though we are commonly right about what sorts of qualitative states we ourselves are in, folk psychology rejects that how one's mental qualities appear exhausts how they are. At least in some cases, we are open to being corrected about our mental qualities. This is vividly illustrated by cases such as so-called dental fear, wherein dental patients report feeling pain upon drilling even though they lack the relevant nerves. Folk psychology admits of the following reasonable explanation of such a case: From the first-person perspective, it seems to these patients that they are in pain, but they are not in pain. Rather, the patients are misconstruing their fear and sensations of vibrations as pain (cf. Rosenthal 2005, p. 209).

Likewise, though much perception is conscious, there is substantial experimental evidence that we can also perceptually discriminate stimuli without being aware that we perceive those stimuli (e.g., Breitmeyer et al 2004, Ro et al 2009). These so-called subliminal perceptions play the same kinds of perceptual roles as conscious

⁸ Though some have argued, for instance, that all folk psychological posits will eventually be replaced by a mature neuroscience (e.g., Churchland 1981), I'll argue that all theorists implicitly draw on folk psychology for their initial characterizations of the phenomena in question.

perceptions and so are arguably cases of nonconscious mental qualities. And folk psychology accommodates both conscious and nonconscious mental qualities.

Given these folk-psychological facts about mental qualities, what theory of mental qualities is best? It is clear that folk psychology holds that mental qualities are systematically related to perceptible properties in perception. If so, then there are arguably spaces of mental qualities that match the quality spaces of their corresponding perceptible properties. So-called quality-space theories of mental qualities capitalize on this observation (e.g., Sellars 1963, Lewis 1972, Shoemaker 1975, Churchland 2007). And I'll argue that the version of quality-space theory that best captures our folk psychological conception of mental qualities is a view I'll call QST (e.g., Clark 1993, Clark 2000, Rosenthal 2005, Rosenthal 2010).⁹

According to QST, creatures' discriminatory capacities determine quality spaces for the perceptible properties that reflect the similarity-and-difference relations in which the properties of the same modality stand. For instance, the perceptible colors form what is often known as the color solid (e.g., Clark 1985, p. 433). To explain those discriminations, QST theorizes that spaces of mental qualities are extrapolated from and match these spaces of perceptible properties. QST holds that mental qualities are identified and individuated by their locations within spaces of mental qualities homomorphic to the corresponding spaces of perceptible properties. This view fits comfortably with common sense and is supported by many recent experimental findings. For instance, there is evidence that there are distinct spatially-organized

⁹ I am happy to discuss the ways in which these various quality-space theories differ. For instance, Rosenthal's (2005) account holds, whereas Clark's (2000) feature-placing account rejects, that there are spatial mental qualities. These distinctions, however, are not crucial for my general claim that mental qualities are representational.

neural maps for each of the various modalities in sensory cortex (for olfactory qualities, see, e.g., Howard et al 2009; for tactile qualities, see, e.g., Heed 2010; for taste qualities, see, e.g., Chen et al 2011).

Though both the folk notion of mental qualities and QST are silent about whether mental qualities are representational, they are both consistent with that possibility. And there are various reasons to think that mental qualities are representational. First, common sense holds that there's typically no difference between, for instance, seeing perceptible red and having a sensation with mental red. Similarly, since mental qualities figure in perception, mental qualities arguably enable perceptual discriminations. The most natural explanation is that a mental quality represents the property located at the corresponding location in the space of perceptible properties.

And I'll argue that what I'll call qualitative representation is different than intentional representation. As some argue, a mark of intentionality is mental attitude (e.g., Searle 1979, p. 81). Mental qualities, however, exhibit nothing like mental attitude. Additionally, intentional contents exhibit a sentence-sized character and so represent things like states of affairs. Contents thus can be true or false and can represent things as existing or as not existing. Moreover, they stand in implication relations to other contents. By contrast, mental qualities exhibit a term-sized character. Mental qualities thus represent perceptible properties only as existing and can be only either accurate or inaccurate. Likewise, they cannot stand in implication relations. Lastly, intentional contents are amodal insofar as any intentional content can figure in any kind of state such as a belief or a perception. Mental qualities, however, are

modality specific; mental red, for instance, is tied to vision and thus can only figure in visual sensations and visual perceptions of red.

If mental qualities are representational in the way I propose, then we have the beginnings of explanations of many phenomena. First, we clearly have an explanation of the role mental qualities play in our psychology: Mental qualities are those mental properties that enable perceptual discrimination among perceptible properties by representing those properties. And unlike intentionalism, this view permits ready explanation of the distinctions between thought, perception, and sensation.

Moreover, since QST explains mental qualities solely in terms of a creature's discriminatory capacities, the view is compatible both with third-person access to mental qualities as well as with mental qualities' occurring both consciously and nonconsciously. Thus we need not posit p-concepts to account for any special first-person access to mental qualities. We can also explain, among other things, why changes in one's experiences result in changes in the way things seem (cf. Byrne 2001), how experiences ground perceptual beliefs (cf. Pautz 2010a), the existence of erroneous perceptual thoughts (cf. Sellars 1967, ch. 1), why some aspects of perception are inferentially isolated (cf. Crane 1992), and perceptual constancies.

§7 Conclusions

I'll close chapter 5 by replying to some putative objections to this account of representational mental qualities and discuss how my view clarifies several debates in the contemporary philosophy of mind. First, one might think that such an account of mental qualities is false because of the conceivability of undetectable quality inversion. But such inversion would only be possible were the spaces of perceptible properties

symmetric (cf. Shoemaker 1975, Clark 1985). Such symmetrical spaces are impossible, however, because otherwise corresponding perceptible properties on each side of the axis of symmetry would be indistinguishable from one another. Undetectable quality inversion is, in any case, only conceivable in the absence of an informative account of mental qualities. Once we have this informative account in hand, it is clear that undetectable quality inversion is inconceivable.

Second, recall that many argue that perception exhibits so-called nonconceptual intentional contents in addition to whatever conceptual contents they may exhibit. If nonconceptual contents do not exhibit any of the hallmarks of conceptual states, such as mental attitude, then some may object that nonconceptual contents are simply representational mental qualities by another name. I'll thus discuss a few accounts of nonconceptual content and how they differ from my view. Tye (1995), for instance, argues that a perception exhibits nonconceptual content if it has acquired the biological function of representing a perceptible property. I'll argue, however, that such teleosemantic accounts of nonconceptual representation are problematic (cf. Pautz 2010b, Ford 2011). I'll also argue that representational mental qualities on their own better explain what Peacocke (1992) posits both nonrepresentational mental qualities and two varieties of nonconceptual content to explain (cf. Meehan 2002).

I'll also address other objections in the dissertation, including any objections that may come up during the prospectus examination. For instance, does qualitative representation face an analog of what Fodor (1987, p. 102) calls the disjunction problem for intentionality? That is, why does mental red represent perceptible red and not

perceptible red or perceptible blue? But I'll argue this kind of objection is diffused by understanding how QST individuates qualities via their locations in quality spaces.

I'll then discuss how this view clarifies several debates in the contemporary philosophy of mind. For example, consider the debate over the so-called contents of perception, which concerns which properties are represented in perceptual experience and which properties are represented downstream in perceptual thoughts (e.g., Siegel 2006). QST enables us to make headway on this issue by distinguishing the class of properties that are qualitatively represented from the properties that are represented intentionally. I may discuss other applications as well, such as how QST applies to the debate over what is known as enactive perception (e.g., Noë 2004).

Bibliography

- Aristotle (1968), de Anima: Books II, III (with passages from Book I), tr. D. W. Hamlyn, Oxford: Clarendon Press.
- Aydede, M. and G. Güzeldere (2005), "Cognitive Architecture, Concepts, and Introspection: An Information-theoretic Solution to the Problem of Phenomenal Consciousness," Noûs 35, 2: 197–255.
- Balog, K. (forthcoming), "Acquaintance and the Mind-Body Problem," in The Mental, the Physical, ed. C. Hill and S. Gozzano, Cambridge, UK: Cambridge University Press, pp. xxx.
- Berkeley, G. (1948), The Works of George Berkeley, eds. A. A. Luce and T. E. Jessop, London: Thomas Nelson & Sons Ltd.
- Block, N. (1978), "Troubles with Functionalism," Minnesota Studies in the Philosophy of Science IX, 261-325; reprinted in Block (2007a), pp. 63-101.
- (1990), "Inverted Earth," Philosophical Perspectives 4, Action Theory and the Philosophy of Mind: 53-79; reprinted in Block (2007a), pp. 511-532.
- (1996), "Mental Paint and Mental Latex," Philosophical Issues 7: 19-49.
- (2003), "Mental Paint," in Reflections and Replies: Essays on the Philosophy of Tyler Burge, ed. M. Hahn and B. Ramberg, Cambridge, MA: MIT Press, pp. 165-200; reprinted in Block (2007a), pp. 533-570.
- (2006), "Max Black's Objection to Mind-Body Identity," in Phenomenal Concepts and Phenomenal Knowledge: New Essays on Consciousness and Physicalism, eds. T. Alter and S. Walter, Oxford: Oxford University Press, pp. 249-306; reprinted in Block (2007a), pp. 535-498.
- (2007a), Consciousness, Function, and Representation: Collected Papers, Volume 1, Cambridge, MA: MIT Press.
- (2007b), "Wittgenstein and Qualia," Philosophical Perspectives 21, 1: 73-115.
- (2010), "Attention and Mental Paint," Philosophical Issues 20, 1: 23-63.
- Block, N. and J. A. Fodor (1972), "What Psychological States are Not," Philosophical Review 81: 159-81.
- Breitmeyer, B. G., T. Ro and N. S. Singhal (2004), "Unconscious Color Priming Occurs at Stimulus-Not Percept-Dependent Levels of Processing," Psychological Science 15, 3: 198-202.

- Boghossian, P. A. and J. D. Velleman (1989), "Color as a Secondary Quality," Mind 98: 81-103.
- Burge, T. (2003), "Qualia and Intentional Content: Reply to Block," in Reflections and Replies: Essays on the Philosophy of Tyler Burge, ed. M. Hahn and B. Ramberg, Cambridge, MA: MIT Press, pp. 405-415.
- Byrne, A. (2001), "Intentionalism Defended," Philosophical Review 110, 2: 199-240.
- (2006), "Color and the Mind-Body Problem," Dialectica 60, 2: 223-44.
- (2009), "Experience and Content," Philosophical Quarterly 59, 236: 429-451.
- Cappelen, H. and E. Lepore (2007), Language Turned on Itself: The Semantics and Pragmatics of Metalinguistic Discourse, Oxford: Oxford University Press.
- Carruthers, P. (2004), "Phenomenal Concepts and Higher-Order Experiences," Philosophy and Phenomenological Research 68, 2: 316-36.
- Chalmers, D. J. (1996), The Conscious Mind: In Search of a Fundamental Theory, Oxford: Oxford University Press.
- (2003), "The Content and Epistemology of Phenomenal Belief," in Consciousness: New Philosophical Perspectives, ed. Q. Smith and A. Jokic, Oxford: Oxford University Press, pp. 220-72.
- (2004), "The Representational Character of Experience," in The Future for Philosophy, ed. B. Leiter, Oxford: Oxford University Press, pp. 153-181.
- (2006a), "Perception and the Fall from Eden," in Perceptual Experience, ed. T. S. Gendler and J. Hawthorne, Oxford: Oxford University Press, pp. 49-125.
- (2006b), "Phenomenal Concepts and the Explanatory Gap," in Phenomenal Concepts and Phenomenal Knowledge: New Essays on Consciousness and Physicalism, eds. T. Alter and S. Walter, Oxford: Oxford University Press, pp. 167-194.
- (2010), The Character of Consciousness, Oxford: Oxford University Press.
- Chen, X., M. Gabitto, Y. Peng, N. J. P. Ryba and C. S. Zuker (2011), "A Gustotopic Map of Taste Qualities in the Mammalian Brain," Science 333, 6047: 1262-1266.
- Churchland, P. M. (1981), "Eliminative Materialism and the Propositional Attitudes," Journal of Philosophy 78, February: 67-90.

- (2007), "On the Reality (and Diversity) of Objective Colors: How Color-Qualia Space is a Map of Reflectance Profile Space," Philosophy of Science 74, 2: 119-149.
- Clark, A. (1985), "Spectrum Inversion and the Color Solid," Southern Journal of Philosophy 23, 431-43.
- (1993), Sensory Qualities, Oxford: Clarendon Press.
- (2000), A Theory of Sentience, Oxford: Oxford University Press.
- Coates, P. (2007), The Metaphysics of Perception: Wilfrid Sellars, Perceptual Consciousness, and Critical Realism, New York: Routledge
- Crane, T. (1992), The Contents of Experience: Essays on Perception, Cambridge, UK: Cambridge University Press.
- (2007), "Intentionalism," in Oxford Handbook to the Philosophy of Mind, eds. A. Beckermann, B. P. McLaughlin and S. Walter, Oxford: Oxford University Press, pp. 474-493.
- (2009), "Is Perception a Propositional Attitude?," Philosophical Quarterly 59, 236: 452-469.
- Davidson, D. (1979), "Quotation," in Inquiries Into Truth And Interpretation, Oxford: Oxford University Press, pp. 79-92.
- Dennett, D. C. (1988), "Quining Qualia," in Consciousness in Contemporary Science, eds. A. J. Marcel and E. Bisiach, Oxford University Press; reprinted in Philosophy of Mind: Classical and Contemporary Readings, ed. D. J. Chalmers, Oxford: Oxford University Press, pp. 226-246.
- (1991), Consciousness Explained, Boston: Little, Brown and Co.
- Dretske, F. (1981), Knowledge and the Flow of Information, Cambridge, MA: MIT Press.
- (1995), Naturalizing the Mind, Cambridge, MA: MIT Press.
- Fodor, J. A. (1984), "Semantics, Wisconsin Style," Synthese 59, June: 231-50.
- (1987), Psychosemantics, Cambridge, MA: MIT Press.
- (1998), "There are No Recognitional Concepts, Not Even RED," Philosophical Issues 9, 1-14.

- Ford, J. (2011), "Tye-dyed Teleology and the Inverted Spectrum," Philosophical Studies 156, 2: 267-281.
- Hardin, C. L. (1993), Color for Philosophers: Unweaving the Rainbow (expanded edition), Indianapolis: Hackett.
- Harman, G. (1990), "The Intrinsic Quality of Experience," Philosophical Perspectives 4: 31-52.
- (1996a), "Explaining Objective Color in Terms of Subjective Reactions," Philosophical Issues 7: 1-17.
- (1996b), "Qualia and Color Concepts," Philosophical Issues 7: 75-79.
- Haugeland, J. (1998), Having Thought, Cambridge, MA: Harvard University Press.
- Heed, T. (2010), "Touch Perception: How We Know Where We Are Touched," Current Biology 20, 14: R604-R606.
- Hilbert, D. R. and M. E. Kalderon (2000), "Color and the Inverted Spectrum," in Vancouver Studies in Cognitive Science, ed. S. Davis, Oxford: Oxford University Press, pp. 187-214.
- Hill, C. S. and B. P. McLaughlin (1999), "There Are Fewer Things in Reality Than Are Dreamt of in Chalmers' Philosophy," Philosophy and Phenomenological Research 59, 2: 445-54.
- Hill, C. S. (2009), Consciousness, Cambridge, UK: Cambridge University Press.
- Horgan, T. E. (1998), "Recognitional Concepts and the Compositionality of Concept Possession," Philosophical Issues 9: 27-33.
- (forthcoming), "Introspection About Phenomenal Consciousness: Running the Gamut from Infallibility to Incompetence," in Introspection and Consciousness, ed. D. Smithies, Oxford: Oxford University Press, pp. xxx.
- Horgan, T. E. and J. L. Tienson (2002), "The Intentionality of Phenomenology and the Phenomenology of Intentionality," in Philosophy of Mind: Classical and Contemporary Readings, ed. D. J. Chalmers, Oxford: Oxford University Press, pp. 520-533.
- Horgan, T. and G. Graham (forthcoming), "Phenomenal Intentionality and Content Determinacy," in Prospects for Meaning, ed. R. Shantz, Amsterdam: DeGruyter, pp. xxx.

- Howard, J. D., J. Plailly, M. Grueschow, J.-D. Haynes and J. A. Gottfried (2009), "Odor Quality Coding and Categorization in Human Posterior Piriform Cortex," Nature Neuroscience 12, 7: 932-938.
- Hume, D. (1739/2000), A Treatise of Human Nature, eds. D. F. Norton and M. J. Norton, Oxford: Oxford University Press.
- Jackson, F. (1982), "Epiphenomenal Qualia," Philosophical Quarterly 32, April: 127-136.
- (2006), "The Knowledge Argument, Diaphanousness, Representationalism," in Phenomenal Concepts and Phenomenal Knowledge: New Essays on Consciousness and Physicalism, eds. T. Alter and S. Walter, Oxford: Oxford University Press, pp. 52-64.
- Kant, I. (1787/1998), Critique of Pure Reason, tr. and eds. P. Guyer and A. W. Wood, Cambridge, UK: Cambridge University Press.
- Koch, C. and N. Tsuchiya (2007), "Attention and Consciousness: Two Distinct Brain Processes," Trends in Cognitive Sciences 11, 1: 16-22.
- Kriegel, U. (2009), Subjective Consciousness: A Self-Representational Theory, Oxford: Oxford University Press.
- Levin, J. (2006), "What is a Phenomenal Concept?," in Phenomenal Concepts and Phenomenal Knowledge: New Essays on Consciousness and Physicalism, eds. T. Alter and S. Walter, Oxford: Oxford University Press, pp. 87-110.
- Levine, J. (2001), Purple Haze: The Puzzle of Consciousness, Oxford: Oxford University Press.
- (2010), "Phenomenal Experience: A Cartesian Theater Revival," Philosophical Issues 20, 1: 209-225.
- Lewis, D. (1972), "Psychophysical and Theoretical Identifications," Australasian Journal of Philosophy 50, 3: 249-58.
- Loar, B. (1997), "Phenomenal States," in The Nature of Consciousness: Philosophical Debates, ed. N. Block, O. Flanagan and G. Guzeldere, Cambridge, MA: MIT Press, pp. 597-616.
- (2003), "Transparent Experience and the Availability of Qualia," in Consciousness: New Philosophical Perspectives, ed. Q. Smith and A. Jokic, Oxford: Oxford University Press, pp. 77-96.

- Locke, J. (1700/1975), An Essay Concerning Human Understanding, ed. P. H. Nidditch, Oxford: Clarendon Press.
- Lycan, W. G. (1996), Consciousness and Experience, Cambridge, MA: MIT Press.
- (2006), "Representational Theories of Consciousness," in The Stanford Encyclopedia of Philosophy, ed. E. N. Zalta, accessed October 2011, URL = <http://plato.stanford.edu/entries/consciousness-representational/>.
- Mandik, P. (forthcoming), "Color-consciousness Conceptualism," Consciousness and Cognition, 10.1016/j.concog.2010.11.010.
- Mather, G., F. Verstraten and S. Anstis (1998), The Motion Aftereffect: A Modern Perspective, Cambridge, MA: MIT Press.
- McGinn, C. (1989), Mental Content, Oxford: Basil Blackwell.
- Meehan, D. B. (2002), "Qualitative Character and Sensory Representation," Consciousness and Cognition 11, 4: 630-641.
- Millar, B. (2011), "Sensory Phenomenology and Perceptual Content," The Philosophical Quarterly 61, 244: 558-576.
- Moore, G. E. (1903), "The Refutation of Idealism," Mind 12, 48: 433-453.
- (1952), "A Reply to My Critics," in The Philosophy of G. E. Moore, ed. P. A. Schilpp, New York: Tudor, pp. 533-677.
- Nagel, T. (1974), "What is it Like to be a Bat?," Philosophical Review 83, 4: 435-50.
- Noë, A. (2004), Action in Perception, Cambridge, MA: MIT Press.
- Papineau, D. (2002), Thinking about Consciousness, Oxford: Oxford University Press.
- (2006), "Phenomenal Concepts and the Materialist Constraint," in Phenomenal Concepts and Phenomenal Knowledge: New Essays on Consciousness and Physicalism, eds. T. Alter and S. Walter, Oxford: Oxford University Press, pp. 145-166.
- Pautz, A. (2010), "Do Theories of Consciousness Rest on a Mistake?," Philosophical Issues 20, 1: 333-367.
- (2010), "Why Explain Visual Experience in Terms of Content?," in Perceiving the World, ed. B. Nanay, Oxford: Oxford University Press, pp. 254-309.

- Peacocke, C. (1983), Sense and Content: Experience, Thought, and their Relations, Oxford: Clarendon Press.
- (1992), A Study of Concepts, Cambridge, MA: MIT Press.
- Perry, J. (2001), Knowledge, Possibility, and Consciousness, Cambridge, MA: MIT Press.
- Prinz, J. J. (2007), "Mental Pointing: Phenomenal Knowledge Without Concepts," Journal of Consciousness Studies 14, 9-10: 184-211.
- Quine, W. V. (1940), Mathematical Logic, Cambridge, MA: Harvard University Press.
- Recanati, F. (2002), "The Fodorian Fallacy," Analysis 62, 4: 285-89.
- Reid, T. (1969), Essays on the Intellectual Powers of Man, ed. B. A. Brody, Cambridge, MA: MIT Press.
- Ro, T., N. S. Singhal, B. G. Breitmeyer and J. O. Garcia (2009), "Unconscious Processing of Color and Form in Metacontrast Masking," Attention, Perception, and Psychophysics 71, 1: 95–103.
- Rock, I. (1997), Indirect Perception, Cambridge, MA: MIT Press.
- Rosenthal, D. M. (2005), Consciousness and Mind, Oxford: Clarendon Press.
- (2010), "How to Think About Mental Qualities," Philosophical Issues 20, 1: 368-393.
- Searle, J. R. (1979), "What Is an Intentional State?," Mind LXXXVIII, 1: 74-92.
- (1983), Intentionality: An Essay in the Philosophy of Mind, Cambridge, UK: Cambridge University Press.
- (1992), The Rediscovery of the Mind, Cambridge, MA: MIT Press.
- Sellars, W. (1963), Science, Perception, and Reality, London: Routledge & Kegan Paul.
- (1967), Science and Metaphysics: Variations on Kantian themes, London: Routledge & Kegan Paul.
- (1975), "The Structure of Knowledge Lecture I: Perception," in Action, Knowledge and Reality: Studies in Honor of Wilfrid Sellars ed. H.-N. Castañeda, Indianapolis: Bobbs-Merrill, pp. 295-347.
- Shoemaker, S. (1975), "Functionalism and Qualia," Philosophical Studies 27, 5: 291-315.

- (1994), "Phenomenal Character," Noûs 28, 1: 21-38.
- (2000), "Phenomenal Character Revisited," Philosophy and Phenomenological Research 60, 2: 465-467.
- (2001), "Introspection and Phenomenal Character," Philosophical Topics 28, 2: 247-73.
- (2003), "Content, Character, and Color," Philosophical Issues 13, 1: 253-78.
- (2006), "On the Way Things Appear," in Perceptual Experience, ed. T. S. Gendler and J. Hawthorne, Oxford: Oxford University Press, pp. 461-480.
- Stoljar, D. (2005), "Physicalism and Phenomenal Concepts," Mind and Language 20, 469-94.
- Siegel, S. (2006), "Which Properties are Represented in Perception?" in Perceptual Experience, ed. T. S. Gendler and J. Hawthorne, Oxford: Oxford University Press, pp. 481-503.
- (2010), The Contents of Visual Experience, Oxford: Oxford University Press.
- Thau, M. (2002), Consciousness and Cognition, Oxford: Oxford University Press.
- Tye, M. (1995), Ten Problems of Consciousness: A Representational Theory of the Phenomenal Mind, Cambridge, MA: MIT Press.
- (2002), "Visual Qualia and Visual Content Revisited," in Philosophy of Mind: Classical and Contemporary Readings, ed. D. J. Chalmers, Oxford: Oxford University Press, pp. 447-456.
- (2003a), "Blurry Images, Double Vision, and Other Oddities: New Problems for Representationalism?," in Consciousness: New Philosophical Perspectives, eds. Q. Smith and A. Jokic, Oxford: Oxford University Press, pp. 7-32.
- (2003b), "A Theory of Phenomenal Concepts," in Minds and Persons, ed. A. O'Hear, Cambridge, UK: Cambridge University Press, pp. 91-105.
- (2009), Consciousness Revisited: Materialism without Phenomenal Concepts, Cambridge, MA: MIT Press.
- van Boxtel, J. J. A., N. Tsuchiya and C. Koch (2010), "Consciousness and Attention: On Sufficiency and Necessity," Frontiers in Psychology 1, 217: 1-13.
- Vendler, Z. (1972), Res Cogitans, Ithaca, NY: Cornell University Press.