The Role of Concepts in Perception

by

Kevin Connolly

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Department of Philosophy
University of Toronto

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Abstract

The claim of my dissertation is that some basic concepts are required for perception. Non-basic concepts, we acquire, and I give an account as to how that process changes our perception.

Suppose you are looking at the Mona Lisa. It might seem that you can perceive a lot more shades of color and a lot more shapes than for which you possess precise concepts. I argue against this. For every color or shape in appearance you have the ability to categorize it as that color or shape. It’s just that this is done by your sensory system prior to appearance. I argue that empirical studies show this. Blindsight patients, for instance, are blind in part of their visual field. But they can use color and shape information received through the blind portion. I take this, along with other studies, to show that once you perceive a color or shape, it has already been categorized.

I then argue that we perceive only low-level properties like colors and shapes. For instance, we don’t perceive high-level kind properties like being a table or being a wren. I do think that wrens or tables might look different to you after you become disposed to recognize them. Some take this to show that being a wren or being a table can be represented in your perception. I argue that this inference does not follow. If you are not disposed to recognize wrens, but we track the attention of someone who is, and we get you to attend to wrens in that same way, your
visual phenomenology might be exactly the same as theirs. But there is no reason to think that it represents a wren. After all, you lack a recognitional disposition for wrens. I take this and other arguments to show that we perceive only low-level properties like colors and shapes.
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Chapter One

The Role of Concepts in Perception: Kantian Underpinnings

Abstract: Kant championed a Copernican shift for philosophy according to which objects of experience conform to the form of our cognitive faculty rather than the other way around. One central tenet of Kant’s Copernican shift is that perceptual objects conform to some of our basic concepts. In this chapter, I defend this central tenet as an interpretation of Kant (several scholars have challenged it in the last decade). I argue that despite these recent attempts to show otherwise, perception requires concepts for Kant. On my reading, objects of perception conform to some of our basic concepts, while other (non-basic) concepts are not required for perception (although they are required for perceptual knowledge).

1. Introduction

A dissertation on the role of concepts in perception should begin with Kant. For it was Kant who famously argued that objects of experience must conform to the form of our cognitive faculty: to the forms of space and time, and to certain conceptual forms (the categories). Not all of our concepts are derived from experience, Kant argued. Rather, the possession of some basic concepts is a prior condition for experience itself. He claimed that this insight, along with the insight that objects of experience conform to the forms of space and time, would provide philosophy with a shift in standpoint akin to the Copernican shift in astronomy, and no less important. As he put it:

[Copernicus] tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest. A similar experiment can be tried in metaphysics… I assume that objects… conform to concepts. (Critique of Pure Reason, Bxvi-xvii)\(^1\)

According to Kant, this Copernican shift for philosophy could give us both a diagnosis of the past failings of metaphysics and a basis for future metaphysics. Just as many failures of past astronomy are due to ascribing the apparent rotation of the stars to the stars themselves, so too are many failures of past metaphysics due to ascribing the apparent features of objects to the objects

\(^1\) All further Kant citations will be from the Critique of Pure Reason unless otherwise noted.
themselves. The very existence of future metaphysics, Kant argued, would require a shift in perspective from the object to the spectator—a shift from objects to the form of our cognitive faculty.

To begin with Kant is to begin with the idea that there is in fact a role for concepts in perception. At first glance, this is less than obvious. Consider the concepts BIRD and HOUSE. These concepts, one might suppose, come by way of perception. By showing a child lots of birds, she acquires the concept of a bird. After all, it seems implausible that a child would just be born with that concept. It seems much more likely that the concept of a bird is acquired. But if concepts are acquired through perception, how could perception itself require concepts?

Kant makes a distinction in order to answer this question. He distinguishes between empirical concepts and a priori concepts (also known as the categories). Empirical concepts arise from the senses. One acquires them by abstracting common features from several distinct objects of the same kind (“Jäsche Logic,” 92). Empirical concepts include concepts like BIRD or HOUSE. Our ordinary intuitions about concepts are correct for empirical concepts, as in the above case of the child and the bird. Those concepts are acquired through perception, and are not required for perception itself. On the other hand, our ordinary intuitions are incorrect when applied to a second class of concepts. Those concepts are a priori concepts, which are general concepts like the concept of unity. Such concepts are not derived from perception.

In this chapter, I outline the role that concepts play in Kant’s theory of perception. This task is especially pressing because in the last decade, a rift has formed in Kant scholarship. A new interpretation of Kant is gaining traction, both in Europe and in North America. According to this interpretation, on Kant’s view perception does not require concepts (see Allais, 2009; Hanna, 2005, 2008; and Rohs, 2001). The new interpretation challenges the traditional reading of
Kant. In this chapter, I push back against the new interpretation. In section two, I provide a new argument for why perception does in fact require concepts for Kant. In sections three and four, I build on this argument and reply to the new interpretation.

Let me be clear about the scope of this chapter. The claim of Kant’s Copernican shift is the claim that objects of experience must conform to the form of our cognitive faculty. This conformity involves multiple levels. Some levels are constitutive of experience. These include space, time, and what Kant calls the *mathematical categories* (the categories of quality and quantity). Other levels are not constitutive of experience, but rather regulate experience. This is the case with what Kant calls the *dynamical categories* (the categories of relation and modality). My focus in this chapter is on those categories that are constitutive of experience. My claim is that on Kant’s view, these constitutive categories are prior conditions for perception.

My account here is only a portion of the much larger story of Kant’s Copernican shift. While his central point is that objects of experience must conform to our cognitive faculty (on multiple levels), it is important that on his view our cognitive faculty has a telos. Objects of experience conform to our cognitive faculty for the end of producing a body of knowledge. In this chapter, when I give an account of the role of constitutive categories in perceptual experience, this is an account of just one level at which objects of experience conform to our cognitive faculty. Each of these levels, however, is part of a larger operation, one whose end is the production of a body of knowledge.

This chapter is more than just a defense of the traditional interpretation of Kant. It provides a framework for the dissertation. I argue here that Kant holds three theses. First, he holds that some basic concepts are prior conditions for perception. Second, he holds that other (non-basic) concepts are not prior conditions for perception. Third, he holds that those non-basic con-
cepts are required for perceptual knowledge. In this chapter, I argue that Kant holds these theses. In the rest of my dissertation, I argue that Kant’s theses, broadly construed, are true.

2. A Priori Concepts and Perception

2.1 The Interpretive Problem

At first glance, it seems obvious that perception requires a priori concepts for Kant. After all, one central thesis of Kant’s Copernican shift is that objects of experience conform to our concepts, and not the other way around. Put this together with a major theme in the first Critique—that the categories are conditions of possible experience (A95-96, B199)—and this specifies the role of the categories with respect to experience. They are not derived from it, as empirical concepts are, but rather they precede it. They are prior conditions for the very possibility of experience. As Kant puts it, there is a necessary agreement of experience with a priori concepts because those concepts make experience possible (B166).

Since Kant says that the categories are conditions of possible experience, at first glance this seems to show that possession of the categories is a prior condition for perception. In fact, it does not show this conclusively. Although Kant clearly states that the categories are required for experience, or Erfahrung, he regularly uses the term Erfahrung to mean empirical knowledge. As he writes, the categories serve for “the possibility of empirical knowledge; and such knowledge is what we entitle experience [Erfahrung]” (B147). So, at least in some places, Kant treats Erfahrung as a cognitive term, a term meaning “empirical knowledge.”

When Kant claims that possession of the categories is a prior condition for experience, if experience is strictly a cognitive term, then he may just be saying that possession of the categories is a prior condition for empirical knowledge. If this is right, then just because possessing
them is necessary for empirical knowledge, it does not follow that their possession is necessary for what we would think of as perception. It just follows that possessing them is necessary for what we would think of as cognition.

The same interpretive problem applies to Kant’s Copernican shift. One of Kant’s theses was that our basic concepts do not conform to objects of experience. Rather, objects of experience conform to our basic concepts (Bxvii). However, if experience [Erfahrung] is just a cognitive term, then he may just be claiming that in cognition objects conform to our basic concepts. If it is just a cognitive term, then his claim may not apply to perception.

2.2 A Way Forward

We need a new argument in order to show that concepts play a necessary role in perception for Kant. Hannah Ginsborg offers one such approach. Ginsborg worries that if Kant’s view reduces to the claim that a priori concepts are necessary for empirical knowledge, then his view faces the threat of triviality (2006b, p. 62). In the face of this, Ginsborg’s strategy is to excavate a second notion of experience in addition to the first. This second notion is more like our ordinary empiricist notion of experience, and Ginsborg argues that Kant holds that concepts are necessary for this ordinary empiricist notion of experience as well. Ginsborg attempts to preserve the radical nature of Kant’s view by holding that, for him, the categories are necessary not just for empirical knowledge, but for experience (in the ordinary empiricist sense of the term) as well. The looming difficulty for her is to show that Kant holds a unified and consistent account of experience, given that on her interpretation he holds two distinct notions of experience.

I suggest another strategy. We can show that concepts play a necessary role in perception for Kant by appealing to Kant’s notion of appearance [Erscheinung]. While “experience” means
“empirical knowledge” (at least in some passages), “appearance” is not strictly a cognitive term. For one, it carries a connotation that is closer to what we normally think of as experience, almost a phenomenological connotation. Appearances appear [erscheinen] to us (B69).

2.3 Appearances

What exactly are appearances? To start, appearances are mind-dependent entities. For example, Kant writes that appearances “cannot exist in themselves, but only in us” (B59). This is not necessarily to say that appearances are mental entities. It is to say that appearances involve a relation between a subject and an object. Kant puts it more explicitly when he writes, “[A]ppearances do not exist in themselves, but only relative to the subject in which, so far as it has senses, they inhere…” (B164).

A shadow cannot occur without something that casts it. Similarly, an appearance cannot occur without some thing of which it is an appearance. It is an “absurd conclusion,” Kant says, “that there can be appearance without anything that appears” (Bxxvi). After all, as he puts it, it follows from the very concept of an appearance that “something which is not in itself appearance must correspond to it” (A251). Simply put, an appearance, according to the meaning of term, depends on some object of which it is an appearance.

Let me note two points here. First, Kant is able to appeal to the ordinary meaning of the term “appearance” in explaining what he means by the term. For instance, he rules out conclusions that conflict with the ordinary meaning of appearance (Bxxvi). He accepts conclusions that follow from the very concept of appearance (A251). Second, since an appearance depends on some object of which it is an appearance, it follows that hallucinations do not count as appear-
ances. Since an appearance depends on some object of which it is an appearance, and a hallucination does not depend on such an object, hallucinations are not appearances.

So far, I have claimed that an appearance requires some thing of which it is an appearance. But an appearance is more than this. It also requires the existence of a subject to which it appears. The property of being an appearance is like the property of being a brother. Being a brother is instantiated only given the existence of two things. First, a male must exist. Second, that male must have a sibling. Similarly, something is an appearance only given the existence of two things. First, there must be an object that it is an appearance of. Second, there must be a subject to which it appears.

One condition of something’s being an appearance, then, is that there is some subject to which it appears. What I want to suggest is that this condition depends on a third condition. The initial condition can be met only if the subject possesses specific a priori concepts. So, an appearance can appear to a subject only if that subject possesses specific a priori concepts. My reason for this last claim is textual.

In a passage on the understanding (the faculty of cognition), Kant writes, “In the understanding there are then pure a priori modes of knowledge…. These are the categories, that is, the pure concepts of understanding… All appearances, as data for a possible experience, are subject to this understanding” (A119). In short, the categories apply to all possible appearances. In the next section, I show specifically how the categories of quantity apply to them.

2.4 The Categories of Quantity

Consider the following skeptical worry. It could be the case that our appearances are unlawful. As humans, we could be saddled with “a melee of appearances” [ein Gewüle von Er-
scheinungen] (A111). Our appearances could be “mere ruleless heaps” \[bloß regellose Haufen\] (A121). As Kant puts it:

> Appearances might very well be so constituted that the understanding should not find them to be in accordance with the conditions of its unity. Everything might be in such confusion that, for instance, in the series of appearances nothing presented itself which might yield a rule of synthesis and so answer to the concept of cause and effect. This concept would then be altogether empty, null, and meaningless. (B123)

As Henry Allison puts it, one of Kant’s major concerns “is to exorcize this specter,” and his goal “is to prove that everything given to the mind in accordance with its forms of sensibility, that is, all appearances, which includes everything that could possibly become an object of empirical consciousness, must be subject to the conditions of this unity, and therefore to the categories…” (2001, pp. 37-38). While it could have been the case that our appearances were unlawful, our appearances in fact have order. They conform to forms of our mind: to space, time, and the categories. This is the case not just for those appearances that we turn into knowledge. As Ginsborg puts it, “[T]he objective validity of the categories depends on their having a role to play, not just in explicit judgment, but also in our perceptual apprehension of the objects about which we judge” (2008, p. 70). Possession of the categories is a prior condition for all appearances.

Kant gives the example of perceiving a house (B162). The categories of quantity (unity, plurality, totality) are operative not just for making a judgment about the house, but also in the very perception of the house itself. As Allison writes, “[I]t is not a matter of subsuming an object that one takes to be a house under the category of substance, but rather of a category functioning as a “rule of apprehension” (2004, p. 196). In our perception of a house, we do not just place the object of our perception under a concept—the concept HOUSE. The appearance of the house is not just a precondition for classifying that appearance as a house. Rather, the appearance is an
end result of a prior classification. Concepts play a role in the very perceptual apprehension of the house itself. Specifically, the categories of quantity are operative.

Consider the example of a melody. Plausibly, when you perceive a melody, you do not just perceive the individual notes. You perceive the notes as being part of a unified whole. Similarly, on Kant’s view, when you perceive a house, you perceive the parts of the house as parts of a unified whole. A melody consists of notes, which, over time, make up a temporal whole. A house consists of parts, which, over space, make up a spatial whole. In both cases, the perception of the parts makes the perception of the whole possible (see B203). As with a melody, the house is a unified whole composed of a totality of parts. The concepts of quantity (unity, plurality, and totality) are operative in its perception.

The perception of a house is simply the example that Kant uses. However, he intends his point to apply to the perception of physical objects in general (see Griffith, 2010, p. 22). Kant writes, “[A]ll possible perceptions [Wahrnehmungen], and therefore everything that can come to empirical consciousness, that is, all appearances of nature, must, so far as their connection is concerned, be subject to the categories” (B164-65).

Kant’s account of the categories of quantity is an important feature of his Copernican shift. One thesis behind the shift was the claim that concepts do not conform to objects, but rather objects conform to our basic concepts. On Kant’s view, the concepts of quantity (unity, plurality, and totality) provide a case in point. His claim is that the categories of quantity do not conform to objects. Rather, objects conform to them. Those concepts are particular instances of Kant’s Copernican shift. They are concepts to which objects of experience conform. Like space and time, for Kant, the categories of quantity are constitutive of appearances.

3. Empirical Concepts and Perception
In section 3.4, I return to the role of a priori concepts in perception. Now I want to turn to empirical concepts, and specifically to an interpretive debate that has emerged from the *Critique* in just the last decade.

### 3.1 Conceptualism or Nonconceptualism?

A recent debate in Kant scholarship, traversing both the Anglophone and Germanophone literature, focuses on the role of concepts in Kant’s theory of perception. A *nonconceptualist* interpretation challenges the traditional reading of Kant. Very roughly, proponents of this interpretation argue that for Kant, perception does not require concepts. These proponents include Lucy Allais (2009), Robert Hanna (2005, 2008), and Peter Rohs (2001).

On the other side of the debate, Hannah Ginsborg (2006a, 2008), Aaron Griffith (2010), John McDowell (1994), and Christian Helmut Wenzel (2005) support a more traditional reading of Kant. They claim that Kant is a *conceptualist*. They argue that on Kant’s view, perception requires concepts.

The debate is typically posed in terms of whether Kant allows “empirical intuitions” [*empirische Anschauungen*] without concepts. (Note that there is some precedent for translating *Anschauung* as “perception” (see Gram, 1982, p. 42)). McDowell explains empirical intuitions as “bits of experiential intake” (1994, p. 4). In the following discussion, I will hold a perception to be a bit of experiential intake. My use of “experience” here should not be confused with Kant’s cognitive term *Erfahrung*. On my use of “experience,” it is still an open question whether experiential intake requires concepts. The debate about whether Kant is a conceptualist or a nonconceptualist is a debate about whether Kant allows empirical intuitions without concepts, or, to put it another way, whether he allows experiential intake without concepts.
One issue in the debate concerns the relationship between empirical intuitions and empirical concepts, again, the latter being concepts like BIRD or HOUSE, which come to us by way of the senses through a process of abstracting common features from several distinct objects of experience ("Jäsche Logic," 92). The debate here is whether Kant allows empirical intuitions without empirical concepts. Nonconceptualist interpretations claim that Kant does allow them, while conceptualist interpretations claim he does not.

My previous discussion bears on the second issue in the debate: the relationship between empirical intuitions and \textit{a priori concepts}, also known as \textit{the categories}. The issue here is whether Kant allows perception without a priori concepts. Nonconceptualist interpretations claim that Kant allows them, while conceptualist interpretations claim he does not.

In section 3.2 and 3.3, I evaluate the debate over whether Kant allows empirical intuitions without empirical concepts. In 3.2, I examine the evidence that Kant prohibits empirical intuitions without empirical concepts. In section 3.3, I examine the evidence that Kant allows empirical intuitions without empirical concepts. My claim is that the standard arguments in both directions fail. We have no conclusive reason to think that he allows them, and we have no conclusive reason to think that prohibits them.

\section*{3.2 The Argument from Blind Intuitions}

One of the most quoted lines from the first \textit{Critique} is, “Thoughts without content are empty, intuitions without concepts are blind” (B75). Some take this slogan to support the view that Kant is a conceptualist. They claim that Kant’s slogan rules out the possibility of intuitions without concepts.
What does it mean for intuitions without concepts to be blind? In *Mind and World*, McDowell answers this question as follows. Among other things, it means that a concept of $x$ is a prior condition for a perception (intuition) of $x$. A perception of a body, for instance, requires one to possess the concept of a body. Without that concept, the perception (intuition) would be blind. (One assumption here is that in a perception of a body, a body actually appears to the subject. It is not just that the object he is looking at is a body, regardless of how it appears to him).

### 3.2.1 A Reply to McDowell

As Peter Rohs, Robert Hanna, and Lucy Allais point out, however, just because intuitions without concepts are blind, it does not follow that they do not exist. It could just be that such intuitions do not yield knowledge (see Rohs, 2001, p. 220, Hanna, 2008, p. 45, and Allais, 2009, pp. 392-93). We can generalize this nonconceptualist response. For any claim that Kant makes about the impossibility of intuitions without concepts, nonconceptualists can argue that that claim is restricted to the role of intuitions in the production of knowledge. Call this, the *knowledge restriction strategy*.

The knowledge restriction strategy deflates McDowell’s argument. The response shows that Kant’s slogan alone does not entail conceptualism. After all, when Kant claims “intuitions without concepts are blind,” he could just mean that intuitions without concepts are blind in the sense that they do not produce knowledge by themselves. But note the following. Even if “intuitions without concepts are blind” only applies to cognition, it also does not follow that there are intuitions without concepts. Even supposing that Kant does not rule out the existence of intuitions without concepts, it does not follow that that lonely intuitions exist. Applying this to the debate at hand, even if Kant does not rule out intuitions without concepts, it does not follow that
he is a nonconceptualist. So it follows from the slogan neither that Kant is a conceptualist, nor that he is a nonconceptualist. In determining whether Kant is a conceptualist or a nonconceptualist, Kant’s slogan is mute. It says nothing either way.

3.2.2 McDowell’s Revised Position

In his 2008 paper, “Avoiding the Myth of the Given,” McDowell revises his position from *Mind and World*. One major change is in the Kantian slogan that McDowell employs. In *Mind and World*, he uses Kant’s slogan “intuitions without concepts are blind” (B75), and as I have just argued, he draws a conclusion from that slogan that does not follow (at least as an interpretation of Kant). To say that intuitions without concepts are blind is not to say that they do not exist. So Kant’s slogan does not show that Kant is a conceptualist.

In “Avoiding the Myth of the Given,” however, McDowell uses a second Kantian slogan: “It must be possible [können] for the ‘I think’ to accompany all my representations” (B131). There is a lot to unpack here, but roughly what the slogan does is put a condition on having intuitions. Intuitions are a kind of representation (B93). The condition on intuitions is as follows: it must be possible to represent your intuition in the form of a judgment. The “must be possible” wording is important. The claim is that even if you do not actually articulate your intuition, that intuition is articulable. That is, every intuition is a potential candidate for a judgment.

McDowell’s new view runs as follows. A perception is an intuition. Intuitions have a special character. Specifically, they can be articulated. When we make a judgment about a perception, we are articulating an intuition. This is not to say that we articulate all of our intuitions. But the important point is that our intuitions are articulable, even if we do not actually end up articulating them.
We can enrich McDowell’s view by thinking back to Kant’s claim that objects of experience conform to our cognitive faculty, a conformity that involves multiple levels: space, time, and the categories. Our cognitive faculty, I said, is a faculty with a telos, namely, the end of producing a body of knowledge. Kant’s slogan, “It must be possible for the ‘I think’ to accompany all my representations,” Kant says, is the principle of our cognitive faculty. So McDowell’s new view can be read as follows: it must be possible to represent your intuition as a judgment, and this is one step in part of a multi-level process whose end is knowledge. A judgment is something that can be responsive to your other beliefs and can contribute to a body of knowledge.

Notice that McDowell’s new view is actually consistent with a nonconceptualist interpretation of Kant, though. The nonconceptualist can agree that it must be possible to represent your perception in the form of a judgment. Nonconceptualists already grant the fact that in cases of knowledge, we do represent our perception in the form of a judgment. Nothing prevents them from saying that all experiences are potentially cases of knowledge. Their point is just that there are perceptions that do not become knowledge. Put another way, their point is simply that there are intuitions without concepts.

On his new view, McDowell himself seems to allow the existence of intuitions without concepts. He admits that for much of the content in an ordinary intuition, we never develop the conceptual capacity to articulate that content. This is the case, he says, with most of the fine-grained shades of color and fine-grained shapes in our experience (2008, p. 8). (I return to this topic at great length in the next chapter). McDowell’s point, however, is that just because we do not conceptualize much of the content in an ordinary intuition, it does not mean that we could not do so. His claim is simply that we must be able to conceptualize intuitions, even if we do not ac-
tually do so. Once again, this leaves room for the existence of intuitions without concepts. Un-
conceptualized intuitions would seem to be intuitions without concepts.

While I think that McDowell’s new view is an improvement over his old view (for one, it
ends up offering an account of perceptual justification very similar to the one that I endorse in
Chapter Four), I think that he does not go far enough to defend his view as a conceptualist view.
This is surprising because McDowell could use Kantian resources to do so. He just needs to ar-
gue that intuitions require concepts, but that the concepts they require are a priori concepts, not
empirical concepts. If McDowell were to take this position, then he could block the possibility of
intuitions without concepts.

Reconsider Kant’s slogan: “It must be possible for the ‘I think’ to accompany all my rep-
resentations” (B131). I said that it means, roughly, that it must be possible for a subject to repre-
sent her perception in the form of a judgment, as part of a multi-level process whose end is
knowledge. But notice that the slogan itself says nothing about cases where a subject does not
represent her experience in the form of a judgment. That is, it says nothing about cases of intu-
itions without concepts. It does not preclude intuitions without concepts, but it does not endorse
their existence either. As with the slogan “intuitions without concepts are blind,” in determining
whether Kant is a conceptualist or a nonconceptualist, this new slogan says nothing either way.

### 3.3 The Argument from Lonely Intuitions

Is there other evidence indicating that Kant asserts the existence of intuitions without
concepts? Kant says that intuitions relate immediately to objects (B33, B93, and B377). Peter
Rohs (2001, p. 214) and Lucy Allais (2009, p. 389) argue that this contrasts with Kant’s claim
that concepts relate to objects only through mediation (they cite B93 and B377).
In “Bezieht sich nach Kant die Anschauung unmittelbar auf Gegenstände?” [“Do Intuitions Relate Immediately to Objects for Kant?”] Rohs begins by arguing that for Kant, intuitions relate immediately to objects, while concepts do not. He then claims that this motivates a distinction between “seeing something” and “seeing that something is the case” (p. 215). Seeing that something is the case involves empirical concepts, he argues, while merely seeing something does not involve empirical concepts.

Rohs applies this distinction to the case of perceiving an apple. Seeing that something is an apple requires the concept of an apple, while merely seeing an apple does not (p. 219). Rohs claims that when intuitions relate immediately to objects, this is equivalent to “seeing something.” When intuitions are coupled with concepts, this is equivalent to “seeing that something is the case.” He argues that intuitions without empirical concepts occur in cases where we see something, but do not see that something is the case.

### 3.3.1 A Reply to Rohs

While I accept the distinction between seeing something and seeing that something is the case, I do not think the distinction motivates Rohs’ conclusion. Rohs is right that one can see an apple without seeing that it is an apple. However, it doesn’t follow that one can see an apple without using any concepts whatsoever (even assuming we restrict ourselves to empirical concepts). As a counter-example, suppose I see an apple without seeing that it is an apple, but while seeing that it is an object. In one respect, this is a case of merely seeing something. I am just seeing an apple. But in another respect, I am still seeing that something is the case. I am seeing that the apple is an object.
Rohs’ mistake is the assumption that just because one can see an apple without possessing the concept of an apple, one can see an apple without possessing any concepts. In other words, he assumes that seeing that it is an apple would be a conceptualization of a nonconceptual state, and not a reconceptualization of a previously conceptual state (see Laurence and Margolis, forthcoming). If you see that it is an apple now, but previously saw that it is an object, however, your new perceptual state would be a reconceptualization of a previously conceptual state.

Rohs cannot just rely on cases like the apple case, where a subject sees an $x$ without seeing that it is an $x$. These cases do not show the possibility of intuitions without empirical concepts. What he needs is a case where a subject sees something without seeing that it is anything. He needs such a case because he needs an example of intuitions without any empirical concepts, not just without one particular empirical concept.

Unfortunately for Rohs, it is difficult to imagine a case where a subject sees something without seeing that it is anything. It is hard to imagine any object that one could see without at least seeing that it is an object. But suppose for a second that one could do that. More important is the following point. Even if there were intuitions without empirical concepts, this does not entail that Kant is a nonconceptualist. Showing that Kant allows intuitions without empirical concepts does not show that Kant allows intuitions without concepts simpliciter. Since Kant holds that there are a priori concepts in addition to empirical concepts, it could still be that a priori concepts are necessary for intuitions. So, if Kant allows intuitions without empirical concepts, but not without a priori concepts, then he does not actually permit intuitions without concepts. If this is the case, then he is not a nonconceptualist. In short, we could just grant the existence of lonely intuitions to the nonconceptualist, and nonconceptualism still would not follow.
As it turns out, then, the debate about whether Kant allows intuitions without empirical concepts does not show whether Kant is a conceptualist. In fact, for the nonconceptualist, the debate cannot show that Kant is a nonconceptualist. After all, even if he allows intuitions without empirical concepts, it does not follow that he allows intuitions without concepts simpliciter.

For the conceptualist, on the other hand, the debate about whether Kant allows intuitions without empirical concepts could show that Kant is a conceptualist. If the conceptualist were able to show that Kant denies intuitions without empirical concepts, then that would show that Kant is a conceptualist. But, as I argued, the debate does not show that. McDowell argues for Conceptualism by using Kant’s slogan, “intuitions without concepts are blind.” But even if intuitions without concepts are blind, it does not follow that intuitions without concepts do not exist. What’s more, McDowell’s most recent position not only fails to rule out intuitions without concepts. It seems to endorse their very existence.

The conceptualist interpreter of Kant has two potential paths to winning the debate. The first path is to show that empirical concepts are prior conditions for perception. The second path is to show that a priori concepts are prior conditions for perception. McDowell takes the first path, but is unsuccessful. But the nonconceptualist needs to block both paths in order to win the debate. After all, even if nonconceptualists block the first path, Kant could still be what A. D. Smith refers to as a categorial conceptualist (2002, p. 119). That is, Kant still might hold that the categories are prior conditions for perception.

The upshot of sections 3.2 and 3.3 is the following: the question as to whether Kant is a conceptualist comes down to the question as to whether he allows empirical intuitions without a priori concepts. If he allows empirical intuitions without a priori concepts, then he is a noncon-
ceptualist. If he rejects the possibility of empirical intuitions without a priori concepts, then he is a conceptualist.

4. Kant’s Theory of Perception

4.1 The Argument for Kantian Conceptualism

Does perception require a priori concepts for Kant? Recall that Kant holds that the categories are necessary not just for experience, but also for appearance. The categories apply to all possible appearances (A119, B164-65). Passages in Kant indicate that appearances are subject to the categories. But it is also the case that Kant’s anti-skeptical project works only if appearances are subject to the categories. The application of the categories to appearances ensures that we do not end up with a lawless “melee of appearances” (A111).

We can concede to the nonconceptualists that experience [Erfahrung] is a cognitive notion for Kant. We can allow that experience [Erfahrung] means something like empirical knowledge. We can concede that when Kant claims that the categories are necessary for experience, this does not show that they are necessary for perception. We can allow all of this as long as we hold that appearance [Erscheinung] is not a cognitive term. Nonconceptualists cannot reply that Kant’s claim about the role of the categories in appearance is restricted to the generation of empirical knowledge. As Ginsborg puts it, “[T]he objective validity of the categories depends on their having a role to play, not just in explicit judgment, but also in our perceptual apprehension of the objects about which we judge” (2008, p. 70).

Nonconceptualist interpreters of Kant cannot deny that appearance involves concepts without overcoming some serious textual hurdles. Kant claims that the categories apply to all possible appearances (A119, B143). He blocks the possibility that appearances could have been
“mere ruleless heaps” (A121). Appearances have order because concepts play a role in perception.

On Kant’s view, when you perceive a house (or any physical object), concepts are active not just in your classification of that object as a house, but also in the very perceptual apprehension of the house itself (B162). When you perceive a house, you perceive the parts of the house as parts of a unified whole, just as when you perceive a melody, you perceive the notes as being part of a unified whole. The categories of quantity (unity, plurality, and totality) are operative in that process. The upshot, as Kant puts it, is that “all possible perceptions [Wahrnehmungen], and therefore everything that can come to empirical consciousness, that is, all appearances of nature, must, so far as their connection is concerned, be subject to the categories” (B164-65).

If nonconceptualist interpreters are to maintain that perception is not subject to the categories, they need to deny that appearance is subject to the categories. Since they need to deny that appearance is subject to the categories, and since Kant himself holds that appearance is subject to the categories, the nonconceptualist interpretation of Kant fails. Kant is a conceptualist.

Let’s take stock then. Kant’s slogan “Intuitions without concepts are blind” does not imply Conceptualism, the view that perception requires concepts. Still, Nonconceptualism does not follow. Although Kant does not rule out lonely intuitions, he does not endorse them. But even if he did endorse them, it would not follow that Kant is a nonconceptualist. After all, it could be that he allows intuitions without empirical concepts, but denies intuitions without a priori concepts. Next, I argued that Kant does in fact deny intuitions without a priori concepts. The categories are prior conditions for appearance and not just for knowledge. So the standard nonconceptualist reply—that Kant is restricting his claims to the generation of knowledge—fails.
4.2 Kant and Skepticism

I said earlier that Kant is responding to a skeptical worry: the worry that appearances could be “mere ruleless heaps” (A121), leaving us with “a melee of appearances” (A111). The traditional mistake that fueled this worry was the idea that appearance comes to us raw and unprocessed. According to this view, you have an appearance, and then you classify it in some way. It is right that classification occurs posterior to appearance. But it is a fallacy to assume that because it occurs posterior to appearance, it occurs only posterior to appearance (see Laurence and Margolis, forthcoming). The traditional mistake is to think our concepts operate only after you have an image in your appearance (I expand on this in Chapter Two).

In cases of beliefs, sometimes a conceptual state reconceptualizes another conceptual state. Suppose that you are looking at a bird in a tree. You believe that it has a long beak and pear-shaped body. You think about what kind of bird it is. Then you form the belief, based on your prior belief, that the bird is a wren. Your belief that the bird is a wren is a conceptual state. But it would be a fallacy to think that just because that belief is conceptual, the prior belief, from which that belief is formed, is not itself conceptual.

Kant accepts that classification occurs posterior to appearance. Our empirical concepts classify appearances posterior to appearance. When you look at a house and form the judgment that the object is a house, for instance, you employ your empirical concept OBJECT and HOUSE. All this is consistent with the traditional view. But what Kant’s view adds is that this conceptualization is actually a reconceptualization, not of another belief (as in the wren case), but of your appearance. The house appears to you only after the appearance is structured by the categories.

Kant’s big move then is to say that appearances are already processed. They do not come
to us raw and unprocessed. Once you have that image in appearance, it has already been classified, and just because posterior classification occurs, it does not follow that prior classification does not occur.

4.3 Concepts and Empirical Knowledge

So far, I have been focusing on two rival interpretations of Kant. But one thing that both sides agree on is that, for Kant, there is no empirical knowledge without empirical concepts. Nonconceptualist interpreters assume this in their response to conceptualist interpreters. Nonconceptualist interpreters argue that “intuitions without concepts are blind” means only that intuitions without empirical concepts cannot yield empirical knowledge. They argue that the slogan says nothing about perception, but is actually about what is required for empirical knowledge. But this response itself assumes that empirical knowledge requires empirical concepts. So, in preserving the possibility of intuitions without empirical concepts, they accept that empirical knowledge requires empirical concepts.

The thesis that empirical knowledge requires concepts is intuitive. One might deny that perception requires concepts. However, it seems very likely that beliefs require concepts. For instance, it seems implausible that one could have a belief that the bird is a wren without having the concept of a wren (I expand this line of thought in Chapter Four). Given that empirical knowledge requires belief, empirical knowledge requires concept possession. One cannot have the empirical knowledge that the bird is a wren without having the concept of a wren. So, empirical knowledge requires concept possession.

For any claim that Kant makes about the impossibility of intuition without concepts, nonconceptualists can claim that we can restrict that claim to the role of intuitions in the production
of knowledge. Importantly, though, this knowledge restriction strategy shares an assumption with conceptualists, namely, that perceptual knowledge requires empirical concepts, even if perception does not. So both sides of the debate agree that for Kant, empirical knowledge requires empirical concepts.

5. Conclusion

I opened by articulating Kant’s Copernican shift. Kant claims that objects of experience must conform to the form of our cognitive faculty, to the forms of space and time, and to certain conceptual forms (the categories). On this last point, he argues that not all concepts are derived from perceptual experience. Rather, some concepts—like the concept of unity—are basic. They underlie perceptual experience itself. In this chapter, I interpreted Kant’s thesis. I argued that for Kant, some basic concepts are prior conditions for appearance. In the chapters that follow, I argue that Kant’s basic thesis is true: perception conforms to some of our basic concepts.

In the subsequent chapters of this dissertation, I detail the role that concepts play in perception. While my primary aim is not historical, this dissertation supports some broadly Kantian theses. In this chapter, I argued that he holds those theses. In sections two and three, I argued that for Kant perceptual experience requires some basic concepts, namely, the categories of quantity and quality. In section three, I rejected some standard arguments that on Kant’s view perceptual experience requires empirical concepts. In section four, I argued that for Kant empirical knowledge requires empirical concepts.

In the chapters that follow, I argue that these theses, broadly construed, are true. Chapter two can be read as an argument that perceptual experience does require some basic concepts. Chapters three and five can be read as an argument that perception does not require empirical
concepts. Chapter four can be read as an argument that perceptual knowledge does require empirical concepts.

In the chapters that follow, I move to more contemporary questions about the role of concepts in perception. But these contemporary questions themselves arise out of the Kantian text. There are historical reasons for this. P.F. Strawson was one of the most prominent interpreters of Kant in the last century. Gareth Evans, the main proponent of Nonconceptualism, was a student of Strawson’s. John McDowell, the main proponent of Conceptualism, credits Strawson’s influence on him both directly and indirectly through Evans (1994, p. viii). He calls Strawson’s book on Kant’s First Critique “peerless” (p. viii). McDowell’s other Kantian influence is Wilfred Sellars, whose interpretation of Kant is found in Science and Metaphysics: Variations on Kantian Themes. Kant’s influence is both explicit and implicit in Evans and McDowell (for some examples of implicit influence, see Franks, 2005, p. 55n.78).

Of course, many other philosophers have entered the modern debate since Evans and McDowell. I want to suggest that these other philosophers have been carrying on a Kantian debate. This is not to say that they have always recognized the Kantian underpinnings. But, knowingly or not, they have carried those Kantian underpinnings forward. Participants in the debate are bearers of views that, whatever else they are, are also variations on Kantian themes. The moves that these philosophers make within the framework of the modern debate are moves within a Kantian framework.

My suggestion, then, is that the current debate about the role of concepts in perception arises out of a Kantian framework. The current philosophical landscape, that is, the problem space for these questions, is a Kantian landscape. The choices that we are left with are Kantian
choices; the moves available to us are Kantian moves. And so, as we now enter the modern debate, we enter more aware of our surroundings.
Chapter Two

Does Perception Outstrip Our Concepts in Fineness of Grain?

Abstract: We seem perfectly able to perceive fine-grained shades of color even without possessing precise concepts for them. The same might be said of shapes. I argue that this is in fact not the case. A subject can perceive a color or shape only if she possesses a concept of that type of color or shape. I provide new justification for this thesis, and do not rely on demonstrative concepts such as THIS SHADE or THAT SHAPE, a move first suggested by John McDowell, but rejected by Christopher Peacocke and Richard Heck among others. My claim is that for every color or shape in your appearance you have the ability to categorize it as that color or shape. It’s just that this ability is exercised by your sensory system prior to appearance. I use some empirical studies to show this. In the case of blindsight, for instance, patients are blind in part of their visual field. Yet they can use color and shape information received through that blind portion. I argue that blindsight and other studies show that once you perceive a color or shape, it has already been categorized as the type of color or shape that it is. On my account, appearance is an end result of a classification, not just a precondition for it.

1. Introduction

In the previous chapter, I argued that on Kant’s view, the possession of certain basic concepts is a prior condition for perception itself. In this chapter, I argue that for certain low-level properties like colors and shapes, Kant’s claim is right. Certain basic concepts are indeed required in order to perceive those properties. Specifically, my claim is that a subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape. This thesis, which I call Color and Shape Conceptualism, may seem counter-intuitive. It seems to some that we can perceive some colors and shapes perfectly well even though we lack precise concepts for them. It seems to them that in such cases our perceptions outstrip our concepts in terms of their fineness of grain. I think that this is incorrect, and I try to show how we possess precise color and shape concepts for every shade and shape that we can perceive. I do so without appealing to demonstrative concepts such as THIS SHADE or THAT SHAPE, an approach first suggested by John McDowell (1994), but rejected by Christopher Peacocke (1998, 2001a, 2001b, 2009a, 2009b)},

Let me say more about what it means to have a perception of something. Consider Descartes’ example from the *Meditations* in which a square tower in the distance appears round to him (p. 53, §76). In that example, should we say that Descartes has a perception of squareness, or a perception of roundness? I will be saying that in such a case Descartes has a perception of roundness. Of course, there is a sense in which one might think that Descartes has a perception of squareness. After all, the squareness of the tower is causally responsible for what appears to him. I will not be speaking in that way, however. Instead, I will capture that sense by saying “the object he is attending to (or looking at) is square.”

Instead of saying that Descartes has a perception of roundness (as I will say), some philosophers would say that he has a perception as of roundness. I will not be using that terminology because it has some misleading connotations. It is often just assumed that if someone has a perception as of some property, then she possesses the concept of that type of property (for a good example, see Noë, 1999, p. 257). But the very question up for debate is whether perception requires certain concepts, and our terminology should not just stipulate an answer to that question.

In Chapter One, I explained what Conceptualism and Nonconceptualism mean as interpretations of Kant. As we move into the contemporary debate, the meanings of these terms change somewhat. I will call *Nonconceptualism* the view that a subject can have a perception of some property (or some property’s instantiation, if you prefer) even if she lacks a concept of that type of property. This version of Nonconceptualism is a kind of “State Nonconceptualism,” a view recently endorsed and defended by Tim Crane (2008). On this view, one can have a perception that the ball is shiny even if one lacks the concept SHINY.
I will call Conceptualism the view that a subject can have a perception of some property only if she possesses a concept of that type of property. In order to have a perception that the ball is shiny, for example, one has to have the concept SHINY.

Conceptualism entails Color and Shape Conceptualism (the thesis for which I am arguing): if a perception of some property requires the possession of a concept of that type of property, then, since colors and shapes are properties, a perception of a color and shape requires the possession of a concept of that type of color and shape.

Very plausibly (but cf. Stalnaker, 2003), one can have a belief that the ball is shiny only if one possesses the concept SHINY. Conceptualism is the view that one can have a perception that the ball is shiny only if one possesses the concept SHINY. According to Conceptualism, perceptions and beliefs are similar in that both are concept-dependent, and this fact creates an easy transition between them. It simplifies the justificatory process.

Whether one is a conceptualist or a nonconceptualist depends in part on what standard one holds for concept possession. All other things being equal, holding a low standard for concept possession makes one more likely to accept Conceptualism, while holding a high standard makes one more likely to accept Nonconceptualism. After all, if you hold a low bar for concept possession, then you are more likely to think that a subject can have a perception of some property only if she possesses a concept of that type of property, and you are less likely to think that if you hold a high bar for concept possession.

My view holds a somewhat low standard for concept possession, and so later in the chapter I reply to the charge that this standard renders the debate trivial. To this end, I argue against a higher standard for concept possession, specifically the view that a subject possesses a concept of $x$ only if she possesses an expression for $x$. Given that this view is mistaken, just because you
lack an expression for a color or shape concept, it does not follow that you lack the concept itself. Other upshots ensue. For instance, just because non-human animals and infants lack language, it does not follow that they lack concepts.

2. Preliminaries

2.1 The Argument from Fineness of Grain

The argument from fineness of grain is one motivation for Nonconceptualism (see Evans, 1982, p. 229 and Heck, 2000, pp. 489-90). It runs as follows. We possess general color concepts such as BROWN and LIGHT BLUE. However, there are much finer-grained shades, which we seem perfectly able to perceive even if we do not possess general color concepts for them (Raffman, 1995, pp. 294-97). For example, it seems that we can perceive sepia things even without the concept SEPIA. Nonconceptualists argue that in such cases we do not need to possess a color concept of a shade in order to experience that shade. The same line of reasoning holds, mutatis mutandis, for shapes.

Nonconceptualists can grant that there are non-specific ways of articulating the content of one’s perception, but deny that such articulations are sufficient. A lazy or inarticulate speaker, for instance, might say while looking at his messy desk that he perceives that there are lots of things. Nonconceptualists can argue that such an articulation is an insufficient characterization of the content of his perception given that it does not adequately reflect the detail of what he experiences. Similarly, they can argue that it is unacceptable to say that one has a perception that

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2 Jeff Speaks concludes that the argument from fineness of grain does not entail State Nonconceptualism (2005, pp. 379-82), but his argument relies on McDowell’s demonstrative solution. In section 4.3, I argue we have good reason to reject the demonstrative solution.
the ball is red when one has a perception of a maroon ball. Such a general description does not adequately reflect the detail that one perceives.

2.2 Concepts Defined

According to the thesis I am arguing for, a subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape. What is a concept, and what does it mean to possess one? Starting with the former question, what is the ontology of a concept? Are concepts abstract objects or mental objects? My assumption will be that concepts can be treated like numbers in the following respect. We can answer most questions about numbers (for instance, what three plus five equals, or what the square root of forty-nine is) without having to answer whether numbers are abstract objects or not. In what follows, I assume that concepts can be treated similarly (with an important modification shortly). I acknowledge that these ontological questions are important, but the main question that I am concerned with is what it means to possess a concept. My assumption is that I can answer this question without delving into the ontological ones.

I will argue that there are several ways to possess a concept, but that they have a common core. Simply put, to possess the concept of a $B$ is to have the ability to consistently type-identify $Bs$ in ideal contexts. What does it mean to type-identify a $B$? It means to classify, or categorize a particular $B$ as a $B$. To possess the concept of an ostrich, for example, is to have the ability to consistently type-identify ostriches in ideal contexts, that is, to be able to consistently classify a given ostrich as an ostrich. I defend this view at great length in section 4.1, and I will say much more throughout the chapter about how exactly this type-identification occurs.
One reason for holding the type-identification view is that it is consistent with several theories of concepts. For example, the classical view of concepts holds that concepts are definitions (see Laurence and Margolis, 1999, pp. 8-14, and Murphy, 2002, pp. 11-16). A subject possesses the concept of a bachelor if and only if she possesses the definition that a bachelor is an unmarried man. Given that she has the relevant information about the candidates, the definition enables her to consistently type-identify bachelors, that is, to categorize bachelors as bachelors. According to a second view of concepts, concepts are prototypes (see Rosch, 1999, pp. 196-201). A subject’s concept of a bird, for example, is a prototype of a bird, perhaps consisting in a weighted list of more and less prototypical bird features. The prototype enables the subject to consistently type-identify birds. As with the classical view, the prototype view maintains that possession of a concept of $B$ involves the ability to consistently categorize that $B$ as a $B$.

Even though I hope to remain neutral on whether concepts are abstract or mental objects, let me note an argument in favor of holding that concepts are abstract objects. Concept possession is the ability to consistently type-identify $B$s. However, some machines have such an ability. They can classify square things as square or red things as red. So, by my definition, machines can possess concepts. It may seem counter-intuitive to think that machines have concepts. However, I think that such counter-intuitiveness is due to thinking about concepts in a particular way that we can avoid. If we assume that concepts are mental objects, then it seems strange to say that machines have concepts, given that they do not have mental representations. Still, there is another sense of a concept in which concepts seem to exist even if there is no one around to have mental representations. The idea is that even if everything capable of a mental representation went out of existence, concepts would still exist. On this view, concepts are abstract objects, not mental representations. Since the case of classifying-machines gives us pause to hold that con-
cepts are mental representations, we therefore have one reason to hold that concepts are abstract objects instead.

2.3 Possession Conditions for Concepts Defined

My concern in this chapter is not so much with concepts themselves, but with what it means to possess a concept. Concepts have possession conditions, where a possession condition describes an ability or set of abilities that the subject has in virtue of possessing a concept. Take the concept RED. Possessing the concept gives you certain abilities, and these abilities are stated in the possession conditions for red. The possession conditions for the concept RED might describe the ability to use that concept in inferences, or to discriminate red things in one’s visual field, or both.

Christopher Peacocke holds that possession conditions “state what is required for full mastery of a particular concept” (1992, p. 29, my emphasis). I think this misstates the role of possession conditions. For one, it makes the notion of a concept inconsistent with how we ordinarily talk about concepts. We attribute concepts for much less than full mastery, and Peacocke admits as much. But what he fails to admit is that when we attribute a concept, it is because we take the subject to possess that concept. This is not to say we think she has full mastery of that concept. It is rather that we think that the right kind of partial mastery is sufficient for concept possession (cf. Bealer, 2002, p. 102). Of course, we might sometimes wrongly attribute a concept to someone who lacks even partial mastery. But if Peacocke is right, then our attributions are systematically wrong. We are wrong every single time we attribute a concept to someone who falls short of full mastery. We are wrong because we are attributing to them a concept that, according to Peacocke, they do not in fact possess.
Suppose a subject can reliably discriminate green things from things of all other colors except blue. Furthermore, by reading books and asking others, suppose she knows which things are typically green, and she is able to make inferences about green things. Now, presumably she lacks full mastery of the concept GREEN. People with full mastery are able to reliably discriminate green things from blue things, and she cannot. Yet, if we were to witness the subject’s near perfect competence, we would likely attribute to her the concept GREEN, and I take it that Peacocke would agree. When we attribute a concept to her, though, we are not attributing to her a concept that she lacks. Sure she lacks full mastery. She cannot discriminate green and blue. Still, she can see green, and she knows which things are actually green, and she can use the concept GREEN in inferences. Why exactly would we attribute to her the concept GREEN? It is because she has the right kind of partial mastery, and the right kind of partial mastery is sufficient for concept possession. Full mastery is not required.

So far, I have been talking about concept possession. However, we don’t just possess concepts. We also deploy them. We can lay out the relationship between concept possession and concept deployment as follows. A possession condition describes an ability, that is, something that a subject can do. It might describe the ability to use the concept RED in inferences, or to type-identify red things in one’s visual field. Concept deployment involves exercising that ability. It involves doing what possessing that concept enables you to do. For instance, it involves actually using the concept RED in inferences, or actually type-identifying red things in one’s visual field.

3. The Argument for Color and Shape Conceptualism

3.1 The Argument for Pre-Conscious Classification
We often classify the objects that we perceive according to the colors and shapes under which we perceive them. We say or think that a house is cape cod blue, or that a particular soccer ball is strangely ellipsoidal. In this section, I offer evidence that this is simply the end stage of the classificatory process. Consider the fact that the image on your retina is in two dimensions and upside down. The information carried in the retinal image gets identified and reconstructed as your visual image. Classification is taking place, and specifically classification done by your sensory system prior to when you get that perceptual image.

My claim is that prior to consciousness (not just conscious awareness, but also conscious accessibility) the sensory system has already classified something as red. Traditionally, it was held that first something appears to be a certain way, and then it gets classified as red when the subject applies the concept RED. The argument in this section is that something appears to be red only after it has been classified as red by the sensory system (see Matthen, 2005a, p. 30).

This inversion may seem harmless enough, but for perception, it amounts to what Kant compared to the Copernican shift (Critique of Pure Reason, Bxvi). As I mentioned in Chapter One, just as Copernicus argued that the earth revolves around the heavenly bodies, rather than the other way around, Kant argued that objects of experience conform to the form of our cognitive faculty rather than the other way around. One central tenet of Kant’s Copernican shift is that perceptual objects conform to some of our basic concepts rather than the other way around. I am proposing a claim quite similar to Kant’s own claim. My suggestion is that for colors and shapes classification occurs prior to consciousness, not posterior to it. Perceptual objects conform to our color and shape concepts, and not the other way around.

One piece of evidence that classification occurs prior to consciousness is the case of hemifield neglect. Patients with hemifield neglect have brain damage in the right side of their
brain, causing them to neglect the left side of their visual field. In one case, a patient was presented with green line drawings of two houses, identical in all respects, except that one was on fire and the other was not. The bright red flames of the fire were placed in the blind portion of the subject’s visual field. The subject claimed that the houses were the same. Yet when asked which one she would like to live in, she reliably chose the one not on fire (Marshall and Halligan, 1993, p. 766).

In the hemifield neglect case, the subject could deploy information received through the blind portion of her visual field. Although the image of the flames never makes it into her conscious appearance, she is able to use that information when asked which house she would like to live in. One very plausible explanation for this is that the information is being classified, but that this is being done prior to that information making it into her conscious appearance.

A second piece of evidence for pre-conscious classification is the case of blindsight. Blindsighted patients have a neurological condition such that they are blind in part of their visual field. Yet, they are able to use information received through that blind portion. Lawrence Weiskrantz, one of the original researchers into blindsight, describes one case where a subject was presented with a black and white striped circle (Weiskrantz, 1997, p. 18). The circle was placed in the subject’s blind field. Sometimes the stripes were oriented horizontally, and other times they were not. The subject was then asked to guess whether the circle in his blind field was oriented horizontally. He guessed correctly at well above chance, and in some cases, he guessed nearly perfectly. He was nearly perfect at determining that a horizontally-oriented circle was horizontal, and was also nearly perfect at determining that an obviously non-horizontally-oriented circle was non-horizontal.
A second study conducted by Weiskrantz tested shape identification. A blindsighted subject was asked to guess whether the stimulus placed in the blind portion of his visual field was an “X” or “O.” As in the orientation case, the subject guessed correctly at well above chance levels (Weiskrantz, 2009, p. 91).

Weiskrantz originally conducted these blindsight studies in the 1970’s. They were designed to make broad determinations, for instance as to whether blindsighted patients detected orientation and shape. Since Weiskrantz’s pioneering work, however, other cases of blindsight have provided evidence that the processing occurs at a fine-grained level and includes information about shape, size, and orientation, as well as letters and words (Marcel, 1998), and color (Danckert et al., 1998). My focus in this chapter is on color and shape perception. So, the important lesson from blindsight is the following. Blindsight patients are able to deploy fine-grained information about colors and shapes without that information making it into their conscious appearance. What I want to suggest is that they are able to do this because their sensory systems have already classified those colors and shapes at a fine-grained level.

Let me be clear that I am pushing a certain interpretation of blindsight. My claim is that although blindsight is a cognitive deficit, it is indicative not only of visual processing in blindsight cases, but also of visual processing in normal sighted patients. There is evidence for this claim. For one, blindsight can be induced in normal sighted patients. One such study used magnetic stimulation to induce temporary blindsight in normal sighted patients (Boyer et al., 2005). In one trial of that study, subjects were presented with bars oriented in a certain way. In a second trial, they were presented with patches of a certain color. Even when the subjects said that they had seen nothing, when asked to guess the orientation or the color, they guessed correctly at a rate better than chance (for a good summary, see Lamme, 2006).
Blindsight involves vision, but there is further evidence of phenomena very like blindsight occurring in other sense modalities. In a case of “blind touch,” a subject with a lesion in the left part of her brain was unable to feel her right arm at all. Yet, when touched there while under blindfold, she was able to point to where she was touched. This was surprising to her, since she adamantly maintained that she could not feel anything (Paillard et al., 1983). In a case of “deaf hearing,” a patient with lesions was unable to hear auditory stimuli. Yet she was able to move her head in the direction of the auditory stimuli at a rate better than chance. In fact, when it was pointed out to the subject that she was doing this, she then learned to use her own head movements to guess where a sound was coming from, thereby improving her ability to consciously detect auditory location (Garde and Cowey, 2000). In “blind smell,” subjects were told that occasionally there would be a substance in the air stream. The substance was detectable only by smell. Although they claimed that they could not detect any odor, when forced to guess whether the substance was present, the subjects guessed at better than chance (Sobel et al., 1999).

In blindsight itself, color and shape information is classified, even without it appearing to the subject. Blindsight provides evidence that pre-conscious classification occurs. But there is other evidence as well.

In studies of metaconsort, a target stimulus is presented very briefly, followed by a brief masking stimulus (Breitmeyer and Ögmen, 2006, p. 5). The masking stimulus surrounds, but does not overlap spatially with the target. For example, if the target is a disc, then the masking stimulus is a non-overlapping ring surrounding the disc. Subjects are unable to report properties of the target because the mask blocks their recall of it. Assuming the target is a disc, then the surrounding ring blocks their recall of the disc. However, studies have repeatedly shown that information about the target does influence the subject’s motor, emotional, and cognitive processes.
In cases of metacontrast, information from the target seems to be classified, even though it is unavailable to the conscious subject.

3.2 Pre-Conscious Possession of a Concept Defined

The cases of hemifield neglect, blindsight, and metacontrast provide evidence for a distinction between classification and consciousness. They show us that information is classified even if the subject is not conscious of that information. This motivates the view that classification occurs prior to consciousness.

Suppose we hold (as I suggested at the beginning of the chapter) that to possess the concept of a $B$ is to have the ability to consistently categorize $B$s as $B$s, that is, to be able to type-identify them. This is exactly what is occurring prior to when you entertain a visual image. Classification occurs prior to consciousness, and given that this classification occurs, consider the following possession condition for a concept:

**Pre-Conscious Possession of a Concept:** An organism pre-consciously possesses a concept $C$ of a color or shape $F$ if and only if the organism is able to type-identify $F$-things prior to consciousness.

According to this condition, if an organism is able to categorize decagonal things as such prior to consciousness, then the organism possesses a concept of a decagon pre-consciously. The same holds true about colors. If the organism is able to categorize sepia things as such prior to consciousness, then the organism possesses the concept of sepia pre-consciously. These are both points about concept possession. We can say something about concept deployment as well. Where pre-conscious concept possession involves the ability to categorize something as an $F$ prior to consciousness, pre-conscious concept deployment involves actually categorizing the thing as an $F$ prior to consciousness.
3.3 The Core Argument for Color and Shape Conceptualism

If we take the blindsight, metacontrast, and hemifield neglect studies as indicative of sensory processing, then for every color or shape in visual consciousness, one has pre-conscious possession of a concept of that type of color and shape. The fact that those colors and shapes are in consciousness in the first place shows that one already possesses a concept for those colors and shapes. It’s just that one possesses them pre-consciously. Pre-conscious possession is defined as being able to type-identify \( F \)-things prior to consciousness. But if we take the blindsight, metacontrast, and hemifield neglect studies as indicative of sensory processing, then for every color or shape \( F \) in one’s consciousness, one is able to type-identify \( F \)-things prior to consciousness. A color or shape cannot make it into consciousness without first being categorized as that type of color or shape.

Recall the thesis of this chapter: a subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape. If possession means pre-conscious possession, then this thesis is true. A subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape pre-consciously, that is, only if she can type-identify that color or shape prior to consciousness.

My thesis is about colors and shapes. After all, the fineness of grain argument trades on colors, but can also apply to shapes, and I am responding to that argument. But note that the sorts of properties that are identified prior to consciousness extend further than just colors and shapes. These properties include, at the very least, shape, size, orientation, and color. Furthermore, they

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[^3]: Following McDowell and Brewer, I hold that given a color sample \( x \), a color falls under the concept SHADE X if and only if it is indiscriminable from \( x \). The same holds, \textit{mutatis mutandis}, for shapes. To see how this formulation avoids problems with the intransitivity of perceptual indiscriminability, see McDowell (1994, 170-71) and Brewer (1999, 174-75).
include properties in other sense modalities besides vision. Cases of blind touch, deaf hearing, and blind smell indicate that tactile, auditory, and olfactory properties are also categorized.

Recall that Conceptualism is the view that a subject can have a perception of some property only if she possesses a concept of that type of property. My argument goes toward demonstrating that thesis, not just in terms of colors and shapes, but also at least in terms of sizes and orientations, as well as properties for other sense modalities besides vision.

Does visual perception just represent low-level properties like colors, shapes, sizes, and orientations, or does it also represent high-level properties, properties like being a table or being a wren? I will turn to this debate in the next chapter, but notice that the truth of Conceptualism will depend on which properties are represented in perception. If visual perception represents only colors, shapes, sizes, and orientations, then my argument in this chapter shows not only that Color and Shape Conceptualism is true, but also that Conceptualism itself is true (for vision, at least). According to Conceptualism, a subject can have a perception of some property only if she possesses a concept of that type of property. If subjects can have visual perceptions only of colors, shapes, sizes, and orientations, then Conceptualism is true for vision. After all, what I have been claiming is that for every color, shape, size, and orientation that a subject perceives, she possesses a concept. The cases of hemifield neglect, blindsight and metacontrast show this.

3.4 A Reply to the Triviality Objection

There are high theories of concept possession and low theories of concept possession (see Smith, 2002, p. 110). A high theory holds a high threshold for concept possession, while a low theory holds a low threshold. Suppose a theory holds that possessing a word for sepia is a necessary condition for possessing the concept SEPIA. That would be a high theory. Suppose a theory
holds that the mere ability to discriminate sepia things from non-sepia things is sufficient for possessing the concept SEPIA. That would be a low theory.

Pre-conscious concept possession falls somewhere on the low end of the spectrum. However, the debate between conceptualists and nonconceptualists assumes a high theory of concept possession (with the exception of Noë, 2004). The worry is that by assuming a low theory of concept possession, Conceptualism will be true by stipulation. By holding such a low bar for what counts as a concept, perception will qualify as conceptual too easily. I will have rendered the debate trivial (for this kind of criticism, see Ayers, 1991, pp. 176-79, Ginsborg, 2006a, p. 359, Roskies, 2008, p. 649, Smith, 2002, pp. 110-11, and Toribio, 2008, p. 353).

Michael Ayers, A. D. Smith and Josefa Toribio all object to the same low theory of concept possession—the view that concept possession is a mere discriminative ability. But I agree with them on this. If I held that an ability to discriminate were sufficient for concept possession, then the debate would be trivial. On my view, though, discrimination does not suffice for concept possession. To possess the concept of an $F$ is more than discrimination. It is to have the ability to type-identify $F$-things, that is, to categorize a thing as an $F$.

There is a clear difference between discrimination and type-identification. One might be able to discriminate a color or shape from others, yet not be able to identify it (Raffman, 1995, pp. 294-95). Suppose, for example, that you can discriminate some particular sepia shade from neighboring shades (even in several contexts), but that you are unable to identify that shade as sepia when presented with the shade by itself. You have a discriminative ability without the ability to type-identify.

I want to be clear about what I mean by “type-identification,” and what I do not mean. Suppose that you take all of the objects on your desk and sort them into piles. This might not
qualify as type-identification. To type-identify one of those objects is to categorize that object in one particular way. To type-identify an ostrich, for instance, is to categorize it as an ostrich. You may be sorting $F$s, but it does not follow that you are categorizing $F$s as $F$s.

Suppose that you are discriminating color $x$ from color $y$. What kind of categorizing is occurring? If discriminating two colors is categorizing at all, at best it is categorizing color $x$ as different from color $y$. But this is not to say that you are classifying either of those colors as the type of color that it is. Analogously, I might be able to discriminate ostriches from a background. But if this act involves categorization at all, it does not involve categorizing ostriches as ostriches. You can discriminate two colors without categorizing them as the type of color that they are. So from your mere discriminative ability alone, it does not follow that you have a concept of that type of color.

According to my definition, possessing a concept of an $F$ is to have the ability to consistently type-identify $F$s. This definition also meets Smith’s criterion for making the debate between conceptualists and nonconceptualists interesting. According to his criterion, to make the debate interesting, one needs to hold that “to possess a concept is to be in a position to classify objects” (2002, p. 111; although see Roskies, 2008, p. 649, for an alternative view). Of course, Smith did not have pre-conscious classification in mind when he proposed this criterion, so he would likely object to the way that I apply my definition. But if his objection is right, there should be some principled reason why pre-conscious capacities cannot be conceptual capacities.

Consider one such reason proposed by John McDowell. According to him, conceptual capacities involve what he (following Kant) calls “spontaneity.” That is, they must be exercisable by active thinking (1994, p. 11). Active thinking is a conscious activity, an activity under the control of the subject. If conceptual capacities must be exercisable by active thinking, then
they must be exercisable at the conscious-level. If true, this might seem to create a problem for my view. Since pre-conscious capacities are capacities exercisable prior to consciousness, they would not qualify as conceptual capacities.

Just because a capacity is exercised prior to consciousness, however, it does not follow that it cannot be exercised posterior to consciousness. So, I think that the above inference is invalid. Possibly, the same conceptual capacity (the ability to type-identify sepia things, for instance) could be exercised both prior and posterior to consciousness. Of course, the ability to type-identify sepia things may well involve different natural mechanisms at the pre-conscious and conscious level. It may involve different parts of the brain, for instance. Yet we can still call it the same capacity because both levels involve the ability to type-identify sepia things. If this is the case, there would be two different ways to exercise the same conceptual capacity (one at the pre-conscious level, and the other at the conscious level), not two different capacities, and nothing that McDowell says seems to rule out this possibility.

Consider the analogy of a sense (such as audition or vision). A sense may use several different natural mechanisms at different times. Yet, it can still be the same sense based on some common ability that it has. As Malika Auvray and Charles Spence put it (following J.J. Gibson), “smelling and tasting need not be defined by receptors and nerves; they can instead be defined by their functions in use” (2008, p. 1022). What I am saying about a conceptual capacity is quite similar. A conceptual capacity need not be defined by a single part of the brain. It can instead be defined in terms of its function.

I have been raising the idea that we have conceptual capacities deployable prior to consciousness. But the notion of such a conceptual capacity is not a new one. Arguably, some of Kant’s categories are of this kind. As I mentioned in Chapter One, Kant distinguishes his cate-
categorical concepts from empirical concepts like BODY, HEAVY or DIVISIBLE, concepts that are derived from experience ("Jäsche Logic," 92). When used in judgments, empirical concepts involve spontaneity. For example, a subject can control whether she deploys the concept HEAVY or the concept DIVISIBLE when she makes a judgment of the form “All bodies are x.”

Some categories, on the other hand, are constitutive of experience. These include the categories of quality and quantity, which underlie experience rather than being derived from it. They differ from empirical concepts in that we cannot choose whether or not we deploy a particular category in experience. On Kant’s view (as I argued in Chapter One), when you perceive a house, the categories of quantity (unity, plurality, totality) are operative not just for making a judgment about the house, but also in the very perception of the house itself (B162). Arguably, the categories are capacities operative beyond one’s conscious control, like the color and shape capacities that I am proposing. On Kant’s view, you do not control the deployment of some of your a priori concepts, just as you do not control whether you see objects in space and time.

It might seem strange to attribute to Kant the view that some concepts are deployed outside of our conscious control. After all, the categories are part of the cognitive faculty that Kant calls the understanding. But the understanding is the faculty of “spontaneity” (B75), a faculty of freedom (see McDowell, 1994, p. 66). It seems at first glance that this presents a problem for my interpretation. How can the categories be capacities that a subject has no control over, when they belong to the understanding, a faculty of spontaneity and freedom? I think that there is a reasonable response to this.

The categories themselves need not be spontaneous, as long as they can give rise to spontaneity. The understanding can still be the faculty of spontaneity, and the categories still a part of
the understanding, as long as the categories contribute to the process of spontaneity, even if the categories themselves are not spontaneous.

Consider the following analogy. Pumping blood is the activity of the heart. While each part of the heart may contribute to this end, there may be only one part that actually does the blood pumping (or even no part at all). The heart can still rightly be called the blood-pumping organ, even though there are parts of the heart that do not actually pump blood, but only contribute to a process that does perform that function.

Spontaneity is the activity of the understanding. But this is just to say that the understanding has spontaneity as its end. While each part of the understanding contributes to spontaneity, it need not be the case that each part is spontaneous. The understanding can still rightly be called spontaneous, even if the categories are not themselves spontaneous, but still contribute to a process of judgment that is spontaneous. In that case, the understanding will still have spontaneity as its end.

To sum up, my proposal is that we have conceptual capacities for colors and shapes, and that these capacities are deployed prior to consciousness. They can be conceptual and still be deployed outside of our conscious control, and this is not such a strange idea because some of Kant’s categories are just like that.

Let’s return to the main concern of this section. The concern was that by holding such a low bar for concept possession, perception would qualify as conceptual too easily. I admit that I hold a low bar for concept possession, and also that other participants in the debate (with the exception of Noë, 2004) hold a high bar. However, I do not hold the particular low theory to which these high theorists object. My theory holds higher standards. It may not be a high theory, and I
acknowledge that. However, high theories can be problematic as well. As I will argue in section 4.1, we have reason to reject at least one popular high theory of concept possession.

3.5 Conscious Possession of a Concept Defined

When we credit someone with the possession of a concept, it is likely that they are able to do much more than just pre-conscious type-identification. If someone possesses a concept of sepia, for instance, they are probably able to make logical inferences about sepia. But as I argued in section 2.3, possession conditions (pace Peacocke) are not necessary conditions for concept possession. They do not state what is required for full mastery. So we need not conclude that the pre-conscious possession condition is insufficient for concept possession. We can conclude instead that there is another possession condition in addition to a pre-conscious one:

**Conscious Possession of a Concept**: An organism consciously possesses a concept $C$ of a color or shape $F$ if and only if the organism is able to type-identify $F$-things posterior to consciousness.

According to this condition, if an organism is able to type-identify decagons posterior to consciousness, then the organism consciously possesses the concept of a decagon. If the organism is able to type-identify sepia things posterior to consciousness, then the organism consciously possesses the concept of sepia. This is conscious concept possession. We can say something about concept deployment at this level as well. Where conscious concept possession involves the ability to categorize something as an $F$, conscious concept deployment involves actually categorizing the thing as an $F$.

In the previous section, I mentioned the Kantian distinction between empirical concepts and the categories. My suggestion was that on Kant’s view, humans deploy some concepts prior to consciousness, and I linked this claim to my own claim that we deploy concepts of colors and shapes pre-consciously. We can make a similar point about the relationship between empirical
concepts and what I am calling *conscious possession of a concept*. I claimed that since empirical concepts involve what Kant calls “spontaneity,” the subject can control them. I can put this same point in my own terms. Empirical concepts are possessed at the conscious level. They are employed posterior to consciousness.

4. Replies to Some Objections

4.1 A Reply to the Epistemic Argument

Recall that a *high* theory of concept possession holds high standards for concept possession. Suppose you hold that possessing a word for sepia is a necessary condition for possessing the concept SEPIA. That would be a high theory. Previously, I began a defense of my own low theory of concept possession. Now I continue the task by arguing against the high theory of concept possession just mentioned—the view that possessing a word for \( x \) is required for possessing a concept for \( x \).

Consider the *Epistemic Argument* (see McDowell, 1994, pp. 7-13, and Brewer, 1999, Ch. 2 and Ch. 3). The epistemic argument is a traditional motivation for Conceptualism (I present the argument here, but I address it in much greater detail in Chapter Four). According to the argument, there is a causal relationship between perception and belief, but the relationship between the two is not solely causal. We are not simply forced into our perceptual beliefs by causal laws. Rather, a perception is also *rationally* related to a belief. We can reflect on whether a particular perception provides a good reason for a belief. We believe that the ball is shiny *because* we see that the ball is shiny, where “because” means “for the reason that” not just “in virtue of the cause that.” Perceptions do not just cause beliefs. They also provide reasons for beliefs.
We could always give an external account of why the subject believes what she does, the argument continues. Perhaps we could give a scientific account of her brain processes, or maybe we could just justify her beliefs through reasons that we know, but that she does not. In any case, these external reasons would not be the subject’s rational grounds for her beliefs. They would not be her own reasons. If the reasons that perceptions provide are to be a subject’s rational grounds for her beliefs, grounds that she can entertain, and not merely external, causal grounds, then they need to be the subject’s own reasons. She needs to be able to entertain the reason provided to her by her perception, namely, *that the ball is shiny*. This is the reason for her belief that the ball is shiny.

If the reasons that perceptions provide are to be the subject’s own reasons, reasons that she can entertain, then she can articulate them. Unlike the scientific reasons based on her brain processes, the argument continues, she can say what her own reasons are. If she can articulate them, then they are composed of concepts that she possesses. So, for instance, she can have a perception that the ball is shiny only if she possesses the concept SHINY. But articulability means more than this. It also implies that she must have words for the concepts. Call this *The Articulation Constraint*:

**The Articulation Constraint:** $S$ possesses a concept of $x$ only if she possesses an expression for $x$.

The articulation constraint is not claiming that concepts are the same as expressions. It is making a weaker claim. The claim is just that possession of a concept requires the ability to express that concept. On McDowell’s *Mind and World* view, for instance, there is an intimate connection between the reasons one has for a perceptual belief, and the reasons one can give if asked to justify that perceptual belief. As McDowell puts it in a passage responding to Christopher Peacocke:

In the reflective tradition we belong to, there is a time-honoured connection between reason and discourse. We can trace it back at least as far as Plato: if we try to translate “rea-
son” and “discourse” into Plato’s Greek, we can find only one word, *logos*, for both. Now Peacocke cannot respect this connection. He has to sever the tie between reasons for which a subject thinks as she does and reasons she can give for thinking in that way. Reasons that the subject can give, in so far as they are articulable, must be within the space of concepts. (1994, p. 165).

On McDowell’s *Mind and World* view, the reasons that a subject has for her perceptual belief are reasons that the she can express. Those reasons are composed of the subject’s own concepts, and she needs to have expressions in order to express those concepts. McDowell allows that demonstrative expressions can suffice. If you lack an expression for a particular shade of color, for instance, McDowell argues that you can express your concept of that color with a demonstrative expression like “that shade” (I return to this issue in much greater length in section 4.3).

McDowell and Brewer’s epistemic argument assumes the articulation constraint: the principle that $S$ possesses a concept of $x$ only if she possesses an expression for $x$. The constraint creates a high standard for concept possession, but, as I will argue, the constraint itself is problematic.

Imagine two children, one sitting in a classroom learning new words, the other a feral child, who can hunt, fish, and interact with the world in very complex ways, but who has no language. Suppose the first child learns the word “fish,” and is somewhat good at applying it correctly. She applies it correctly most of the time, but incorrectly at least some of the time. Suppose the feral child, on the other hand, is highly competent at identifying fish, although he cannot learn the word “fish.” In addition, due to his practice hunting fish, the feral child can identify within the category of fish. He can identify which fish taste good and which fish do not, which fish are sensitive to his slight movements in the water, and which fish are not sensitive. He can identify which fish swim in shallow water and which fish do not. Many non-human animals can do just this. Why deny that a feral child could?
The feral child’s competence in identifying fish is superior to the schoolchild’s, even though she possesses the word “fish.” In that case, we should credit him with the concept FISH, even though he lacks a word for it. Yet, if this is right, then the articulation constraint is false. S can possess a concept of x even without possessing a word for x. Possessing a word for a concept is not a necessary condition for possessing that concept. But now reconsider the high theory of concept possession that says that possessing a word is a necessary condition for possessing a concept. That high theory is false.

The feral child case shows that there are a variety of ways to possess a concept. Possessing a word is a pretty good indication that one possesses the associated concept. However, possessing a word is not necessary for concept possession. The right kind of mastery—such as the mastery that the feral child has—is sufficient for concept possession, even though he lacks the word for that concept.

Think about the case of forgetting someone’s name. Suppose that you have an in depth profile of an acquaintance in your mind. You know your relationship to them, and when you last talked to them. You know what their favorite food is, and all about their hobbies. You simply cannot remember her name. But then what does this mean about your concept of that person? When you suddenly forget her name, do you also suddenly lose your concept of her? Do you then return to having a concept of her if you remember her name? These questions are important not just for forgetting people’s names. People forget the names of other people, but they also forget the names of objects and properties, and we can ask the same sorts of questions about those cases as well.

Proponents of the view that you need a word for a concept could just say the following, however. While you may have forgotten your friend’s name, it does not follow that you have lost
your concept of her. After all, there are other ways that you might refer to her. For instance, in the absence of knowing her name, you might refer to her by using another expression instead. You might just use pronouns like “her” or “she,” or you might use some sort of description. So even if you lack a name for her, you still have an expression by which you can refer to her. If this is right, then the case is no problem for the articulation constraint. After all, since you still have an expression for your acquaintance, there is no reason to think that you lack a concept of her. The same kind of answer can work for cases where you forget the names of an object or property. If you forget the name of something, you might just use demonstrative expressions like “this” or “that,” or else some sort of description. Since you have an expression for the object or property, there is no reason to think you lack a concept for it. There is no violation of the articulation constraint.

Notice an important difference between the case of forgetting a name and the feral child case, though. In a case where you have merely forgotten a name, you might always fall back on some other expression. But the important feature of the feral child case is that he has no language, so he has no other expression to fall back on. So the feral child case is a genuine counter-example to the articulation constraint. After all, the case is an instance where a person has a concept of $x$, but no expression for $x$.

Furthermore, in the feral child case, it’s not just that he has no language. Supposing that he has passed the developmental stage for learning language, he lacks even the ability to learn a language. So it’s not just that the feral child lacks an expression. He may not even have the capacity for one. So there feral child cannot be said to have even a dispositional possession of an expression.
We now have a further argument for holding that type-identification is the mark of concept possession. Start with A.D. Smith’s distinction between high theories of concept possession and low theories of concept possession, where a high theory holds a high bar for what it takes to possess a concept, and a low theory holds a low bar for what it takes to possess a concept. A major high theory in this debate is problematic. You do not need a word for a concept. The feral child case shows this. But low theories of concept possession are problematic too. A mere discriminative ability does not suffice for concept possession. After all, you might be able to discriminate one shade of color from another, yet not be able to identify it. The fineness of grain argument has this right. There are lots of shades of color and shapes, which we can discriminate perfectly well, but for which we seem to lack concepts. Discrimination alone does not suffice for concept possession.

My claim is that the type-identification view of concept possession falls in the middle between two extremes. A predominant high theory of concept possession holds that possessing a word for a concept is necessary for possessing that concept. I argued against this. A predominant low theory of concept possession holds that a mere discriminative ability is sufficient for concept possession. I argued against that. We are left with a middle position, one that denies the necessity of word possession as well as the sufficiency of a mere discriminative ability. The type-identification view meets those criteria.

4.2 A Reply to the Argument from Non-Human Animal and Infant Perception

My claim in the last section was that S can possess a concept of x even without possessing a word for x. If this is right, then it gives us a response to a common nonconceptualist argument, which runs as follows:
P1) Non-human animals and infants lack concepts since they lack language.

P2) But they have perception.

C) So perception does not require concepts.

The problem with the argument is that just because non-human animals and infants lack language, it does not follow that they lack concepts, since possessing a word is just one way to possess a concept, but not the only way.

Consider how this applies to the central example of the chapter. With color, one need not possess the word “sepia” to possess the concept SEPIA. Possession of the word is an indication that one possesses the associated concept. However, if one can consistently type-identify sepia things, one possesses the concept SEPIA. We can now offer a reply to the argument from fineness of grain.

4.3 A Reply to the Argument from Fineness of Grain

Recall the argument from fineness of grain. We possess general color concepts such as BROWN and LIGHT BLUE. However, we can perceive much finer-grained shades, even though we do not possess precise color concepts for them (Raffman, 1995, pp. 294-97). Such cases show, the argument continues, that we do not need to possess a color concept of a particular shade in order to experience that shade (Evans, 1982, p. 229).

In Mind and World, John McDowell concedes that we do not have as many general expressions for color concepts as shades of color that we can sensibly discriminate (p. 57). But, he argues, even though you might lack general color expressions like chartreuse or kelly green, demonstrative expressions such as “this shade,” “that shade,” or “colored thusly” can express concepts for which you possess no general color expressions (p. 57). If you lack the concept SEPIA,
then in the presence of a sepia ball, you can always say, “The ball is that shade” even if you cannot say, “The ball is sepia.”

McDowell’s demonstrative solution has come under pressure from Peacocke (1998, 2001a, 2001b), Heck (2000), Döric and Pacherie (2001), and Kelly (2001, 2003). McDowell (1994, Appendix III, and 1998), Brewer (1999, 2005), Sedivy (2006), and Chuard (2006, 2007) have attempted to respond to these criticisms. I argued earlier for Color and Shape Conceptualism: the view that a subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape. What I hope to show is that the force of the fineness of grain argument has been diminished once we consider the argument for Color and Shape Conceptualism. McDowell’s reply to the fineness of grain argument then becomes unnecessary.

Evans is mistaken that we lack precise color concepts for each and every fine-grained shade. For every color $F$ in one’s consciousness, one has a concept of that color. Concept possession is the ability to type-identify $F$-things. We do have an ability to classify each color in such a way. It’s just that this classification occurs prior to consciousness. The fact that one is able to type-identify $F$-things is demonstrated by the fact that those colors are already in one’s consciousness.

McDowell is responding to cases of color perception where a subject purportedly lacks an expression to associate with a concept. His demonstrative solution is intended to show that we do not lack expressions for fine-grained color concepts. We have them in the form of demonstrative expressions such as “that shade.” My reply is that even if we do lack expressions to associate with concepts, we can possess concepts in other ways. This is what the feral child case shows. The fact that we lack an expression for a concept does not imply that we lack the concept itself.
4.4 A Reply to the Argument against State Conceptualism

I now want to return to the debate between conceptualists and nonconceptualists, and specifically to a technical distinction between two different versions of Nonconceptualism. Let me begin by introducing a term.

Perceptions have *content*, just as newspaper stories or television news reports do (see Siegel, 2011, section two, and Siegel, 2010, p. 28). They purport to represent the way things are, and do so accurately or inaccurately. Suppose a newspaper story reports on the events of a bank robbery, stating for instance that the robber was six feet tall and carried a gun. The content of the story is accurate or inaccurate. It accurately represents the way things are if the robber actually was six feet tall and actually carried a gun. Otherwise, it represents inaccurately. A television news report might show a surveillance video of the robbery. The video purports to represent the events as well, showing for instance that the thief stumbled as he exited the bank. Like the newspaper report, the video has content. It purports to represent the way things are, and it does so accurately or inaccurately. If the thief stumbled as he exited the bank, then the content of the video is accurate. If not, then the content is inaccurate.

Perceptions also have content. A bystander who observes the thief during the robbery sees that the thief’s hair is brown. His perception represents the world in a particular way. The content of his perception is accurate if the thief’s hair at that time was indeed brown. We can tell a similar story about beliefs. Beliefs represent the world in a particular way, and do so accurately or inaccurately. The bystander sees that the thief’s hair is brown and forms the belief that the thief’s hair is brown. That belief has content. If the thief’s hair is brown, it is accurate. If not, it is inaccurate.
The notion of content motivates a distinction between two different versions of Nonconceptualism: Content Nonconceptualism and State Nonconceptualism. According to Content Nonconceptualism, the content of perception is different in kind from the content of beliefs (see Heck, 2000, p. 485, and Speaks, 2005, pp. 359-62). A content nonconceptualist typically holds that perceptual content is fundamentally imagistic, while belief content is fundamentally linguistic. Peacocke, for instance, argues that perceptual content is imagistic. On his view, a subject’s perceptual content consists in a set of axes with its origin at the subject’s center of gravity, where for each point, we “specify whether there is a surface there, and if so what texture, hue, saturation, brightness and temperature it has at that point, together with its degree of solidity” (2003, p. 108). Like Peacocke, content nonconceptualists often hold that perceptual content is imagistic in kind, and they contrast perceptual content with belief content, which they take to be linguistic in kind. According to proponents of this view, while beliefs represent properties that are articulable in terms of concepts (due to their linguistic structure), perception represents properties that are not articulable in terms of concepts (due to their imagistic structure). Due to a fundamental difference in kind, the argument goes, perceptual states cannot in principle be conceptual.

According to State Nonconceptualism, on the other hand, the content of perception has the same kind of content as the content of belief (both have a linguistic structure), but the states are different. On this view, a subject, S, is in a nonconceptual state if S is in a state without possessing the concepts that articulate its content. According to this account, a perceptual state may be a nonconceptual state currently, even though there is no principled reason why it could not be a conceptual state. If S has a perception of a shiny ball, for instance, but lacks the concept SHINY, then S is in a nonconceptual perceptual state. But if she acquired that concept, then she would be in a conceptual perceptual state.
It is invalid to infer nonconceptual content from a nonconceptual state (see Speaks, 2005, p. 361). Just because S is in a perceptual state without possessing the concepts for that content, it does not follow that the content itself is nonconceptual. The content could still be conceptually articulable even if S lacks the concepts to articulate that content. If S has a perception of a shiny ball, but lacks the concept SHINY, then S is in a nonconceptual state, but the content if that state is still articulable in terms of the concept SHINY.

Does the same hold true for conceptual states? That is, if S is in a conceptual state, does it follow that the content of that state is conceptual? If not, then this would be problematic for my view. Conceptualism, in the way that I have formulated it, is a claim about states. S can be in a perceptual state only if she possesses the relevant concepts. If a state’s being conceptual does not imply that its content is conceptual, then my thesis does not actually make a claim about conceptual content. Since the debate is typically cast as a debate about conceptual content, and not just conceptual states, my view would be of limited worth.

I accept the reason for why a nonconceptual state does not imply nonconceptual content. However, I do not think that an analogous reason denies the inference from a conceptual state to conceptual content. A nonconceptual state does not imply nonconceptual content for the following reason: just because S cannot articulate the content, it does not follow that the content is inarticulable in principle. Consider the analogous argument applied to Conceptualism. Just because S can articulate the content, it does not follow that the content is articulable in principle. This argument is invalid. The very fact that you can articulate the content *does* show that it is articulable. If you have a perception of a shiny ball, and can articulate that the ball is shiny, then the content of that perception is articulable. So the standard reason for why a nonconceptual state
does not imply nonconceptual content fails to show that a conceptual state does not imply conceptual content.

5. Conclusion

Kant famously argued for a *Copernican shift* whereby objects of experience conform to the form of our cognitive faculty rather than the other way around. Once again, one crucial thesis of Kant’s Copernican shift was that perceptual objects conform to some of our basic concepts (*Critique of Pure Reason*, Bxvi-xvii). On Kant’s view, although we arrive at many of our concepts from perception, some basic concepts are required for perception itself. In Chapter One, I defended this view as an interpretation of Kant.

If what I have argued here in this chapter is right, then Kant’s claim is correct when applied to concepts of colors and shapes. Some basic concepts, namely color and shape concepts, are required for perception. You cannot perceive a color or shape without possessing a concept of that type of color or shape. To put this in a Kantian way, perception conforms to our basic concepts of colors and shapes, and not the other way around. In this chapter, I offered an account of what it means for perception to conform to some of our basic concepts. Possessing a basic concept gives you the ability to take a stimulus and classify it prior to your consciousness of that stimulus. So, to say that perception conforms to some basic concepts is to say that once you perceive a property, that property has already been classified by your sensory system. This gives us an empirical reason to hold the view that perception conforms to some basic concepts.

Recall that Conceptualism is the view that a subject can have a perception of some property only if she possesses a concept of that type of property. In this chapter, I argued only for Conceptualism about colors and shapes. After all, those are the properties targeted by the argu-
ment from fineness of grain. However, the justification for my argument about those properties also applies to other perceptual properties as well. At the very least, these other properties include size, and orientation properties. After all, the empirical studies that I used to justify Conceptualism about colors and shapes also apply to size and orientation properties. In particular, studies on blindsight reveal pre-conscious classification of size and orientation in addition to colors and shapes.

A full defense of Conceptualism needs to identify which properties are represented in perception. Does perception represent only properties like colors, shapes, size and orientation, or does it also represent properties like being a table or being a wren? The conceptualist needs to argue that we possess concepts for all of the properties that perception represents. I have already argued that we possess concepts for colors, shapes, size and orientation properties. In the next chapter, I argue that these are the sorts of properties that perception represents. Perception does not represent high-level kind properties like being a table or being a wren.

This chapter discussed the idea of nonconceptual content: the question of whether perception represents properties that are not conceptually articulable. My claim was that color, shape, and some other low-level properties present no challenge to conceptual articulation. In fact, our perceptions of colors and shapes are not only articulable, we actually possess concepts for every color and shape that we can perceive, and the same holds true for several other low-level properties. In the next chapter, I will be moving from nonconceptual content to highly conceptual content. The question is whether perception represents properties that are articulable only in terms of high-level concepts: concepts of natural kinds such as wrens, and concepts of artificial kinds such as tables. I will argue that perception does not represent such properties. In this chapter, I
argued against the existence of nonconceptual content, and in the next, I argue against the existence of highly conceptual content.
Chapter Three

Recognitional Dispositions and Perceptual Phenomenology

Abstract: Suppose you recently gained a disposition for recognizing wrens. Wrens might look different to you now in virtue of your new disposition. According to one argument, this shows that the property of being a wren can be represented in your perception. The content of perception can include high-level kind properties. I claim here that this conclusion does not follow from the argument. Then, based on my objection to the argument, I sketch a positive account of what happens perceptually when you become disposed to recognize a high-level kind property. Finally, I argue that we have good reason to hold that only low-level properties like colors, shapes, size, orientation, and bare sounds are represented in perception.

1. Introduction

The preceding chapter was about fineness of grain in properties that admit of similarity orderings. Take colors, for instance. Orange is more similar to red than it is to blue. For shapes, a rectangle is more similar to a square than it is to a circle. Likewise, location, orientation, illumination, and size properties can each be arranged in terms of similarity (I expand on this account in much greater detail in Chapter Five). In contrast, this chapter is about discrete properties, and particularly high-level kind properties. High-level kind properties include natural kind properties like being a wren and artificial kind properties like being a table. Such properties do not typically admit of similarity orderings. Unlike colors or shapes, high-level kinds are not typically more or less similar to each other. A mountain, for instance, is neither more nor less similar to a wren than it is to the metal gold.

Some philosophers hold that we perceive high-level kind properties (in addition to low-level properties like colors, shapes, size, orientation, illumination, textures, and bare sounds). Susanna Siegel has recently offered an argument that such properties are represented in perception (2006; 2010). Roughly and briefly (to be expanded upon in the next section), the argument is
that since some high-level kind properties can look phenomenally different to someone once they become disposed to recognize them, those properties are represented in perception. I claim here that this argument does not actually show that high-level kind properties are represented in perception. Based on my criticism of the argument, I sketch a positive account of what happens perceptually when you become disposed to recognize such a property. In the final part of the chapter, I argue that we have good reason to hold that only low-level properties are represented in perception.

The question as to whether perception represents high-level kind properties has important epistemological ramifications (Siegel, 2006, p.483, and 2007, p. 129). In particular, the answer to that question will determine which perceptions count as misperceptions and which beliefs count as false beliefs. Suppose that the object you are attending to is a wax tomato, not a real tomato. If perception represents high-level kind properties like the property of being a tomato, then your perception would be a misperception. You incorrectly perceive that it is a tomato, when the object is in fact a wax tomato. On the other hand, if perception represents only low-level properties and not high-level kind properties, then your perception is not a misperception. You correctly perceive the particular color and shape of the wax tomato, and although you are still in error, your error is not a misperception. It is a false belief. You have a veridical perception of a certain color and shape. Then you infer the false belief that the object is a tomato (I argue for such an account in Chapter Four).

High-level and low-level property views both arise in the history of philosophy. Heidegger, for example, holds that high-level kind properties are represented in perception:

[W]e hear the storm whistling in the chimney, we hear the three-motored plane, we hear the Mercedes in immediate distinction from the Volkswagen… In order to hear a bare sound we have to listen away from things, divert our ear from them, i.e., listen abstractly. (“The Origin of the Work of Art,” p. 156)
On Heidegger’s view, we don’t just hear bare sounds. We hear a Mercedes, a Volkswagen, or a three-motored plane.

Contrast Heidegger’s view with Hume’s view. On Hume’s view, perception does not even represent distances. As he puts it:

[A]ll bodies which discover themselves to the eye, appear as if painted on a plain surface... their different degrees of remoteness from ourselves are discovered more by reason than by the senses. (A Treatise of Human Nature, I. ii. 5)

According to Hume, visual perception represents colors and locations, but not distances. It is not the senses, but reason, that detects distances.

2. The Phenomenal Contrast Argument

2.1 The Argument Introduced

Plausibly, when looking at a wren, the perception of an expert birdwatcher is phenomenally different from the perception of a layperson, even when they view the wren under the exact same background conditions. The idea is that experts in some fields perceive the world differently from non-experts. Cabernet Sauvignon tastes different to a wine connoisseur. Beethoven’s Ninth Symphony sounds different to a conductor. What it is like to visually perceive a wren is different for an expert birdwatcher.

I find it quite plausible that there is a phenomenal difference in each of these cases, but what precisely does that difference consist in? It might seem at first glance that if there is a phenomenal difference in these cases, then it consists solely in a new feeling of familiarity. The idea is that when an expert birdwatcher sees a wren, a feeling of familiarity accompanies his perception. He has seen many wrens before, and so when he recognizes one, he has a feeling of familiarity. Meanwhile, the layperson has no such feeling. It might seem that the feeling of familiarity
exhausts the phenomenal difference between them.

The phenomenal difference in such cases cannot be just a feeling of familiarity, though. A feeling of familiarity often accompanies recognizing something, and recognizing something often accompanies a feeling of familiarity. But the two pull apart.

In cases of “hyperfamiliarity,” for instance, a patient feels that the faces of strangers are familiar, even though he does not recognize them (see Devinsky et al., 2010). Patients with hyperfamiliarity may frequently ask strangers, “Where do I know you from?” They say hello to everyone that they see (p. 971). Such patients have a feeling of familiarity, but no recognition.

Hyperfamiliarity is restricted to face familiarity. But the wren case just mentioned need not involve faces. So you might think that the case of hyperfamiliarity shows only that for faces a feeling of familiarity is insufficient for recognition. It could still be that when an expert sees a wren, her feeling of familiarity always comes with recognition. If that is right, then it could still be that in the wren case, a feeling of familiarity is sufficient for recognition.

But consider the case of déjà vu. Arguably, cases of déjà vu involve a feeling of familiarity without recognition (see Sacks, 2010, p. 41). A subject perceives a scene or event and has a feeling of familiarity. Yet, he cannot recognize the scene or event that is familiar. If he did recognize it, this would just be a case of simple recognition, and not a case of déjà vu.

Suppose someone has never seen a wren before. In the grip of déjà vu, that person might still have a feeling of familiarity when looking at a wren, just like someone who recognizes a wren when she sees one. Yet, his feeling of familiarity is not due to recognizing the wren. He has never seen a wren before. So, assuming that there can still be a phenomenal difference between the person who recognizes wrens and the one who has never seen them before (and I will motivate this shortly), the difference is not a feeling of familiarity, since when the second person has
déjà vu, both of them have a feeling of familiarity.

Déjà vu and hyperfamiliarity are cases of a feeling of familiarity without recognition, and so they suggest that a feeling of familiarity is insufficient for recognition. But is a feeling of familiarity necessary for recognition? I want to claim that it is not necessary. Consider the case of Capgras syndrome. Patients with Capgras syndrome recognize a face of a close relative, yet do not have the typical emotional response (Matthen, 2010, p. 112), including no feeling of familiarity (Sacks, 2010, p. 42). This leads the patients to consider close relatives as impostors, since the patients have no feeling of familiarity when seeing their faces (see Christodoulou, 1977). In short, instances of déjà vu, hyperfamiliarity, and Capgras syndrome are instances where recognition and a feeling of familiarity come apart.

Suppose a patient with Capgras syndrome is able to recognize the face of his wife perfectly well. Yet suppose that, due to his syndrome, he has no feeling of familiarity when he sees her. Plausibly, his perception of her face at the present moment differs phenomenologically from his perception of her when he first met her (see Siewert, 1998, pp. 255-259). If this is the case, then the phenomenal difference does not consist in a feeling of familiarity. He has no such feeling when he sees her. The phenomenal difference must consist in something else.

As with hyperfamiliarity, though, Capgras syndrome is a syndrome restricted to the recognition of faces. It could still be that in the cases we are considering (like the wren case), there is no recognition without a feeling of familiarity.

Consider the following case, though. Suppose that you have recently learned to recognize wrens. Call $Q_1$ your perception of a wren before you learned to recognize them. Call $Q_2$ your perception of the same scene after you learn to recognize wrens. Suppose $Q_1$ differs phenomenally from $Q_2$ in virtue of your new ability to recognize wrens. Next, imagine someone tells you
that what you are looking at is not a real wren, but is in fact a perfect decoy of a wren. This might cause you to lose your feeling of familiarity as you continue attending to the object (see Siegel, 2006, p. 494). Call your subsequent perception $Q_3$. Plausibly (and I will further motivate this claim shortly), $Q_3$ is still phenomenally distinct from $Q_1$—that is, from your wren perception before you learned to recognize wrens. But if this is right, then the phenomenal change upon learning to recognize wrens is not just a feeling of familiarity. It’s something else in addition.

Reconsider the cases from the beginning of this section. Plausibly, Cabernet Sauvignon tastes different to a wine connoisseur, Beethoven’s Ninth Symphony sounds different to a conductor, and what it is like to visually perceive a wren is different for an expert birdwatcher. I accept that cases such as these might involve a difference in a feeling of familiarity. The wine connoisseur probably has a feeling of familiarity when she tastes Cabernet Sauvignon, while the layperson does not. But my claim is that the phenomenal difference consists in more than just a feeling of familiarity, and even if someone were to object to my previous argument for that conclusion, there is a different route to that same conclusion.

Susanna Siegel argues that in cases like the ones I have been discussing, where we compare an expert’s perception with the perception of a layperson, there is a phenomenal difference in the sensory phenomenology, that is, in the phenomenology pertaining to the properties that sensory experience represents, properties like colors, shapes, and perhaps also high-level kind properties. She contrasts sensory phenomenology with phenomenology associated with imagination, with emotions, with bodily sensation, with background phenomenology (as with drunkenness or depression), and with non-sensory cognitive functions (as with a feeling of familiarity) (2006, p. 492). There may be changes in those kinds of phenomenology as well, but Siegel’s concern is just with the sensory phenomenology. To put it roughly, for vision, the sensory phe-
nomenology is that visual phenomenology that typically changes when you move your head from side to side. The idea is that with some cases of expertise, this phenomenology differs between an expert and a layperson. If this is right (and I will hold that it is), then the phenomenal difference in such cases consists in more than just a feeling of familiarity.

One plausible explanation for the difference in sensory phenomenology is as follows. Some experts possess recognitional dispositions for each of several properties in their expert domain. The expert birdwatcher is disposed to recognize a House Wren and a Marsh Wren. The wine connoisseur is disposed to recognize Merlot and Pinot Noir. The symphony conductor is disposed to recognize a bassoon and a clarinet. The layperson, on the other hand, is not disposed to recognize those properties. But then, as Charles Siewert puts it, there is “a difference between the way things look to us when they merely look somehow shaped, colored, and situated, and how they look to us when they look recognizable to us as belonging to certain general types…” (1998, p. 256).

Let’s simplify the above cases. Exchange our expert birdwatcher—who likely has a large repertoire of recognitional dispositions for birds—for an ordinary subject. Also, instead of comparing our subject’s perception with the perception of another subject, think about an intra-personal case across time. Now consider Siegel’s core argument that perception represents high-level kind properties. Call it the Phenomenal Contrast Argument.

Suppose our ordinary subject acquires a recognitional disposition for wrens. Contrast her perceptions before and after she gains that disposition. Plausibly, after she gains the disposition, even if she looks at exactly the same scene of a wren, the sensory phenomenology of her perception has changed. Given that the perceptions differ in their sensory phenomenology, they differ in their content, that is, in what the perceptions represent. Specifically, they differ with respect to
the high-level visual property that she is now disposed to recognize—the property of being a wren. The argument generalizes, mutatis mutandis, to other high-level kind properties. High-level kind properties can be represented in perception.

While I find it plausible that after a subject gains a recognitional disposition for wrens, even if she looks at exactly the same scene of a wren, the sensory phenomenology of her perception may have changed, my claim is that even if her sensory phenomenology differs between the two perceptions, it does not follow that the perceptions differ in representing the property of being a wren.

2.2 The Counter-Example Case Introduced

Suppose we take someone who is disposed to recognizing wrens (call him “Reg”). Suppose that we track Reg’s attention when he attends to a wren. Imagine that we chart the saccades of his eyes, for instance, and the depth at which he focuses. Suppose that another subject, “Un-reg,” is not disposed to recognizing wrens. But imagine that through conditioning we train Unreg to attend in the exact same way that Reg attends (in the next section, I specify what attending in that way would entail). Suppose we minimize the physical differences between them (they have the same visual acuity, depth perception, and color discrimination, for instance). Suppose also that we replicate the very scene that Reg attended to. We then allow Unreg to look at the bird in all sorts of ways, and we encourage him when he comes close to the right way. The goal is to get Reg and Unreg to attend to the wren in exactly the same way. My suggestion is that if we succeed in this goal, Unreg’s sensory phenomenology will be the same as Reg’s.

I am setting up this case in terms of training. But training is actually inessential to making my point. It could be that we get Unreg to attend like Reg by stimulating the muscles involved in
Unreg’s visual attention. Or, it could be that Unreg just accidentally attends to the wren in the same way as Reg. No matter how we do it, my claim is that if we get Unreg to attend in the way that Reg does, his sensory phenomenology will be the same as Reg’s.

I suggested that Unreg might accidentally attend to the wren in the same way as Reg attends. In fact, you might even think that attending to the wren in that way is part of the very process by which we become disposed to recognize wrens. Roughly and briefly (to be expanded upon in section 4.1), the idea is that one attends as Reg does before one is disposed to recognize a wren, not just afterwards, since attending in that way is how one comes to acquire the recognitional disposition in the first place.

2.3 Clarifications

2.3.1 Differences Outside of the Sensory Phenomenology

My claim is that if we get Unreg to attend in the way that Reg does, his sensory phenomenology will be the same as Reg’s. Now consider some reasons for thinking that Reg and Unreg differ in their phenomenology. Suppose Reg has a feeling of familiarity when he sees the wren, while Unreg does not. The feeling of familiarity would be a phenomenal difference between Reg and Unreg. Or, to take another example, suppose Reg has the thought that the bird is a wren. Unreg will not have that thought, given that he does not recognize the bird as a wren. So, assuming that thoughts have phenomenology, Reg and Unreg will differ in their phenomenology. But, and this is the important point, my target is just the sensory phenomenology. Since this is a visual case, I am claiming just that their visual phenomenology is the same. I make no claim about the cognitive phenomenology being the same. I make no claim about the phenomenology
associated with feelings being the same. More generally, I make no claim regarding differences between Reg and Unreg that rest outside of the sensory phenomenology.

Now you might deny that we can separate sensory and non-sensory phenomenology. I disagree, but note that I am taking the distinction between sensory and non-sensory phenomenology from Siegel. Ultimately, I am trying to show that the phenomenal contrast argument is invalid. To this end, my strategy is to accept its premises (and here I am considering background assumptions as premises). I want to show that the argument’s conclusion does not follow from its premises. You might deny that we can separate sensory and non-sensory phenomenology. But denying one of the argument’s premises is an objection to the soundness of the argument. It does not block my challenge to the argument’s validity.

2.3.2 The Complexity of Attention

Why would I think that Reg and Unreg would have the same sensory phenomenology? On the one hand, many intuitive differences between Reg and Unreg are differences outside of the sensory phenomenology. On the other hand, Unreg’s attention can be sophisticated, even without having a recognitional disposition. He may saccade from one point to another, shifting his eyes in the process. Call this spotlight attention, since attention of this kind acts like a spotlight on a stage (Prinz, 2010, p. 318). Unreg’s visual attention may also be diffuse at times, not simply centered on a single point. When we look at the starry sky, for instance, we need not attend to just single stars. We can attend to large portions of the sky. Call this diffuse attention (Prinz, 2010, p. 318). Unreg’s attention might even be some hybrid of spotlight attention and diffuse attention. He might spotlight the beak and the tail, while also diffusely attending to the entire object. Attending to a wren can be complex, even if you have no disposition to recognize the
bird as a wren, and this is the sort of rich attention I have in mind for Unreg. Since one’s attention can be sophisticated even without a recognitional disposition, this makes it more plausible that Unreg can attend in the same way as Reg.

Now you might think that for some complex attention, only someone with the right recognitional disposition can have it. Take an auditory example. You might think that only someone with a recognitional disposition for fugues can attend to fugues as they do. But consider the following. Quite plausibly, in order to have a recognitional disposition for fugues, you have to have other recognitional dispositions—dispositions for recognizing a theme and a part, for instance. Notice, however, that according to the scheme of the phenomenal contrast argument, Reg and Unreg are meant to differ in only one recognitional disposition. The argument purports to show a representational difference with respect to a single high-level kind property. To do this, it posits a case involving a difference in a single recognitional disposition. But now consider the fugue case under these conditions. Suppose that Reg has a recognitional disposition for fugues. Suppose that Unreg has all of the same recognitional dispositions, just not the one for fugues. Assume that having a recognitional disposition for fugues requires having other recognitional dispositions, dispositions for a theme and a part, for instance. But then once we conceive of Unreg as having dispositions for recognizing a theme and a part, it seems more plausible that he could attend to a fugue exactly like Reg does.

Perhaps you find it implausible that an expert birdwatcher and a layperson could share the same sensory phenomenology when looking at a wren. But this is not the case under consideration. We are not comparing an expert birdwatcher (who likely has a large amount of recognitional dispositions for birds) with a layperson (who has few recognitional dispositions for birds). In the case under consideration, Reg and Unreg are meant to differ in just one recognitional dis-
position, the disposition for recognizing wrens. But again, plausibly, in order to have a recogni-
tional disposition for wrens, you have to have other recognitional dispositions—dispositions for
recognizing a bird and a beak, for instance. But then, once we conceive of Unreg as having dis-
positions for recognizing a bird and a beak (but not for a wren), it seems more plausible that he
could share the same sensory phenomenology as Reg. More generally, my suggestion is that the
differences between Reg and Unreg are not so great that we should think they lead to an insur-
mountable difference in sensory phenomenology.

So far I have been using the perception of a wren as my example. In addition to the prop-
erty of being a wren, the phenomenal contrast argument can apply to other high-level kind prop-
erties. My claim is that for every such property, a subject who is disposed to visually recognize
that property and a subject who is not so disposed but attends in the same way will always have
the same sensory phenomenology (assuming other relevant factors are equal). Again, they might
differ in aspects outside of the sensory phenomenology. But the claim is that their sensory phe-
nomenology will be the same.

2.3.3 Variations on the Counter-Example Case

It might seem at first glance that when we train Unreg to attend to the wren as Reg does,
we are simply giving him a recognitional disposition for wrens. Yet, when we train Unreg, the
training need not even involve wrens. In the training task, we are trying to get Unreg to saccade
in a particular way, to focus in a particular way, and ultimately to attend in a particular way. We
might train him on other objects as long as he is able to mimic Reg’s visual attention when pre-
sented with the wren scene. Furthermore, as I suggested earlier, we could restate the case without
even appealing to training. When presented with the wren scene, Unreg might attend like Reg by
accident, even without a disposition to recognize wrens. But even if we stick to the training case, just because Unreg is able to attend like Reg in one particular scene, he need not be able to attend like Reg in any other scene. When presented with a new wren scene, he might attend just as he would have before the training. In that case, we should not credit him with a recognitional disposition for wrens, since he is not actually disposed to recognize wrens. To take a variation on the original case, suppose we have Unreg duplicate Reg’s attention for one wren, one time. Then we get rid of Unreg, and find an Unreg (prime) to duplicate Reg’s attention the next time. If we do this, then since the original Unreg has only attended to one wren, one time, it need not follow that Unreg is disposed to recognizing wrens. Furthermore, we do no harm to the claim that one doesn’t need a recognitional disposition for wrens in order to attend to wrens like someone who has one.

2.4 The Objection to the Phenomenal Contrast Argument

Consider your perception of a wren before and after you acquire a recognitional disposition for wrens. Suppose all of the background conditions remain the same. The crucial claim in the phenomenal contrast argument is as follows: since the perceptions differ in their sensory phenomenology, they differ in their content, and specifically with respect to the high-level visual property for which you have gained a recognitional disposition—the property of being a wren.

Let’s grant for the sake of argument that your two perceptions differ in their sensory phenomenology. Let’s also grant that it follows that they differ in their content. My claim now is that it does not follow that the contents differ with respect to the high-level visual property for which you have gained a recognitional disposition. That is, it does not follow that they differ with respect to the property of being a wren.
To see this, we need to distinguish three perceptions: \( O_1, O_2, \) and \( O_3 \). \( O_3 \) is your perception of a wren after you acquire a recognitional disposition for wrens. \( O_2 \) is your perception of the same scene before you acquire the disposition, but where you are attending to the wren just as you would if you had the disposition. \( O_1 \) is your perception of the scene before you acquire that recognitional disposition, and where you are attending to the scene as someone who lacks a recognitional disposition for wrens.

I grant for the sake of argument that \( O_1 \) and \( O_3 \) differ in sensory phenomenology, and also that it follows that they differ in content. Next, as I argued in sections 3.1 and 3.2, \( O_2 \) is identical to \( O_3 \) in terms of their sensory phenomenology. But if \( O_1 \) is sensory-phenomenally distinct from \( O_3 \), and if \( O_2 \) is sensory-phenomenally identical to \( O_3 \), then \( O_1 \) is sensory-phenomenally distinct from \( O_2 \). Using the original reasoning about \( O_1 \) and \( O_3 \), since \( O_1 \) and \( O_2 \) differ in their sensory phenomenology, it follows that they differ in their content. Yet, and this is the crucial point, there is no need to hold that the content of \( O_2 \) involves the high-level visual property of being a wren. After all, unlike the subject of \( O_3 \), the subject of \( O_2 \) lacks a recognitional disposition for wrens.

The upshot is as follows: even assuming \( O_1 \) and \( O_3 \) differ in terms of their sensory phenomenology and in terms of their content, it does not follow that they differ with respect to representing the high-level property of being a wren. It could be that the content of \( O_1 \) and \( O_3 \) differs in the same respect that the content of \( O_1 \) and \( O_2 \) differs, and there is no need to hold that this latter difference is a difference in representing the property of being a wren.

Now, one could always adopt the view that to visually attend in the way that one does when one is disposed to recognize a wren is to visually represent the property of being a wren. But note that I do not deny that the contribution of attention to visual phenomenology can be ex-
plained in terms of representing high-level kind properties. My point is that it need not be explained in terms of representing those properties. We can say that to visually attend in the way that one does when one is disposed to recognize a wren is to visually represent low-level properties like colors, shapes, size, orientation, and illumination. We are not compelled to hold that \( O_2 \) represents the property of being a wren, since we can hold that \( O_2 \) represents a particular arrangement of these low-level properties.

But also note that we have eliminated the original compelling reason for why we might think that \( O_2 \) represents the property of being a wren. The claim was not just that \( O_1 \) and \( O_3 \) differ in content, but that they differ in content with respect to a high-level kind property, the property of being a wren. The reason for thinking that they differ with respect to that property rather than some other was that the subject of \( O_3 \) has a recognitional disposition for wrens, while the subject of \( O_1 \) does not. But that compelling reason does not apply to the difference between \( O_1 \) and \( O_2 \). Neither the subject of \( O_1 \) nor the subject of \( O_2 \) has a recognitional disposition for wrens.

3. Recognitional Dispositions and Perception

3.1 Recognitional Dispositions and Attention

I now want to briefly sketch a positive proposal about what happens to your perception when you acquire a recognitional disposition for a high-level kind property (although one can accept my objection to the phenomenal contrast argument without accepting this proposal). The proposal arises out of the idea that attending to a particular wren in the way that Reg does might be part of the very process by which we become disposed to recognize wrens.

Consider two different accounts of what happens when one learns a backhand in tennis. According to one account, learning a backhand creates a new capacity in you. It gives you a new
ability to hit backhands. That might seem reasonable enough. But now consider a second account. According to the second account, you don’t actually gain a new ability. Rather, you already have the ability to hit backhands. Learning a backhand just selects for and reinforces it.

One reason for holding this second account is that before you learn how to hit a backhand, you might accidentally get it right. If we hit tennis balls at you rapidly and give you a tennis racquet to defend yourself, you might possibly hit a backhand without ever properly learning the skill. Plausibly, this indicates that you already have the ability to hit backhands. Learning just selects for that ability, and enables you to repeat it.

Now consider two different accounts of what happens when you acquire a recognitional disposition for wrens. According to one account, acquiring that disposition gives one a new perceptual ability. It enables you to attend to wrens in a new way.

The objection to the phenomenal contrast argument suggests a second account instead. While a recognitional disposition might guide your attention when you see a wren, you could have attended in that way without it, just as you might accidentally hit a backhand without ever properly learning the skill. My positive proposal then is as follows. Acquiring a recognitional disposition does not give you a new ability to attend to wrens in a particular way. It just selects an ability that you already have and enables you to use it repeatedly. It creates a skill.

**3.2 Recognitional Dispositions and Phenomenal Character**

When you have a recognitional disposition for wrens, it can seem that the disposition directly influences your sensory-phenomenal character. But that’s only because there is a strong correlation between the two. Typically you get that phenomenal character only when you have the right recognitional disposition. But in fact, the disposition influences your phenomenal char-
acter only indirectly, through a way of attending. After all, you can get that phenomenal character by attending in the right way, even without having the relevant recognitional disposition. As I have been arguing, someone who lacks a recognitional disposition for wrens could be trained to attend in exactly the same way as someone who has that disposition, and his sensory phenomenology would be the same.

Consider the following analogy. Suppose the existence of some hypothetical factor $x$, which is involved in the development of lung cancer. Suppose that all causal chains involving smoking go through factor $x$ on their way to lung cancer. Furthermore, suppose that there is a causal chain to lung cancer that does not involve smoking, but does involve factor $x$. In such a case, it only appears that smoking is directly causing lung cancer, since there is a strong correlation between the two. But actually, smoking causes lung cancer only indirectly, through factor $x$. Smoking is not necessary for developing lung cancer since you can get lung cancer through factor $x$, even without smoking.

Analogously, in the wren case, it seems at first glance that your recognitional disposition is directly causing your phenomenal character. But this is only because there is a strong correlation between the two. In fact, that recognitional disposition causes your phenomenal character only indirectly, through a way of attending. The recognitional disposition is not necessary for that phenomenal character since you can get that phenomenal character by attending in the right way, even without having the relevant recognitional disposition.

3.3 Phenomenal Similarity and Phenomenal Contrast

Consider again the case of Reg and Unreg, who differ with respect to a recognitional disposition for a high-level kind property, but are otherwise minimally different. Siegel is proposing
a method, based on phenomenal contrast, to show that Reg and Unreg differ with respect to a high-level kind property. Her claim is that since Reg and Unreg differ in terms of their sensory phenomenology, they differ in terms of their content, and specifically with respect to the high-level property for which Reg has a recognitional capacity, but Unreg does not.

My argument against Siegel suggests a different method, based on phenomenal similarity, rather than phenomenal contrast. If Reg and Unreg have the same sensory phenomenology when they attend in the same way, then they do not differ in terms of their content. But then, given that we can account for the content of Unreg’s perception in terms of low-level properties, we can account for Reg’s perception in terms of low-level properties.

Siegel is using contrasting phenomenology to show that high-level kind properties are represented in perception. I am using similar phenomenology to show that high-level kind properties are not represented. My method suggests a test for figuring out which properties are represented: if Unreg attends to something in the exact same way as Reg, and they have the same sensory phenomenology, then Reg’s perception represents no other properties in addition to those that Unreg’s perception represents.

4. The Argument for the Low-Level Property View

4.1 The Low-Level Property View as the Default View

The phenomenal contrast argument purports to show that high-level kind properties are represented in perception. I claimed that the phenomenal contrast argument is invalid. Even if that argument is invalid, though, it does not follow that only low-level properties are represented in perception. After all, some other argument might show that high-level properties are represented. Still, consider what all participants in the debate agree on. Those that hold that high-level
kind properties are represented in perception do not deny that low-level properties are represented. Siegel, for instance, calls it “relatively uncontroversial” that color and shape properties are represented in perception (2006, p. 482). The question for her is whether high-level properties are represented in addition to the low-level properties, not instead of the low-level properties. Everyone agrees that (at least) low-level properties are represented in perception. The burden of proof is on proponents of the view that high-level properties are represented. They need to show that those properties are represented in addition to the low-level ones. Barring a successful argument for that, we should hold that only low-level properties are represented in perception.

Perhaps the previous argument was too quick. Does everyone really agree that low-level properties are represented in perception? Reconsider the Heidegger quote from section one of this chapter:

[W]e hear the storm whistling in the chimney, we hear the three-motored plane, we hear the Mercedes in immediate distinction from the Volkswagen... In order to hear a bare sound we have to listen away from things, divert our ear from them, i.e., listen abstractly. (“The Origin of the Work of Art,” p. 156)

On Heidegger’s view, in typical cases we don’t just hear bare sounds. We hear things like Mercedes’, three-motored planes, and Volkswagens. If we interpret being a Mercedes to be a high-level property, and being bare sound x to be a low-level property, then Heidegger is saying that in typical cases you perceive the high-level kind property of being a Mercedes, and not the low-level property of being bare sound x.

Heidegger’s passage introduces an ambiguity into the view that high-level kind properties are represented in perception. Supposing that we can perceive some such property, do we perceive only that property, or also the relevant low-level properties that compose that complex property? For instance, if we perceive the property of being a wren, do we perceive that property instead of the relevant low-level properties that compose that complex property (the color, shape,
size, orientation of the wren, for instance)? Or do we perceive the property of *being a wren* in addition to those low-level properties? Heidegger’s passage is about audition, not vision, but if we apply what he says about sounds to visual properties, then his view seems to be that in typical cases, we perceive the property of *being a wren*, but not its color and shape. Siegel, on the other hand, holds that one perceives the property of *being a wren* in addition to its color and shape properties (see, for instance, Siegel, 2006, p. 488).

My claim was that everyone agrees that low-level properties can be represented in perception. But notice that this still holds for both versions of the view that high-level kind properties are represented in perception. Heidegger claims that in typical cases you perceive the property of *being a Mercedes*, and not the property of *being bare sound x*. Yet, he doesn’t deny that you can hear a bare sound. On his view, detecting the low-level properties just requires what he calls “listening abstractly.” So, on his account, low-level properties can be represented. It’s just that in typical cases, they are not.

I deny the view that high-level kind properties are represented in perception, but consider one reason for preferring Siegel’s version of that view to Heidegger’s version. So far in this chapter, we have been examining the claim that some of the sensory phenomenology differs between before you acquire the relevant recognitional disposition, and afterwards. But it seems just as intuitive that some of the sensory phenomenology is very similar. There is a lot of overlapping phenomenology between your perceptions of a wren before and after you acquire a recognitional disposition for wrens. In fact, theorizers often note this when they discuss the case (see Bermudez, 2003, p. 294, Crane, 1992, p. 137, Smith, 2002, pp. 96-97, and McDowell, 2008, p. 3).

Assuming constant background conditions, your two perceptions of a wren are very similar qualitatively, even if your possession of a recognitional disposition differs between them. We
can give a plausible explanation of this in terms of the representation of low-level properties. You see very similar low-level properties in the two perceptions—similar colors and shapes, for instance. The low-level content of the two perceptions plays an explanatory role. It accounts for their phenomenal similarity. Even as you acquire the new recognitional disposition, the low-level content remains relatively similar.

One important feature of the wren case, then, is the phenomenological similarity in your perceptions before and after you acquire a recognitional disposition for wrens, and Siegel’s view has the resources for explaining this fact, since she holds that low-level properties are represented in both cases. The similar low-level content explains the phenomenological similarity. But no such explanation is available to Heidegger. If my interpretation of him is correct, he would hold that Reg’s perception of a wren does not represent low-level properties. But then it seems that he has few resources to explain the intuitive similarity in the sensory phenomenology before and after someone acquires a recognitional disposition for wrens.

4.2 Other Arguments for High-Level Properties

My claim is that since everyone agrees that (at least) low-level properties are represented in perception, the burden of proof is on proponents of the high-level property view to show that additional properties are represented, and that barring a successful argument that high-level properties are represented, we should hold the low-level property view. But is there a successful argument that high-level properties are represented in perception? Consider the following passage from Farid Masrour:

We say that someone looks happy, that we saw the cat jump on the mouse, that we saw the stone break the window, and so on. So we have prima facie reasons to think that we can visually experience complex properties and relations such as prickliness, happiness, jumping, and breaking. (2011, p. 1)
Masrour’s claim is about which properties are part of our perceptual phenomenology, but someone might apply his same reasoning to the question as to which properties are part of the content of perception. The idea would be that we should hold that perception represents high-level properties since such a view would align with our everyday perceptual claims.

We often make perceptual claims that have high-level content. We report that we see that the ball in the grass is a tennis ball, or say we see that the bird on the fence is a wren. If we take our perceptual reports as accurate descriptions of our perceptual content, that content involves high-level properties. Given that our everyday perception claims align with the view that high-level properties are represented in perception, it might seem at first glance that we have reason to hold that view.

I think that such an argument is problematic, though. To align perceptual content with our everyday perceptual claims, we would actually have to expand the content of perception implausibly far. Consider some ordinary perceptual claims. We walk by a closed door with a dark window and we report that we see someone is not in her office. We glance down at an arrow on a letter “E,” and we say that we see that the gas tank is empty. We look at a pattern in the mud and we report that we see a car was there. We look at a flashing light on a carbon monoxide detector, and say we see that there is carbon monoxide in the living room.

If we take ordinary perceptual claims to indicate perceptual content, then perceptual content goes well beyond kind properties. If we take our claims seriously, then we can visually detect invisible properties and we can see absences. It is not just that we infer these things; it’s that we literally see them.
Furthermore, if we take our perceptual claims to indicate perceptual content, it follows that we can perceive not just high-level properties, but extremely high-level ones. Consider some perceptual claims from Herbert Spencer:

When he sees that the dweller in marshes lives in an atmosphere which is certain death to a stranger… when he sees that the Greenlander and the Neapolitan subsist comfortably on their respective foods—blubber and macaroni, but would be made miserable by an interchange of them—when he sees that in other cases there is still this fitness to diet, to climate, and to modes of life, even the most sceptical must admit that some law of adaptation is at work. (*Social Statics*, p. 75)

If we take perceptual claims to indicate perceptual content, it follows (based on the claims in the Spencer passage) that we can literally perceive the property of *living in an atmosphere which is certain death to a stranger*, and we can see the property of *subsisting comfortably on blubber*.

In short, while the argument based on our perceptual claims does give us high-level content, the content that it gets us is implausibly high-level content. Without a successful argument that high-level properties are represented in perception, again, we should hold that only low-level properties are represented.

4.3 Low-level Properties and Conceptualism

My thesis in this chapter is that we perceive only low-level properties like colors, shapes, size, and orientation. We do not perceive high-level kind properties like *being a wren* or *being a table*. But then recall Chapter Two’s distinction between Conceptualism and Nonconceptualism. According to the conceptualist, a subject can have a perception of some property only if she possesses a concept of that type of property. Nonconceptualists, on the other hand, argue that a subject can have a perception of a property even without possessing a concept of that type of property.
To demonstrate Conceptualism, the conceptualist needs to show that a subject possesses a concept for every property that the subject perceives. So, if we perceive high-level properties, the conceptualist needs to show that a subject possesses a concept for each such property that she perceives, in addition to each low-level property that she perceives. Take Siegel’s view, for instance. On her view, when we perceive a tomato, we perceive a particular color and shape, and also potentially the property of *being a tomato*. If this is right, then the conceptualist has to account for our concepts of kind properties in addition to our color and shape concepts.

If we perceive only low-level properties, on the other hand, the conceptualist’s task is easier. Since perception is limited to such properties, the conceptualist need only show that the subject possesses a concept for each low-level property. If the object you are looking at is a tomato, then the conceptualist need only account for concepts of low-level properties such as the color and shape of the tomato.

In Chapter Two, I argued for *Color and Shape Conceptualism*, the view that a subject can have a perception of a color or shape only if she possesses a concept of that type of color or shape. The claim was that for every color or shape in appearance you have the ability to categorize it as that type of color or shape. It’s just that this is done prior to appearance by your sensory system. The image on your retina is two-dimensional and upside down. The information that the retinal image carries gets identified and reconstructed as your three-dimensional, right side up visual image. That process involves classification done by your sensory system prior to when you get the perceptual image, and specifically the classification of color and shape information. Empirical studies show this. As I mentioned in Chapter Two, in the case of blindsight, subjects are blind in part of their visual field. But they can use color and shape information received through the blind portion. Information (including shape and color information) is classified, yet
none of this information appears to the conscious subject. In the case of metacontrast (to return to another example from Chapter Two), a target stimulus is presented very briefly followed by a masking stimulus. Subjects are unable to report properties of the target, because the mask blocks their recall of it. Yet the information about the target (including color and shape information) influences the subject’s cognitive processes. I took the cases of blindsight and metacontrast to show that once you perceive a color or shape, it has already been categorized, and my claim now is that we perceive only low-level properties like colors and shapes. We don’t perceive high-level kind properties like being a table or being a wren.

So far, I have argued only for Color and Shape Conceptualism. That view entails Conceptualism only if we just perceive colors and shapes. Yet, my argument for Color and Shape Conceptualism applies to more properties than just colors and shapes. As I mentioned in Chapter Two, cases of blindsight provide evidence that pre-conscious processing identifies visual properties of shape, size, orientation (Marcel, 1998), and color (Danckert et al., 1998). As with colors and shapes, the sensory system is able to classify information about size and orientation prior to consciousness. Furthermore, as I also discussed in Chapter Two, analogues of blindsight in other modalities indicate that we are also able to classify properties in those modalities prior to conscious appearance. In “blind touch,” for instance, a subject was unable to feel her right arm, yet she was able to point to where she was touched even while blindfolded (Paillard et al., 1983). In “blind smell,” subjects claimed that they could not detect any odor, but when forced to guess whether an odor-emitting substance (detectable only by smell) was present, they guessed at better than chance (Sobel et al., 1999). In “deaf hearing,” a subject claimed that she was unable to hear auditory stimuli, yet she was able to move her head in the direction of the stimuli at a rate better than chance (Garde and Cowey, 2000). Based on these studies, we have evidence that the
sensory system is at least able to classify information about color, shape, size, orientation, auditory and tactual location, and bare smells.

Metacontrast and blindsight (as well as analogues of blindsight) give us good reason to think that we possess concepts of low-level properties (including the properties of color, shape, size, orientation, auditory and tactual location, and bare smells). My claim in this chapter is that we perceive only low-level properties.

5. Conclusion

The central claim of my dissertation is a Kantian one. It’s that some basic concepts are required for perception, while non-basic concepts, we acquire. Recall Kant’s distinction between empirical concepts and a priori concepts. The former are concepts, which come to us by way of experience, from which they are derived through a process of abstraction. These would include concepts like WREN, or TABLE. From several instances of wrens, for instance, we abstract what Kant calls their common “mark” [Merkmal]. A priori concepts, also known as the categories, are not derived from experience, but are instead prior conditions for experience itself. These include very general concepts like the concept of unity.

I argued in Chapter One that while on Kant’s view, perception requires a priori concepts, there is no reason to think that it requires empirical concepts. The argument went as follows. Kant does famously say, “intuitions without [empirical] concepts are blind” (B75). John McDowell takes this to show that perception requires empirical concepts for Kant. But actually, Kant’s slogan says nothing on that issue. Just because intuitions without concepts are blind, their non-existence does not follow. It just follows that they cannot yield knowledge.
This chapter can be read as support for the claim that perception does not require empirical concepts. After all, we do not actually perceive properties like *being a wren*, or *being a table.* So, there is no reason to think that concepts of those properties are required for perception.
Chapter Four

Concepts and Perceptual Justification

Abstract: In this chapter, I argue that the concepts that you possess constrain the perceptual beliefs you can form. Therefore, they constrain the perceptual knowledge you can have. As a point of departure, I use a thesis from Fred Dretske, M. G. F. Martin, and Christopher Peacocke: which beliefs one can form depends on which concepts one possesses. For instance, the bird watcher’s supply of bird concepts enables her to form lots of beliefs about birds. A layperson, on the other hand, is unable to form some of those beliefs. I argue that since the layperson is unable to form those beliefs, he cannot use his perceptions to justify those beliefs. His concepts constrain the perceptual beliefs that he can form and the knowledge that he can have. In section four, I expand my account of perceptual justification. I argue that most of our everyday perceptual reports do not actually report the content of our perceptions. Instead, they report the content of the perceptual beliefs that we infer from our perceptions.

1. Introduction

In Chapter Two, I argued that the perception of colors, shapes, and other low-level properties presupposes the possession of concepts for those types of properties. You cannot visually perceive something as a decagon, for instance, without having the ability to classify decagons as decagons. In Chapter Three, on the other hand, I argued that you do not actually perceive anything as having high-level kind properties like being a table or being a wren. It follows that there is no reason to think that possession of high-level kind concepts like WREN or TABLE are required for the perceptual process. However, I do think that such concepts play an important role in the formation of perceptually based beliefs. In this chapter, I outline that role.

My claim in this chapter is the following: the concepts that you possess constrain the perceptual beliefs you can form. Therefore, they constrain the perceptual knowledge you can have. Why is this important? For one, it provides a partial vindication for a traditional motivation for Conceptualism (an argument that I mentioned in Chapter Two): the Epistemic Argument. I explain the argument in the next section, but roughly and briefly, the claim is that since perceptions
provide reasons for beliefs, reasons that a subject can entertain and articulate, the perceiving subject has to possess certain concepts. My claim is that there is something right about this. In cases of perceptual justification at least, certain concepts are indeed required. Without the right concepts, you cannot form certain perceptual beliefs. So, we need certain concepts in order for our perceptions to justify our beliefs.

So far I have argued that high-level kind properties are not perceptually represented. We perceive only low-level properties like colors, shapes, size, and orientation. I have also argued that we possess concepts for every color and shape that we perceive, as well as for other low-level properties like size and orientation. This leads us to a puzzle. Perceptions provide reasons for beliefs. But those beliefs typically involve high-level kind concepts. They involve concepts like WREN and TABLE, not just concepts like MAGENTA and OCTAGONAL. But then what is the justificatory relation between perceptions and beliefs if the states that provide reasons are conceptually incommensurate with the beliefs for which they provide reasons?

Later in the chapter, I attempt to answer this puzzle. I draw on the results of Chapter Two and Chapter Three to argue that most of our everyday perceptual reports do not actually report the content of our perceptions. Rather, they report the content of the perceptual beliefs that we infer from our perceptions (using background beliefs). Roughly and briefly, the idea is that you perceive low-level properties like colors, shapes, size, orientation, illumination, and texture. You have background beliefs about what particular arrangements of those low-level properties amount to. For instance, you believe that round, yellow, soft, fuzzy spheres are likely to be tennis balls (a belief that can be updated as you learn new things). When you look at a tennis ball, you infer that an object is a tennis ball based on your perception and your background belief. Of course, such an inference will have to be very quick. But, as I argue, we have reason to think that
very quick perceptual inferences occur. After all, racecar drivers or air traffic controllers—people who frequently look at gauges—seem to form inferential perceptual beliefs about what those gauges monitor, and they do so very quickly. I expand on this idea in section four.

2. The Epistemic Argument

As I mentioned in Chapter Two, the epistemic argument is a standard argument for Conceptualism (see McDowell, 1994, pp. 7-13, Brewer, 1999, Ch. 2, 3, and 6, and Brewer, 2005). The argument begins with a description of the relationship between perceptions and beliefs. There is a causal relationship between perceptions and beliefs, but the relationship between the two is not strictly causal (McDowell, p. 8, and Heck, 2007, p. 118). A solely causal account of perception, as McDowell puts it, would simply “exculpate” us for what we believe—just as someone banished from a place would be exculpated if she were dropped there by a tornado (McDowell, p. 8). But perception does not give us mere exculpations. We can reflect on whether a perception provides a reason for a belief. If we perceive something that cannot possibly be the case, we can reject it as a reason for a belief that it is in fact the case. When we perceive a stick in the water as bent, we can reject that as a reason for believing that the stick is bent. In short, there is a rational relation between a perception and a belief, not just a causal one. Perceptions do not just cause beliefs. Perceptions provide reasons for beliefs (Brewer, 1999, pp. 18-25, and Heck, 2007, p. 118).

Suppose a subject is visually attending to a shiny ball, and believes (based on her perception) that the ball is shiny. What kind of a reason does her perception provide for her belief? We could always specify that reason as a reason that we know, but that she does not. But such a reason would not be her own reason for her belief. It would not give us her own rational ground for
holding that belief. In order for the reason to be a ground that she can entertain, and not merely an external, causal ground, it needs to be her own reason (Brewer, 1999, p. 49 and pp. 149-152, and Brewer, 2005, p. 219). But, and this is the important point, if those reasons are to be truly the subject’s own reasons, reasons that she can entertain, then she has to be able to articulate them (McDowell, 1994, pp. 165-166). In order for her to be able to articulate them, though, they have to be articulable in terms of concepts that she possesses (Brewer, 1999, pp. 149-152, and Brewer, 2005, pp. 217-221). This puts a constraint on her perception. Perception requires that she possess certain concepts.4

I think that there is something right about the conclusion of this argument, although for reasons that are orthogonal to its premises. In cases where your perception justifies a belief at least, certain concepts are indeed required. This is because without the right concepts, you are unable to form certain perceptual beliefs. Perception, in cases of justification, requires that a subject possesses certain concepts.

3. Concepts and Perceptual Justification

3.1 Concepts and Belief Formation

My aim in this chapter is to show that one’s perceptions—when they play a justifying role—depend on the concepts that one possesses. I want to start with a more conservative claim, though. Very plausibly, one’s beliefs depend on the concepts that one possesses. One piece of evidence for this claim is that as theorizers, we individuate the beliefs of a subject according to the concepts that subject possesses. Susanna Siegel puts the idea as follows:

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4 The kind of possession in play here is what I called “conscious possession of a concept” in Chapter Two. Unless otherwise indicated, when I talk about concept possession in this chapter, I am referring to concept possession at the conscious level, not at the pre-conscious level (for this distinction, see Chapter Two, 3.2 and 3.5).
One can believe that whales swim without believing that large sea-dwelling mammals swim, even though whales are large sea-dwelling mammals. According to a common defense of belief conceptualism, the relevant beliefs differ in which concepts the thinker is deploying, and that explains how it is that someone can have one of these beliefs without the other (2011, section six).

In “Perception, Concepts, and Memory,” M. G. F. Martin makes a similar point:

The proposition that Leo is a lion entails that Leo is an animal, so the proposition that Leo is a lion is logically equivalent to the proposition that Leo is both a lion and an animal. Assuming that it is a posteriori that one is a lion only if one is an animal, someone could believe that Leo was a lion without thereby believing that Leo was both a lion and an animal. An account of belief therefore needs to make a distinction between these two beliefs…. [A] possible explanation of [someone’s] failure to believe that Leo is an animal [while believing that Leo is a lion] is that she lacks the concept of an animal. (p. 238)

We individuate two beliefs if a person can believe the proposition in the content of the first belief without believing the logically equivalent proposition in the content of the second. One way that it is possible for a person to do this is if she lacks a concept that is a constituent of that second proposition. This is one reason why as theorizers, the way that we individuate beliefs needs to be sensitive to the subject’s concepts.

The Siegel and Martin passages concern our individuation of beliefs. The claim is that belief individuation should be sensitive to the concepts possessed by the subject of those beliefs. Christopher Peacocke makes the same point, but puts it in terms of belief attribution. According to Peacocke, when we attribute beliefs to subjects, we do so based on the concepts that they possess. He puts the idea (which he later endorses) as follows, “Suppose you sincerely attribute to Ralph the belief that whales are mammals. It is plausible that the truth of this attribution depends in part upon Ralph’s satisfying the possession condition for an appropriate concept of whales and for a similar concept of the property of being a mammal” (1992, p. xiii). Peacocke’s point is as follows. When we attribute beliefs to subjects, we do so based on the concepts that they possess. This is because the truth of our attributions depends on whether or not the subject possesses
those concepts. We want our attributions to be correct, and they are correct only if they track the concepts the subject possesses.

As Peacocke, Siegel and Martin have said, the way that we individuate and attribute beliefs is sensitive to the concepts possessed by the subject of those beliefs. What I want to focus on is one particular way that belief individuation and attribution is so sensitive. My claim is that a subject can have a belief about some property only if she possesses a concept of that property.

Consider the following example proposed by Siegel: “Suppose the thinker lacked the concept ‘whale’: she had no idea what whales were, nor even that there was such a thing. Arguably such a thinker could not believe that whales swim, that whales are blue, or anything else about whales” (2011, section six). The idea is that if you lack a concept, you are unable to form beliefs or thoughts involving propositions that have that concept as a constituent. As Martin puts it, “Where one lacks a conceptual ability, one thereby lacks a thought involving it” (2003, p. 238). If a thought or belief involves a particular concept, then one needs to possess that concept in order to have that thought or belief.

Even theorists who deny that experiences are concept-dependent often hold that beliefs are concept-dependent (with the exception of Stalnaker, 2003). In fact, Fred Dretske argues that it is the concept-dependence of beliefs that distinguishes them from experiences:

Experiences of piano playing do not require the concept of a piano (at least not in the same way as a belief or judgment requires it). They require no understanding of what a piano is or what it sounds like. Even mice can see and hear pianos being played. Believing is something else. It requires the concept of a piano, some understanding of what a piano is. Mice who hear pianos being played do not believe pianos are being played. Their understanding is, I assume, too feeble to believe this even though their hearing is good enough to hear it. (1995, p. 9)

On Dretske’s view, one difference between experiences and beliefs is that the latter require concepts, while the former do not. While you can have an experience of piano playing without pos-
sessing the concept of a piano, you cannot have a belief about piano playing without possessing the concept of a piano.

As I mentioned, the thesis that I am proposing (following the passages in Siegel, Martin, Peacocke, and Dretske) is that a subject can have a belief about some property only if she possesses a concept of that property. Call this view, Belief Conceptualism:

**Belief Conceptualism:** A subject can have a belief about some property only if she possesses a concept of that property.

Suppose the bright star you see out your window every night is the North Star, and yet you have never made that connection. Arguably, you have a belief that the star is a bright star, but not that it is the North Star. After all, you have not noticed that the star is the North Star, and our belief attributions are sensitive to what you have and have not noticed. You lack the belief that the star is the North Star, and this is the case even if you possess the concept of the North Star but fail to use it in a belief (this point was implicit in the initial Siegel and Martin passages). My claim is a more conservative one. If you altogether lack the concept of the North Star, then you cannot form a belief that the star is the North Star. Of course, you might be able to form some other beliefs about that star, such as the belief that the star is a bright star. It’s just that you cannot form the belief that the star is the North Star. You can form that belief only if you possess the concept of the North Star.

One intuitive rationale for Belief Conceptualism is the following. We think that experts typically have more knowledge about their area of expertise than non-experts do, and this is due (at least in part) to the wealth of concepts that they possess. Their specialized concepts enable them to form specialized beliefs, and those beliefs enable them to have specialized knowledge. Upon opening a gallon of paint labeled “auburn,” a house painter might notice that the color is actuallyburgundy. He has knowledge (based on his perception) that the color of the paint is bur-
gundy, and he can know this in part because his concept of burgundy enables him to form that belief. A non-expert might very well lack that concept, and so she will be unable form that perceptual belief.

A further motivation for holding Belief Conceptualism is as follows. Sometimes information is lost on us. We say that the lecture was way over our head. We say that we don’t have the relevant background to understand the work of abstract art. We say that we cannot tell whether the wine is good because to us all wine tastes like box wine. In such cases, information is lost on us, and one plausible explanation is that it is lost because we lack certain relevant concepts.

Consider a novice beer drinker, who cannot tell the difference between a perfect pour from the tap and a mediocre pour. When given a perfect pour, that information is lost on him (see Dretske, 1995, pp. 66-71). One plausible explanation for why information is lost on him is that he lacks the concept of a perfect pour. He is unable to identify a perfect pour when he sees one, even if he is directly attending to it visually. The connoisseur, on the other hand, can access that information. He has the concept of a perfect pour, and he can recognize one as such when he sees it.

Ultimately, I want to argue the following about such cases. The connoisseur can form a belief that the drink is a perfect pour. The novice, on the other hand, is unable to form that belief even when he is attending in the right way. Since he is unable to form that belief, he cannot use his perception to justify that belief. After all, he cannot even form that belief in the first place. So there is no such belief for his perception to justify. In this way, perception, in cases of justification, requires that a subject possesses certain concepts.

3.2 Belief Conceptualism Applied to Perceptual Beliefs
So far, I have been arguing for Belief Conceptualism: a subject can have a belief about some property only if she possesses a concept of that property. Since a perceptual belief is a type of belief, it follows that a subject can have a perceptual belief about some property only if she possesses a concept of that property:

**Belief Conceptualism (applied to perceptual beliefs):** A subject can have a perceptual belief about some property only if she possesses a concept of that property.

Suppose the paperweight on your desk is octagonal. Assume that you have noticed that it is many-sided, but you have not noticed that it’s octagonal. Arguably, if you have a perceptual belief about the sides of the paperweight, you have a perceptual belief that the paperweight is many-sided, but not a perceptual belief that the paperweight is octagonal. I am advancing a still weaker thesis. I want to set aside the case where you simply do not notice that the paperweight is octagonal. In that case, it may be that you still possess the concept OCTAGONAL, but that since you have not noticed that the paperweight is octagonal, you never deploy the concept. The case that I want to focus on is a case where you altogether lack the relevant concept. Suppose that you lack the concept OCTAGONAL (as well as any concepts logically equivalent to it). My claim is that if you lack that concept, as a young child might, then you cannot form a belief that the paperweight is octagonal. Of course, you might be able to form other beliefs—like the belief that the object is many-sided. But you can form the belief that the object is octagonal only if you possess a concept of octagonal.

### 3.3 A Constraint on Perceptual Justification

Perceptions play an epistemic role. They yield knowledge about the world. At least some of our beliefs are justified by perceptions. Suppose you look out at your desk, see your octagonal paperweight, and form the perceptual belief that the paperweight is octagonal. Your perception
gives you knowledge that the paperweight is octagonal. It justifies your belief. As James Pryor puts it, it helps to make that belief “epistemically appropriate” (Pryor, 2005, p. 181). But now consider the following simple constraint on perceptual justification. A subject’s perception justifies her perceptual belief only if she has that belief. Your perception justifies your perceptual belief that the paperweight is octagonal only if you have the belief that the paperweight is octagonal. Call this basic constraint the Perception-Belief Constraint:

**Perception-Belief Constraint:** A subject’s perception justifies her perceptual belief only if she has that belief.

According to this constraint, in order for a subject’s perception to justify her perceptual belief, she has to have that belief.

### 3.4 The Role of Concepts in Perceptual Justification

The argument so far runs as follows. Suppose that you are thinking about animals that live in the ocean. If you altogether lack the concept of a whale, then you cannot form a belief that one such animal is a whale. You might be able to form the relevant belief for a shark or a dolphin, just not for a whale. This is because you can have a belief about some property (e.g., being a whale) only if you possess a concept of that property (e.g., WHALE). But now imagine that there is an octagonal paperweight on your desk and you are visually attending to it. Suppose that (based on your perception) you form the belief that the paperweight is octagonal. Your belief is a perceptual belief. Since a subject can have a belief about some property only if she possesses a concept of that property, and since a perceptual belief is a belief, a subject can have a perceptual belief about some property only if she possesses a concept of that property. You can have a perceptual belief that the paperweight is octagonal only if you possess the concept OCTAGONAL. But now think of the following. Your perception can justify your belief that the paperweight is
octagonal only if you have that belief. But in order to have that belief, you need to possess the concept OCTAGONAL. So your perception can justify your belief that the paperweight is octagonal only if you possess the concept OCTAGONAL.

Here is the argument put more formally:

**P1:** A subject can have a belief about some property only if she possesses a concept of that property.

**P2:** A perceptual belief is a belief.

**C1:** So, a subject can have a perceptual belief about some property only if she possesses a concept of that property (from P1, P2).

**P3:** A subject’s perception justifies her perceptual belief only if she has that belief.

**C2:** Therefore, a subject can have a perception, where that perception justifies her perceptual belief, only if she possesses a concept of that property (from C1, P3).

Consider a painter with a large repertoire of color concepts. Her repertoire enables her to form a large amount of beliefs about colors. A layperson, lacking such a supply of color concepts, is unable to form some of those beliefs. Suppose, for example, that the painter possesses a concept of chartreuse while the layperson lacks that concept. Upon seeing chartreuse flowers, the expert will be able to form a belief that the flowers are chartreuse. The layperson, I am suggesting, will not be able to form that belief. He cannot form it because he lacks the concept.

Since the layperson lacks the concept of chartreuse, he cannot use his perception to justify a belief that the flowers are chartreuse. He lacks that belief, and cannot form it, since he lacks the required concept. Since he cannot form the belief that the flowers are chartreuse, he cannot use his perception to justify that belief. His perception justifies that belief only if he possesses the concept of chartreuse.

3.5 The Epistemic Argument Reconsidered
According to the epistemic argument, perceptions provide reasons for beliefs, reasons that a subject can entertain and articulate. This yields a constraint on perception. In order to perceive such and such, a subject has to possess certain concepts, namely, concepts for articulating the content of that perception.

My argument amounts to a partial defense of the epistemic argument. My claim is that if a perception is to justify a belief, certain concepts are indeed required. For instance, a subject can have a perception, where that perception justifies her perceptual belief that the paperweight is octagonal, only if she possesses the concept octagonal.

My argument is only a partial defense of the epistemic argument because I make no claim that in order for a perception to be a perception, it has to justify a perceptual belief, as John McDowell and Bill Brewer seem to (see McDowell, 1994, pp. 7-13, and Brewer, 1999, Ch. 2, 3, and 6). Their epistemic argument has come under pressure from Peacocke (1998, pp. 383-84), Heck (2000, pp. 511-20), Byrne (2005, pp. 237-45), and Pryor (2005, pp. 193-95; also relevant is his 2000, pp. 535-36). In Chapter Two, I raised one criticism of the epistemic argument, but I do not plan to enter further into this debate here. My claim here is simply a conditional one: if a perception justifies a subject’s perceptual belief, then she has to possess certain concepts.

My position contrasts with McDowell’s Mind and World view in a further way. I do not assume that perceptual content has to include every concept that is included in the perceptual belief content that is justified. So, I do not assume that if, for instance, you have a justified perceptual belief that an object is a tennis ball, the concept TENNIS BALL must figure into your perceptual content. As he first made the epistemic argument, McDowell held that “the content of an experience would need to include everything the experience enables its subject to know non-inferentially,” although he has since rejected that view (2008, p. 3). I reject it as well.
My argument so far aims to show a role for concepts in perception, and specifically in perceptual justification. The argument has epistemic import. Since concepts constrain the perceptual beliefs you can form, they also constrain the perceptual knowledge you can have. If you cannot form the perceptual belief that the flowers are chartreuse, then you cannot have the perceptual knowledge that the flowers are chartreuse. If you cannot form the perceptual belief that the paperweight is octagonal, then you cannot have the perceptual knowledge that the paperweight is octagonal. In section four, I build on this argument and give an account of perceptual justification.

3.6 Perceptual Justification and Perceptual Content

In Chapter Three, I made a distinction between two different views of what we perceive. According to one view, we perceive only low-level properties like colors, shapes, size, orientation, illumination, textures, and bare sounds (see Clark, 2000). According to a second view, we also perceive high-level kind properties: natural kind properties like being a wren and artificial kind properties like being a table (see Siegel, 2006 and 2010). In Chapter Three, I argued that we have good reason to hold that perception represents only low-level properties. But I want to be clear that my argument in this chapter works independently of which of the two views one holds.

Suppose that S is an ordinary adult and the object she is visually attending to is a tomato. Proponents of the high-level property view claim that S’s perception can represent a tomato. Proponents of the low-level property view claim that S’s perception represents a certain color and shape, but does not represent a tomato. Both of these views are views about which properties we perceive. But the views themselves say nothing about which beliefs we form from our perceptions.
Suppose $S$ looks at the tomato and forms the perceptual belief that the object is a tomato. Both theories can admit as much (at least under an inclusive view of what qualifies as a perceptual belief—more on that in the next section). Both theories are able to hold that a subject can have a perception, where that perception justifies her perceptual belief, only if she possesses a concept of a tomato. The account of justification will differ based on whether one holds a high-level or low-level property view. For the former view, $S$ perceives that the object is a tomato. His perception justifies his belief that the object is a tomato. In order for that justification to occur, though, he needs to form the belief that the object is a tomato. I have argued that in order to form that belief, he has to possess the concept TOMATO.

For the low-level property view, on the other hand, the account runs as follows. $S$ perceives low-level properties like the color, shape, and size of the tomato (perhaps after looking at the object from various points of view). $S$ has a background belief about the sensory properties of a tomato: he believes that spherical, red objects of a particular size are likely to be tomatoes. $S$ infers, based on his perception and his background belief, that the object is a tomato. His perception alone does not justify his belief. His belief is justified by his perception together with his background belief. Still, in order for that justification to occur, he needs to form the belief that the object is a tomato. I have argued that in order to form that belief, he has to possess the concept TOMATO.

4. An Account of Perceptual Justification

4.1 Perceptual Inferences
Call a belief grounded in a perception a *perceptual belief*. Call a belief grounded in a perception alone a *pure perceptual belief*. Call a perceptual belief *impure* if it is grounded in a perception, but not solely in a perception.

Once again, my view is that perception represents only low-level properties like colors, shapes, size, orientation, illumination, textures, and bare sounds. Perceptual content does not include high-level kind properties like *being a table* or *being a tomato*.

If the content of perception includes only low-level properties, then it follows that a substantial amount of our perceptual beliefs are impure perceptual beliefs. After all, on the basis of our perception we very often form beliefs such as *the object is a tennis ball*, not just beliefs such as *the object is green and spherical*. Our perceptual beliefs often involve high-level properties, not just low-level ones. But if a substantial amount of our perceptual beliefs involve high-level properties, and if our perceptions themselves involve only low-level properties, then most of our perceptual beliefs are not grounded in a perception alone.

Many of the perceptual beliefs that we form involve inferences that utilize background beliefs. James Pryor calls this “mediate justification” or “inferential justification.” As he puts it, this kind of justification occurs “[w]hen your justification to believe P comes in part from your having justification to believe other, supporting propositions” (2005, p. 183). When you look at a tennis ball, you see that the object is yellow and spherical, that the felt has a certain shape, and/or the lines have a particular color and shape. You also have a background belief about what tennis balls look like. You believe that round, yellow, soft, fuzzy spheres are likely to be tennis balls. Based on your perception and your background belief, you infer that the object is a tennis ball. Your justification to believe that the object is a tennis ball comes in part from your justification...
to believe that tennis balls look like that. In Pryor’s terms, you have inferential justification to believe that the object is a tennis ball.

My claim is that typically a perceptual belief is grounded not only in a perception, but also in a background belief. Background beliefs can be updated as you learn new things. In the tennis ball case, for instance, as you learn that tennis balls need not be yellow, you might update your belief appropriately. Then, when you are looking at a blue tennis ball, you can infer that it is a tennis ball based on your perception and your updated background belief.

Regardless of whether one holds that perception represents high-level properties or only low-level ones, everyone should admit that some perceptual inferences occur. Suppose you are driving in your car, look down at the dashboard, and perceive the gas gauge. You form the perceptual belief that your gas tank is low. Yet, this belief is not based on your perception alone. It is an impure perceptual belief. You have a background belief about gas gauges and what they mean. You then infer, based on your perception and your background belief, that your gas tank is low (for more on this case, see Dretske, 1995, pp. 41-42, Pryor, 2000, pp. 525 and 538, and Pryor, 2005, pp. 182-83).

Suppose one denies that a perceptual inference involving a background belief occurs in the gas gauge case. Suppose one admits that you form a belief that your gas tank is low, but holds that you also perceive that your gas tank is low. If you believe that your gas tank is low solely because you perceive that your gas tank is low, then no inference drawing on a background belief would be necessary. Since both the perception and the belief involve the same high-level content, you would not need to infer, based on your perception and your background belief, that your gas tank is low.
I think that such a view is problematic, for reasons that are familiar from Chapter Three. Suppose you walk by a closed door with a dark window and form the belief that a colleague is absent, or suppose you look at a flashing light on a carbon monoxide detector, and form the belief that the living room contains carbon monoxide. You form these beliefs based on perception. But you form these beliefs using an inference involving a background belief. Denying an inference would commit us to the view that we can see absences and we can visually detect invisible properties. After all, if you form the perceptual belief that a colleague is absent, and you form that belief based solely on your visual perception, this commits you to the view that you can perceive absences. If you form the perceptual belief that the living room contains carbon monoxide, and you form that belief based on your visual perception alone, this commits you to the view that you can see carbon monoxide. Since carbon monoxide is invisible, this commits you to the view that you can see invisible properties.

Denying perceptual inferences commits you to the view that you can perceive absences and invisible properties. But it also commits you to the view that you can perceive extremely high-level properties. In Chapter Three, I discussed the following passage from Herbert Spencer:

When he sees that the dweller in marshes lives in an atmosphere which is certain death to a stranger... when he sees that the Greenlander and the Neapolitan subsist comfortably on their respective foods—blubber and macaroni, but would be made miserable by an interchange of them—when he sees that in other cases there is still this fitness to diet, to climate, and to modes of life, even the most sceptical must admit that some law of adaptation is at work. (Social Statics, p. 75)

My claim in Chapter Three was that if we take our everyday perceptual claims to indicate perceptual content, then unpalatable consequences ensue. For one, it follows that we can perceive extremely high-level properties like living in an atmosphere which is certain death to a stranger or subsisting comfortably on blubber. These properties are implausible candidates for perceptible properties.
But note that if we take those same claims to indicate perceptual beliefs instead, this presents a problem if we also deny that a perceptual inference based on a background belief occurs. If you form the perceptual belief that the dweller in marshes lives in an atmosphere which is certain death to a stranger, and you form that belief based on your visual perception alone, this commits you to the view that you can see the property of *living in an atmosphere which is certain death to a stranger*. But, once again, such a property is an implausible candidate for a perceptible property.

In short, denying perceptual inferences involving background beliefs leaves one with an implausible view of perceptual content. It leaves one with a view in which you can literally see absences and invisible properties. It leaves one with a view in which you can perceive properties of an implausibly high level.

### 4.2 Perceptual Belief Formation

The upshot of the argument from the previous section is that both high and low-level theories of perceptual content should countenance the phenomenon of perceptual inferences involving background beliefs. If high-level property theorists deny that the phenomenon occurs, then they will have to accept some unpalatable candidates as perceptible properties.

Suppose that a high-level property theorist countenances perceptual inferences involving background beliefs. She will probably admit that in the gas gauge case, you infer the perceptual belief that your gas tank is low. What I am saying is simply that this kind of phenomenon is widespread.

Some high-level theorists might even agree that perceptual inferences involving background beliefs are widespread. Suppose they hold that when you look at a tennis ball, you see
that the object is a tennis ball, and then you form the perceptual belief that the object is a tennis ball. They might still think that your perceptual belief is based in part on some other background belief. One candidate is a background belief about the reliability of your senses, say, the belief that your vision is fine. Stewart Cohen, for instance, argues that a potential knowledge source (such as sense-perception) can yield knowledge for a subject only if the subject knows that the source is reliable (2002, p. 309). Suppose that a high-level theorist holds Cohen’s principle. On such a view, you know that the object is a tennis ball (via perception) only because you have a background belief about the reliability of your vision. This is the case, even though your perception has the same high-level content as your perceptual belief.

Other high-level theorists will hold that many of our perceptual beliefs do not involve inferences requiring background beliefs. They will hold that when you look at a tennis ball, you see that the object is a tennis ball, and then you form the perceptual belief that the object is a tennis ball. No background belief is necessary. Still, high-level property theorists should admit that at least some of our perceptual beliefs involve perceptual inferences using background beliefs (as in the gas gauge case). My claim is simply that there are a lot more cases of perceptual inference than high-level property theorists admit.

Suppose that the object that you are visually attending to is a tennis ball. The high-level property theorist will claim that you perceive that the object is a tennis ball, and form a belief that the object is a tennis ball. It is intuitive for them to hold that the process involves what Pryor calls “immediate justification,” where your belief is immediately justified “[w]hen your justification to believe P does not come from your justification to believe other propositions” (2005, p. 183). The high-level property theorist may claim that your justification to believe that the object is a tennis ball does not come from believing any other propositions. What I am claiming is that
your belief that the object is a tennis ball involves inferential justification, not immediate justification. You perceive that the object is green and spherical (among other things). You have a background belief about what tennis balls look like. You then infer, based on your perception and your background belief, that the object is a tennis ball.

While the high-level property theorist claims that you perceive that the object is a tennis ball, I claim that this is actually the content of your perceptual belief (John McDowell has recently argued for a similar view: see McDowell, 2008, pp. 3-4). On this account, you do not actually perceive that the object is a tennis ball. You believe that the object is a tennis ball. Your perceptual content involves only low-level properties, while your belief content involves high-level properties.

Some may take issue with my inferential account because it seems to imply that the process of belief formation is slower than it really is. We frequently form beliefs based on perceptions very quickly. So, it makes sense to ask whether we really make all of these inferences in forming our perceptual beliefs. It might seem at first glance like that would take a long time, and belief formation typically does not.

Consider the gas gauge case, though. You infer a belief that your gas tank is low. Yet, it seems like you have the belief instantaneously. But even if you do not, there is little reason to think that you could not. Surely a racecar driver or an air traffic controller—people who frequently look at gauges—form perceptual beliefs about what those gauges monitor, and do so very quickly. The perceptual beliefs that the racecar driver and the air traffic controller form about what the gauges monitor seem just as instantaneous as the beliefs that you form about objects being tennis balls, tables, or chairs. If you had as many confrontations with gas gauges as
you do with chairs, your inferences about gas gauges might be just as quick as your inference that the object in the corner is a chair.

Inferences in general (not just perceptual inferences) become quicker with training. When you learn the multiplication tables, for instance, your inferences are slow at first. It takes you time to reason that if you take eight five times, then you get forty. After training, your inferences get faster. We could always posit that what was once an inference becomes a different mental operation once they get faster. But then at what point does something stop being inference? Just because inferences become quicker, it doesn’t follow that they are no longer inferences. My claim instead is that rather than positing two different kinds of mental operations, we should posit one kind (an inference), and hold that they can be quicker or slower. After all, we know from experience that we can become quicker with inferences. You see “Eight times five” and you immediately infer that the answer is forty. Why not hold that inferences themselves can seem immediate?

Suppose once again that you are visually attending to a tennis ball. If you can tell that the object is a tennis ball, it is most likely because you have seen tennis balls before, and so you are now able to recognize them as such. At present, you can quickly tell that an object is a tennis ball. But you should not conclude from this that the perceptual belief that an object is a tennis ball was always quick and non-inferential. At some point in your history, you learned what a tennis ball looks like. During the learning process, you were most likely slower in forming the appropriate belief, and you became quicker with training. Descartes puts this basic idea nicely in his sixth set of replies to objections to his Meditations:

“[W]hen we now make a judgement for the first time because of some new observation, then we attribute it to the intellect; but when from our earliest years we have made judgements, or even rational inferences, about the things which affect our senses, then, even though these judgements were made in exactly the same way as those we make
now, we refer them to the senses. The reason for this is that we make the calculation and judgement at great speed because of habit, or rather we remember the judgements we have long made about similar objects; and so we do not distinguish these operations from simple sense-perception. (p. 295, §438)

Descartes’ passage is about size, distance, and shape. He thinks that sense perception itself does not detect such properties, but rather we infer these properties (or make judgments about them) from our sense perception. Since we make these inferences or judgments from an early age, and eventually do so very quickly, Descartes continues, it is tempting to deny that we are making any inferences or judgments at all. We are tempted to think that sense perception detects those properties, even though we arrive at them by way of an inference or a judgment. I am making a similar claim about high-level kind properties. We infer these properties from our perception using a background belief, but since we make these inferences from a young age, it is tempting to think that we perceive such properties. That would be a mistake. Those properties are part of the content of our perceptual beliefs, not the perceptions themselves.

Just because perceptual belief typically involves an inference, it does not follow that the process of belief formation is slow. Experts, such as racecar drivers or air traffic controllers make what seem like clear cases of perceptual inferences, and they make those inferences quite quickly. But over time even non-experts become quicker at inferring the identity of ordinary objects like tennis balls.

5. Conclusion

In Chapter One, I gave an interpretation of Kant according to which he holds three theses. First, he holds that perceptual experience requires some basic concepts, namely, the categories of quality and quantity. Second, he does not hold that perceptual experience requires empirical con-
cepts, or at least we have no reason to think that he does. Third, I argued that on Kant’s view, knowledge requires empirical concepts.

In the chapters that followed, I argue that these theses, broadly construed, are true. In Chapter Two, I argued that perceptual experience does require some basic concepts. In Chapter Three, I argued that perception does not require empirical concepts. On the other hand, my argument in this chapter amounts to the claim that perceptual knowledge requires empirical concepts.

Recall that one important issue in Kant interpretation is whether he allows empirical intuitions—what McDowell glosses as “bits of experiential intake” (1994, p. 4)—without empirical concepts. Nonconceptualist interpretations claim that Kant does allow them, while conceptualist interpretations claim that he does not. In Chapter One, I argued that both interpretations shared a common premise: regardless of whether Kant allows empirical intuitions without empirical concepts, he does not allow empirical knowledge without empirical concepts. Nonconceptualist interpreters assume this in their response to conceptualist interpreters. For instance, in response to the seemingly pro-conceptualist claim, “intuitions without concepts are blind” (B75), nonconceptualists argue that it means only that intuitions without concepts cannot yield perceptual knowledge. They preserve the possibility of intuitions without empirical concepts, while accepting that perceptual knowledge requires empirical concepts for Kant. Their acceptance of this interpretation is uncontroversial because both sides of the debate hold that perceptual knowledge requires empirical concepts, even though they disagree about whether Kant holds that perception requires empirical concepts.

My argument in this chapter amounts to the claim that Kant was right: perceptual knowledge does require empirical concepts. More specifically, in order to have a perceptual belief
about some property, you have to have an empirical concept of that property. Insofar as beliefs are required for knowledge, perceptual knowledge about some property requires that you have an empirical concept of that property.

In chapters two, three, and four, I argued that three of Kant’s theses, broadly construed, are true. I now plan to move forward from Kant. In the next and final chapter, I expand the account of perception that I have developed in the previous chapters.

Chapters one through four focus predominantly on visual perception. In Chapter Five, I expand my account beyond vision to other sense modalities, as well as to experiences that involve more than one sense modality (multi-modal experiences). If we return to the central case of this chapter, the tennis ball case, we see that we have been simplifying things. The account of perceptual justification in the tennis ball case focused on visual perception. However, our experience of a tennis ball is often multi-modal. You can look at a tennis ball. But if you pick up the tennis ball, you can also feel its fuzziness and the flexibility of its rubber core. If a player hits the ball, you can hear the sound that it makes as it bounces off of the racket. A more full account of perceptual justification should accommodate these facts.

I want to suggest the following account of perceptual justification in the tennis ball scenario that I have just described. Your perception involves low-level properties of different modalities: touch, vision, and audition. Your background belief about tennis balls involves sense features from these different sense modalities. You believe that round, yellow, soft, flexible, fuzzy spheres that make a particular sound when hit are likely to be tennis balls. You infer, based on your perception and your background belief, that the object is a tennis ball. As seen in this example, a full account of the role that concepts play in perceptual justification should accom-
modate multi-modal cases. In the next chapter, I turn to such cases, and try to accommodate them into my account.
Chapter Five

The Contents of Perception: Beyond Vision

Abstract: In chapters one through four, I gave an account of the contents of visual perception. I argued that visual contents are restricted to low-level properties such as color, shape, size, and orientation. In this chapter, I expand my low-level property account beyond vision. I explore other sense modalities besides vision, as well as experiences that involve more than one sense modality (multimodal experiences). In the latter part of the chapter, I turn to a burgeoning area in multimodal research: crossmodal experience. A crossmodal experience is a multimodal experience where the impact of one sense modality on another changes the experience in the latter modality. In the common case of the ventriloquist effect, for instance, seeing the movement of the ventriloquist dummy’s mouth changes your experience of the auditory location of the vocals. I argue that a low-level conception of perceptual content can help us to make sense of crossmodal experiences.

1. Introduction

In the dissertation so far, I have focused on the integration of perception and cognition, by exploring the role that a subject’s cognitive capacities play in the way she perceives the world. On the one hand, experience involves the integration of perception and cognition. On the other hand, experience also involves the integration of many senses—multisensory integration. In this chapter, I move from cognitive/perceptual integration to multisensory integration.

The dissertation so far has focused largely on visual perception. I have argued that visual contents are restricted to low-level properties like color, shape, size, and orientation. In this chapter, I move beyond vision to other sense modalities. I also examine experiences that involve more than one sense modality (multimodal experiences). This latter class of experiences is important because philosophers, psychologists, and cognitive scientists now have a pretty good idea of how individual senses like vision and audition work. Since perceptual experience often involves more than just a single sense modality, theorists are turning their focus to multimodal per-
One burgeoning topic in this area is crossmodal perception, a kind of perception where the impact of one sense modality on another changes the experience in the latter modality.

A 2004 study at Oxford’s Crossmodal Research Lab showed that hearing an augmented sound of a crunch makes soft potato chips seem crisper and stale chips seem fresher (Zampini and Spence). In that study, a higher volume of a crunch sound correlated with the judgments of crisper and fresher, while a lower volume correlated with the judgments of softer and staler. The study showed that the sensory system is able to reconcile auditory data with gustatory data, in this case by modulating the experience of crispness or freshness.

Consider this study in light of a low-level conception of perceptual content. One characteristic of low-level properties is that they admit of similarity orderings (for a detailed motivation and analysis of this fact, see Clark, 2000, and Matthen, 2005a). Take a particular class of low-level properties (the class of colors, or shapes, or sizes, or locations, or orientations, for instance). For a class of low-level properties, we can say of a substantial portion of its members \(x, y,\) and \(z\) that \(x\) is more similar to \(y\) than it is to \(z\). For instance (as a first approximation), we can say that for colors, orange is more similar to red than it is to blue. We can say that for size, a peanut is more similar to a watermelon than it is to the Empire State Building. A more precise examination of similarity orderings shows that they are often multi-dimensional. Colors, for instance, are comparable along the dimensions of brightness, saturation, and hue (Matthen, 2005a, p. 111). By utilizing those three dimensions, we can map out similarity judgments as made by subjects, and for a substantial portion of colors \(x, y,\) and \(z, x\) will be more similar to \(y\) than it is to \(z\).

I think that such a similarity structure is an integral feature of crossmodal cases. For the class of crisp things, for instance, we can say of a substantial amount of its members that \(x\) is
more similar in crispness to \( y \) than it is to \( z \). This fact is relevant for making sense of the Zampini and Spence study. In the study, as one’s sensory system reconciles a taste with a sound, the taste appears more crisp or less crisp, more fresh or less fresh. In everyday situations (outside of the experimental context), when you hear a crunch sound of magnitude \( x \), there would be a correlating magnitude of crispness \( y \). In the experimental context, when you hear an augmented crunch sound of magnitude \( x \), the actual magnitude of the crispness is less than \( y \), but you perceive something more similar in magnitude to \( y \).

My proposal is that data reconciliation in crossmodal cases works because the properties that they involve are low-level properties that admit of a similarity ordering. Hearing an augmented sound of a crunch can make stale potato chips seem crisper because crispness is a special kind of property. It is a kind of property that \( can \) be reconciled with an aberrant crunch sound of magnitude \( x \). Specifically, it can be made more similar to the magnitude of crispness that typically corresponds with the magnitude of that sound. In the Zampini and Spence study, the same holds, \textit{mutatis mutandis}, for the property of freshness. At the end of this chapter I expand this same sort of analysis to properties in the content of three other crossmodal experiences: to phonemes in the McGurk effect, to auditory locations in the ventriloquist effect, and to visual motions in the motion-bounce illusion.

I begin at a more basic level. In section two, I expand the low-level property account of the previous chapters beyond vision to other sense-modalities. In section three, I offer a low-level property interpretation of flavor perception (a kind of perception that is by its very nature a multimodal perception, since it arises from the combination of multiple sense modalities, including taste, touch, and smell). In section four, I turn to crossmodal cases, arguing that a low-level property view can help us to understand such cases.
2. Recognitional Dispositions: Beyond Vision

Ralph Waldo Emerson once journaled that people “see what they are prepared to see,” asking rhetorically, “who sees birds, except the hunter? or the Ornithologist?” (1982, p. 514). There is something right in what Emerson says. The ornithologist and the hunter aim their eyes in a different direction than the layperson. They prepare themselves to see birds before the birds are even there. Emerson wrote those words in 1864, but we now have a battery of empirical evidence indicating that experts attend differently from non-experts. For instance, a 1998 study on expert soccer players showed that when they defended opponents, they focused longer on the opponent’s hips than non-experts do (Williams and Davids). Furthermore, a 2002 study on expert goalkeepers showed that during penalty kicks, they fixate longer on the non-kicking leg, while non-experts fixate longer on the trunk area (Savelsbergh et al.). As well, a 2010 study on expert fencers showed that they focus longer on the upper trunk area of their opponents than non-experts do (Hagemann et al.).

One reason why an expert might attend differently is that experts often have techniques that are specific to their crafts, and these techniques guide their actions. A wine expert with no knowledge about a glass of wine in front of her might swirl the glass, sniff the wine, and swish it around in her mouth. These techniques help to identify the wine and its elements. The non-expert, on the other hand, is untrained in the craft. He is likely unaware of the techniques, or else unaware of the fact that you can use those techniques in the service of recognition. The expert uses techniques specific to her craft for the purpose of identification, and since the non-expert lacks that craft, the non-expert does not use those techniques. But when the wine expert swirls the glass, sniffs the wine, and swishes it around in her mouth, and the non-expert does none of
these things, it should come as little surprise that the expert attends differently than the non-expert. Like the ornithologist and the hunter, the wine expert looks in different places than the non-expert. She uses the techniques of her craft to do this.

Of course, not everyone is an expert wine taster. But average people still have perceptual skills. When you gain a disposition for recognizing wrens, you are not becoming an expert bird watcher. But perhaps you are still gaining some amount of bird watching expertise, however small. In Chapter Three, my suggestion was that your newfound disposition for recognizing wrens might manifest itself perceptually in the way that you attend to wrens.

When you become disposed to recognize wrens, you might attend to wrens differently, just as after extensive classical musical training, you might attend differently to a symphony. In both cases, all of the component properties were always there. But now your newfound disposition might guide your attention towards different properties—different colors or shapes, for instance, in the wren case.

In Chapter Three, I argued that visual perception represents only low-level properties like colors and shapes. It does not represent high-level kind properties like being a table or being a wren. In order to show this, I criticized an argument made by Susanna Siegel (2006; 2010). According to Siegel, if you gain a recognitional disposition for wrens, wrens might look different to you (phenomenally) in virtue of your new disposition to recognize them. Since there is a difference in your phenomenology, she argues, there is a difference in your perceptual content, specifically with respect to the property of being a wren. Your perception now represents that property. If this is right, then perception can represent high-level kind properties.

In response to Siegel, I argued that someone who doesn’t possess a recognitional disposition for wrens might attend to wrens in exactly the same way that you do when you have that
disposition. I argued that wrens might look exactly the same to him (phenomenally) as they do to you, assuming that we minimize the physical differences between you two (you both have same visual acuity, depth perception, and color discrimination, for instance). Yet, if he lacks a recognitional disposition for wrens, there is no reason to think that his perception represents the property of *being a wren*. So there is no reason to think that the type-perception that you two share in common represents the property of *being a wren*.

My argument in Chapter Three was about vision, but vision is only one sense modality of many, and other senses have their own properties. Consider the following list (not meant to be exhaustive). The sense of hearing detects pitches, timbre, and loudness. The sense of touch detects temperature, texture, and vibration. Gustation detects sweetness, saltiness, and sourness. The sense of smell detects maltiness and muskiness.

Siegel argued that high-level kind properties are represented in vision, but we could reformulate that same scheme of argument for audition. If you acquire a recognitional disposition for fugues, for instance, fugues might sound different to you in virtue of your new ability to recognize them. Taking Siegel’s line of argument, the difference in your perceptual phenomenology indicates a difference in your perceptual content, specifically with respect to the property of *being a fugue*. According to Siegel’s line of reasoning, this shows that auditory perception can represent the property of *being a fugue*.

In fact, we could reformulate Siegel’s argument for touch, taste, or smell. For touch, we could use the high-level property of *being cashmere*, arguing that your tactile phenomenology can change once you become disposed to recognize cashmere. For gustation, we could use the property of *being a Cabernet Sauvignon*, arguing that your gustatory phenomenology can change once you become disposed to recognize that type of wine. For smell, we could use the high-level
property of \textit{being Chanel No. 5}, arguing that your olfactory phenomenology can change once you gain a recognitional disposition for that kind of perfume.

Just as we can reformulate Siegel’s argument for each sense modality, though, we can also reformulate my reply for each sense modality. Take the auditory case. Suppose that someone attends to a fugue in exactly the same way as you do (and that the two of you differ only with respect to your having a recognitional disposition for fugues). The fugue might sound exactly the same to him as it does to you. Yet, if he lacks a recognitional disposition for fugues, there is no reason to think that his perception represents the property of \textit{being a fugue}. So there is no reason to think that the type-perception that you two share in common represents that property.

In short, acquiring a recognitional disposition does not enable one to perceive a new kind of property, and this is the case regardless of the sense modality (although I won’t run through the entire argument for each modality). Regardless of whether you acquire a disposition for wrens, fugues, cashmere, Cabernet Sauvignon, or Chanel No. 5, that disposition does not enable you to perceive those properties.

\section*{3. Flavor Perception: A Low-Level Property Interpretation}

So far, although I have expanded my account beyond vision, I have still restricted my account to single sense modalities. But perceptual experience often involves more than just a single sense modality. That is, it is often multimodal. You might look at a wren and hear its chirp. You might look at a dog as you hear its bark and smell its wet fur. Flavor perception is significant in this regard because the experience of flavor is a multimodal experience by its very nature. Flavor experience is not the product of a single sense. Rather, it arises from the combination of multiple
sense modalities, including taste, touch, and retronasal smell (smell directed internally at the food you have just eaten, rather than at external objects) (Smith, 2009). If you plug your nose entirely while eating a peach, you will not be able to detect the flavor of the peach. This is because the sense of smell is necessary for experiencing the flavor. Without it, there is no flavor experience. Flavor experience arises only through the combination of smell, touch, and taste.

It might seem at first glance that when flavor perception integrates the properties detected by taste, smell, and touch, it creates new emergent properties, properties over and above the properties detected by the individual sense modalities operative in flavor perception. If these properties were high-level properties, properties like being a peach, or being a Cabernet Sauvignon, then that would present a problem for my low-level property view.

But what do we actually perceive in flavor experience? What I want to suggest is that we perceive the properties detected by the individual modalities that are operative in flavor perception (taste, smell, and touch), and we perceive certain magnitudes of each of those properties (of the sweetness, and of the softness, for instance). Still, I want to argue, it does not follow that flavor perception represents high-level kind properties like being a peach, or being a Cabernet Sauvignon.

My view gains support from modern flavor psychology, and particularly a strand of thought started by Edward Titchener in 1910. Titchener notes how we can isolate the components of a flavor experience:

Think, for instance, of the flavour of a ripe peach. The ethereal odour may be ruled out by holding the nose. The taste components—sweet, bitter, sour—may be identified by special direction of the attention upon them. The touch components—the softness and stringiness of the pulp, the puckery feel of the sour—may be singled out in the same way. (p. 135)
In other words, when eating the peach, we need not attend just to the total flavor of the peach. We can attend to the flavor components, to the sweetness or bitterness, or to the stringiness of the pulp. On this count, Titchener’s view is consistent with a common premise in modern-day flavor psychology: a subject can analyze flavors into their component parts (see Auvray and Spence, 2008, sections 2.4 to 2.6, McBurney, 1986, pp. 119-122, and Stevenson, 2009, Chapter Four). Donald H. McBurney puts the point in the following way (as Malika Auvray and Charles Spence summarize):

According to McBurney, the different smell and taste components of a flavor are not combined synthetically to form a new sensation (where the smell and taste components would lose their individual qualities of sensation), but rather they are combined in order to form a single percept. This explains why the components of a flavor are perceived as a whole but still remain analyzable when people specifically attend to each component. (2008, p. 1020)

Flavor perception does not fuse the low-level properties of individual senses into new, unanalyzable, flavor properties. Rather, when biting into a peach, we can analyze the flavor into its taste, touch, and smell components. Just as when listening to the symphony, you can attend to the components of that composite sound, isolating the sound of the glockenspiel or the contrabassoon, so too when eating the peach, you can attend to the components of that flavor, isolating the sweetness, or the bitterness, or the stringiness of the pulp.

Following Titchener and modern-day flavor psychology, I want to suggest the following account. When you bite into a peach, you do not perceive the property of being a peach. Rather, you perceive lower-level properties (and their magnitudes): properties like being bitter, being sweet, and being stringy. From your perception of this arrangement of low-level properties, along with a background belief about the sensory properties of peaches, you infer a perceptual belief about it being a peach. (Of course, in a typical interaction with a peach, the content of your per-
ception is not restricted to gustatory properties, but also involves visual, tactile, olfactory, and/or auditory properties).

Let me elaborate on the compositional structure of a flavor. The arrangement of a particular flavor involves certain component properties rather than others. Just as the sound of Beethoven’s Ninth Symphony involves the component sounds of a flute, oboe, and clarinet, peach flavor involves the component properties of *being bitter*, *being sweet*, and *being stringy*. Furthermore, just as the symphony involves the right magnitude of the flute, oboe, and clarinet sounds (as directed by the composer or conductor), the composite flavor involves the right magnitude of bitterness, sweetness, and stringiness. It involves a certain amount of each of its composite properties.

The arrangement of component properties in a flavor is like the arrangement of ingredients in a recipe. A recipe has a list of ingredients, but it also has a set of measurements for those ingredients. A flavor has component properties, but it also has these properties in specific magnitudes. With too much bitterness, for instance, a peach might not have the flavor of a peach anymore.

I have been arguing that flavors have a compositional structure. The compositionality of flavor enables us to make the following move. Just as we are not compelled to say that vision represents a wren, since we can explain that representation in terms of an arrangement of low-level properties, we need not say that gustation represents a peach, since we can explain such a representation in terms of an arrangement of low-level properties.

We can still do some justice to the intuition that one’s perception represents a peach by saying that a peach is indeed represented—not as part of the content of the perception, but as part of the content of the perceptual belief. When you interact with a peach, you see an orange, fuzzy,
and spherical object. You feel its softness and fuzziness. When biting into a peach, you perceive an arrangement of low-level properties like being bitter, being sweet, and being stringy. You have a background belief that soft, orange, fuzzy, bitter-tasting spheres are likely to be peaches. Based on your perception and your background belief, you infer the perceptual belief that the object is a peach.

In addition, we might even countenance the complex property of being peach flavored. The peach tastes a particular way, and we could say that when you bite into the peach and experience an arrangement of low-level properties like being bitter, being sweet, and being stringy, the peach instantiates the complex property of being peach flavored. But the important point is this. Even if you experience something as peach flavored, it does not follow that your perception represents the property of being a peach. After all, something can be peach flavored (even down to the stringiness), and still not actually be a peach. So, even if we countenance the complex property of being peach flavored, it does not follow that perception represents high-level kind properties like the property of being a peach. After all, a fake peach would be peach flavored.

Recall the lesson of Chapter Three. A recognitional disposition for a high-level kind does not give you the ability to perceptually represent that property, but it might enable you to perceive low-level properties arranged in a new way. When looking at a wren, for instance, you do not perceive the property of being a wren (even if you have a disposition to recognize wrens). But your recognitional disposition might guide your attention, such that you perceive different colors and shapes than you would otherwise.

We can now incorporate flavor perception into the same type of model. On my account, we do not perceive properties like being a peach. We perceive an arrangement of low-level properties like being bitter, being sweet and being stringy. Conceived of in this way, flavor per-
ception is no different from other cases of multimodal perception—which I will discuss in the next section when I introduce the ventriloquist effect, the McGurk effect, and the motion-bounce illusion. As I mentioned earlier, such cases represent a special class of multimodal experiences, since they are crossmodal experiences—experiences where the impact of one sense modality on another changes the experience in the latter modality. My claim is that these cases are consistent with the type of model I have been proposing. In each of the crossmodal cases, crossmodal influence does not create a new type of property. Rather, it modulates existent low-level properties. The low-level property structure of such cases can help us to make sense of how they work.

4. Perceptual Content and Crossmodal Perception

4.1 Three Crossmodal Cases

4.1.1 The Ventriloquist Effect

In the *ventriloquist effect*, you hear a sound, and you see an apparent source of that sound. You then hear the sound coming from the apparent source that you see, although it is actually coming from elsewhere. The effect is named after the familiar case where you hear a ventriloquist’s voice, you see the ventriloquist dummy’s mouth moving, and you hear the sound coming from the mouth of the dummy, even though it is actually coming from the mouth of the ventriloquist.

The ventriloquist effect also occurs outside of ventriloquism. In a typical movie theater, the sound comes from speakers on the side of the theater. Yet, when you see the image of someone speaking, you hear the sound coming from the screen and not the side (Howard and Templeton, 1966, p. 361). This is an instance of the ventriloquist effect that occurs without an actual ventriloquist. In fact, the ventriloquist effect need not involve speech at all (see O’Callaghan,
2008, p. 323). While sometimes you may see mouths moving on the movie screen, other times you do not see mouths at all, as when you see a car explosion onscreen. Even in that case, the effect will still apply.

4.1.2 The McGurk Effect

The McGurk effect occurs when a subject views a video of a person saying one set of syllables, while the audio has been changed to a second set of syllables. The subject experiences yet a third set of syllables, distinct from the first two sets. In the founding study on the McGurk effect, the visual portion of the video showed a young woman mouthing the syllables ga-ga. The audio portion was over-dubbed so that the audio repeated the syllables ba-ba. Yet, ninety-eight percent of adult subjects experienced a third set of repeated syllables: da-da (McGurk and MacDonald, 1976, p. 747). Similarly, for eighty-one percent of adult subjects, when the audio played pa-pa, but the visual showed someone mouthing ka-ka, the subjects heard ta-ta.

4.1.3 The Motion-Bounce Illusion

In the motion-bounce illusion, subjects look at a computer display of two moving disks. The two disks move steadily towards each other until they meet. If the subject hears a sound at or around the point of collision, the disks typically appear to collide and bounce off one another. If the subject does not hear a sound, the disks appear to cross through one another. For example, if disk one starts in the top-left corner, and overlaps with disk two in the middle, it then seems to continue on to the lower-right corner. Likewise, if disk two starts in the top-right corner, and overlaps with disk one in the middle, it then continues on to the lower-left corner. If the subject hears a sound when the disks meet, however, the disks typically switch their trajectories. Disk
one starts in the top-left corner, collides with disk two in the middle, and then switches its trajectory, continuing on to the lower-left corner. Disk two starts in the top-right corner, coincides with disk one in the middle, switches its trajectory, and continues on to the lower-right corner (Sekuler et al., 1997). In other words, the disks appear to bounce off of one another.

4.2 Crossmodal Influence Modulates Low-Level Properties

Consider some structural similarities between the wren case, on the one hand, and the ventriloquist effect, the McGurk effect, and the motion-bounce illusion on the other hand. Both kinds of cases involve integration. The wren case involves the integration of perception and cognition. The crossmodal cases involve the integration of the senses (multisensory integration). In the wren case, a recognitional disposition influences a perception. In the crossmodal cases, the perception in one sense modality influences the perception in another sense modality. In both kinds of cases, I want to argue, no new sort of property is created by the integration. Both kinds of cases involve only the modulation of low-level properties—a fact that is important for understanding how crossmodal cases work.

In the ventriloquist effect, the sense of vision influences audition. If you are blindfolded as you enter a movie theater, you will hear the sounds of the movie as coming from the sides of the theater. When you are finally unblindfolded, vision influences your audition. Before, you heard the sounds as coming from the sides of the theater. Afterwards, you hear the sounds as coming from the screen. But no new kind of property is created by that experience. You could already detect auditory location. The crossmodal influence just serves to modulate the auditory location that you experience, as you perceive a new location for the sound. In other words,
crossmodal influence does not create a new kind of property, but it does modulate a kind of property that you could already perceive.

In the McGurk effect, vision influences audition. If you were to cover your ears and then uncover them while watching the video, your visual experience would not change. On the other hand, if you were to cover your eyes and then uncover them, you would hear different syllables in the two experiences. Your auditory perception changes after you see the person’s lips move. You see a person saying one set of syllables, while the audio has been changed to a second set of syllables, but you experience yet a third set of syllables. But again, no new kind of property is created. You can already hear syllables and see someone saying them. The crossmodal influence just serves to modulate the syllables that you hear (you hear different syllables before and after you uncover your eyes). So, once again, the crossmodal influence does not create a new kind of property, but it does modulate a kind of property that you could already perceive.

In the motion-bounce illusion, audition influences vision. At first, you see the disks passing through one another. Your visual perception of the disk trajectories changes only after the introduction of a sound, and then you see them as colliding with one another. But once again, when you see two disks bounce off of each other, no new kind of property is created. You could already visually perceive the motion of the disks. The crossmodal influence just serves to modulate the particular motion that you see.

In the wren case, acquiring a recognitional disposition does not enable you to perceive a new kind of property. But it might guide your attention so that you detect different low-level properties. When looking at a wren, you do not perceive the property of being a wren, but your recognitional disposition for wrens might guide your attention so that you notice different colors, shapes, and size properties. Similarly, in the crossmodal cases, crossmodal influence does not
enable you to perceive a new kind of property. But it does modulate some of the low-level properties that you could already perceive. You detect different low-level properties than you would without the influence.

### 4.3 Crossmodal Influence and Data Reconciliation

My claim is that crossmodal influence modulates low-level properties. But we can say more than this. The modulation of these properties is not arbitrary. Rather, crossmodal influence modulates them for a particular purpose, namely, to reconcile them with the properties in another modality (Matthen et al., 2011).

Suppose that for the three cases mentioned above, you did not experience a crossmodal effect. For instance, suppose that you sit down in a movie theater and see people talking on the screen, and cars exploding, but you hear all of the sounds coming from the sides of the movie theater. In that case, the data would require some sort of reconciliation. It is a very unusual experience to see lips moving and hear a sound consistent with those movements, but coming from a different direction. That data requires reconciliation. One way to reconcile the data would be to realize the way that a sound system is set up in a movie theater. Instead of this, your sensory system does the reconciling. You hear the sounds as coming from the screen (although they are coming from the side of the theater). This reconciles the auditory and visual inputs.

To take another example, suppose that in the motion-bounce scenario, you simply heard a random sound when the disks intersected, and experienced the disks as crossing through each other rather than bouncing. Once again, that data would require reconciliation. Why was there a random sound? As with the ventriloquist effect, in the motion-bounce illusion, your sensory sys-
tem reconciles the data. You see the disks as colliding with one another. The sound is heard as the sound of a collision. This makes sense of the random sound.

Suppose that in the McGurk scenario, you saw someone mouthing the syllables *ga-ga*, but heard someone repeating the syllables *ba-ba*. That data would require reconciliation. Typically you hear the syllables that you see a person mouthing, not some other syllables. Seeing someone mouth *ga-ga* while hearing *ba-ba* requires reconciliation. In the McGurk effect, your sensory system performs that task. Importantly, however, even though you are looking at someone mouthing the syllables *ga-ga*, your sensory system does not reconcile that by having you hear the syllables *ga-ga*. Instead, you hear the syllables *da-da*. This might seem to suggest that the auditory and visual inputs are left unreconciled. But McGurk and MacDonald suggest an alternative hypothesis:

> [I]n a ba-voice/ga-lips presentation, there is visual information for [ga] and [da] and auditory information with features common to [da] and [ba]. By responding to the common information in both modalities, a subject would arrive at the unifying percept [da] (1976, p. 747).

When you hear *da-da*, McGurk and MacDonald suggest, this is not a failure to reconcile the ba-voice and the ga-lips. Rather, the ba-voice actually contains some informational features of the sound *da-da*, while the ga-lips contain some informational features of seeing someone say *da-da*. When you hear *da-da*, McGurk and MacDonald claim, you are reconciling auditory and visual data through their common informational features (I explain this further in the next section).

**4.4 The Significance of Low-level Properties for Crossmodal Cases**

So far, I have been arguing that crossmodal influence modulates low-level properties in order to reconcile those properties with the properties in another modality. I now want to suggest
that there is a reason why crossmodal influence acts specifically on low-level properties. My proposal is that low-level properties enable data reconciliation.

As I mentioned at the beginning of the chapter, one characteristic of low-level properties is that they admit of similarity orderings. For a particular class of low-level properties (the class of colors, or shapes, or sizes, or locations, or orientations, for instance), we can say of a substantial portion of its members $x, y,$ and $z$ that $x$ is more similar to $y$ than it is to $z$. For a low-level property like color, for instance, green is more similar to blue than it is to red. (A more precise similarity ordering of color would have to take into account the three dimensions of color: brightness, saturation, and hue). To take another example, for size, a pea is more similar to an acorn than it is to the Eiffel Tower. We could give the same kind of account for shapes, location, orientation, and illumination, to name a few more low-level properties.

But now consider crossmodal cases as cases that aim at data reconciliation. In the McGurk effect, as your sensory system reconciles a sound with a visual image, it modulates the sound. In most everyday situations (outside of the experimental context), when you see someone mouthing the syllables $ga-ga$, there would be a correlating sound: $ga-ga$. In the experimental context, when you see someone mouthing the syllables $ga-ga$, the actual sound is $ba-ba$, but you hear something more similar to $ga-ga$, namely, $da-da$ (I will motivate the claim that these two sounds are more similar shortly). My suggestion is that data reconciliation works in the McGurk effect because the phonemes involved are low-level properties, properties that readily admit of a similarity ordering.

We know from our own experience that some words sound more similar to each other than others. One piece of evidence for this is that we confuse some words with each other when we hear them, but do not confuse other words with each other. If we break down spoken words
into their units, we can tell the same sort of story about these units, or phonemes. A phoneme $x$ can sound more similar to a phoneme $y$ than to another phoneme $z$. Todd M. Bailey and Ulrike Hahn have charted the similarity relations between phonemes in great detail (Bailey and Hahn, 2005; Hahn and Bailey, 2005). For instance, they argue that “/t/ is more similar to /d/ than to /l/” (where “/t/” represents a phoneme of t) (Bailey and Hahn, 2005, p. 339). According to them, this is why “tuck” sounds more similar to “duck” than it does to “luck.” Phoneme similarity helps to explain why we sometimes confuse certain words when we hear them, but not others.

We need not commit to a single unified phoneme space, where each phoneme can be ordered in relation to every other phoneme (just as every color can be ordered in relation to every other color). Still, we can say that there are phoneme spaces. To use Bailey and Hahn’s example, /t/ is more similar to /d/ than to /l/. My claim is that the McGurk effect exploits such spaces. Da-da sounds more similar to ga-ga than ba-ba does. This account dovetails with McGurk and MacDonald’s account of the McGurk effect. They speculate that “the acoustic waveform for [ba] contains features in common with that for [da] but not with [ga]…” (1976, p. 747). On their view, the similar acoustic waveform is what accounts for the similar sounds of ba-ba and da-da.

In the McGurk effect, the audio plays one sound (e.g., ba-ba), and the visual shows someone mouthing a second sound (e.g., ga-ga), but you hear yet a third sound (e.g., da-da). My suggestion is that your sensory system reconciles the aberrant sound (ba-ba) by making it more similar to the sound that typically would correspond with the image that you see (ga-ga). Da-da sounds more similar to ga-ga than ba-ba does.

According to McGurk and MacDonald, the ga-lips also contribute to data reconciliation in the McGurk effect (1976, p. 747). As I mentioned, they claim that the sound ba-ba shares some informational features in common with the sound da-da (they put this point in terms of a
similar acoustic waveform). But they also claim that seeing someone say *ga-ga* shares some informational features with seeing someone say *da-da* (they cite the fact that lip movements for *ga-ga* are frequently misread as lip movements for *da-da*). According to their explanation, hearing *da-da* provides a unique solution to the conflicting visual and auditory data. It reconciles the auditory and visual data through their common informational features.

In the ventriloquist effect, as your sensory system reconciles an auditory location with what you see, it modulates the auditory location. Typically, when you see lips moving and hear a sound consistent with the lip movements, the location of that sound is the moving lips. In the ventriloquist effect, when you see the lip movements, the actual auditory location is from elsewhere, but you experience the location as from the moving lips. My suggestion, again, is that the ventriloquist effect works because auditory location is a low-level property that admits of a similarity ordering. In the ventriloquist effect, your sensory system reconciles an aberrant auditory location (e.g., the location of the sides of a movie theater) by making it more similar to the auditory location that typically would correspond with the image that you see (e.g., the movie screen).

In the motion-bounce illusion, as your sensory systems reconcile a visual image with what you hear, it modulates the visual image. Typically, when you see two objects coincide and hear a sound when they do, you see the motion we call “bouncing.” But in the motion-bounce illusion, when you see the two objects coincide, you hear a random sound, but you experience the “bouncing” visual motion. Once again, my suggestion is that the motion-bounce illusion works because visual motion is a low-level property that can admit of a similarity ordering. In the motion-bounce illusion, your sensory system reconciles an aberrant sound by making the im-
age that you see more similar to the visual motion that would typically correspond with that sound (a “bouncing” motion).

The argument in this chapter is two-fold. First, we have good reason to think that perception represents only low-level properties like colors, shapes, size, orientation, illumination, textures, bitterness, sweetness, and bare sounds. Second, holding such a view can help us make some sense of multimodal experiences. Crossmodal cases are multimodal experiences that involve low-level properties, properties that admit of similarity orderings. They are also cases of data reconciliation (Matthen et al., 2011). What I am suggesting is that crossmodal cases aim at data reconciliation by modulating low-level properties, and that the similarity orderings typical of low-level properties make this modulation work. What you hear in the McGurk effect, for instance, is more similar to the auditory correlate of what you see. Since what you hear is a low-level property, it is the sort of thing that can be made more similar to what you see. It is the sort of thing that can be reconciled in that way.

5. Conclusion

In Chapters Two and Three, I argued that for every property that you can visually perceive, you possess a concept of that property. That is, you have the ability to classify or categorize that property as the type of property that it is. It’s just that classification is done by your sensory system and occurs prior to visual appearance.

I cited the case of blindsight as evidence for this. In blindsight, subjects are blind in part of their visual field. Yet they are able to use information received through that blind portion, specifically information about colors, shapes, size, and orientation. My claim was that blindsight was indicative of visual processing. Once you perceive color, shape, size, or orientation, that in-
formation has already been classified. In fact, I went on to argue that for every property you can visually perceive, you have the ability to categorize it. It’s just that this is done prior to visual appearance.

This same type of argument can apply to other sense modalities. Blindsight involves vision, but (as I mentioned in Chapter Two) something like blindsight occurs in touch, smell, and audition. In “blind touch,” for instance, a subject with a lesion was unable to feel her right arm. Yet, when touched there while under blindfold, she was able to point to where she was touched (Paillard et al., 1983). In “blind smell,” subjects were told that occasionally there would be a substance in the air stream. The substance was in fact detectable only by smell. Although the subjects claimed that they could not detect any odor, when forced to guess whether the substance was present, they guessed at better than chance (Sobel et al., 1999). In “deaf hearing,” a subject with lesions was unable to hear auditory stimuli. Yet she was able to move her head in the direction of the stimuli at a rate better than chance (Garde and Cowey, 2000).

To my knowledge, no one has discovered an instance of “blind taste.” It might seem at first glance that if blind taste does not exist, this would present a difficulty for my view. My claim is that for every property you can perceive, you have a concept of that property. That is, you have the ability to categorize that property as the type of property that it is. What is the justification for this? In the case of vision, blindsight shows that our sensory systems do in fact perform this categorization. Blindsight shows that for every color or shape we can perceive, we have the ability to classify it as that color or shape. It’s just that this is done prior to consciousness. But what is the justification for holding that for every taste property you can perceive you have a concept of that property? If there is no analogue to blindsight for taste properties, then it
might seem that we have no analogue reason to think that our sensory systems categorize taste properties prior to conscious appearance.

How much weight should we give to the fact that no documented case of blind taste exists? For vision, blindsight brought to our attention the fact that sensory classification occurs prior to conscious appearance. But, of course, even without the discovery of blindsight, sensory classification would still occur. Just because we lack behavioral evidence that gustatory perception involves classification prior to consciousness, it does not follow that such classification is non-existent.

Some might take the fact that no one has documented a case of blind taste as evidence that it does not exist. But consider an alternative explanation for why no one has discovered an instance of it. It could be that psychologists have not studied the subject, or, if they have studied the subject, it could be that they have not studied her in a way that would reveal blind taste. This explanation is especially plausible because, although the seminal blindsight studies were conducted in the 1970’s, some analogues for other modalities have not been discovered until much more recently. For instance, the seminal study of blind smell was published in 1999 (Sobel et al.). The founding study for deaf hearing was published in 2000 (Garde and Cowey). In fact, the term “deaf hearing” was coined by Alan Cowey and Petra Stoerig in 1991 to denote a hypothetical analogue to blindsight (Cowey and Stoerig). An actual instance of deaf hearing was not discovered until a decade later.

One reason why such discoveries are difficult is that blindsight involves brain lesions. To discover an actual instance of deaf hearing, a person needed to have the right brain lesions, and that person needed to submit to studies, and the psychologists needed to perform studies that would indicate deaf hearing. All of this would need to happen for a case of blind taste. So, even
if no one has documented a case of blind taste, we have good reason to deny the inference that blind taste does not exist at all. After all, blind taste could be like deaf hearing. It could be something that is first hypothesized, and then discovered.
Bibliography


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