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Make Perception Phenomenology Again

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Make Perception Phenomenology Again

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To the haters and losers.

Abstract

Make Perception Phenomenology Again

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Abstract: This project concerns the representational contents of experience generally and visual experience specifically. I justify and then employ a phenomenology-first methodology, where the most important test of a claim about perceptual content is whether it matches perceptual phenomenology. In the first chapter, I argue that the contents and phenomenology of an experience are identical, not merely correlated or explanatorily linked. I use this conclusion in the second chapter to argue that the content of visual experience is a property complex, which is itself structured from simpler properties and relations. Much of the defense of the property complex view consists in demonstrating how an experience with non-propositional content can play a robust cognitive and epistemic role in our mental lives. Despite compelling arguments to the contrary, I argue that we do not need to attribute propositional contents to visual experiences to explain how they reliably cause and justify true beliefs. The third chapter enlists George Berkeley as an ally. Berkeley appeals to a notion of association between non-propositional mental states in his writings on vision. I argue that this notion, properly understood, can be used today to explain away intuitions that lead some to posit higher-order visual contents.

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Chapter 1: From Representationalism to Identity Representationalism

Despite facing extended criticism on a number of fronts for several decades, representationalism has remained a leading approach to understanding phenomenal consciousness. In this paper, I want to discuss a question the representationalist faces that has thus far been largely overlooked.

Some quick and dirty definitions. By "representation," I mean any object, state or event that is about something; canonical examples include beliefs, desires, intentions, paintings and poems. I am interested in mental representation in this paper; this category includes the first three members of the list above and excludes the last two. By "content", I mean what is represented by a representation. Obviously the nature of content is a fraught issue, but presumably the content of my belief that snow is white has something to do with snow and the property of being white. By "phenomenal character" or "phenomenology", two terms I use equivalently, I mean roughly what it is like to be a particular creature or have a particular mental state. I think our phenomenal concepts (although not necessarily their referents) defy further attempts at explication, so I won't make any such attempts.

Here is where we are headed. Representationalists agree that phenomenal character supervenes on the content of experiences, but are often unclear on precisely what relation holds between phenomenal character and content. I will argue that the relation must be identity, simply because all other views compatible with the supervenience claim face insuperable difficulties. A lot of context is necessary to explain why this is the case; as such, I will jump right in.

1 Representationalism Introduced

Let's begin by defining Representationalism in the following way:

Representationalism: The phenomenal character of an experience metaphysically supervenes on its content.¹

Equivalently, the claim is that no two metaphysically possible experiences with the same content differ in their phenomenal character.

Different philosophers have characterized Representationalism—sometimes called "Representationalism", other times called "Intentionalism"—in a number of different and not obviously equivalent ways. I don't claim that there is any one true statement of the view, but formulating Representationalism as I do above allows us to draw a line between two different theoretical orientations toward phenomenal consciousness. Anti-Representationalists may think there are correlations between phenomenal character and content in normal humans, but these correlations do not hold in other possible scenarios and perhaps fail in some actual scenarios. As such, an account of the contents of experience will form no part of a philosophical account of phenomenal character. Representationalists, by contrast, think a theory of mental content is a major step toward an account of phenomenal character, because phenomenal character bears an intimate connection to content. Once we have determined the contents of a given experience, this should explain why its phenomenal character is the way it is.²³

¹ Going forward, I adopt the slightly clumsy convention of capitalizing "Representationalism" in order to indicate that I am specifically talking about this formulation of the view, rather than any related theses. I will do the same with other views that receive explicit definitions in the text.

² Speaks (2009, p.555) makes a similar point.

³ Of course, Representationalism as formulated above does not entail the explanatory claim referenced in this paragraph. As we will discuss in section 4, it is very difficult in practice to accept Representationalism while rejecting this explanatory claim.

Representationalism is (1) interesting and (2) plausible. I'll briefly explain why, starting with (2).

A simple argument for Representationalism starts with the trivial observation that the contents and phenomenal character of our experiences are, in many instances, closely correlated.⁴ Phenomenally reddish experiences, had by me, reliably represent a common property, redness, and the same goes for other sensible properties, such as other colors or shapes. (You can only understand the phrase "reddish experiences" because the phenomenology in question correlates so reliably with a particular content.) These correlations are too strong to be a mere coincidence, and the simplest explanation is that they are metaphysically necessary, as Representationalism states.

Another argument appeals to the transparency of experience.⁵ According to transparency, we do not have introspective access to our experiences as such; all we can do in introspection is attend more closely to the state of our environment.⁶ This suggests that phenomenal character is out there in the world, not in the mind.⁷

Why is Representationalism interesting? One reason is that it can help account for experience in physicalistic terms. If phenomenology supervenes on representational content, and representation can be understood reductively, then physicalism, understood as the thesis that the mental supervenes on the physical, is vindicated. To the extent that we should be

⁴ This will be denied by those who hold that experiences have no content, such as Travis (2004).

⁵ Harman (1990); Dretske (1995).

⁶ This way of explaining transparency requires amendment when it comes to interoceptive experiences, which represent the condition of our bodies rather than the external environment. With a pain in the leg, for instance, the subject can introspect the state of her leg. This is still compatible with transparency; the subject is still not aware of her experience, but rather something extra-mental.

⁷ A few other arguments for Representationalism are helpfully summarized in Tye (2009).

antecedently committed to physicalism, Representationalism's naturalistic credentials are not merely interesting, but evidence in its favor.⁸

Additionally, Representationalism provides us with a methodology for studying types of experiences that defy easy theorizing. Consider emotions, which have a distinctive phenomenal character. A Representationalist knows her account of emotional experiences must meet the following constraint: emotions have content, and the content explains why emotions have *that* phenomenal character. This constraint helps guide theorizing and makes the study of emotions more tractable.⁹

Representationalism comes in a number of varieties. According to intramodal representationalism, phenomenal character supervenes on the content *and* modality of an experience, whereas on intermodal representationalism, modality does not itself affect phenomenal character. (Since the above formulation makes no reference to sensory modality, it is a version of intermodal representationalism.) Representationalists have differing views on the nature of contents themselves—Russellian, Fregean, or something else; conceptual or nonconceptual; rich or thin. And while Representationalists have often defended reductive accounts of experience, it is also compatible with primitivist and antiphysicalist views.

I myself am a Representationalist: I find the arguments summarized above convincing. However, as I am not here primarily concerned with the truth of Representationalism, I will not defend it any further (except very briefly in section 7), nor will I attempt to resolve the disputes

⁸ Dretske (1995, prologue) is clear that vindicating physicalism is a key motivation behind his defense of Representationalism.

⁹ Tye (2008) and Mendelovici (2013) give accounts of emotional experiences that can be characterized as following roughly this methodology.

from the previous paragraph. Having introduced the view, we can turn to our main task: determining more precisely how phenomenal character and content are related.

2 Problems With Identity Representationalism

Representationalism is a supervenience thesis, but it is natural to ask whether our evidence supports a stronger view. If phenomenal character supervenes on an experience's content, why not say it is simply identical to the experience's content? At the very least, Occam's Razor speaks in favor of the identity claim.

Broadly speaking, there are two reasons for a Representationalist to reject this view. The first is that there are theories of content on which the identity claim is intuitively implausible. Suppose we think that contents are functions from possible worlds to truth values.¹⁰ This has its merits as a theory of content, but surely the phenomenal character of my visual experience is not such a function. Phenomenal character, by contrast, seems to consist of a collection of properties and relations, perhaps under modes of presentation. The supervenience thesis may still hold—perhaps the phenomenal character is constituted by properties that play some important role in determining the function in question—but the identity thesis seems far less plausible.

The second reason is that there are things which can arguably enter into the contents of experience without changing the phenomenal character. There are a number of plausible examples of this, but the cleanest one is singular content.

Borrowing an example from Speaks (2009, p.560), suppose I visit Montreal, having never seen (or, let us suppose, even heard of) the Jacques Cartier bridge. When I first see the bridge,

¹⁰ Stalnaker (1984).

my visual experience puts me in a position to have singular thoughts about that very bridge. It is hard to explain how my experience could play this cognitive role if it did not have singular content. So the Jacques Cartier bridge, not merely its properties, must enter the contents of my experience.

Now suppose I take a nap, during which time some pranksters destroy the Jacques Cartier bridge and replace it with a qualitatively identical bridge. When I wake up and look at the new bridge, my visual experience has different singular content than before my nap. But intuitively, the phenomenal character of my experience now is exactly the same.¹¹ So the singular contents of my experience can change without a corresponding phenomenal change. Therefore, the content of my experience is not identical to its phenomenal character.¹²

Similar arguments can be made, with varying degrees of plausibility, concerning other perceptual contents. Natural kinds may enter the contents of experiences without changing their phenomenal character.¹³ Perhaps experiences sometimes have moral content that makes no phenomenal difference.¹⁴ Similar things might be said about causation, determinable colors, and more.

While these objections are not decisive, they favor the view that experiences have content that goes beyond what is phenomenally available to the subject, and thus content and

¹¹ We can assume that my spatial location relative to the bridge, illumination conditions, etc. have not changed.

¹² This argument can be run without assuming that contents literally include particulars like the Jacques Cartier bridge. Even on unstructured views of content, the contents of the two experiences will have different accuracy conditions: the first will be accurate iff the Jacques Cartier bridge is so-and-so, while the second will be accurate iff the new bridge is so-and-so. Thanks to Jon Litland for suggesting this extension of the argument.

¹³ As suggested in Speaks (2009, fn.32).

¹⁴ McGrath (2004). McGrath is more concerned to argue that moral beliefs are non-inferentially formed on the basis of perception than that moral properties or facts enter the contents of experience. Nevertheless, it is natural to fill out her view by attributing moral content to experiences.

phenomenology are distinct. In what follows, we will see why this claim causes problems for the Representationalist.

3 The Metaphysics of Representationalism

We now arrive at our main question. According to Representationalism, what, precisely, is the relation that holds between an experience's content and its phenomenal character?

To see the relevance of the question, consider what motivated Representationalism in the first place. Representationalists hold that we can explain phenomenal character in terms of representational content: the reason my anger feels the way it does is because of the properties it attributes to the object of my anger. If this is true, the Representationalist presumably owes us a credible account of how the feeling and the representation are connected, such that we can see why *that* sort of representation gives rise to *that* feeling.

The Representationalist has three mutually exclusive and (more or less¹⁵) exhaustive options:

Mere Supervenience Representationalism (MSR): The phenomenal character of an experience metaphysically supervenes on its content, and no other interesting or explanatory relation holds between phenomenal character and content.

Construction Representationalism (CR): The phenomenal character of an experience is metaphysically built from its content.

¹⁵ One view not discussed in the main text is that phenomenal character is metaphysically prior to, yet distinct from, the content of an experience. For instance, Chalmers (2006) argues that experiences have Edenic, Fregean, and ordinary Russellian content, where the latter two are grounded in both the former and facts concerning the intentions and environment of the subject. On some versions of this type of view, phenomenal character and content might each supervene on the other, despite the metaphysical priority of phenomenal character. Since this kind of view has never, to my knowledge, been defended in print, I will ignore it in the main text.

Identity Representationalism (IR): The phenomenal character of an experience is identical to its content.

We discussed some objections to Identity Representationalism in section 2 above. Mere Supervenience Representationalists deny that there is any further account to be given of the relationship between phenomenal character and content.

I use the terms "construction" and "building" following Bennett's (2011) use of the term to characterize a number of relations, such as composition, realization, and emergence, that are asymmetric and irreflexive, and where one relatum is more fundamental than the other.¹⁶ Saying that phenomenal character is built from content is neutral as to the precise nature of the building relation between them. As such, a Construction Representationalist will fill in her view with a more detailed account of the building relation in question. Some views along these lines are discussed in section 5.

Different Representationalists have expressed explicit or implicit support for different versions of the view. Take Dretske (1995, p.xiii), who says that "[a]ll mental facts are representational facts". This sounds like IR, but could be either CR or MSR if supervening facts are taken to be of the same kind as facts on which they subvene; phenomenal facts would then be representational facts as long as they supervene on facts about representational content. Byrne (2001, p.204) is clear that he is interested in the supervenience thesis rather than litigating between IR, CR and MSR. Speaks (2009) rejects IR for roughly the reasons laid out in

¹⁶ Some philosophers would use "grounding" instead of "building" in this capacity. However, the term "grounding" has become associated with two more specific proposals from Fine (2012) and Schaffer (2009, 2017), respectively, concerning how to understand metaphysical dependence and metaphysical disputes more generally. Since "construction" and "building" do not have these connotations, I use them here for the more neutral and less controversial notion.

section 2 and seems to accept some version of CR. Mendelovici (2018, pp.94-95) explicitly accepts IR.

While we can tentatively place some Representationalists in one of the three camps, very few have addressed this question at any length. Since the point of Representationalism is to assert a tight connection between phenomenal character and content, it seems worthwhile to get clearer on precisely what that relation is.

In the next two sections, I will examine a number of accounts a Representationalist might offer of this connection. To foreshadow: this proves to be a very difficult task.

4 Mere Supervenience Representationalism

The Mere Supervenience Representationalist holds that phenomenal character supervenes on the contents of experience. However, she declines to offer any further account of the relation between content and phenomenal character, on the grounds that there is simply nothing metaphysically interesting to say. According to her, an experience that represents a red juggling ball will necessarily have a reddish and sphereish phenomenal character,¹⁷ but this cannot be explained by any tighter connection between redness and sphericity, on the one hand, and reddishness and sphereishness on the other. To the defender of MSR, all there is to be said about reddishness is that it is the kind of phenomenal character that experiences have iff they represent redness.

¹⁷ I use the suffix "-ish" to indicate that I am referring to a distinctive kind of phenomenal character, rather than the corresponding property. This leaves open the question of whether the relevant kind of phenomenal character is identical to the property it corresponds to.

A defender of MSR could say that reddish phenomenal character is identical to the property of redness. However, on her view, this cannot be in virtue of a general identity between content and phenomenal character, since content and phenomenal character sometimes come apart. Instead, it is just a brute modal fact that some properties that enter the content of an experience necessarily partly constitute its phenomenal character, even though content and phenomenal character are different in other ways.

MSR is a weird view. It is one thing to formulate Representationalism as a supervenience thesis. Since supervenience is itself neutral regarding the metaphysical status of the supervening entities and their precise relation to the subvening ones, it is a useful way of formulating controversial metaphysical theses. In the context of formulating physicalism, for example, this neutrality is a virtue.¹⁸ But in defending physicalism about the mind, philosophers typically make more specific claims about the nature of mental properties. A fully developed physicalist view should say whether mental properties are identical to, realized by, grounded in, or emergent from physical properties. Much the same can be said for Representationalism: a fully developed defense of the view should be more specific about the content-phenomenology connection.

Contemporary work in metaphysics has downplayed the importance and value of supervenience in inter-level metaphysics, tracing back to examples from Fine (1994). This led to a literature¹⁹ on the notion of ground, an explanatory, hyperintensional, necessitating relation between facts that can underwrite supervenience claims. While skeptics of ground have

¹⁸ See Stoljar (2010).

¹⁹ Fine (2001, 2012); Rosen (2010); and many others.

criticized it for lacking theoretical utility, they have typically done so by appealing to other hyperintensional building relations that can do the relevant theoretical work.²⁰

A Representationalist could hold that these trends in metaphysics are misguided and remain committed to MSR, but she would face a further problem. Consider a widely accepted supervenience claim, such as the claim that the properties of molecules supervene on the properties of atoms. One piece of evidence for this correlation is that there are strong correlations between the properties of molecules in a given region of space and the properties of the atoms in the same region. But a much stronger piece of evidence is that the parthood relation holds between atoms and molecules, and the properties of parts determine the properties of wholes.²¹ It is our understanding of the parthood relation, and our knowledge that it holds between atoms and molecules, that justifies us in the supervenience claim.

Now consider Representationalism, a far more controversial supervenience claim. The defender of MSR denies that any building relation holds between content and phenomenal character. This makes it much more difficult for her to provide evidence, to herself or others, that the supervenience claim really is true. She can point to correlations between content and phenomenology, but it is hard to see how such correlations alone could justify a universal generalization about all possible experiences. In fact, her denial of any deeper connection undercuts her justification for believing the supervenience claim, since we have so few examples of supervenience without an underlying building relation.

²⁰ Wilson (2014, p. 537) explicitly claims that we have many "small-g" grounding relations that go beyond merely modal relations in her argument for the superfluity of grounding. See also Koslicki (2015).

²¹ Priority monists, such as Schaffer (2010), claim instead that wholes are prior to their parts, and therefore the properties of wholes determine the properties of their parts. This merely underlines my main point in this section, as both monists and pluralists agree on the need to appeal to something more fine-grained than supervenience.

Mere Supervenience Representationalism has little to recommend it. We can now move on to a more plausible version of Representationalism, Construction Representationalism.

5 Construction Representationalism

The Construction Representationalist holds that phenomenal character is built from the contents of experience. We can then ask her: what is the building relation in question?

Different answers to this question lead to different versions of CR.

Before considering what this building relation might be, let us introduce a constraint on what versions of representation we will consider. The constraint is that Construction Representationalism should be metaphysically conservative, by which I mean that it should not introduce a *sui generis* building relation that holds only between phenomenal character and content, with no precedent in contemporary metaphysics. The reason to provisionally accept the constraint is that introducing such a relation would risk being *ad hoc*. We will revisit this assumption in section 6.

This section proceeds as follows. In 5.1, I consider the view that phenomenal character is part of the content of an experience, in a broad sense of "part". In 5.2, I consider the view that the phenomenal character of an experience is an abstraction from its contents. In 5.3, I consider the view that phenomenal character is one of many layers of an experience's content.

5.1 Parthood

Recall the example of the Jacques Cartier bridge and its qualitatively identical duplicate. When I open my eyes and see the new bridge, this difference in singular content does not make a phenomenal difference. However, the color and shape properties of the bridge that enter into the content of my experience do make a phenomenal difference; I seem to be phenomenally

aware of those very properties. So while some parts of the content don't affect my phenomenology, many parts of the content do.

This suggests the following view:

Parthood Construction Representationalism (PCR): The phenomenal character of an experience is a proper part of its content.

At first glance, PCR has a lot to recommend it. Unlike Mere Supervenience Representationalism, PCR explains why phenomenal character supervenes on content by appealing to a well-understood building relation. It is also independently plausible, at least at first glance, that phenomenal character of a given experience is a proper part of its content. And unlike Identity Representationalism, PCR can accommodate singular contents that are not phenomenally available.

Nevertheless, I will argue that PCR is false. The reason is that, regardless of one's view of the nature of content, there is a mismatch between the structure of phenomenal character and the structure of content, such that the part-whole relation does not hold between them.

This problem is easy to see if we assume a possible-worlds theory of content. As I said above, the phenomenal character of my experience doesn't seem to be a function from possible worlds to truth-values; it is even less plausible that it is a proper part of a function from possible worlds to truth-values. (I don't even know what that would be.) But the problem also arises if we take contents of experience to be Russellian or Fregean. In the rest of this section, I assume for simplicity that the contents of experience are Russellian propositions, while phenomenal character is built from the very properties that figure into the contents.

When specifying the phenomenal character of a given experience, it is not enough to list the phenomenally available properties. Suppose I see a red triangle--we'll call it O1--to the left of a green circle, O2. The phenomenal character of my experience is not given by the unordered list <red, triangular, left, green, circular>, as this list could just as easily describe an experience of a green triangle to the left of a red circle. What is required to capture the structure of phenomenology is a way of specifying which properties are phenomenally bound together.

We can do this by using the lambda calculus, a formal tool which works as follows. We begin with an expression with a number of open variables. In the case of my experience above, the expression would be as follows:

$\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Green}(y) \wedge \text{Circular}(y) \wedge \text{Left-of}(x,y)$

We can then use λ -operators to bind the variables x and y , creating the following term:

$\lambda x \lambda y (\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Green}(y) \wedge \text{Circular}(y) \wedge \text{Left-of}(x,y))$

The resulting expression is known as an abstraction term. We can take the abstraction term to refer to what some philosophers call a property complex,²² one that a pair of objects instantiate iff they satisfy the open formula inside the abstraction term.

Since visual experiences by hypothesis have singular content, the structure of their content will be very different from the structure of their phenomenal character. Maybe the content is a collection of atomic propositions: $\text{red}(o1)$, $\text{triangular}(o1)$, $\text{green}(o2)$, $\text{circular}(o2)$, $\text{to-the-left-of}(o1,o2)$. Or maybe it is a single conjunctive proposition: $\text{red}(o1) \ \& \ \text{triangular}(o1) \ \& \ \text{green}(o2) \ \& \ \text{circular}(o2) \ \& \ \text{to-the-left-of}(o1,o2)$. Regardless, the point is that the content of the experience will have discrete parts, rather than the irreducibly holistic structure of its

²² Such as, for example, Pautz (2007, p.258).

phenomenal character.

The problem is now clear: the property complex that we have identified with the phenomenal character is not a part of the content of the relevant experience. The availability of objects means that lambda abstraction is not required for stating the contents of the relevant experience, which means in turn that the property complex that we identified with the phenomenal character--the referent of the lambda term above--is not a part of the experience's Russellian content. So PCR is false.

One option for the defender of PCR is to appeal to an expanded notion of parthood. The property complex may not be a constituent of the Russellian proposition, but there is still a broader sense of "part" in which the property complex is a part of the proposition in question. I suspect that any plausible version of this strategy collapses into Abstraction Construction Representationalism, to be discussed in 5.2 below. If not, it likely runs afoul of the metaphysical conservatism constraint mentioned above.

The Construction Representationalist can point out that there are deep similarities between the property complex and the Russellian propositions that constitute the content. This is true, and a good reason not to give up on CR. The point for present purposes is that parthood is not the building relation that holds between phenomenal character and content. Even if many of the properties that partially constitute content also constitute phenomenal character, this is not the same as phenomenal character itself being a proper part of content. Moreover, while the content and phenomenal character may have parts in common, having parts in common is not itself a building relation. The Construction Representationalist should instead

search for a different building relation that does hold between the content of a given experience and its phenomenal character.

5.2 Abstraction

In "Towards a Theory of Part," Kit Fine introduces a building relation he calls "segmentation".²³ Consider an indivisible physical atom with finite volume. We can distinguish (at least cognitively) between the left and right halves of the atom, despite the fact that we have no way of referring to them aside from specifying their relation to the atom. Fine introduces segmentation in order to build the atom's left and right halves from the atom itself. Take a given spacetime region R and an indivisible atom x ; there is a unique segmentation x/R located at the intersection of R and the spacetime region occupied by x .

Fine compares segmentation to abstraction, another building relation we can characterize as decompositional. Take the proposition that Socrates is wise and Socrates is a philosopher. If we remove Socrates from this proposition, we are left with a property complex: $\lambda x(\text{Wise}(x) \wedge \text{Philosopher}(x))$. The property complex is an abstraction built from the proposition above. What segmentation and abstraction have in common is that they take integrated wholes and serve to detach previously invisible constituents of those wholes.

As noted above, it is natural to take the content of experience to be a Russellian proposition, while taking the content to be a property complex denoted by means of lambda

²³ Fine describes segmentation as an operation, not a relation; he also describes it as generative, not building. I take it these differences make no difference in the present context, as Fine is still talking about metaphysical dependence.

abstraction. Abstraction Construction Representationalism (ACR) claims that the property complex is an abstraction from its content.²⁴

I think ACR is the most plausible version of Construction Representationalism. The operation of abstraction in question is coherent, and applying it to Russellian content does in fact generate a property complex. Nevertheless, I think ACR should ultimately be rejected, because we should not take the logical operation of abstraction to refer to a genuine building relation.

The analogy with segmentation helps to draw out the problem. Supposing Fine's extended but indivisible atoms have proper parts, it is reasonable to suppose that these proper parts are built from the atoms by segmentation. But our ability to define a segmentation operation is not a sufficient reason to accept proper parts of indivisible atoms into our ontology. Such entities play no causal, nomic or explanatory role; I, personally, have no strong intuition that there are any such things. Our ability to think about segmentations is no argument, since we can think about plenty of things that don't exist. So the most parsimonious view is that there are no segmentations.

Similarly, the fact that we can define an abstraction operation between propositions and property complexes does not show that we have succeeded in referring to a building relation. The primary difference between the cases of abstraction and segmentation is that we have independent reason to believe that property complexes exist, while this is not the case for segmentations of indivisible atoms. But this still does not show that property complexes are metaphysically dependent on Russellian propositions for their existence. So it seems, *pace* Fine,

²⁴ Thanks to Jon Litland for suggesting this view.

that we lack compelling reasons to think either segmentation or abstraction is a genuine building relation.

This is not a knockdown argument against ACR. But the view has an ideological cost that it would be best not to pay.

5.3 Layered Content

Some philosophers hold that perceptual content has multiple layers. I will take Christopher Peacocke's (1992) treatment as a representative example.

Peacocke holds that visual experiences have three layers of content. The first layer, which he calls "scenario content", is a kind of nonconceptual content which can be glossed as a "way of filling out the space" around the perceiver.²⁵ Scenario content includes things like the locations of surfaces, other spatial properties such as orientation, and properties such as hue, saturation, and brightness, all within egocentric axes specified by reference to the orientation of the subject's body. The second layer consists of Russellian propositions, which are assessable for truth or falsity, and contains some properties that are not present in scenario content. The third layer consists of Fregean propositions.

Dividing the content of an experience into layers suggests a new form of Construction Representationalism, which we can call Layer Construction Representationalism (LCR). The idea is that the phenomenal character of an experience is identical to one layer of its content. If she follows Peacocke's account of perceptual content, the defender of LCR can identify the phenomenal character of an experience with its scenario content. Singular content, of both Russellian and Fregean varieties, is included in the other layers.

²⁵ Peacocke (1992, p.61).

Strictly speaking, LCR is a version of Parthood Construction Representationalism, given that layers of perceptual content are parts of the content of the relevant experience. However, given the distinctive claims about perceptual content that motivate this view, it is useful to separate it from PCR as described above.

The main problem with LCR is that the notion of layered perceptual content is unmotivated. There is no strong reason, independent of wanting to vindicate Construction Representationalism, to believe that perceptual content consists of multiple distinct layers. Peacocke does not himself provide an argument that perceptual content is layered. Without independent evidence to attribute layers of content to experiences, LCR is nothing but an ad-hoc way to jerry-rig contents so as vindicate Representationalism.

One possible reply, implicit in Peacocke's discussion of different layers of content, is that scenario, Russellian, and Fregean content all play important explanatory roles. We are therefore justified in attributing each kind of content to our mental states insofar as each layer is necessary for different explanatory purposes. But even if this is true, there is still no argument for attributing all three layers of content to a single perceptual state as opposed to attributing different layers of content to states at different stages of visual processing. Perhaps visual experiences have something like Peacocke's scenario content, while states later in visual processing have singular propositional content. This satisfies the purported need for multiple kinds of visual content without attributing each kind to a single perceptual state.²⁶

²⁶ In objecting to Peacocke's view, I am not making any strong assumptions about the nature of content or about what sort of evidence is sufficient for attributing content to any given mental state. I am simply pointing out that Peacocke has not given us sufficient evidence to conclude that multiple layers of content are needed. It is up to defenders of Peacocke-style layered views to explain why visual experiences specifically must have multiple kinds of content.

Suppose, however, that we really do have reasons for attributing multiple layers of content to our perceptual experiences. Then we would face another problem, the problem of redundant content. Scenario content and Russellian content will include many of the same properties—location, orientation, hue, etc.—so that the experience as a whole will represent these properties twice over. This massive duplication of content is a bizarre consequence of Peacocke's view.

The natural response to this redundancy worry is to drop talk of layers of content in favor of overlapping kinds of content. Peacocke might say that the content of an experience consists of scenarios, Russellian propositions, and Fregean propositions, but the different layers share constituents and cannot be segregated neatly; therefore, there is no need to duplicate content in different layers. Whether this view can be developed in a coherent fashion, it faces the same problem as Parthood Construction Representationalism. As we have given up the notion of discrete layers of content, there is no longer any part of the content, in any plausible sense of "part", to be identified with the experience's phenomenal character.

5.4 Is Construction Representationalism Explanatory?

We have examined three different building relations the Construction Representationalist might appeal to and found problems with all three options. There is also a more general problem CR faces. Even if some building relation holds between content and phenomenal character, CR is not explanatory in the way Representationalism promises to be.

Suppose that, *pace* the arguments from 5.2 above, the phenomenal character of an experience is an abstraction from its content. This would be a step toward a viable version of Construction Representationalism. However, the task of the defender of ACR (or any version of

Representationalism) is to explain why experiences have the phenomenal character they do given their content. And simply identifying a building relation that holds between them is not sufficient to accomplish this task.

Let me put the problem another way. The question put to the Representationalist is: Why is *that* the phenomenology of this experience? The defender of ACR answers: Because *this* is the content of the experience, and *that* (gesturing at the phenomenology) is an abstraction from the content. The worry is that this answer on behalf of ACR is unconvincing. The fact that a given property complex is built from the content of an experience seems insufficient to explain why the experience has that phenomenology in the first place.

Whether this is a problem turns on difficult issues concerning the nature of metaphysical explanation. Suppose we adopt Schaffer's (2017) view of explanation, on which explanans do not have any logically necessary or a priori connection with their explananda. The defender of CR can then rest satisfied with the explanation given above. In response to the charge that this explanation is unsatisfying, she can insist that all explanations are similarly unsatisfying in that the principles linking explanans and explananda do not follow from the natures of either relata. But this view seems to make metaphysical explanation far too easy, as it permits us to appeal to absurd linking principles. If I say that there is something rather than nothing because 97 is a prime number, the Schafferian has no resources to reject my explanation.

Suppose instead that we adopt a more demanding view on which it must be in the essence of the explanandum to be built from the explanans.²⁷ On this view, the explanation given by the defender of CR once again looks insufficient, as it does not seem to be in the

²⁷ Development of this view is found in Rosen (2010).

essence of phenomenal character to be a part of the content of an experience, or to bear any other building relation to the content. The defender of CR could simply deny this and claim that bearing some building relation to the content of an experience is part of the essence of phenomenal character. But this claim lacks independent plausibility. By comparison, it is intuitively much more plausible that molecules essentially have atoms as constituent parts.

Let's sum up the conclusions of this section. Construction Representationalists have a surprisingly difficult time identifying the building relation that holds between content and phenomenology. But even if they can specify this relation, that would not on its own suffice to explain why experiences have the phenomenology they do, barring some controversial assumptions about the nature of explanation.

6 The Anti-Representationalist's Revenge

At the beginning of section 5, I said the Construction Representationalist should not defend her view by appealing to a novel building relation, because this would risk being ad hoc. Given the failures of the versions of CR discussed in section 5, the defender of CR might want to reject this metaphysical conservatism. She can introduce a novel building relation—call it B(CR)—by its theoretical role. B(CR) is the two-place relation that (1) holds between content of a given experience and its phenomenal character, (2) is asymmetric, (3) holds between relations of differing relative fundamentality, and (4) underwrites claims of metaphysical explanation.²⁸ Phenomenology supervenes on content because the building relation B(CR) holds between them.

²⁸ The specific conditions placed on B(CR) are not important; what is important is the method of introducing the relation by its theoretical role.

This version of CR—call it Spooky Construction Representationalism (SCR)—is both consistent and epistemically possible. The problem is that the Representationalist is not justified in believing it. I mentioned a similar problem briefly in Section 4's discussion of MSR, but since SCR is likely to be more attractive to Representationalists than MSR, I will expand on the point in more detail here.

Representationalists claim that when subjects are conscious, what they are phenomenally aware of is represented by their experience. Much of the literature on Representationalism concerns various putative counterexamples where we can distinguish between phenomenology and content. Some putative counterexamples concern experiences that have phenomenology which seems to defy Representationalist analysis;²⁹ some concern phenomenal variation between actual subjects in normal conditions with no apparent representational difference;³⁰ and some concern thought experiments in which subjects are phenomenally inverted but representationally typical.³¹ While many of these cases are compelling, Representationalists have responded with accounts of the relevant cases that do not violate Representationalism.

Both Representationalists and Anti-Representationalists claim to have gotten the better of these exchanges. But as I see it, this literature, consisting of various putative counterexamples to Representationalism and Representationalist replies, is inconclusive. Cases like Block's Inverted Earth case and experiences like moods admit of multiple interpretations, some of

²⁹ Moods are one example; see Kind (2013). Casser (2020) argues that pain does not function to inform organisms about bodily damage, and that therefore it cannot be accommodated by the Representationalist.

³⁰ See Block (1999) for putative examples of this kind involving phenomenal variation between various human populations. Peacocke's (1983) example (also discussed in Millar (2010)) of two trees of equal size at different distances is an intrasubjective case of this type.

³¹ These famously include the inverted spectrum and inverted Earth cases, as discussed in Shoemaker (1982) and Block (1990).

which are Representationalism-friendly, and some of which are not. The relevant point is that the appeal to B(CR) is not forced on us by our evidence, since there are plausible interpretations of the relevant cases--Anti-Representationalist interpretations--that do not require this appeal. And in the absence of a strong reason to prefer Representationalism, we should reject B(CR) on grounds of metaphysical profligacy. Anti-Representationalist theories do not have a similar cost. For example, a theory that identifies phenomenal properties with non-representational biochemical properties carries no objectionable metaphysical baggage.³²

The Anti-Representationalist can go farther than this and say that the defender of SCR undermines the motivation for her own view. Remember that Representationalism was supposed to provide an explanation of phenomenal character in terms of content. Now the Spooky Construction Representationalist admits that she does not know what building relation holds between phenomenology and content. Because the building relation in question is crucial to her explanation of phenomenal character, she admits that she does not know how this explanation is supposed to go. But this means that she never had an explanation of phenomenal character in terms of content to begin with. So the Representationalist's promise, key to motivating her view in the first place, cannot be kept by the Spooky Construction Representationalist.

By contrast, if the Representationalist *could* identify the building relation that holds between content and phenomenology, this would favor resolving the difficult cases in her favor. If she could tell us more about B(CR), give us independent examples of B(CR) holding, and explain how B(CR) holds in uncontroversial cases where phenomenology and content seem to

³² Block (1996, p.21).

match, this would be strong evidence for Representationalism. (Of course, in this scenario, B(CR) would no longer be spooky). But no such account seems forthcoming, so our evidence favors Anti-Representationalism.

To be clear, the argument is not that Spooky Construction Representationalism is inconsistent or epistemically impossible. The argument is also not that we are never justified in postulating *sui generis* building relations between two classes of entity. If the evidence that there must be such a relation is decisive, we are justified in such a postulation. The argument is that *if* Representationalism requires postulating a novel building relation, *and* given that the evidence for Representationalism is *not* decisive, *then* we should reject Representationalism in favor of views that do not require appeal to a novel building relation.

While there may be versions of CR that we have not considered, I take us to have established a compelling case against both MSR and CR. I will now return to Identity Representationalism and argue that its benefits outweigh the costs.

7 Identity Representationalism

I am an Identity Representationalist—I hold that the phenomenal character of an experience is identical to its content. I do not believe that the objections to IR from section 2 are decisive. Before responding to those objections, I will discuss how IR avoids the objections facing both MSR and CR.

Consider again a simple experience as of a red triangle to the left of a green circle. The Identity Representationalist says that the content of the experience can be represented like so:

$\lambda x \lambda y (\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Green}(y) \wedge \text{Circular}(y) \wedge \text{Left-of}(x,y))$

The phenomenal character of the experience is precisely the same. So the Identity Representationalist identifies the content of this particular experience with its phenomenal character. She does the same for other experiences, the contents of which are much more complex, but which can be formulated in a similar way, and thus identified with phenomenology. The token identity of phenomenal character with content in normal visual cases is strong evidence for the type identity of phenomenal character and experiential content.

Now consider mood experiences, a notoriously difficult case for Representationalists. Philosophers have offered differing accounts of both emotional phenomenology and emotional content, only some of which are compatible with Representationalism. The Representationalist can now make the following argument:

- 1) Contents of experience are type-identical to phenomenal character.
- 2) Accounts $a_1 \dots a_n$ are compatible with the identity of contents of experience and phenomenal character, while all other accounts are not.
- C) One of $a_1 \dots a_n$ is true.

Now suppose we have two accounts of mood experiences, one of which identifies the phenomenal character of moods with their content, the other of which does not. Both views are equally phenomenologically plausible, and each view has a plausible view of mood content. The evidential tie is broken by the argument above, which rules out the second view on theoretical grounds.

Anti-Representationalists can reply that the conclusion of the argument is less plausible than identifying contents with phenomenal character. This objection relies on intuitions about

emotional phenomenology, which are contested by Representationalists. By contrast, premise 1 relies on claims about visual phenomenology in ordinary cases, which are far less contentious, along with a plausible inductive inference from those cases to the type-identity claim. The Anti-Representationalist can reply that she has incorrigible knowledge of her own emotional phenomenology, or, more plausibly, that she is simply better at phenomenal introspection than her Representationalist opponents. I don't dismiss this response out of hand, but I find it unlikely.

Representationalists who do not identify content and phenomenology cannot avail themselves of this argument, as they cannot appeal to the type-identity claim. If Construction Representationalists could tell us what relation holds between phenomenology and content, they could make use of a similar argument, using the phenomenology-content link in place of the type-identity claim in premise 1. But as we saw in section 5, there does not seem to be any such link, so they cannot fill the gap in their argument. Defenders of MSR and SCR are no better off; as argued above, these are not well-motivated views.

The Identity Representationalist has a good explanation for the supervenience of phenomenal character on content: phenomenal character is identical to content, and supervenience is a reflexive relation. Identity is obviously not a novel relation, so the Identity Representationalist can appeal to it while abiding by the metaphysical conservatism referenced above.

8 Two Approaches to Perceptual Content

We now return to the problems from section 2. The first problem is that on some views of the contents of experience, it is implausible to identify content and phenomenology. The

second problem is that experiences seem to have contents--singular contents of visual experiences being the most obvious example--that have no bearing on phenomenology.

I think the Representationalist should respond to the first problem by rejecting the relevant views of perceptual content. She should instead adopt a view of the content of experience that mirrors the phenomenology of the experience. For visual experiences, the content might be a property complex, which can be denoted by a certain lambda term in the way discussed in section 5.1. This avoids any structural mismatch between content and phenomenology that would undermine the identity claim.

The second problem is significantly harder. Unlike the possible-worlds theory of content, the claim that perception enables us to have singular thoughts about objects in our environments seems pretheoretically obvious, and rejecting this claim seems like a serious cost. I can see two approaches the defender of IR might take to addressing this problem.

The first approach is to deny that perceptual experiences are responsible for all the important cognitive and epistemic work done by the perceptual system. Cognitive scientists recognize a wide range of representations in the visual system, from simple representations of local properties to much more complicated representations of entire scenes. The defender of IR can claim that the visual system puts out singular representations of objects around us, and³⁴ that these singular representations put us in a position to have singular thoughts about these objects, but deny that these representations are ever phenomenally conscious. This takes the sting out of the property complex view of perceptual content.

The second, more radical approach holds that perceptual experience does all the important cognitive and epistemic work done by the perceptual system. This is to deny that any

states of the visual system represent particulars at all; instead, they only represent the properties of these particulars. The defender of IR could do this by denying that we have singular thoughts at all, or even by accepting a bundle theory of objects. But she could also argue that we come to have singular thoughts through some process other than simply forming a belief with the same content as a perceptual experience. I will sketch two ways in which this might work.

The first way is to deny that singular thought requires perceptual representation of or acquaintance with the object of that thought. Such acquaintance conditions have been rejected by semantic instrumentalists like Kaplan (1989), who hold that we can have singular thoughts simply by stipulative introduction of a singular term whose reference is fixed by a definite description. They are also rejected by Jeshion (2010): she holds that singular thoughts employ mental files about individuals, which are formed through involuntary mental processes in cases where that individual is cognitively significant to the subject. On both views, singular thoughts about visible objects (like the Jacques Cartier bridge) can be caused by perceptual experiences of those objects, even if the object itself does not enter the content of the experience.

The second way is to hold that we have singular thoughts only in a derivative sense. According to Mendelovici's (2018) self-ascriptivism about thought contents, one way for thoughts to have a particular content is for us to take them to have that content. Sometimes this ascription is explicit, while sometimes it is a matter of having dispositions to ascribe certain contents to one's thoughts under the right circumstances. For example, my disposition to take that belief—the one concerning the large artificial structure in my visual field stretching across

the Saint Lawrence River—to be a singular thought about that very bridge explain why it is a singular thought.

There is more to say about each of these approaches. However, I take us to have shown that the problems with Identity Representationalism are not decisive, as the Identity Representationalist has a number of plausible rejoinders. By contrast, Mere Supervenience Representationalism and Construction Representationalism face deep metaphysical problems that render belief in these views unjustified. I conclude that Representationalists should be Identity Representationalists.

9 Conclusion

Many philosophers have argued for the supervenience of phenomenology on content, but few have been clear concerning precisely what content-phenomenology relation they have in mind. I have argued that the relation in question is identity, and that this has significant consequences regarding the cognitive and epistemic role of experience.

We can now proceed to use Identity Representationalism to argue for novel views of perceptual content. We turn to this task in the next chapter.

Chapter 2: The Property Complex View of the Content of Visual Experience

In this chapter I will defend the view that the content of a visual experience is a property complex. This view is not novel, particularly as a view of the content of hallucination.³³

However, there are a number of obvious objections to the property complex view, especially as a view of the content of successful experiences, which have not to date been met in any detail. These objections have led many to conclude that the view and views like it are non-starters.

We can usefully sort challenges faced by the property complex view into three categories. Defenders of the view must explain (1) the veridicality and success conditions of visual experiences. Then, they must explain how a property complex can play the (2) cognitive and (3) epistemic roles that visual content manifestly plays in our mental lives. The goal of this chapter is to show how these challenges can be met. I will address them in sections 2, 3, and 4, respectively.

In the first chapter, I argued that the content of a visual experience is identical to its phenomenal character. This identity claim permits us to infer from claims about phenomenal character to claims about content. If we can demonstrate that phenomenal character has a certain feature, we can infer that content has that same feature. I will use this methodology to motivate the property complex view, as well as several more specific claims about visual content along the way.

³³ See Johnston (2004) and Tye (2014) for development of the property complex view as an account of hallucinatory content. Pautz (2010) considers but does not endorse the property complex view for visual experience generally.

Of course, this methodology only works if our phenomenal intuitions are reliable. As recent work in philosophy and psychology has shown, phenomenal intuitions are surprisingly unreliable in a wide variety of circumstances.³⁴ To the extent that it is possible, I will avoid relying on intuitions that are not fairly widespread or easy to motivate. When intuitions are divergent, I will rely on other methodologies.

1 The View

In this section I will provide some preliminary reasons to hold the property complex view and offer an account of what property complexes are.

1.1 The Property Complex View Introduced

A week ago, I sat in the back of the library with a water bottle on my desk, which we'll name "Dexter". Dexter was cylindrical, about twelve inches tall and four in diameter, and pink with a black top. I misplaced Dexter a few days later, prompting me to buy Timmy, a water bottle of the same make from the same brand. Timmy is also cylindrical, about twelve inches tall and four in diameter, and pink with a black top.

I now sit at the same desk in the back of the library looking at Timmy. As far as I can tell, there is no phenomenal difference between my experience now and the experience I had a week ago. My experience now is characterized by the pinkness of the water bottle and its distinctive shape, as seen from this angle (roughly the same one I saw Dexter from last week). Last week it was characterized by the same pinkness and cylindricality, although they were Dexter's properties and not Timmy's. And there is no other phenomenal contribution made by either Dexter or Timmy that would enable me to tell them apart.

³⁴ Schwitzgebel (2008).

Now, there is an obvious difference between my experience now and my experience week ago: today, I see Timmy, and a week ago, I saw Dexter. The two experiences relate me to different objects. I accept this intuition, but whatever my seeing Timmy amounts to, it is not simply a matter of Timmy being part of the phenomenal character of my experience. Objects are just not the sort of thing that can make a phenomenal difference. Because I hold that phenomenal character is identical to content, and because these two experiences have the same phenomenal character, I hold that the content of these two experiences is the same.

Once we accept that experiences do not represent objects like Dexter and Timmy—that is, that they do not have singular content—we have a number of options for what content to attribute to these experiences. The content could be existential: it could assert that there is some object with the properties I experience. The content could have primitive referential elements, akin to words like "that" in English. The content could be a property complex, a property itself built from simpler properties and relations. Or there could be feature-placing content, in which simple qualities are placed in different directions within the subject's field of view.

I hold that the content of a visual experience is a property complex. In this section, I will develop the view without arguing against the competitors from the previous paragraph. In the process of defending the property complex view later in the paper, I will point out where it has advantages over its competitors.

1.2 Referring to Property Complexes

Consider my simple visual experience as of a red triangle to the left of a green circle, both of which are three feet away from the subject. (Going forward, we'll name this experience

"Simple".) The content of my experience is (ex hypothesi) a property complex built from color, shape, orientation and distance properties. How do we specify the property complex in question?³⁵

The content of my visual experience cannot simply be the list of color and shape properties instantiated by the two particulars, because this would fail to capture the structure of the experience. Redness and triangularity are bound together in the complex in a way that the redness and circularity are not. A singular content view can capture this fact; the redness and triangularity represented by experience are predicated of the same particular, while the greenness and circularity are predicated of a different particular. But since Identity Representationalists do not attribute singular content to experiences, they must capture this structure differently.

We can do this by using the lambda calculus, the formal tool introduced in chapter 1.³⁶ We begin with an expression with a number of free variables. In the case of my experience above, the expression would be as follows:

$\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Green}(y) \wedge \text{Circular}(y) \wedge \text{Left-of}(x,y) \wedge \text{Three-Feet-Away}(x,z) \wedge \text{Three-Feet-Away}(y,z)$

We can then use λ -operators to bind the variables x and y , creating the following term:

$\lambda x \lambda y \lambda z (\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Green}(y) \wedge \text{Circular}(y) \wedge \text{Left-of}(x,y) \wedge \text{Three-Feet-Away}(x,z) \wedge \text{Three-Feet-Away}(y,z))$

³⁵ I do not think Simple is a plausible example of experiential content. In fact, I suspect it is metaphysically impossible. For one thing, objects typically appear to have complex three-dimensional shapes, not simple two-dimensional ones. For another, normal human visual experiences always have orientation relations in their content. Nothing just appears three feet away from me--it appears three feet to the left of, above, or in front of me. I slur over these details in my discussion of Simple to make the example more tractable.

³⁶ The same method is given in Tye (2014, appendix).

The resulting lambda term refers to a three-place relation. A trio of objects instantiate that relation iff and because they instantiate the properties that constitute the it in the way specified by the lambda term. Relations of this sort are what we are calling property complexes.

The content of Simple is constituted solely from color and shape properties and spatial relations. However, the property complex view is neutral on which properties can enter into the contents of visual experience—that is to say, neutral on which properties constitute the property complexes that our experiences represent. If there are good reasons to think that so-called “higher-order” properties enter the contents of experience—including causal relations, natural kinds, and more—a property complex theorist can unproblematically build these properties into the contents of visual experiences. I will not take sides in this debate going forward.³⁷

1.3 What are Property Complexes?

Securing reference to property complexes is much easier than giving a satisfactory account of their nature. We can ask two important questions. First, to what metaphysical category do property complexes belong? Second, what relation holds between property complexes and the properties of which they are constituted? I will answer the first question in this section and the second in section 1.4.

In response to the first question, I say that property complexes are transcendent universals, for three reasons.

³⁷ Identity Representationalism constrains the contents we can reasonably attribute to visual experiences to properties that might reasonably be taken to make a phenomenal difference. However, there are compelling arguments to the effect that higher-order properties do make a phenomenal difference (see Siegel (2010)). We will return to this issue in the third chapter below.

First, our account of the content of visual experience is equally an account of the phenomenology of visual experience. I do not think that nominalist views, which typically analyze properties as classes of particulars, leave us with a plausible account of visual phenomenology. On these views, what one is phenomenally aware of in having an experience that represents an n-place property complex is a set of ordered n-tuples of possibilia. This strikes me as incredible.

Mulligan, Simons, and Smith (1984) make a similar objection against nominalist views. Rodriguez-Pereyra (2002, section 4.12) responds that, in perception, what we see is that an object has some property, not what makes it the case that it has that property. When I see that the triangle is red, I need not be aware of the triangle's membership in the set of all possible red things; I need only be aware of its being red. But this response fails if we accept the property complex view, as what we are phenomenally aware of is the property complex itself, not the fact that some collection of particulars instantiates the property complex. And as already stated, the view that we are aware of a set of ordered n-tuples of possibilia seems incredible.

At this point, the nominalist can dig in her heels. She can claim that my intuition is based on a misguided view of phenomenal awareness as revealing the hidden essences of the properties of which we are aware. This is similar to the color physicalist's response to primitivist intuitions about color: we should not expect color experience to reveal the hidden essences of color properties. I don't know how to resolve this impasse. The best I can do is to repeat that colors and other sensible properties do not seem like sets of possibilia, and that I cannot

believe that I am phenomenally aware of such sets. I will proceed on the assumption that such views are false.

Second, the content of a visual experience need not be instantiated in the subject's environment. The property complex cannot consist of tropes, as there are no tropes in the subject's environment to constitute the property complex in illusory cases.³⁸ The remaining possibility is that property complexes are universals. Are these universals transcendent--that is, can they exist uninstantiated?

They certainly do not need to be instantiated locally, given that we accept the possibility of illusion. Perhaps property complexes do not exist unless they are instantiated somewhere in the actual world. But that would put a bizarre constraint on the contents a visual experience can have. Suppose the content of Simple is instantiated on a distant planet, but no similar property complex is instantiated. Then I could have an experience like Simple, but not one that represented an orange triangle to the left of a green square, or that represented them both as four feet away from me, as the relevant property complex simply wouldn't exist. The problem repeats itself if we merely require that the constituents of the property complex all be instantiated. There are uncountably many distance relations that a subject might be said to represent, most of which are presumably uninstantiated. Intuitively, an experience can represent any distance relation whatever, regardless of whether those relations are instantiated anywhere. So the natural conclusion is that we can be aware of uninstantiated

³⁸ Pautz (2020, section 3) discusses an unusual view called "sensa representationalism", on which an experience that represents F-ness brings about a short-lived, mind-independent object--a "sensum"--that really is F, and that serves as the immediate object of phenomenal awareness. One could, in principle, defend trope theory by adopting a version of sensa representationalism on which experiences of F-ness bring about a property complex constructed from short-lived tropes. I find this view intriguing, but will not pursue it in the main text.

universals.

Third, there are compelling reasons to think that we can be phenomenally aware of properties that are in fact uninstantiated. Chalmers (2006) argues that our experience of colors presents them as simple, primitive properties that are radically different in kind from the surface reflectance properties our experiences track. Pautz (2006) argues that facts about color structure cannot be accommodated by physicalist views, and that this leads to illusionism about color experience. And Chalmers (2019) argues that the spatial properties our experiences represent have no place in the relativistic world of our best physical theories.³⁹

These illusionist views of perceptual experience are controversial. But if there are any examples of properties that we can represent despite their not being instantiated by any physical object, we must treat these properties as transcendent universals. And if one property, or one class of related properties, exists uninstantiated, metaphysical simplicity indicates that other universals are transcendent as well. So given the likelihood that our perceptual experiences systematically represent at least some uninstantiated properties, we should take properties to be transcendent universals.

Rodriguez-Pereyra (2002, p.216) says it would be "most surprising" if the metaphysics of properties turned on issues in philosophy of perception. But I do not agree that this is at all surprising. Perception is a central philosophical topic and our most important method for learning contingent facts. There is no a priori reason to doubt that we can learn a few necessary facts via perception as well.

1.4 Constructing Property Complexes

³⁹ See Cutter (2021) for a helpful overview of arguments of this type.

Our next question concerns the relation between property complexes and the properties that constitute them. This question becomes more pressing once we have determined that property complexes are platonic universals, as the metaphysics of complex universals are notoriously unclear. Lewis (1986) rejects various notions of complex universals (which he calls "structural universals") as incoherent, theoretically useless, or objectionably mysterious. How can we respond?

One option is to take structural universals as mereologically simple, rather than built out of simpler universals, absolving ourselves of the responsibility to explain how this building occurs. But on this view, there is no explanation of the modal connection between property complexes and simpler properties.⁴⁰ Take the property complex $\lambda x \lambda y (\text{Red}(x) \wedge \text{Green}(y) \wedge \text{Next-to}(x,y))$. Necessarily, any object that instantiates this property complex will instantiate either redness or greenness. But if we hold that property complexes are mereologically simple, we cannot explain this by noting that redness is a part of this property complex. It seems we must accept an objectionably brute modal connection--or find a better view.

Another option, suggested in Fine (2010), takes our method for referring to property complexes as a guide to their metaphysics. We begin with a Russellian proposition, say, the proposition that a is red and b is green and a is to the left of b. We then introduce an operation of abstraction that removes the objects from the proposition and yields a complex property in its place.

For example, we start from the following proposition:

$Ra \wedge Gb \wedge Lab$

⁴⁰ Lewis (1986, pp.41-42).

Then we use abstraction to generate the following property complex:

$$\lambda x \lambda y (R_x \wedge G_y \wedge L_{xy})$$

In other words, we build a complex universal from a Russellian proposition.

One could object by denying there is any such operation as abstraction. Regardless, I find this account suboptimal if property complexes are to be used as the contents of experience. It is natural to think that an experience as of something red and triangular affords me awareness of the quality of redness. However, on the Finean view of property complexes, redness is not a constituent of the content of my experience. Finean property complexes, though in some sense structured, are mereologically simple. It is difficult to see how I could be aware of redness via awareness of something that does not contain redness as a constituent.

A third option, which I prefer, is to compose property complexes out of simpler universals using non-classical mereology. Doing so requires us to explain how a simpler universal may be a part of a property complex many times over. The version of this strategy I will pursue comes from Forrest (2016).⁴¹

Forrest appeals to two operations on universals in constructing property complexes: conjunction and reflexive binding.⁴² Applying the conjunction operation to two or more properties simply gives us those properties taken together. If *a* is round and *b* is square, *a* and *b* thereby instantiate the property complex that results from applying conjunction to roundness and squareness.

⁴¹ See also Bigelow (1986), Fine (2017).

⁴² Forrest also appeals to existential binding for the construction of some universals. Existential binding will be irrelevant for our purposes.

Reflexive binding identifies two slots in a universal. For example, applying reflexive binding to the dyadic loving relation generates the monadic property of loving oneself. Not all relations have reflexive bindings, the proper parthood relation being an example. However, many do, including many of the relations that are commonly represented by experience. We will see how this works in practice in the example below.

Talk of slots in properties and relations commits me to positionalism about relations. Positionalism is, roughly, the view that properties and relations have positions or arguments in them--what I am calling "slots". On this view, the difference between Fred's being taller than George and Fred's being shorter than George is the slots that Fred and George occupy in the taller-than relation. While positionalism is controversial, it has received compelling defenses; moreover, if positionalism is false, our talk of slots will have to be captured in some other idiom. So while I intend for my use of the term "slots" to be taken literally, those who reject positionalism will have their own way of characterizing Forrest's reflexive binding operation.⁴³

Here is how we generate the content of Simple using conjunction and reflexive binding. We first take the broad conjunction of Simple's constituents. This generates the following property complex:

$\lambda x_1 \lambda x_2 \lambda x_3 \lambda x_4 \lambda x_5 \lambda x_6 \lambda x_7 \lambda x_8 (\text{red}(x_1) \wedge \text{triangle}(x_2) \wedge \text{green}(x_3) \wedge \text{square}(x_4) \wedge \text{to-the-left-of}(x_5, x_6) \wedge \text{three-feet-away-from}(x_7, x_8))$

We then apply reflexive binding: this ensures that the correct properties and relations are bound together within the complex. Repeated applications of reflexive binding yield the following:

⁴³ For defenses of positionalism, see Gilmore (2013) and Dixon (2018).

$\lambda x_1 \lambda x_2 \lambda x_3 (\text{red}(x_1) \wedge \text{triangle}(x_1) \wedge \text{green}(x_2) \wedge \text{square}(x_2) \wedge \text{to-the-left-of}(x_1, x_2) \wedge \text{three-feet-away-from}(x_1, x_3))$

Note that we could have generated a different property complex by applying reflexive binding differently. For example, we could have identified the slot for something red with the slot for something square, generating a property complex partly instantiated by red squares rather than red triangles. Reflexive binding thus allows us to build distinct property complexes from the same constituents.

We do not yet have the content of Simple. We need the conjunction of the complex above with the three-feet-away-from relation:

$\lambda x_1 \lambda x_2 \lambda x_3 \lambda x_4 \lambda x_5 (\text{red}(x_1) \wedge \text{triangle}(x_1) \wedge \text{green}(x_2) \wedge \text{square}(x_2) \wedge \text{to-the-left-of}(x_1, x_2) \wedge \text{three-feet-away-from}(x_1, x_3) \wedge \text{three-feet-away-from}(x_4, x_5))$

We then apply reflexive binding twice more, thereby generating the property complex represented by Simple:

$\lambda x_1 \lambda x_2 \lambda x_3 (\text{red}(x_1) \wedge \text{triangle}(x_1) \wedge \text{green}(x_2) \wedge \text{square}(x_2) \wedge \text{to-the-left-of}(x_1, x_2) \wedge \text{three-feet-away-from}(x_1, x_3) \wedge \text{three-feet-away-from}(x_2, x_3))$

So appealing to conjunction and reflexive binding as recommended by Forrest allows us to build property complexes from simpler properties. It also allows us to maintain that simpler color and spatial properties are parts of the property complexes of which we are phenomenally aware. This makes it easier to maintain that I am phenomenally aware of redness, as intuitively, my awareness of the complex entails that I am aware of its parts. And finally, it is no mystery that the property of being a triangle follows the content of Simple through modal space, as the former is a constituent of the latter.

One objection concerns whether the properties in the original conjunction can be said to be parts of the resulting property complex. I think the answer is yes. Certainly the conjuncts of a conjunctive property are its parts. Applying reflexive binding to a conjunction yields a different conjunction of the underlying simpler properties by identifying slots in those properties, but it should be considered a conjunctive property nonetheless. Applying this point to our example above: redness is a part of the content of Simple, even when reflexive binding ensures that redness and triangularity are instantiated by the same object.

Another reasonable objection is that we should get by with simple properties, without the further ontological commitment of property complexes or the further ideological commitment of operations on properties such as conjunction and reflexive binding. Whether this is ultimately true turns on the theoretical role of universals, and in particular whether there are roles that property complexes, constructed in this way, are uniquely well-suited to play. We cannot resolve these issues here. I will simply note that the usefulness of property complexes as the content of experience constitutes one reason to accept them into our ontology, albeit far from a decisive one.

2 Accuracy Conditions

Most philosophers of perception, in particular those who hold broadly intentionalist views, hold that perceptual states can be assessed for accuracy. For example, Dretske (1995, p.4) ties the representational capacity of a car's speedometer to its ability to misrepresent the speed of the car. Similarly, Schellenberg (2018, p.59) notes that "having accuracy conditions [is a] key signature[] of representational content."

I share the intuition that experiences can be judged for accuracy. However, on views like mine that do not attribute propositional content to experiences, stating accuracy conditions is a more difficult task. A property complex cannot be true or false, so we cannot assimilate accuracy to truth. We need a different account.

For reasons to be canvassed below, I do not think that accuracy conditions are essential to experiences. The following account of accuracy is therefore not an official part of the view of visual content being defended. The point of giving accuracy conditions is to respond preemptively to the objection that the property complex view must reject widespread intuitions about perception's ability to be accurate or inaccurate. If we can give accuracy conditions with only the resources available to the property complex view, this objection is blocked.

2.1 Accuracy

Here is a simple first pass:

Account 1: A visual experience undergone at t is maximally accurate iff at t , the property complex it represents is instantiated in the subject's environment.

Account 1 is objectionably imprecise. Presumably, if the relevant property complex were instantiated on Pluto, this would not count as the subject's environment--but Account 1 itself does not tell us one way or the other. It is also subject to obvious counterexamples. Suppose you have a veridical experience of the scene around you. I am standing six feet to your left, and I have an experience with precisely the same content. The content--ex hypothesi a property complex--is instantiated in my environment, namely by you and the objects you see. The bookcase on the right that appears to you to be three feet to the right also appears to me to be

three feet to the right--but it is nine feet to my right. So intuitively, my experience, unlike yours, is inaccurate, even though Account 1 counts it as accurate.

This suggests the following amendment:

Account 2: A visual experience undergone at t is maximally accurate iff at t , the n -place property complex it represents is jointly instantiated by the subject and $n-1$ other objects.

This is an improvement. It eliminates the reference to the subject's environment, and it rules out the counterexample above. It also captures the fact that visual experiences always convey information about their subjects, in a manner to be discussed in detail in 3.2 below. However, Account 2 faces other counterexamples.

Consider the following bizarre scenario, which we'll call Triangle.

Triangle: I undergo Simple at t , and at t , I am in fact a red triangle to the left of a green circle, and we are both three feet away from some further thing.

The three of us instantiate the content of my experience, so Account 2 counts my experience as accurate. But intuitively, this experience is inaccurate. I take my experience to be telling me that something else in my environment, distinct from me, is red and triangular. The absence of any such thing means that my experience is inaccurate; my color and shape are irrelevant.

Perhaps the scenario just sketched is metaphysically impossible. Arguably, I could not have been a red triangle, nor could a red triangle have a visual experience. But the point is that my experience rules out this scenario independent of these considerations of metaphysical possibility. We should be able to provide an explanation of why, when had in this (perhaps impossible) scenario, the experience is inaccurate. So Account 2 must be modified.

Note how easy it is to explain the inaccuracy of this experience on singular content views. These views can say that I enter the content of my experience, that I am the one represented as bearing various spatial relations to external particulars. But on the property complex view, the content alone does not give me a way to determine which slot in the property complex I must occupy for the experience to be accurate. The task is to identify a way of finding this slot given an arbitrary property complex.

Here is the solution. When I undergo Simple and my experience is accurate, I am aware of the red triangle and the green square--I see them, in the colloquial sense of "see". But I do not see myself, the thing that is three feet from the triangle and the square, even though I am aware of the spatial relations I bear to each of them. Intuitively, this is because my visual experience does not attribute any monadic properties to me. This makes for a clear contrast between how experiences represent the subjects of those experiences and the objects that (together with the subject) jointly instantiate the property complex. I would not be aware of any of the other objects if the experience did not attribute at least one monadic property to them, over and above any relations they might bear to other objects in the scene.⁴⁴

This brings us to our final account:

Account 3: A visual experience is maximally accurate iff the property complex it represents is jointly instantiated by the subject and objects in their environment, and the subject occupies the slot in the property complex that involves no monadic properties.

⁴⁴ Cases where subjects report seeing something in peripheral vision, but are unable to identify the color and shape properties of the seen object, are putative counterexamples. I think the correct account of such cases is that the experience attributes some highly determinable shape property to the object, one for which we have no natural language predicates and that therefore fails to lead to verbal reports about shape. If objects in peripheral vision did not appear to have such determinable shapes, we could not be said to see them.

Account 3 involves some new notions that requires explanation, starting with occupying a slot. If a collection of n particulars instantiate an n -place property complex, each of the n particulars *occupies* one of the n slots in that property complex. When Fred and George instantiate the taller-than relation, Fred occupies one of the slots—we can call it the "taller" slot⁴⁵—and George occupies the "shorter" slot.

A slot *involves* some property if that property is a part of the property complex and instantiating that property is a necessary condition on occupying that slot. The "x" slot in Simple involves the property of redness, because a particular must be red to occupy that slot. It does not involve the property of greenness, because a particular can occupy the slot without being green—even though it must be related to something green.

Having clarified our terms, we can apply Account 3 to Simple as follows. We identify the slot in the property complex that involves no monadic properties—in this case, the "z" slot. Something can occupy the "z" slot in the property complex regardless of what monadic properties that thing has. We then see whether the subject occupies the "z" slot in the property complex by instantiating the property complex jointly with some collection of other objects. If it does, the experience is maximally accurate; if not, it is less than maximally accurate.

What about property complexes where each slot involves at least one monadic property? While there are certainly property complexes meeting this description, I cannot imagine any visual experience that attributes a monadic property to the subject of that experience. I suspect it is metaphysically necessary, or at least nomologically necessary, that

⁴⁵ Of course, the slot is not literally tall, as slots have no spatial properties. The slot is labeled "taller" due to its being occupied by the taller individual.

any visual experience has as its content a property complex with exactly one slot that has no monadic properties attributed to it by the complex.⁴⁶ Any property complex that does not meet this criteria is not a candidate to be the content of a visual experience, or at least not a normal human visual experience.

Suppose this is wrong and some visual experiences represent property complexes that do not have exactly one such position. If so, such experiences simply do not have accuracy conditions. Account 3 might therefore be parochial, in that there are unusual visual experiences that have no accuracy conditions, and are therefore neither accurate nor inaccurate.

Admitting that some possible experiences lack accuracy conditions would be a problem if we took accuracy conditions to be essential to experiences. By contrast, I take experiences to have accuracy conditions in virtue of the role they typically play in the cognitive lives of normal humans. (I will have more to say about the relevant cognitive role in section 3 below.) Bizarre experiences in distant possible worlds, and perhaps experiences had in unusual conditions in the actual world, are not suitable to play this cognitive role, and therefore they lack accuracy conditions. So it is no surprise that Account 3 cannot be applied to these pathological cases.

Intuitively, accuracy comes in degrees. If we take property complexes to be composed of simpler properties as discussed above, we can accommodate this intuition fairly easily. In cases of relatively mild illusions, the property complex represented by the experience will not be instantiated, but a similar property complex will be instantiated. We can therefore say the following:

⁴⁶ In other words, I think it is a law of appearance that visual experiences do not attribute monadic properties to their subjects. See Pautz (2020) for discussion of laws of appearance.

Relative Accuracy: An experience e_1 is more accurate than an experience e_2 , had by a subject S in a context C , iff

- (1) there is some property complex P instantiated by S and some objects in C ,
- (2) P resembles the content of e_1 to a greater degree than P resembles the content of e_2 , and
- (3) there is no further property complex Q instantiated by S and some objects in C that resembles the content of e_2 to a greater degree than e_1 resembles the content of e_2 .

Suppose I am three feet away from an orange triangle and a green square, the former to the left of the latter. The three of us instantiate a property complex that is just the same as the content of Simple, except that the triangle is orange, not red. Were I to undergo Simple in this context, it would be highly but not maximally accurate.

Now consider an experience—called "Inaccurate"—that represents a red triangle to the left of a green circle, each three feet away from a further thing. The content of Inaccurate resembles the property complex instantiated in the scene to a lesser degree than the content of Simple does, and there is no property complex instantiated in the relevant context that resembles Inaccurate's content more closely than the one referred to above resembles the content of Simple. So Simple is more accurate than Inaccurate.

I leave the notion of resemblance between property complexes unanalyzed. It could be a matter of sharing constituents: two property complexes resemble to the extent that they have the same constituent properties. It could be a matter of the way in which the constituents of the complex compose the complex itself. It could be a matter of primitive resemblance between constituents: a property complex partly constituted by the redness universal will

resemble a complex partly constituted by the orangeness universal. Most likely, resemblance between property complexes is a function of all three features.

What if there is no fact of the matter about the degree to which two property complexes resemble, or whether one complex resembles a second more closely than a third? In that case, there will be no fact of the matter about the degree to which a given experience is accurate, or about which of two experiences is more accurate. If the task is to capture our pretheoretical intuitions about accuracy, this is a feature of the account, not a bug. There are not complete rankings of possible experiences by accuracy, in particular scenarios, implicit in our everyday intuitions about veridicality. There is just a loose sense that Simple is fairly accurate in a scenario where there is an orange triangle three feet away from me, whereas an experience as of something purple and dragon-shaped would be not at all accurate in the same scenario. Our account of relative accuracy can account for this intuition.

2.2 Seeing Objects

Perceptual accuracy is distinct from seeing. This can be demonstrated by the example of veridical hallucinations.⁴⁷ A mad neuroscientist stimulates my brain so I have an experience as of a pink elephant in the corner of the room; there is, in fact, a pink elephant in the corner of the room; but intuitively, I do not see the pink elephant, despite my experience being accurate. Despite this difference, accuracy is an important part of the account of seeing I want to sketch, to which we now turn.

Our account of seeing includes a causal condition. It is therefore in the tradition of

⁴⁷ Such cases are described in Lewis (1980).

causal theories of seeing.⁴⁸ It also includes an accuracy condition--mere causal connectedness is not enough.⁴⁹ Intuitively, if the content of my experience resembles none of its causes in any respect, I cannot be said to see anything.

This brings us to our account of seeing:

Seeing: A subject S sees x iff

- (1) S has a visual experience E that is partly caused by x;
- (2) x occupies a slot in some property complex that is sufficiently similar to some slot in the content of E;
- (3) were x to undergo significant changes, there would be a corresponding change in the content of E.

The first clause ensures that the object seen bears some causal connection to the subject's experience as of that object. This rules out the obvious cases of veridical hallucination. When the mad neuroscientist alters my brain directly so that I have an experience as of a pink elephant, and there is in fact a pink elephant in front of me, the elephant plays no causal role in the production of my experience. Note that Seeing does not rule out deviant causal chains, such as when the mad neuroscientist surveys my environment, then intentionally induces a veridical experience.

The second clause is a resemblance condition; its importance can be best illustrated with an example. Take Simple above, and suppose Simple is caused in a non-deviant way by two objects in my environment, O1 and O2. O1 is red and triangular, and O1 is to the left of O2, but

⁴⁸ Grice & White (1961), Tye (1982).

⁴⁹ Evans (1982), Montague (2013).

O2 is in fact purple and an irregular hexagon. (Perhaps I am undergoing neurological difficulties that affect only the right half of my visual field.) Both objects are four feet away from me.

The following property complex is instantiated by the two objects and myself.

Purple Surprise: $\lambda x \lambda y \lambda z (\text{Red}(x) \wedge \text{Triangular}(x) \wedge \text{Purple}(y) \wedge \text{Irregularly-Hexagonal}(y) \wedge \text{Left-of}(x,y) \wedge \text{Four-Feet-Away}(x,z) \wedge \text{Four-Feet-Away}(y,z))$

There are obvious similarities between the "x" slot in Purple Surprise and the "x" slot in the content of Simple. Anything that occupies the former slot--like O1--must be red and triangular, to the left of a second thing, and three feet away from some third thing. This is just the same as what is required to occupy the analogous slot in Simple's content, except that the distance is four feet rather than three feet, and the second thing has different properties. In virtue of this resemblance between the slot in Purple Surprise instantiated by O1 and the "x" slot in the content of Simple, the second clause of Seeing is satisfied by O1.

The same cannot be said for O2, as the "y" slot in Purple Surprise is completely different from the "y" slot in the content of Simple. O2 occupies the former slot because it is an irregular hexagon; but to occupy the latter slot, an object has to be green and triangular. There is, of course, no other slot in the content of Simple that O2 is any closer to occupying. So the second clause of Seeing is not satisfied, and I do not see O2.

Now consider the case in which a yellow cube in front of me, named "Y", is hidden from view by a mirror, which reflects light from a blue cube to my right, named "B", illuminated such as to appear yellow.⁵⁰ I have an experience as of a yellow cube in front of me (caused by B), so my experience is accurate. But intuitively, I do not see either cube.

⁵⁰ Grice (1961); see also Tye (2018).

The first two conditions of Seeing ensure that this intuition is vindicated. By the first clause, I do not see Y, as it does not cause my experience. By the second clause, I do not see B, as the relevant slot in the content of my experience will not be sufficiently similar to any property complex instantiated by B. So I see neither Y nor B, despite the fact that my experience is veridical.

The third clause ensures that the first two clauses are not satisfied by accident. Suppose our mad neuroscientist makes the capricious decision to momentarily induce a veridical hallucination in me before inducing various wild and falsidical hallucinations. At the moment of the veridical hallucination, the first two clauses are both met—recall that the first clause does not rule out deviant causal chains—but intuitively, I do not see anything in my environment. The third clause is not satisfied because future changes in the colors, shapes, or locations of O1 and O2 will not have any effect in the content of my experience. I will instead undergo wild hallucinations at the whim of the mad neuroscientist.

However, suppose the mad neuroscientist decides to produce ongoing veridical experiences in me through direct intervention. He carefully tracks changes in my environment and produces property complexes that are instantiated by the objects before me. Now all three causes are satisfied: the experience is in part caused by the objects before me (as they cause the neuroscientist's intentions to induce particular experiences); the property complex in the content is *ex hypothesi* identical to the one instantiated by the objects before me; and changes in the objects before me will lead to changes in the content of my experience, via the neuroscientist's interventions. So according to Seeing, I see the objects before me, despite the fact that (I am sure) many will have the intuition that I do not see anything in this case.

Another issue is ambiguity in clauses (2) and (3). Clause (2) makes use of the notion of two slots being "sufficiently similar"; clause (3) refers to "significant changes" in the environment. Without clarifying what amounts to sufficient similarity or what counts as a significant change, Seeing will fail to yield a determinate verdict in many cases.

I am unbothered by these issues. I am happy to grant that I see O1 and O2 in the case of ongoing manipulation, regardless of how deviant the causal chain is. And I see no problem with the imprecision of the second clause regarding how closely the slots in the relevant property complexes must resemble. This is because I do not take the word "see" to carve phenomenal, cognitive, or epistemic reality at its joints.

The function of the word "see" is to denote a kind of practically relevant cognitive accomplishment. When I ask whether you see the car approaching, or whether you see Bob in the crowd, your answer lets me know whether you are in a position to form a variety of beliefs about your surroundings in a reliable way. This knowledge helps me predict your future behavior in ways that are practically valuable. If you see the car approaching, I can trust you not to walk into the street and risk injury; if you cannot see Bob in the crowd, I may need to point him out so you can return the book he lent you. I can be justifiedly confident that you have achieved the relevant connection with your environment while being radically ignorant of the nature of that connection, and even while holding false beliefs about it. I can even be justified in this confidence when your connection to the environment is mediated by a mad (but sufficiently reliable) neuroscientist.

In contrast, the notion of perceptual content has no direct practical relevance in ordinary contexts. I don't need to know whether the property of carhood, or Bob himself, enter the

contents of your experience. I just care about the car- and Bob-involving beliefs you are likely to form, in virtue of their role in directing your future behavior. We come to discuss perceptual content for theoretical reasons, such as explaining what and how beliefs are caused by perceptual states and what justifies those beliefs. These theoretical reasons are what justify us in our attributions of content to our perceptual states. Theoretical concerns like these are related to our practical concerns: we would ultimately like a theory that explains how we come to see things, in this ordinary sense of see. But the practical concerns operate independently of the theoretical concerns. Our term "see" can serve its practical function regardless of whether the term has any theoretical use.

For this reason, I do not think our ordinary talk of seeing should be taken as a guide to the nature of perception. Philosophical theories of perception are obligated to recover our ordinary talk of seeing within their preferred terms. But given the purpose to which the term "seeing" is put in ordinary language, it would be merely a coincidence were the word to carve the world at its joints. We should therefore be satisfied with accounts of seeing that are merely approximate and somewhat gruesome.

3 The Cognitive Role of Experience

In the introduction, I distinguished between the cognitive role experiences play and their epistemic role. I noted that, on the property complex view, it becomes harder to explain how experiences can play either role. In this section I will meet the first explanatory task. Once we have an account of how experiences can play a robust cognitive role on the property complex view, we will have the resources to meet the epistemological challenge.

Consider the following principle suggested in Pautz (2009, p.500), where "x" ranges over

all entities, regardless of ontological category:⁵¹

Grounding Principle: If experiential property E necessarily grounds the capacity to have beliefs involving x without imaginative extrapolation, then x enters into the phenomenal content of E.

Grounding Principle is an intuitively plausible principle concerning the role of perceptual experience in belief formation. It is also a threat to the property complex view. In section 1, I denied that experiences ever represent objects, times, or the subject themselves. But clearly experiences frequently put us in a position to form beliefs that concern objects, times, and subjects. If certain experiential properties do this necessarily, then we must give up the property complex view.

Pautz emphasizes the importance of the qualification that, should P genuinely enter into the content of E, we can form beliefs involving P without imaginative extrapolation. This is to get around cases such as Hume's missing shade of blue. Experiences of certain shades of blue (or any color) put us in a position to imagine and form beliefs about closely resembling shades of blue, even if we have not experienced those distinct but similar shades. The qualification is to avoid the implausible conclusion that these missing shades are part of the content.

The intuitive idea is that there must be a suitably direct connection between the experience and the beliefs subjects can form on its basis for us to be justified in attributing content to the belief that matches the content of the experience. The key contention of this section is that the connections between the content of an experience and contents of beliefs

⁵¹ Pautz restricts his attention to beliefs involving properties. As I am interested in singular beliefs, we need to consider cases where experiences ground the capacity to have singular thoughts, and which therefore motivate the view that experiences have singular content. Personally, I think Grounding Principle continues to enjoy intuitive support when the range of "x" is expanded accordingly.

formed on its basis are often far less direct than we think. For this reason, we need not conclude that perceptual experiences have the same content as the perceptual beliefs they cause.

Before showing how this works in particular cases, let me give an example to illustrate how difficult it is to determine whether the antecedent of Grounding Principle is satisfied. In Berkeley's *New Theory of Vision*, he denies that spatial properties are immediately perceived by means of vision. The way in which we are able to form spatial judgment on the basis of vision is through associations between our non-spatial visual ideas and our tactile ideas, which are themselves properly spatial. We develop these associations over time, as we come to realize that certain visual ideas are commonly succeeded by certain tactile ideas. Without coming to associate visual and tactile ideas through repeatedly experiencing them together, we would not have the capacity to perceive distance by sight. So Berkeley would say the antecedent of Grounding Principle is false when E is taken to be a visual experiential property and x is taken to be any spatial property or relation.⁵²

We need not agree with Berkeley that visually perceiving space requires associations with tactition to appreciate his strategy. We take some class of perceptual beliefs, in his case beliefs concerning the spatial properties of objects in our environment. We then explain how we can come to form beliefs with these contents on the basis of experiences with much thinner contents, appealing to some method for moving from the latter states to the former. This method could be association, as Berkeley claims for many spatial beliefs, but it could also be something different.

⁵² We will examine the implications of Berkeley's views in detail in chapter 3.

Before moving on, some terminological clarifications. I define a perceptual belief as one that is caused by a perceptual experience. I define a *mediate* perceptual belief as one that is caused by a perceptual experience in virtue of that experience causing an intervening mental state--a belief, an imaginatory episode, etc. So, if your experience as of a gray, rhinoceros-shaped object causes you to believe that there is a rhinoceros in front of you, and this belief in turn causes you to believe that you are in danger, your belief that you are in danger counts as a mediate perceptual belief.

An *immediate* perceptual belief is any perceptual belief that is not mediate.⁵³ We are primarily interested in immediate perceptual beliefs in what follows.

This definition allows that immediate perceptual beliefs can differ between subjects undergoing the same experience. For example, I may lack the concept of rhinoceros, so I do not form any immediate beliefs about rhinoceroses on the basis of the same experience. I will explain below how immediate perceptual beliefs depend on background beliefs of the subject. I would prefer not to describe immediate perceptual beliefs that depend on background beliefs as inferential. When you transition from your experience of a rhinoceros to your rhinoceros belief, you are not using the content of your experience as a premise in an argument. You are simply transitioning from the experience to an appropriate belief, and this transition is facilitated by your background beliefs about how rhinos usually look. However, the question strikes me as merely terminological. If one is inclined to call transitions from experience to belief that depend on background beliefs "inferences", while understanding that experiences do not have propositional content, that is fine with me.

⁵³ This usage differs from other uses of "mediate" and "immediate"--compare Pryor (2000, p.532).

3.1 Properties

Recall Simple, our toy example of a red triangle to the left of a green circle, each three feet away from the subject. On the basis of Simple, a typical subject will come to believe that this property complex is instantiated. She will also come to believe that the constituents of the property complex, such as redness and circularity, are instantiated. These beliefs are not merely immediate, but basic perceptual beliefs: they do not depend on the subject having any other beliefs at the time of her experience.

A typical visual experience will cause many basic perceptual beliefs. If I look around the seminar room, my experience will represent a complex of colors, shapes, spatial relations, and perhaps higher-order properties like being a whiteboard. I will typically form a corresponding array of basic perceptual beliefs: there is something brown, there is something brown and chair-shaped, there is something pink (my water bottle) on top of something brown, there is a whiteboard to the left of something chair-shaped, etc.

I do not think the content of basic perceptual beliefs includes the subject or the subject's environment. I will argue in section 3.2 that, in order for subjects to form immediate perceptual beliefs that concern themselves or their environments, certain background beliefs need to be in place.

Is there any problem with the notion that perceptual beliefs are caused by perceptual experiences that lack propositional content? One could object that such a view contradicts what we tacitly know about the causal roles of our own mental states. The idea is that, according to common sense, experiences "tell" us things, or "say" that our environment is such-and-such. It is in virtue of our experiences telling us things, in this colloquial sense, that they

cause us to form beliefs. According to the objector, this "telling" just is a matter of having propositional content.

I agree with the objector that our theories of the mind should, as far as possible, avoid contradicting our pretheoretical intuitions about the causal roles of our mental states. But the property complex view has no such problem, because it is no part of commonsense that experiences have propositional content. On the property complex view, perceptual experiences tell us things in the same way the rings in a tree trunk "tell" us how old the tree is--they are reliable indicators of certain states of affairs. We would need further argument to be justified in taking this talk of "telling" in a more robust sense; I don't know what this further argument would be.

As far as I can tell, all common sense has to say on the matter at hand is that experiences cause beliefs, a claim that defenders of the property complex view can and should accept. So common sense and the property complex view can happily coexist.

Aside from beliefs about the instantiation of various properties, subjects can also form basic perceptual beliefs about the constituents of the property complex themselves. For example, I can come to believe that red is more like orange than it is like green on the basis of an experience with redness, orangeness and greenness in the content. The extent of our immediate knowledge of the properties represented by experiences is a subject of dispute: for example, color physicalists hold that we can only learn the essences of colors through empirical investigation, while color primitivists hold that we come to know their essences immediately via visual experiences. The property complex view need not take sides in this debate.

The example of beliefs about properties formed on the basis of experiences should reassure us that visual experiences can cause beliefs even if they lack propositional content. Even granting temporarily that experiences have propositional content, everyone should agree that the proposition that red is more like orange than it is like green is not part of the content of my perceptual experience. Nor can we infer that red is more like orange than it is like green from propositions that are part of the content of my experience. Nor does it help if we appeal to other beliefs subjects might possess--in typical subjects, there is simply no way to infer what resemblance relations hold among colors on the basis of an experience's propositional contents and other ordinary beliefs they possess. Rather, subjects simply form beliefs about how color properties resemble others on the basis of visual experiences with very different contents. If experiences have propositional contents, they are irrelevant to explaining how we come to have these beliefs.

In a similar way, defenders of the property complex view can hold that we come to believe that the constituents of the property complex are instantiated without the experience having propositional contents. On the basis of an experience like Simple that represents properties like redness and triangularity, we come to believe that redness and triangularity are instantiated. This is not to say that perceptual states could not do this if they had propositional content. It is simply to say that we do not need to attribute propositional content to experiences to explain how they cause basic immediate perceptual beliefs. Given that we have compelling phenomenological reasons to deny that they have propositional contents, we should adopt the property complex view.

3.2 Subjects

Visual experiences immediately cause beliefs in subjects that concern the subjects themselves. Typically, these beliefs concern spatial relations the subject bears to nearby objects. I believe that my hat is two feet away from me; I believe that I am standing behind someone very tall; I believe I am twenty yards from a growling tiger. Part of the cognitive role of experiences is to cause us to form those beliefs. How do they do it?

One explanation is that subjects enter the content of experiences themselves. But Identity Representationalists cannot accept this view. If you sat at my seat in the coffee shop, you would have an experience with (more or less) the same phenomenal character. By Identity Representationalism, our experiences have the same content. But then there is no way that my experience represents me, and your experience represents you. So experiences cause subject-involving beliefs without themselves representing subjects.

We might be able to get around this were we to accept the existence of a spatially located phenomenal self.⁵⁴ I personally find this claim phenomenologically dubious.⁵⁵ But one way to resolve this dispute is to see whether visual experience can play the requisite cognitive role even if the content does not include a phenomenal self. If so, this would show that phenomenal selves are explanatorily superfluous.

Another explanation is that experiences represent subject-involving properties. On one way of understanding what it means to be subject-involving, it is unproblematic. My visual experience represents a number of spatial relations, many of which in fact hold between me—the subject—and things in my environment. What I mean by "subject-involving properties" is

⁵⁴ Michelle Montague has suggested this view in conversation.

⁵⁵ Depending on how we understand phenomenal selves, it would also risk violating Representationalism, to which I am already committed.

stronger. These are properties that constitutively involve subjecthood (but not necessarily any particular subject). For example, having perceptual experiences is a subject-relative property, as only subjects can have experiences. Being six feet away from a subject is also a subject-involving property.

My view is that visual experiences represent neither the subject of the experience nor subject-involving properties. In other words, the property complex represented by a given visual experience could be instantiated without any subjects being present, or even existing.

To see how this might be the case, consider the representational content of depictions, such as paintings. A painting represents a scene from a particular perspective, much like a visual experience. But paintings do not represent subjects or have subject-involving content. Intuitively, a painting can accurately represent a scene without anyone occupying the point of view from which the scene is depicted. It merely represents things in the scene as bearing various spatial relations to something—a subject, a region of space, an inanimate object, or whatever.⁵⁶

On the property complex view, much the same is true of visual experience. My visual experience does not represent me, or subjecthood, or the property of having an experience, or any other subject-involving property. It represents a property complex, one slot in which involves standing in spatial relations to something.

⁵⁶ Some philosophers, such as Munton (2021, p.650), object to analogies between visual experience and pictorial representations. I reply that drawing one analogy between experiences and pictures in one respect, as I have done in the main text, in no way implies that experiences are themselves "pictures in the head", or even that pictures and experiences share more than one interesting property.

Given such a sparse view of perceptual content, how do visual experiences cause subject-involving beliefs? On the view under consideration, a subject who remained perfectly stationary for her entire existence and lacked experiences in any other perceptual modality would not form any subject-involving beliefs on the basis of her visual experiences. She would still be able to form beliefs concerning the properties represented by her experience, as described in section 3.1 above. But she would not come to think that she instantiated the property complex in question.

I suspect we come to form subject-involving beliefs on the basis of experience in virtue of associations between experiences. Any account of how this occurs is necessarily speculative, but I suspect it goes more or less as follows.

As infants move around, there are regularities in how their visual experiences change. These regularities include correlations between visual and tactile experiences, correlations between visual experiences and intentional movements, and similarities between the property complexes represented at various times. In time, they come to tacitly accept that the represented property complex always includes a slot to which everything else bears some spatial relation, and they come to believe that we instantiate this slot in the content of any given experience. This standing belief allows them to transition immediately from visual experiences to subject-involving beliefs.

There is a sense in which we can describe visually perceiving subjects, including infants, as believing that they occupy a certain spot in the property complex. But this need not and generally should not be construed as having an explicit mental representation of generalizations about experience, or as having explicit representations of their experiences as

such. Infants and toddlers simply transition from visual experiences to appropriate actions, possibly without even forming explicit beliefs on the basis of their experiences that would justify their actions as appropriate. At a later stage of development, they can explicitly represent themselves as bearing the relations they visually represent to things in their environments. But even cognitively sophisticated adults need not have a prior perceptual representation of themselves in order for an experience to cause them to form beliefs about themselves. They simply transition from their experiences to subject-involving beliefs in accordance with previously established associations.

Of course, infants are not in a position to articulate the line of thought that leads them to these beliefs, nor are we in a position to remember how we came to form these beliefs when we reach adulthood. But this is not a problem, as there is plenty of precedent for learning processes of this kind. Infants' ability to learn spoken languages likely depends on a similar process of learning through experience, although they are unable to remember the learning process once they know the language. So there is no obstacle in principle to our subject-involving beliefs depending on our using a similar learning process to discover correlations between the contents of visual experiences and our location relative to objects nearby.

The content of our subject-involving beliefs will depend on our concept of self. Normal human subjects, with relatively sophisticated concepts of self, will form richer subject-involving beliefs corresponding to their more sophisticated concepts. Infants and non-human animals, with minimal self-concepts, will form correspondingly impoverished subject-involving beliefs.

On the property complex view, the phenomenology of our visual experiences is much the same as that of infants and non-human animals. The difference is that our conceptual

sophistication enables us to form more sophisticated immediate perceptual beliefs. This locates the psychological difference at the level of belief, not the level of experience. In my view, this is the correct result.

3.3 Objects

As noted in section 1.1, it seems that two experiences had on two different occasions can be phenomenally identical, despite being experiences of distinct particulars. This raises a puzzle for the property complex view. Visual experiences regularly put us in a position to have singular thoughts about objects in our environment. How can this occur if the experience itself does not itself have singular content?

Before addressing this question directly, let's consider a helpful distinction from Skrzypulec (2015). Metaphysicians distinguish between the substratum theory of objects and the bundle theory of objects. On the substratum theory, an object consists of a substratum element and the properties it instantiates, Substrata can be defined by their theoretical role: they might serve to individuate objects, to stand in the instantiation relation to particulars, or to unify properties into a single object. The bundle theory denies the existence of substrata. On the bundle theory, objects are simply properties bound together, with no further thing to serve as individuator, instantiator, or unifier. The binding is typically thought to be done by a primitive relation called "compresence", but we can leave the notion of binding intuitive.

Skrzypulec points out that we can make a similar distinction with regard to the contents of mental states, in particular visual representations. A given representation could therefore have objectual content in one of two ways. It could represent a collection of properties bound together such as to compose a bundle-theoretic object. Or it could have substratum-theoretic

content by representing properties as instantiated or unified by some further thing, or by representing objects as being individuated by something other than their properties.

We can now see that, on the property complex view, visual experiences have bundle-theoretic objectual content. As we saw in section 1.4, a property complex is not just the set of its constituents. The properties constituting a property complex are bound together (via conjunction and reflexive binding, if we follow Forrest) in such a way as to entail the presence of a bundle-theoretic object, composed at least in part of those properties. However, visual experiences do not have substratum-theoretic content, as there is no representation of an individuator, instantiator, or unifier of objects—except insofar as the property complex itself serves to individuate the objects it instantiates.

This is not to say that, on the property complex view, the content of a visual experience includes bundle-theoretic objects, or that visual experiences are inaccurate if the substratum theory is true. Visual experiences do not represent the bundle-theoretic compresence relation, nor do they represent the absence of a substratum. Our claim is more modest: experiences represent the binding together of properties in a way characteristic of bundle theory, without representing them in a way that would require something to individuate or unify the represented objects, or to instantiate the object's properties.

We can now see why the feature-placing content view, mentioned briefly in section 1.1, is inadequate as a theory of visual content. If visual experiences merely represented colors at locations in the visual field, they would have neither bundle-theoretic nor substratum-theoretic objectual content. Visual experience would therefore not provide us with a way of singling out objects from their surroundings, or to determine which color and shape properties are bound

together. But clearly visual experience itself does serve these roles, which shows that the feature-placing content view is false.

Since visual experiences have bundle-theoretic objectual content, we can explain widely shared intuitions about phenomenal particularity. For example, Montague (2011, p.121) notes that perceptual experiences have “the character of being experience of individual particular objects.” Similarly, Mendelovici (forthcoming) notes that a typical experience “has a particular phenomenology as of there being a particular object present in your experience.” Intuitions such as these can be satisfied by any view that attributes bundle-theoretic content to experiences, including the property complex view. Or at least, it is not clear why bundle-theoretic objectual content would fail to satisfy these intuitions.

However, there seem to be compelling reasons to attribute substratum-theoretic content to visual experiences. Vision scientists have gathered an impressive amount of experimental evidence for the presence of perceptual object representations (henceforth “PORs”), distinct from representations of properties bound together.⁵⁷ As we will see, this is a problem for the property complex view.

Much of the evidence for PORs comes from the multiple object tracking experimental paradigm, in which subjects are asked to track multiple objects as they move around on a display screen. Subjects are remarkably good at tracking up to four objects in this way, even if the visible properties of the tracked objects change. In fact, Bahrami (2003) showed that subjects can successfully track and reidentify objects despite failing to notice changes in the

⁵⁷ See Quilty-Dunn (2020) for a helpful discussion of empirical work on PORs.

objects' visible properties. If tracking objects over time were a matter of post-perceptual judgment based on perceptual representations of properties, there would be no way to track objects while being ignorant of their properties. So experiments like this one provide compelling evidence that there are PORs.

Once we grant the existence of PORs, the natural view is that they are constituents of visual experiences. This does not entail that visual experiences have singular content. We have not yet identified the semantic content of PORs; it may well be that they function more like demonstratives, such as the word "this" in English, than as singular referring terms. But if visual experience does include PORs, this does show that the content involves substratum-like elements, and thus that the property complex view is false.

Although I accept that there are PORs, and that they are perceptual rather than post-perceptual, I deny that PORs are part of our visual experiences. There are at least two kinds of visual perceptual representations: PORs, and visual experiences that represent property complexes. The two kinds of representation interact, and they may compose further representations, but they are still distinct. I believe that the experimental evidence ultimately supports this view.⁵⁸

To see how two closely related representations might be distinct, consider cases in which visual imagery is mentally superimposed on a visual experience. With effort, I can imagine a pink elephant sitting on the corner of my desk. The elephant imagery is superimposed on my visual phenomenology, and there seems to be a sense in which the perceptual experience and

⁵⁸ The account to be offered below closely resembles the account in Montague (2011). In particular, PORs correspond closely to what she calls "object-positing" content.

the imaging compose a further experience. But we would not say that my imagining an elephant is itself part of my perceptual state. For one thing, the conditions under which my visual experience would change are entirely different from the conditions under which my imagery would change: the former is counterfactually dependent on my environment, while the latter is under my voluntary control.

My claim is that PORs are analogous to this sort of visual imagery. PORs are not under voluntary control to the same extent as visual imagery, but they do exhibit the same kind of detachment from visual experiences that we observe with visual imagery. To demonstrate this, we need experimental evidence that PORs persist independent of the sort of environmental stimulus required for visual experience. This evidence can be found in cases where PORs persist through occlusion.

Consider the visual phenomenon known as the “tunnel effect”. Suppose a visible object disappears behind an occluding figure. Later, a second, similar object reappears from behind the occluding figure, at roughly the time and place we would expect the first object to reappear given its trajectory. Subjects perceive the second object as identical to the original one, regardless of whether the disappearing and reappearing objects are identical.⁵⁹

Now we can ask: are occluded objects perceptually represented during the occlusion period? We could say that they are not: PORs are not active during the occlusion period, before being redeployed as objects reappear. But that makes it hard to explain why the same POR is deployed after reappearance. The more natural answer is that PORs represent the moving object during the occlusion period, and in particular they represent it as moving toward the

⁵⁹ For example, Flombaum and Scholl (2006).

other side of the occluding object. So PORs can represent objects even in the absence of an occurrent visual experience of the objects' properties.

This leaves us with two options. We can maintain that PORs are constituents of visual experiences, despite the fact that they are deployed in the absence of any visual stimulus. Alternatively, we can treat them as distinct representations, which operate alongside but independently from visual experiences. I think the evidence supports the latter interpretation.

Individuating perceptual representations in this way is not a matter of decision or convenience, but follows from natural ways of thinking about mental representations and their individuation conditions. For example, visual experiences have different functional roles than PORs: visual experiences are directly responsive to the environment, while PORs (as witnessed by the tunnel effect) are responsive in a less direct way. Visual experiences also have integrated content, in that removing one property from the represented complex changes the overall nature of the complex. By contrast, PORs are detachable from visual experiences, in that failing to token a POR would not lead to further changes in the content of the experience. This is further evidence that PORs and visual experiences are distinct representations.

As noted above, we can maintain that PORs and visual experiences are distinct representations while accepting that they can compose further representations.⁶⁰ For example, suppose I undergo Simple while tokening a POR directed at the red triangle on the left. Simple and the POR may compose a further perceptual representation, which we might gloss in English as "that thing is red and triangular". This further representation has propositional content, as it

⁶⁰ Compare: my concept <bear> and my concept <tall> are distinct representations, but compose the further representation <bears are tall>.

involves a referring demonstrative, the POR, and a predicative element, the properties represented. Most of our immediate perceptual beliefs seem to have this kind of content, rather than the existential content discussed in section 3.1 above. When I come to believe that that thing is red and triangular, my belief inherits its content from a POR and a visual experience. So PORs help explain how we form our most cognitively salient perceptual beliefs, even though they are not strictly speaking part of our perceptual experiences.

3.4 Times

Thus far, we have ignored questions around temporal representation. But clearly visual experiences cause tensed beliefs. Experiences do not cause me to believe certain properties are instantiated at some time or other; they cause me to believe those properties are instantiated now. And they cause beliefs about how my environment is changing—for example, that the rhinoceros in front of me is coming toward me quickly. How can visual experiences play this role?

Most philosophers of perception agree that experiences represent times and temporal extension, but disagree about the manner in which this representation occurs. There are, broadly speaking, two competing views: atomism and extensionalism.⁶¹

According to atomist views, experiences represent times and temporal extension in virtue of, at some time, representing both that very time and past times.⁶² An atomist might say that my experience represents the baseball traveling through the window between t_0 and t_1 by, at

⁶¹ This terminology is widespread in the literature, but the two views are defined slightly differently by different authors. For a representative example, see Lee (2014). As I am specifically interested in the representational content of experiences, I explicitly use the notion of representation in formulating the views.

⁶² Tye (2003), Lee (2014).

t1, representing <a baseball-shaped object being inside the house and the window being broken at t1> and representing <a baseball-shaped object being outside the house and the window being intact at t0>. In other words, representation of temporal distance occurs simultaneously.

According to extensionalist views, experiences represent times and temporal extension by having the temporal properties in question.⁶³ An extensionalist might say that I represent the baseball traveling through the window between t0 and t1 by representing <a baseball-shaped object being outside the house and the window being intact> at t0 and representing <a baseball-shaped object being inside the house and the window being broken> at t1. In other words, representation of temporal distance occurs in virtue of representing at t0 and then representing at t1, and these representations themselves being at a temporal distance.⁶⁴

It is worth noting that the property complex view and Identity Representationalism are, strictly speaking, compatible with either atomism or extensionalism. To give one (poorly motivated) example, one could say that the property of existing at time t is part of the represented property complex. But atomism and extensionalism are both poor fits for Identity Representationalism. Unlike views that draw a distinction between content and phenomenal character, Identity Representationalists must hold that anything represented in visual experience makes a distinctive phenomenal contribution. And it is difficult to see what distinctively temporal phenomenology would be.

⁶³ Dainton (2000), Rashbrook-Cooper (2017).

⁶⁴ Sometimes, atomism and extensionalism are contrasted with a third view, snapshot theory (Chuard (2011)). The view I will defend is arguably a version of snapshot theory, depending on how that view is formulated. However, snapshot theory is often glossed as a view of the persistence conditions of experiences themselves, rather than a view of how experiences represent temporal features of the world. I will ignore snapshot theory in the main text to avoid ambiguity.

In contrast to atomists and extensionalists, I deny that perceptual experiences represent times or temporal properties. This is a consequence of Identity Representationalism and the fact that there is no distinctly temporal phenomenology. There is no phenomenal "now-ness" present in my visual experience at a given time, and since the phenomenology of an experience is identical to its content, this implies that there is no temporal content.

The challenge is to explain how experiences without temporal content can cause temporal beliefs. I will first explain how experiences cause beliefs about the present, then sketch an account of how we represent the recent past and change over time.

Regarding beliefs about the present, a visual experience can cause the belief that some property is instantiated now in virtue of that experience being undergone now. The temporal content of the belief is inherited from the experience's temporal property of occurring now. The subject does not have to form the thought that the experience is occurring now--she just transitions from a visual experience, had at a particular time, to the belief that the contents of that experience are instantiated at that time.

I personally have the strong intuition that visual experiences lack temporal phenomenology. But even if others disagree, we can ask what explanatory purpose temporal content would serve. If the simple explanation from the previous paragraph is plausible, visual experiences can cause beliefs about the present moment without having temporal content. This renders specifically temporal content explanatorily redundant.

Now for perceptual beliefs about the recent past and about change over time. To account for these beliefs, we have to appeal to visual working memory (henceforth VWM). There is empirical evidence that subjects retain information from their visual experiences for a short

time after those experiences pass, although the information quickly degrades without being attended to by the subject.⁶⁵ Beliefs about how things are changing in our environment may therefore emerge from comparisons between current visual experience and representations stored in VWM.

I will not attempt to explain in any detail how VWM works in conjunction with occurrent visual experience to produce beliefs about change over time. It is likely that the visual system represents change over time via composite representations with both visual experiences and representations in VWM as parts. But regardless, given the presence of representations of the recent past in VWM, there is no need for visual experiences themselves to represent change or temporal distance.

The resulting view is distinct from both extensionalism and atomism in that it denies that temporal representation occurs in experience. However, it retains both extensionalist and atomist elements, but moved to the level of belief. Like extensionalists, I hold that we can form beliefs about the present moment simply by having experiences at the present moment. Like atomists, I hold that we form beliefs about the recent past and change over time through simultaneous representations of differences between the present and recent past.

3.5 Accuracy Conditions Revisited

In section 2, I said that visual experiences do not have accuracy conditions essentially. We are now in a position to explain why they have accuracy conditions at all. In normal human adults with normal vision, visual experiences cause a variety of immediate perceptual beliefs, some of which are basic, some of which depend in part on the presence of various background

⁶⁵ Sperling (1960).

beliefs. An experience's veridicality is a matter of whether the immediate perceptual beliefs it causes are true.

More precisely, we can say that a given experience-type has veridicality conditions relative to a specified class of subjects, all of whom have roughly the same perceptual system, background beliefs and conceptual repertoire. Normal human subjects with normal vision have the same expectations about the slot in a given property complex that they instantiate; they token PORs under roughly the same circumstances; they are inclined to believe the content of their experiences is instantiated now, rather than at some other time; and so forth. A given experience will thus cause the same immediate perceptual beliefs in all subjects in this class. Veridicality is a matter of whether and how many of these beliefs are true.

Absent these expectations, there would be no sense in saying an experience can be accurate or inaccurate. Experiences just represent property complexes; property complexes have no essential directedness at the world of the sort that would generate accuracy conditions. But because we have these expectations (and share them with other philosophers of perception), we have strong intuitions about accuracy. So the property complex view can explain how these intuitions come about.

This also explains why certain bizarre experiences might lack accuracy conditions. An experience that merely represented a red, amorphous shape, without representing a distance borne to some further thing, would likely not produce any beliefs in the subject about her environment. She might think she was hallucinating, or that there was a vast red expanse in front of her, but beliefs formed would likely differ from normal human subject to normal

human subject. So it is no mystery why such experiences lack accuracy conditions relative to the class of normal human subjects.

4 The Epistemic Role of Experience

We have seen how a wide range of perceptual beliefs could be caused by visual experiences on the property complex view, despite the fact that the contents of those beliefs outstrips the content of the experience. We now face the question of how an experience can provide epistemic justification for those beliefs.

An obvious problem is that a property complex is not a proposition, and it is unclear how a mental state without propositional content can justify a belief. Some philosophers dismiss this possibility out of hand.⁶⁶ The best way to respond to these views is indirectly, by developing alternative theories of justification. If we can provide independently plausible explanations of how experiences without propositional content can justify beliefs, and the mapping from experiences to the beliefs they justify is well-motivated, this serves as an implicit argument that propositional content is not a prerequisite for justificatory power.

I will focus on the justification of the beliefs discussed in section 3 above: beliefs concerning the subject of the experience, the properties and relations that constitute the property complex, objects in the subject's environment, and the time at which the subject has their experience. (We can coin an acronym and call these "SPOT-beliefs".) There may be other beliefs that are immediately justified by perceptual experiences, such as the belief that I exist or the belief that I am having a visual experience. However, explaining perceptual justification of

⁶⁶ McDowell (1994). Also, consider Batty (2010, section 4.2), who says that sensory states that merely represented properties would give us "no information about the states of objects in our environment."

SPOT-beliefs is hard enough in its own right, and doing so serves as a proof of concept for the property complex view.

I will consider two theories of perceptual justification: evidentialist reliabilism and essentialism about phenomenal justification. I am undecided as to which of these theories is true; as I suggest in 4.2, they may be compatible. However, if one or both are plausible upon reflection, they can be appealed to by the property complex theorist in an account of the justification of SPOT-beliefs by experiences. This is sufficient to respond to the charge that the property complex view is in principle incapable of explaining perceptual justification.

I will focus only on perceptual justification and ignore perceptual knowledge. I find the distinction between knowledge and mere justified belief obscure.⁶⁷ However, on the plausible assumption that justification is necessary for knowledge, the account of perceptual justification offered here should provide a good start for an account of perceptual knowledge compatible with the property complex view.

4.1 Evidentialist Reliabilism

Reliabilists about epistemic justification hold that a view is justified if it is formed as part of a reliable belief-forming process.⁶⁸ So, a reliabilist will say that our SPOT-beliefs are justified if the process by which we form them is reliable.

In section 3, we sketched an account of how visual experiences cause SPOT-beliefs. We can ask whether this process of forming SPOT-beliefs is reliable. Assuming it is—a plausible if

⁶⁷ Bonjour (2010).

⁶⁸ Goldman (1979).

somewhat controversial assumption⁶⁹—our SPOT-beliefs are thereby justified. A process can reliably result in true beliefs even if there are no intervening states with propositional content to serve as a basis for the belief. So reliabilism is a good fit for non-propositional views of perceptual content like the property complex view.

Reliabilist theories face a number of problems. One objection concerns beliefs that are formed via reliable processes but are intuitively unjustified. For example, a clairvoyant who finds himself spontaneously forming beliefs, for which he can provide no evidence or reasons, is intuitively not justified in his beliefs. However, if he forms these beliefs by a reliable faculty of clairvoyance, the reliabilist (who accepts the simple version of reliabilism above) is committed to saying his beliefs are justified.⁷⁰ Another issue is the generality problem. Before judging whether a given belief was reliably formed, the reliabilist must identify the belief-forming process by which it was formed. But there are many different types of belief-forming processes, at different levels of generality, under which the token belief-forming process a subject formed a given belief in any particular case. We need a way of selecting the belief-forming process that is relevant for epistemic evaluation.⁷¹

My preferred version of reliabilism is evidentialist reliabilism, which has the resources to at least make progress on these problems. Following Comesana (2010, p.584), we can

⁶⁹ As noted in section 2.1.3, there are compelling reasons to think that colors are not actually instantiated. If not, any process that leads us to form beliefs about colors being instantiated in our environment will be unreliable, at least on standard views of reliability.

⁷⁰ Bonjour (1980).

⁷¹ Another problem with reliabilism is that brains in vats can intuitively have justified (but false) beliefs about their environments, but they do not form these beliefs by a reliable belief-forming process. This example seems to show that reliability is not sufficient for justification. My preferred solution to this problem is to supplement reliabilism with essentialism about phenomenal justification, as discussed below in section 4.2.

formulate the view as follows:⁷²

Evidentialist Reliabilism: A belief that p by S is justified iff

(1) S has evidence e;

(2) the belief that p by S is based on e;

and either

(3a) e doesn't include any beliefs and the epistemically relevant type of process by which S's belief that p was formed is reliable; or

(3b) e includes other beliefs of S, all those beliefs are justified, and the epistemically relevant type of process by which e was formed is conditionally reliable.⁷³

I assume going forward that a subject's evidence is restricted to their personal-level mental states. Non-mental states of affairs, such as my water bottle being rose gold, and subpersonal mental representations of the visual system are therefore not evidence. This restriction does allow my beliefs to serve as evidence in a belief-forming process. It also allows perceptual experiences to serve as evidence, even if they lack propositional content. In particular, a visual experience that represents some property is evidence that there is something before me with that property.

Mentalism about evidence allows us to reject views of evidence that make justification too easy. For example, the fact that p should not count as evidence for a subject's belief that p. But mentalism about evidence does not mean that the evidentialist reliabilist must give up her

⁷² A similar view is explored in Goldman (2011).

⁷³ This formulation differs slightly from Comesana's. I include the phrase "epistemically relevant type of process" to remain neutral as to the correct solution to the generality problem, which I address below. I do not require that the types of process in question be "actually" reliable, so as to remain maximally neutral between various conceptions of reliability.

externalist credentials. The evidence a subject uses may supervene on her mental states, but the reliability of her belief-forming process, and therefore the justificatory status of her belief, will constitutively depend on non-mental facts. And we need not require that the subject can access the evidence she uses in any given case.

There are a number of kinds of reliability the Evidentialist Reliabilist to appeal to. She can appeal to the actual reliability of a belief-forming process--that is, the percentage of beliefs actually formed by that process that are true. She can appeal to the reliability of the process within a range of possible scenarios, circumscribed as broadly or narrowly as she chooses. She can also appeal to non-alethic kinds of reliability. For example, she can say that for a belief-forming process to be reliable in the relevant sense is for it to reliably aid the subject's efforts at self-preservation. I will not attempt to resolve this issue. I will just note in passing that belief-forming processes involving visual experiences may be more reliable in some of these senses of reliability than others.

Now we can respond to the objections raised above. Consider the clairvoyant discussed above, who reliably forms true but intuitively unjustified beliefs. Those beliefs are unjustified according to Evidentialist Reliabilism, because they are not formed on the basis of any evidence. This will be true on any reasonable conception of evidence, as there is nothing to which the clairvoyant can appeal as a basis for his beliefs. Therefore, the first clause above is unsatisfied by the clairvoyant's beliefs, and Evidentialist Reliabilism secures the correct result.

Now consider the generality problem, specifically as it concerns SPOT-beliefs. We need to identify the process or processes by which we form SPOT-beliefs that are relevant for epistemic evaluation. We can split this into two questions. One, by what epistemically relevant process

are basic SPOT-beliefs formed--that is, beliefs that are formed solely on the basis of visual experiences are not on the basis of other beliefs? Two, by what epistemically relevant process are non-basic SPOT-beliefs formed--that is, beliefs which we form partly on the basis of experiences and partly on the basis of other beliefs?

We can first note that the types of belief-forming processes that seem epistemically relevant are purely psychological.⁷⁴ These types differ along various psychological dimensions: what kinds of content do the mental states involved in the process have; what attitudes does the subject bear to the contents of those states; how alert was the subject as they formed the belief in question; and so forth. Types that are not purely psychological, such as the type of process <forming a belief by using modus ponens while standing on one foot and being bald>, are intuitively not epistemically relevant.⁷⁵

Furthermore, the particular content of the mental states involved in the process—as opposed to the type of content they have--does not seem epistemically relevant either. Suppose I have an experience as of a red triangle and form the belief that there is a red triangle before me, while you have an experience as of a green square and form the belief that there is a green square before you. My belief-forming process falls under the following type: <forming the belief that there is a red triangle before me on the basis of an experience as of a red triangle>. Yours does not. But intuitively, this type is too specific. We want a type under which both your token belief-forming process and mine fall.⁷⁶

⁷⁴ The solution to the generality problem sketched below is similar to the one defended in Alston (1995).

⁷⁵ To say that belief-forming processes are typed mentally is not to give up reliabilism's externalist credentials. The type of belief-forming process a subject uses may supervene on her mental states, but the reliability of that process, and therefore the justificatory status of her belief, will depend on non-mental facts.

⁷⁶ In this respect, I differ from Alston (1995, p.18), who is clear that epistemically relevant belief-forming processes are often individuated by the specific content of the beliefs formed. I find this odd, given his emphasis in other

For basic SPOT-beliefs, I think the epistemically relevant process is roughly the following: <forming a belief that something is F on the basis of a perceptual experience that represents F-ness>. This process type is purely psychological, as it only involves a belief and a perceptual experience on which that belief is based. The type involves the structure of the contents of the mental states in question: the experience merely has F-ness as its content, while the belief has as its content a proposition with F-ness as a constituent. But the type does not involve the particular contents of the mental states themselves.

It is more difficult to identify the epistemically relevant types by which other SPOT-beliefs are formed. Take the belief I form on the basis of Simple that I am three feet away from something red and triangular. The inputs to my belief-forming process in this case are Simple and my standing belief that in most cases, I occupy the slot in the property complex represented by my experience to which no monadic properties are attributed. The relevant type will presumably involve relations between the content of the experience and the content of the standing belief; for example, it will involve the fact that the belief is in some sense directed at the experience. I don't know how to determine the type more specifically.

I have motivated this sketch of a resolution of the generality problem by appeal to intuitions about what types of belief-forming processes are epistemically relevant. However, there is a deeper motivation. An Evidentialist Reliabilist holds that beliefs are justified in virtue of being based on evidence in a reliable way. Therefore, the natural way for her to type belief-forming processes for the purpose of epistemic evaluation is with respect to the type of

parts of the essay that the processes we are looking for are "natural kind[s]" (p.11). Presumably, two beliefs can be of the same natural kind without having identical contents.

evidence upon which the belief is based, and the way in which the beliefs are based on that evidence. As we are taking evidence to be mental states, what are relevant are mental types: in particular, type of content and type of attitude borne to that content. So the Evidentialist Reliabilist is in a good position to solve the generality problem.

Let us take stock. Reliabilist theories of justification do not require experiences to have propositional content to play a justificatory role, and therefore they are a good match for the property complex view. Evidentialist Reliabilism in particular allows us to identify more precisely the evidential role visual experiences play in justifying SPOT-beliefs, as well as (at least partially) resolving problems for other reliabilist theories. On the assumption that the processes by which we form SPOT-beliefs are in fact reliable, Evidentialist Reliabilism is one promising avenue for securing perceptual justification on the property complex view.

4.2 Essentialism About Phenomenal Justification

Adam Pautz (2017, pp.391-2) claims that it is in the *essence* of phenomenal consciousness to provide epistemic reasons. I wish to expand on this proposal. Before doing so, I will distinguish essentialism about phenomenal justification from similar views with which it is easily conflated.

First, essentialism is distinct from phenomenal conservatism, the view that, if it seems to a subject S that P, S has defeasible justification to believe that P.⁷⁷ For one thing, a seeming to S that p need not be a phenomenally conscious state of S. More relevant for our purposes, on the property complex view of perceptual content, a subject's visual experience does not

⁷⁷ See Huemer (2001, 2006). Pryor (2000, p.536) argues for a similar view, but restricted to experiences as of P. His views will be discussed below in the paragraphs concerning phenomenal force.

have propositional content and is therefore not a seeming that P. So phenomenal conservatism has little to do with essentialism, and it does nothing to help the property complex view of visual perceptual content.

Essentialism is compatible with views that ground the justificatory power of phenomenal consciousness in some special property experiences, distinct from the property of being an experience. For example, some philosophers attribute this justificatory power to phenomenal force, an aspect of the phenomenal character of perceptual experience, which is analogous to the assertoric force of declarative utterances.⁷⁸ Others attribute it to the introspective accessibility of phenomenal character, which allows subjects to reference phenomenal character to explain their beliefs to themselves and others.⁷⁹ We can group views of this kind together with essentialism under the label "phenomenal chauvinism."⁸⁰ The line between chauvinistic and non-chauvinistic views is not particularly sharp, but it is clear enough to be useful in understanding the terrain.

What versions of phenomenal chauvinism have in common is the contention that, at least in typical cases, phenomenally conscious states have special justificatory power that other mental states lack. However, essentialism neither implies nor is implied by such views, at least

⁷⁸ As discussed in Siegel and Silins (2015, pp.790-1).

⁷⁹ See Smithies (2014). Smithies distinguishes between "ambitious" strategies that seek to explain the connection between consciousness and justification in terms of some further facts, and "modest" strategies that merely seek to motivate such a connection. Smithies denies that the ambitious strategy can succeed because this connection is fundamental; this makes him an essentialist (in my terms). However, he motivates essentialism by appeal to the accessibility of phenomenal consciousness through introspection and the purportedly close tie between our concept of epistemic justification and introspective accessibility. One could easily borrow Smithies's reasoning and argue that it is the accessibility of (some or all) conscious states that gives them justificatory power, not their being conscious by itself. My objections in the main text are aimed at views of this sort.

⁸⁰ One could imagine other versions of phenomenal chauvinism. For example, perhaps conscious perceptual states have a sui generis representational content that unconscious perceptual states lack, in virtue of which such states have special justificatory power. In the main text, I will confine my focus to the two views described above and essentialism.

in the forms in which they are often expounded. For example, there are reasons to believe that phenomenal character is not always introspectively accessible to subjects.⁸¹ It also seems that the contents of beliefs are sometimes introspectively accessible in much the same way as phenomenal character, meaning that beliefs can have justificatory power for the same reason despite lacking phenomenal character.⁸² Similar things can be said about phenomenal force: it seems particularly unlikely that having phenomenal character is sufficient for a mental state to have the assertoric force that perceptual experiences are purported to have. If I faintly imagine a unicorn, my imagining has phenomenal character, but presumably it lacks phenomenal force.⁸³

The dialectical advantage of essentialism about phenomenal justification is that it denies the legitimacy of further requests for explanation. Experiences do not justify beliefs in virtue of some property which many of them contingently share. Experiences justify beliefs because it is in the essence of experience to do so.

We can motivate essentialism by noting examples that non-chauvinistic views intuitively get wrong. Supposing a brain in a vat can have perceptual experiences, it seems natural to say that those experiences justify its perceptual beliefs, despite the fact that these experiences are systematically misleading. But many non-chauvinistic views misclassify the brain in a vat's perceptual beliefs as unjustified. Its experiences are systematically unreliable; they do not constitute knowledge; and so forth. The best explanation seems to be that the phenomenal

⁸¹ Block (2007).

⁸² But see Bayne and Montague (2011) for arguments that occurrent beliefs have their own phenomenal character.

⁸³ Compare Teng (2018, p.641).

character of the brain in a vat's experiences is sufficient to justify its resulting beliefs, or at least closely tied to something that is sufficient.

These examples show that experience has special justificatory power, but they do not support essentialism over other versions of phenomenal chauvinism. We can fill this gap in the argument by noting problems other chauvinistic views face.

Take views that hold that phenomenal force gives perceptual experiences their justificatory power. The problem is then to specify what phenomenal force is, and to say what differentiates conscious states with phenomenal force from those that lack it. I personally cannot identify any distinctive phenomenal property, or any distinctive kind of phenomenal character, that might reasonably be termed "phenomenal force". I simply find myself forming justified beliefs on the basis of my perceptual experiences. Appeals to a special phenomenal property of the perceptual state would seem to overcomplicate the point.

Proponents of phenomenal force characterize the relevant conscious states in different ways. Pryor (2004, p.357) claims they involve "the feeling of seeming to ascertain that a given proposition is true." Tucker (2010, p.530) says such a state "makes it feel as though [it] is 'recommending' its propositional content as true or 'assuring' us of the content's truth." But I simply do not know how to understand these claims unless they are ways of asserting that these conscious states dispose me to form beliefs on their basis, and that beliefs formed on their basis are thereby justified. My visual experiences seem to perform their justificatory role without being accompanied by any forceful, assertoric, recommendational, or alethic

phenomenology. The distinctive kind of phenomenology proponents appeal to is introspectively obscure--and, if essentialism is viable, it is explanatorily redundant.⁸⁴

Now take views that hold that experiences have justificatory force in virtue of the accessibility of their contents.⁸⁵ Such views predict that, if there are cases of experiences with inaccessible contents, these experiences lack justificatory force. But intuitively, experiences in these cases can play the same justificatory role as experiences we introspect.

Sperling (1960) showed subjects three rows of four alphanumeric characters and asked them to report on what they saw. Subjects reported being able to see all twelve characters, but were only able to identify about four of them. However, he found that if a (high, intermediate, or low) tone was played to tell subjects to attend to the (top, middle, or bottom) row, the subjects were able to identify all four letters in the relevant row. A natural way to interpret this result is that subjects are able to see all twelve character, despite only being able to report on a subset of the letters they saw. These subjects also failed to form beliefs about characters in the uncued rows.

⁸⁴ Similar things can be said about a response by the phenomenal conservative defended in Huemer (2006). One might say that visual experiences, which themselves lack propositional content, cause seemings that the relevant property complex is instantiated in the subject's environment--and it is this seeming, not the experience itself, that justifies the ensuing SPOT-beliefs. I simply do not find that there is any such intermediating seeming between my visual experience and the ensuing SPOT-beliefs, nor do I think propositional seemings are needed to explain the justification of our SPOT-beliefs.

⁸⁵ Smithies (2014) distinguishes between "ambitious" strategies that seek to explain the connection between consciousness and justification in terms of some further facts, and "modest" strategies that merely seek to motivate such a connection. Smithies denies that the ambitious strategy can succeed because this connection is fundamental; this makes him an essentialist (in my terms). However, he motivates essentialism by appeal to the accessibility of phenomenal consciousness through introspection and the purportedly close tie between our concept of epistemic justification and introspective accessibility. One could easily borrow Smithies's reasoning and argue that it is the accessibility of (some or all) conscious states that gives them justificatory power, not their being conscious by itself. My objections in the main text are aimed at views of this sort.

Now consider subjects who, like the subjects of Sperling's experiment, have experiences as of all twelve letters, but cannot report on more than four. However, unlike Sperling's subjects, their experiences cause them to form beliefs about the identity of all twelve letters. So, suppose the top row reads "P-H-E-N", and the experimenter cues a different row. These subjects come to believe that the top row reads "P-H-E-N", and this belief is caused by the experience. However, they have no memory whatsoever of experiencing the top row, and if asked, they will deny that they saw "P-H-E-N" (or at least remain neutral as to exactly what they saw). Their beliefs about the top row seem, to them, to pop into their heads out of nowhere, even though they are reliably caused by the (now forgotten) experience of the entire grid of twelve letters.

My intuition is that the subjects' beliefs that the top row reads "P-H-E-N" are prima facie justified in virtue of being formed on the basis of a visual experience. Accessibility internalists must deny this: since these subjects have no ability to gain access to the relevant contents, their beliefs about the top row are unjustified. The case is certainly odd, and the epistemic status of the resulting beliefs may be unusual. In particular, we can grant that the feeling that the belief about the top row came out of nowhere is an undercutting defeater for the belief, even though the belief is (unbeknownst to the subject) caused by the experience. But I think that the belief still has prima facie justification in virtue of being based on the experience, even if this justification is ultimately defeated. This is a counterexample to accessibility internalism.

Accessibility internalists can respond by weakening the sense of accessibility in question. They can point out that, before the cue was played, these subjects had the ability to attend to the top row of the grid. Although they did not ultimately attend to the top row and now have

no memory of experiencing it, they could have attended to the top row had the right cue been played. The accessibility internalist can say that this fact—that the basis of the subjects' beliefs was accessible at one time—explains the justification of these beliefs. But this kind of accessibility is so weak, and so disconnected from the intuitions that motivate forms of access internalism in the first place, that I cannot see how it could have any epistemic relevance. Internalists typically motivate accessibility requirements by the need to provide a justification of one's beliefs to oneself or others upon reflection.⁸⁶ But the subject who believes the top row says "P-H-E-N" cannot provide any such justification for her belief, even if at one point she could have attended to her experience of the top row. It seems the epistemically relevant point is that she did, in fact, have such an experience.

Here is another example. Following Tye (2009) and Mendelovici (2013), I hold that emotions and moods are experiences as of normative properties. Humans seem to be relatively bad at introspecting our moods. However, we frequently form beliefs about normative properties on the basis of our moods, even when we seem to be unaware of the mood in question. I may feel glum and come to believe on the basis of that feeling that the world is a miserable place (as revealed in my behavior), but deny that I am in a bad mood if asked. If my belief is *prima facie* justified in virtue of being caused by my glumness, yet I am not able to reflect upon my mood phenomenology, this is a counterexample.

One option is to deny that my belief that the world is a miserable place is *prima facie* justified. I do not think my belief is *ultima facie* justified. I know that my moods can change without any appreciable change in the world, and this gives me reason to doubt that they are

⁸⁶ See Huemer (2006), Dogramaci (2013, section 2).

reliable guides to the world's normative properties. But I do think my belief is prima facie justified. If I were in a glum mood my entire life, I would have no reason to doubt that my glumness is accurately representing the world, and I would be epistemically blameless for believing that the world is as miserable as it seems.

Another option is to insist that my mood phenomenology is in principle accessible, and its accessibility in what grounds its justificatory power. As in the previous case, the issue is to specify the relevant kind of accessibility: how far do we have to go into modal space before I am able to report on my mood or emotional phenomenology? I suspect that, much as with the previous example, any sense in which my mood phenomenology is accessible is relatively trivial and epistemically irrelevant.

So non-essentialist versions of phenomenal chauvinism face serious problems. Those problems are essentialism's strengths. Essentialism can explain why perceptual experiences and emotions can have inaccessible phenomenology while still conferring doxastic justification on a subject's beliefs: it is in the essence of consciousness to do so. Essentialism can also capture what proponents of phenomenal force get right, the fact that the beliefs we are disposed to form on the basis of conscious perceptual states are justified.

To say that experiences justify essentially is not to say what beliefs they essentially justify. If visual experience had propositional content, we could say that experiences essentially justify belief in their propositional contents. But on the property complex view, we need to provide another account.

Visual experiences that represent a given property complex provide immediate propositional justification for beliefs concerning instantiations of the constituents of the

property complex. If I have an experience as of a red triangle to the left of a green square, I have propositional justification for the following beliefs: there is a red triangle, there is a green square, there is something red, there is a red triangle to the left of something else, and so on for all constituents of the property complex, up to and including the property complex itself. I have immediate doxastic justification for beliefs with these contents if the beliefs are caused by experiences with matching contents.

The justification that experiences essentially provide is defeasible. If I have an experience as of a pink elephant in the corner of the room, my belief that there are no pink elephants and my belief that elephants are not allowed in the building serve as defeaters. Hence, I lack *ultima facie* justification for the belief that there is a pink elephant in the corner of the room. Similarly, I could come to believe that physical objects do not possess colors, and that my experiences of color are systematically illusory.⁸⁷ This belief would be a defeater for my SPOT-beliefs concerning color.

A more difficult case of justificatory defeat is the case of mental imagery. Essentialism about phenomenal justification implies that conscious mental imagery has justificatory power in the same way as perceptual experience. But obviously we are not *ultima facie* justified in believing that the contents of our visual imagings are instantiated. We therefore need to identify a defeater for SPOT-beliefs one might form on the basis of visual imagery.

The defeater in question is the mental effort undertaken by the subject. When I want to imagine a pink elephant in the corner of the room, it requires focus for me to maintain the mental image. If there were really such a pink elephant, this focus would not be required for

⁸⁷ As discussed above in section 1.3.

the experience to persist. This mental effort defeats any propositional justification for the elephant's being present (or its properties being coinstantiated).

This explanation of the epistemic difference between perception and imagery dovetails nicely with the Perky's experiments on the indiscriminability of perception and imagery.⁸⁸ Subjects in the experiments were asked to visualize an object such as a banana or tomato. Unbeknownst to the subjects, an image of the object they were asked to imagine was projected onto a screen in front of them--for example, a yellow crescent if they were asked to visualize a banana--as they attempted to engage in visualization. These subjects did not believe that there were such images in front of them, despite (presumably) having visual experiences of them. We can explain why this is the rational response: the effort that subjects associate with visual imagery served as a defeater for their prima facie justification for SPOT-beliefs based on that experience. Had the subjects' experiences changed in ways that were not felt to result from their imaginative intentions, there would not have been any such defeat.⁸⁹

Pautz claims that the justificatory power of experience is part of the constitutive essence of experience. However, essentialism allows that the justificatory power may be part of the consequential essence of experience--that is, that it follows from some other essential property of experience.⁹⁰ For example, suppose that a state's being conscious is in part a matter of its

⁸⁸ Perky (1910).

⁸⁹ This account of the rationality of Perky's subjects puts me in conflict with Hopkins (2012). Hopkins argues that Perky's subjects have non-assertoric awareness of the contents of the pictures shown on the screen in front of them. The subjects confuse this non-assertoric awareness with non-assertoric awareness of the contents of imaginings. This allows him to maintain that visual experience has assertoric force that imaginings lack, thereby denying that they are phenomenally indiscriminable and have the same justificatory power.

Fully engaging with Hopkins's view would require me to provide a theory of experience of pictures, which would take us too far afield. I will just note in passing that dual-aspect views of pictorial experience, on which subjects can be simultaneously aware of pictures and their contents, strike me as far too complex to do justice to the phenomenology of these experiences.

⁹⁰ See Fine (1995) for discussion of the theoretical role of constitutive and consequential essence.

playing some functional role, and it turns out that a state's playing that functional role gives it justificatory power. The justificatory power of consciousness would then come, not from its phenomenology, but from it playing a particular functional role. Non-conscious perceptual states that played the same perceptual role, but lacked other necessary conditions for consciousness, would therefore have justificatory power for the same reason as conscious states.

Essentialism and reliabilism of the sort discussed in the previous section may be taken to be competitors, but they can also be combined. Essentialism takes phenomenal consciousness to be sufficient for propositional justification, but we need not take it to be necessary. Similarly, reliability of a belief-forming process can be a source of propositional justification without being the only such source. So, the justification of SPOT-beliefs may be overdetermined: they are justified because they are formed by a reliable process, and they are justified because the phenomenal states on the basis of which they are formed essentially justify such beliefs.

Essentialism about phenomenal justification and Evidentialist Reliabilism are plausible theories of justification, both of which allow mental states with non-propositional content to play a justificatory role. Perhaps one or both of these views is part of the true theory of epistemic justification--or perhaps not. But given the plausibility of both views, we need not think that perceptual states must have propositional content to justify perceptual beliefs.

5 Property Complexes and Scenarios

While the property complex view of the contents of visual experience does not enjoy widespread support, there are some similar views already in the literature. It is useful to compare and contrast these competitors, especially as it helps bring out some of the unique

features of the property complex view. I will focus on one such view: Peacocke's (1992) view that visual experiences have scenario content.⁹¹

A scenario includes an origin and three axes: left-right, up-down, and front-back.⁹² Points in the scenario can then be defined by the orientation relations they bear to the origin. Surfaces will be located at various points in the scenario, with each surface having various sensible properties. (Peacocke lists texture, hue, saturation, brightness, and temperature.) According to Peacocke, the scenario is the base layer of the content of an experience; there are additional layers of propositional content.

The main similarity between the scenario and property complex views is obvious: they both attribute non-propositional content to experience. As I have tried to do in this chapter, Peacocke offers an explanation of how scenario content can perform important cognitive and epistemic roles in perceiving agents by explaining the relationship between propositional and non-propositional content. A related point of agreement is that the content of a perceptual experience need not exactly match the content of beliefs formed on its basis. A given scenario or property complex includes far more information than a normal subject will be able to conceptualize, and it can produce very different beliefs in different subjects or on different occasions.

⁹¹ Many of the points to be made about the scenario content view apply to Greenberg's (draft) view that experiences have perspectival feature maps as their content.

⁹² Peacocke (1992, p.106) describes the origin and axes as "labelled by certain interrelated properties". I find this talk of labelling opaque—in particular, it's not clear whether Peacocke takes the labels to be representational vehicles or contents—but fortunately I think it can be dispensed with. We can instead say that a scenario includes an origin and axes as constituents.

Nevertheless, there are important differences between the two views. The first is that, while scenarios are partly constituted by an origin and privileged axes, property complexes are not. The property complexes we represent include spatial relations such as <to the left of>, <above>, and <in front of>, but they do not include axes as such. They also do not include an origin, regardless of how we are supposed to understand origins. So scenarios are more complex than property complexes in these respects.

Perhaps Peacocke's reasoning is as follows. Visual experiences do not merely represent distances: they always represent things on the side closer to my heart (my left side) as being on the left of things on the side farther from my heart. (Consider whether you have ever had a visual experience that represented two objects but failed to represent one as to the left of the other.) This calls out for explanation. The simplest explanation seems to be that experiences represent the left-right axis itself. We then represent surfaces at particular locations as to the left or right of each other in virtue of their locations on this axis. So experiences must represent the left-right axis itself to explain why they represent left-right relations between objects. Much the same can be said about the up-down and forward-backward axes.

This argument is only compelling if there are no competing explanations of how we come to represent left and right. But in any case, the explanation sketched above is unsuccessful, as it only pushes the explanatory burden back a step: the scenario content theorist owes us an explanation of how we can represent the left-right axis itself, independent of representing left-right relations between things in our environment. If anything, this seems like a much more difficult task—since our environments do not in fact contain privileged axes, it is not clear what

naturalistic account we could give of this sort of representation. Better to say that we represent left-right, up-down, and front-back relations without representing axes as such.

Similarly, I do not think there is a privileged origin in the content of experience. As I argued in section 3.2, we can explain how we form beliefs about our location by reference to associations between bodily movements and changes in our visual experiences. Including origins in the contents is not required.

A second, related difference is that token experiences with scenario content are necessarily evaluable for accuracy. First, the origin and privileged axes are fixed by reference to the position and orientation of the subject's body. Points in the subject's environment can then be paired with points in the represented scenario. The scenario is accurate in that context to the extent that the properties at particular points in the scenario match the properties at the relevant points in the subject's environment. If a certain shade of redness and degree of illumination are present at the point three feet straight ahead of the origin in the scenario, the experience is accurate iff that shade and illumination are present three feet straight ahead of the subject.

The same cannot be said of property complexes because there is no origin in the content to mark the location of the subject. We need a non-arbitrary way to distinguish between an accurate experience in which the represented property complex is instantiated by the subject and things in her environment and an inaccurate experience in which the property complex is coincidentally instantiated light years away. The only way to resolve this arbitrariness is by appealing to the beliefs that a given subject is disposed to form on the basis of experiences with

that content. Since these dispositions are contingent, experiences have accuracy conditions only contingently.

One might think this is an advantage of scenario content over property complexes. I argued in section 3.5 that this is not the case. The property complex view can satisfy our intuitions about accuracy conditions in ordinary cases, given that in those ordinary cases, visual experiences are disposed to cause a variety of beliefs, which will then be true or false depending on the subject's environment. Since origins and privileged axes have no extra theoretical work to do, we can dispense with them.

Thirdly, Peacocke holds that experiences have multiple layers in addition to scenario content. I argued against this view in chapter 1, section 5.3; I will refrain from repeating those arguments here. It is worth noting that the property complexes we represent will include properties that are not included in Peacocke's scenarios. Peacocke denies that shape properties like squareness or natural kind properties like pine-tree-hood are included in scenarios, instead banishing them to separate layers of content. By contrast, the property complex view allows that a wide variety of properties, including but not limited to shapes and natural kinds, may in principle partly constitute the content. Rather than multiplying layers of content, we may make our single layer as thick as we like.

6 Consequences

We can now consider some interesting philosophical consequences of the property complex view.

6.1 Other Experiential Modalities

This chapter has been concerned to defend a view of the content of visual experience. However, much of the apparatus used to defend this view against objections can be used to defend similar views of the content of other kinds of experience. This raises the question whether we should think that other sensory experiences represent property complexes, or at least whether they also lack propositional content.

Regarding the latter question, the answer seems clearly to be affirmative. Olfactory and mood experiences, to take two examples, seem to present us with properties, but their phenomenology does not contain any predicative or quantificational elements. As an Identity Representationalist, I take the phenomenology of olfactory and mood experiences to be identical to their contents. If visual experiences can perform the requisite theoretical roles without having propositional contents, this opens the way to non-propositional views of the contents of experiences in other modalities.

Do any experiences have propositional contents? It is possible that some do, especially if we allow that there are distinctively cognitive experiences.⁹³ However, I doubt that any sensory experiences have propositional contents, regardless of modality. To have propositional contents, sensory experiences would need to exhibit predicative or quantificational structure; but no such structure is present in the phenomenology of perceptual experiences, so far as I can tell.

Despite this important similarity between modalities, I suspect the contents of experiences in different modalities differ in important ways. I will note two possible dimensions of difference for future inquiry.

⁹³ Bayne and Montague (2011).

One, some experiences do not exhibit the same phenomenal organization as visual experiences. I argued in section 3.3 that visual experiences cause beliefs about objects having multiple properties, and that this is evidence that visual experiences represent property complexes. For instance, an experience like Simple causes me to believe that there is a red triangle before me, not that something red is before me and something triangular is also before me. If they merely had feature-placing content, we would not form beliefs about properties being bound together.

The same cannot be said for experiences in other modalities. Olfactory experiences represent smell properties, but the same sort of internal phenomenal structure does not seem to be present. The smells we are aware of frequently seem to lack any spatial location or any connection to other olfactory features of the subject's environment. It therefore seems likely that olfactory experiences represent properties in an unstructured way, rather than representing property complexes.

Two, some modalities may have the kind of subject-involving content that I have argued vision lacks. In particular, I doubt the phenomenology of tactile experiences can be characterized fully in subject-independent terms. There is a difficult-to-characterize sense in which my tactile experiences represent me, the subject, as being modified in some way. Identifying more precisely what this amounts to is an important subject for future work.

6.2 Radical Anti-Disjunctivism

Disjunctive accounts of perception are currently popular. There are many kinds of disjunctivism, some much stronger than others, but they share the conviction that there are important differences in kind between accurate and inaccurate perceptual states. On the most

radical disjunctivist views, accurate experiences have nothing whatsoever in common with hallucinations, except that they are indiscriminable to the subjects who undergo them. More modest disjunctivist views accept that there are important metaphysical similarities between accurate and inaccurate experiences, while maintaining that they are nonetheless different kinds of state, perhaps in virtue of having different contents or different epistemic properties.

The preceding account is disjunctive in the following minimal sense: it accepts that some experiences are accurate while others are inaccurate. This difference is cashed out in terms of the beliefs these experiences cause, and whether those beliefs are true. Otherwise, the property complex view is entirely non-disjunctive. It treats accurate and inaccurate experiences as having the same underlying metaphysics, the same epistemic properties, and the same kind of content.

Our defense of the property complex view is implicitly a defense of anti-disjunctivism. If accurate experiences can play the theoretical roles they are required to play without having any special properties falsidical experiences lack, there is no need for us to give accurate and inaccurate experiences a disjunctive treatment. After all, an experience can have the same phenomenal character regardless of what my environment is like--or, at least, it seems that way to me. Since we lack compelling theoretical reasons to think veridical experiences must be special, we should treat them no differently than hallucinations.

Chapter 3: Berkeleyian Associationism and Perceptual Belief

In *An Essay Toward a New Theory of Vision (NTV)*, Berkeley appeals to the notion of association. I will argue that the key to understanding his notion of association is that it connects non-propositional ideas, as opposed to being a rational connection between propositional states such as judgments. This feature of Berkeley's view is the explanatory basis for many of his theory's advantages over its rivals. I will close by suggesting some ways of applying Berkeley's notion to contemporary debates.

1 Berkeley and the Geometric Theory of Vision

Berkeley begins *NTV* with his sights firmly set on what he calls the "geometric" theory of vision, which he takes to be the received view at the time of writing. Geometric theories can be distinguished from their competitors by the claim that geometric reasoning is a part of vision itself. Without appealing to geometric inferences, they claim, our vision would be comparatively impoverished.

Descartes's theory of vision is a representative example.⁹⁴ The visual process begins with the stimulation of the retina by light rays projecting from something in the perceiver's environment. From there, signals are sent from the retina to the brain, and then ultimately to the soul. This results in a sensation in the soul in which various sensible properties—colors in the case of vision—are presented to the subject.⁹⁵

⁹⁴ Descartes's most clearly distinguishes between different stages of the perceptual process in the *Sixth Replies*, from which the following description of his view is primarily drawn. See also Simmons (2003).

⁹⁵ *Sixth Replies*, 437.

Here is where geometric reasoning comes in. The initial sensation is two-dimensional; it does not present our three-dimensional surroundings as they are. This is not because Descartes assumes that we perceive the two-dimensional surface of the retina, or that what we perceive is isomorphic to it. Rather, he takes the initial image to be two-dimensional because he can think of no physical mechanism by which the depth of the object perceived could be registered. Moving an object toward or away from a perceiver will not change its effect on the human body, which is merely to project onto the retina. To get from two to three dimensions, a geometric inference is required.⁹⁶

The raw materials for these inferences are the initial visual image and the angle between the direction of the eyes. The mind judges how far away an object is on the basis of this angle, a greater angle meaning the object is closer. Size can then be judged on the size of the immediate visual image and the already calculated distance. This results in our fully-fledged three dimensional visual experiences.⁹⁷

Already Descartes faces a problem, because of his infamous denial of the existence of subconscious mental states.⁹⁸ If spatial perception is a matter of constantly drawing inferences, surely it must be acknowledged that we do not generally take notice of them. Descartes obviously cannot avail himself of the modern strategy of appealing to unconscious, subpersonal visual processing. And, as Berkeley points out in *NTV* 24, we feel comfortable attributing robust

⁹⁶ *Sixth Replies*, 437-438. Descartes is clear that these geometric inferences “depend[] solely on the intellect”, despite our habit of attributing them to the senses.

⁹⁷ *Optics*, 134-137

⁹⁸ See Simmons (2012) for a discussion of the problems Descartes causes for himself by this denial.

three-dimensional visual ideas to children who definitely seem to lack the requisite conceptual resources.

Enter Malebranche. His theory of vision as expressed in *The Search After Truth* (*SAT*) is a geometric one in the spirit of Descartes's, but with a useful distinction between "free" and "natural" judgments. Free judgments correspond to Descartes's conception of judgment as an intentional act of the will. By contrast, natural judgments occur spontaneously in us and serve us in the preservation of our bodies. Natural judgments are frequently misleading—in particular, since our distance judgments are based on apparent size, and our visual system is not a reliable detector of apparent size, many of the natural judgments we form concerning distance are simply false. But since natural judgments of distance are still roughly accurate, they serve their role in enabling our bodily survival.

Even with this distinction in hand, Malebranche still feels uncomfortable claiming that vision relies on judgment at all. In the 1674 edition of *SAT*, he states that a natural judgment "is only a composite sensation",⁹⁹ which is then followed habitually by a free judgment. (I will follow Ott (2017, chapter 8) in describing natural judgments in the later Malebranche as "anemic natural judgments".) Interpreting Malebranche on this point is difficult, as it is unclear how anemic natural judgments are like simple sensations and how they are like ordinary judgments. On the one hand, he believes that anemic natural judgments are truth-evaluable, and hence part of a satisfying explanation of how vision ultimately results in free judgments.¹⁰⁰ On the other hand, they are supposed to be properly visual, unlike free judgments, which are

⁹⁹ *SAT* 52.

¹⁰⁰ As we will see, Berkeley denies that any sensations, compound or otherwise, are truth-evaluable.

made on the basis of but distinct from vision itself.

It is easy to see why the category of natural judgment would make Malebranche uncomfortable, as by Cartesian lights it looks like a contradiction in terms. It is hard to see how something that occurs spontaneously in us, and which cannot be recognized as a judgment rather than a sensation, could be considered an act of the will. But it is not clear that his 1674 solution is much better. In particular, we lack a clear explanation of how simple ideas are compounded to result in anemic natural judgments concerning size, distance, and situation.

Enter Berkeley. Despite his opposition to the geometric theory, he accepts several key suppositions of the view. For one, he agrees that the third dimension is not immediately perceived; for another, he explicitly states in *NTV* 1 that we “perceive by sight the distance, magnitude and situation of objects”. The disagreement concerns the psychological mechanism by which we come to mediately perceive distance, magnitude and situation.

Berkeley’s explanation appeals not to geometric inferences, but to associations between visual and tactile ideas. Certain visual ideas, like confusion, are “regularly observed” to correlate with nearness. Nearness, properly speaking, is a tactile idea—it is a matter of the subject being able to touch the object with very little movement. However, we can still see that the object is near¹⁰¹ in virtue of the association that develops over time between confusion and nearness due to the subject’s regularly observing them together. Once the two ideas are associated, the idea of nearness will inevitably follow the idea of confusion in the subject’s mind. So we come

¹⁰¹ More precisely, we can see the idea’s nearness. See section 2 for an argument that seeing is never propositional for Berkeley.

to see distance, but only mediately on the basis of the visual ideas that are immediately given to the subject.

An obvious consequence of this view, and one that Berkeley is eager to emphasize, is that what we immediately see is only contingently connected to seen distances.¹⁰² The angle made by the two rays of light projecting from the seen object is necessarily connected to the source of the light being some particular distance away. On the geometric views Berkeley criticizes, there is no room for two subjects to receive the same retinal stimulation and form different beliefs about the distance of their source without some miscalculation on the part of one of them. By contrast, there is no connection, necessary or otherwise, between visual ideas and the tactile ideas of distance they represent prior to their having been observed to coexist. If visual ideas were correlated with very different tactile ideas of distance, we would see completely different distances on the basis of the very same visual ideas; if they were not correlated with tactile ideas at all (as in the case of the Molyneux man) we would not see distance at all.

Berkeley was writing at a time when philosophers were concerned with what microscopy could show about spatial perception.¹⁰³ Malebranche took vision to be more accurate when aided with a microscope, as it enabled subjects to see finer details of the objects perceived. But even the most powerful microscope cannot make vision maximally veridical for Malebranche:

¹⁰² Take *NTV* 17: “Not that there is any natural or necessary connexion between the sensation we perceive by the turn of the eyes and greater or lesser distance, but... there has grown an habitual or customary connexion between these two sorts of ideas” [emphasis mine].

¹⁰³ See Atherton (1990, ch. 7) for a discussion of the issue.

matter is infinitely divisible, and microscopes can at best reveal a finite number of material divisions.¹⁰⁴

Berkeley, by contrast, takes ordinary vision to be perfectly adequate even when wholly unaided by microscopes. The visual idea of a table that I have in ordinary contexts suggests to me the tactile ideas that I could have if I touched it. Whatever their scientific interest, microscopes only serve to disrupt this process, as they break the correlations between visual and tactile ideas upon which we rely. What matters for vision to serve this purpose is that the correlations between visual and tactile ideas are consistent over time; the precise nature of the visual ideas in question is irrelevant.

Berkeley can thus reasonably take himself to have a theological advantage over geometric theorists. His geometric interlocutors incur the burden of explaining why a benevolent God would give us a necessarily misleading faculty. Berkeley, by contrast, holds that vision is perfectly adequate to its purpose, and any errors it might lead us into concerning either the qualities of those objects or their mind-independence are a philosopher's mistake. So it is no surprise that Berkeley emphasizes the contingency of the connection between visual and tactile ideas, as it is the direct source of this theological advantage over his rivals.

2 Does Association Involve Judgment?

So Berkeley diverges from geometric views in a number of important ways: the nature of visual perception of space, the way in which we come to have such perceptions on the basis of

¹⁰⁴ In *SAT* 27-28, Malenbranche says: "Through sight we perceive nothing smaller than a mite. Half a mite is nothing if we accept the testimony of vision... Our sight, then, does not represent extension to us as it is in itself[.]"

immediate visual ideas, and the contingency of our way of perceiving space. We can now identify another point of divergence. While geometric theorists typically cast their views in terms of judgments—propositional doxastic states of perceiving minds—Berkeley casts his in terms of association. I will argue that Berkeley should be read as understanding association as a non-inferential transition between simple ideas that are not themselves judgments.

Berkeley gives his initial account of distance perception in NTV 16-28 while simultaneously raising objections for the geometric theory. He describes the transition to ideas of distance in a wide variety of different, not obviously compatible ways; I reproduce them here for easy reference. (Italics are mine, intended to emphasize locutions that describe this transition and its relata.)

“This disposition or turn of the eyes is attended with a sensation, which seems to me to be that which in this case *brings the idea of greater or lesser distance into the mind.*” NTV 16

“...there has grown a *habitual or customary connexion* between these two *sorts of ideas...*” NTV 17

“If we had not constantly found certain sensations arising from the various disposition of the eyes, attended with certain degrees of distance, we should never *make those sudden judgments from them* concerning the distance of objects[.]” NTV 20

“And this being found constantly to be so, there ariseth in the mind an habitual connexion between the *several degrees of confusion and distance*[.]” NTV 21

“...instead of the greater or lesser divergency of the rays, the mind
makes use of the greater or lesser confusedness of the
appearance, thereby *to determine the apparent place of an*
object.” *NTV 22*

“...it is far otherwise [than geometric theorists have said] in the
sudden judgments men make of distance.” *NTV 24*

“...*one idea may suggest another* to the mind...” *NTV 25*

“[The sensation of the eye straining] supplies the place of
confused vision in *aiding the mind to judge* of the distance of the
object[.]” *NTV 27*

Berkeley will go on to explain later in *NTV* that the ideas of distance introduced into the mind are tactile, not visual ones. For now, we are interested in (1) the nature of the transition to (tactile) ideas of distance and (2) whether the end result of this transition is a judgment, or merely an idea.

Several of the excerpts above—specifically *NTV* 16, 17, 21 and 25—indicate that Berkeley takes the relevant sort of transition to relate ideas, not judgments. We begin with a visual idea—as Berkeley will ultimately argue, a color patch that is not itself at any distance from the perceiver—and a distinct idea of distance will thereby appear before the mind. This could presumably occur without the subject of the ideas judging that their ideas are accurate or external to them, as in cases where the subject knows she is hallucinating or subject to a visual illusion. But the idea of distance that one could use as the basis for an ensuing judgment is

brought into the mind by a colored patch, due to their having been observed together frequently in the past.

On the other hand, *NTV* 20, 22, 24, and 27 seem to present a different picture of association. *NTV* 20 and 24 explicitly refer to “sudden judgments” as the ultimate result of mental transitions facilitated by association. And the terminology used in *NTV* 24 and 27—“determining” an object’s location, or a sensation “aiding the mind to judge”—makes the process sound inferential.

It is worth keeping in mind that Berkeley’s main concern in *NTV* 16-28 is to argue for his own account of visual distance perception against geometric theorists like Descartes and Malebranche. Since geometric theorists described the end result of vision as a judgment reached by inference, Berkeley’s talk of judgment and determination might simply be the clearest way of comparing his view to theirs. Berkeley can, of course, accept that visual ideas precede judgments made on the basis of those ideas. The question is whether visual ideas are immediately succeeded by (in some sense tactile) judgments, or whether there is an intermediate step in which a visual idea suggests a non-propositional tactile idea that then serves as a basis for judgment.

In *NTV* 19 Berkeley criticizes geometric theories on the grounds that the geometric inferences to which they appeal are not ones which he himself is aware of making. If Berkeley thought that transitioning from visual ideas to associated ideas of distance involved inference and judgment, it would seem that he is guilty of precisely the same error. It is not particularly helpful to note that Berkeley would be appealing to less cognitively demanding inferences than his interlocutors, as there would still be inferences that we make which manage to escape our

judgment. If we take Berkeley at his word in *NTV* 19, we had best assume that any references to *judgment* he makes are not an official part of his account of distance *perception*.

Still, this is only one interpretation of Berkeley's claims in *NTV* 16-28. So it is fortunate that we get much a clearer statement of Berkeley's views in the following passage from *Theory of Vision Vindicated* (*TVV*):

"To perceive is one thing; to judge is another. So, likewise, to be suggested is one thing, and to be inferred another. Things are suggested and perceived by sense. We make judgments and inferences by the understanding." *TVV* 42

This passage makes three important distinctions explicit. First, perception—our entertaining sensory ideas—is distinct from judgment. Second, suggestion—the relation which ideas may bear to one another—is not inferential. Third, judgment and inference are not the proper domain of the senses, and therefore an account of vision may be complete without referencing judgments, sudden or otherwise.

Even if Berkeley did not view association as a non-inferential, non-cognitive relation in 1709, this passage makes clear he did so by 1733. But given that there is room to interpret him as holding the same view in *NTV*, it seems most likely that his talk of judgment was never meant as part of his official account of vision, and was rather a useful way of comparing his associationist theory with that of his geometric opponents. Judgments can then be made on the basis of perception, although they can presumably be withheld if the subject suspects her ideas are (in her present context) misleading. In what follows I will interpret Berkeley as holding this view.

3 Why Association?

Berkeley makes repeated reference throughout *NTV* to the contingency of our visual ideas of space, as opposed to the necessity of these ideas in the views of geometric theorists. By contrast, the distinction between inference and association is not emphasized to nearly the same degree. Nevertheless, I will argue in this section that Berkeley's appeal to association is the source of the virtues of his account and its advantages over geometric views.

The closest Berkeley comes to offering an *account* of association is *NTV* 17, which I reproduce here in its entirety.

“Not that there is any natural or necessary connexion between the sensation we perceive by the turn of the eyes and greater or lesser distance, but because the mind has by constant experience found the different sensations corresponding to the different dispositions of the eyes to be attended each with a different degree of distance in the object, there has grown an habitual or customary connexion between those two sorts of ideas, so that the mind no sooner perceives the sensation arising from the different turn it gives the eyes, in order to bring the pupils nearer or farther asunder, but it withal perceives the different idea of distance which was wont to be connected with that sensation; just as upon hearing a certain sound, the idea is immediately suggested to the understanding which custom had united with it.”

Berkeley is here concerned with the association between various distances and the feeling of the pupils narrowing or widening, but what he says about their connection will go for

other associated ideas as well. He gives both a causal explanation of association—ideas become associated through repeated conditioning—and a constitutive account—it is a matter of one idea regularly following another (in a given subject).

Berkeley does not offer any mechanism by which associations might come to exist in a subject's mind, or by which a subject might transition from the first idea to the associated one. However, it is unlikely that his contemporaries would have viewed these facts as requiring explanation. Berkeley's associationism is thus rather conservative compared to his opponents. Whereas Malebranche appeals to a novel kind of judgment to explain distance perception, Berkeley is clear that association is required independent of vision to explain linguistic understanding. In understanding spoken language, we move spontaneously from a word to its meaning; once this is agreed, it is a small step to apply this model to seeing distance.

Associationism as a way of explaining perceptual phenomena has three additional virtues (apart from parsimony) that set it apart from inferential views, each of which is explicitly noted by Berkeley. It can occur without introspective awareness on the part of the subject; it is not cognitively demanding (unlike geometric reasoning); and it permits more flexibility in the way subjects come to see distance. I will take each one in order.

First, consider Berkeley's criticism of geometric theorists in *NTV* 19. Despite their claims to the contrary, he denies that he engages in geometric reasoning in the process of seeing distance, on the grounds that "I am not conscious that I make any such use of the perception I have by the turn of my eyes." The problem, for Berkeley, is that inference and judgment are activities, and there is no possibility of a subject engaging in such an activity without being aware that she has done so.

Association, unlike judgment, is a process that can occur without any awareness on the part of the subject. There is no explicit justification for this view in the text, but we can speculate as to why Berkeley thought this was a reasonable assumption. Unlike judgment, association is not something we do; it is something that occurs in us, regardless of whether we are aware of it or wish it to occur. Similar to how events external to the subject¹⁰⁵ can lead to ideas occurring in the mind of the subject, and the subject can be unaware of these external happenings, a subject can be aware of a tactile idea of distance while being unaware that it has its source in a prior associated visual idea.¹⁰⁶

This is not to say that we cannot become aware that two ideas are associated. This is, in fact, Berkeley's whole project: he takes himself to have uncovered associations between ideas that go unnoticed by most subjects. The point is that awareness of one's associations is not constitutive of the having an association between two of one's ideas, as it is constitutive of judgment.

Second, consider Berkeley's reference to "brutes and children" in *NTV* 24. Unfortunate racist implications aside, Berkeley's point is that subjects who are relatively cognitively limited can evidently still see the spatial properties of things. Regardless of whether judgments can occur without reflective awareness, it is just not plausible to attribute complex geometric inferences to children as part of an account of visual perception. Associationist accounts have a clear advantage: associations can develop between the ideas of children through repeated

¹⁰⁵ Of course, for Berkeley they are not external to God's mind. But that is irrelevant to the present point.

¹⁰⁶ In fact, Berkeley could in theory state his view without using the term "association", either for a relation between ideas or for a mental faculty responsible for that relation. Berkeley need not quantify over associations as discrete events in the way Descartes and Malebranche have to quantify over judgments. This would provide an explanation of why association occurs without the subject's awareness: there is simply nothing to be aware of aside from the associated ideas.

experience, just as they do in adults. Because of his associationism, Berkeley is not stuck between attributing remarkable inferential skills to children and denying that they see spatial properties altogether.¹⁰⁷

Third, return to Berkeley's distinction between "necessary" and "customary" connections. As mentioned in section 1, the geometric inferences Descartes and Malebranche appealed to hold necessarily, so any two rational subjects cannot differ in the distances or sizes they see without differing in their retinal stimulus. Berkeley appeals to transitions between ideas that hold only in virtue of contingent connections between ideas. This means that different subjects can receive the same visual input and form entirely different ideas of distance, size, and situation with no failure of rationality. But this is only because of the nature of association. Since any two ideas can become associated if one happens to follow the other in a given subject, it is no surprise that subjects in different environments or subjects with markedly different perceptual organs will develop different associations, and thereby come to see different distances and sizes on the basis of similar visual ideas.¹⁰⁸

Of the three virtues of Berkeley's associationism, the appeal to customary connections is most often reiterated throughout the text of NTV. Berkeley would have been keen to emphasize his view's theological advantages, as much of his audience would likely have found the theological evidence for his view uniquely persuasive. This should not obscure the fact that

¹⁰⁷ This argument is similar in form to arguments made about the nature of perception today. For example, one argument that vision has non-conceptual content is that infants can have the same perceptual states as adults, but with a severely limited conceptual repertoire. See Peacocke (2001, p.614).

¹⁰⁸ That this actually occurs comes out in Berkeley's discussion of distance and magnitude, especially in sections 81-86 pertaining to mites and microscopes. Berkeley says a microscope do not correct or improve vision but rather "brings us... into a different world". Our new visual ideas have no practical utility for us, because they are not correlated with tactile ideas in any reliable way. But for a mite, the same ideas are correlated with its ideas of touch, and so it will develop different associations that suit its practical purposes.

Berkeley's associationism is explanatorily prior to his claims about the contingency of the relevant connections. Without his view of association as one non-propositional idea being followed by another, there would be no explanation of how the same visual ideas could be followed by distinct tactile ideas without irrationality, and therefore no explanation of how vision can serve its purpose without deception.

4 How Berkeley Applies Association

Berkeley follows statements of his views on distance, size, and situation—what we could now call “orientation”—with applications of his view meant to demonstrate its explanatory advantages over its rivals. His application to situation is particularly instructive for our purposes, as it demonstrates how the flexibility that comes with associationist views can be applied to complex, otherwise intractable perceptual phenomena.

The puzzle Berkeley attempts to solve is the inversion of the retinal image relative to our visual percepts. Light coming from above the eye and traveling downward ultimately projects onto the retina's lower hemisphere; vice versa for light coming from below. Yet things don't look upside down to us. What explains the difference between the “upside-down” visual image and the “rightside-up” visual percept?

Descartes explains the inversion by analogy with his example of a blind man holding a stick. The blind man starts with knowledge of the location of his hand and the direction the stick is pointing, then infers on this basis whether the thing the stick touches is above or below him. Similarly, we begin with knowledge of the angle at which light rays strike the retina. Since light rays strike the bottom of the retina from above, we can infer that the source of the rays is

above the eye; since they strike the top of the eye from below, the source of those rays is below the eye.¹⁰⁹

This explanation would be unacceptable for Berkeley, for reasons that are by now familiar. Unlike the blind man, we have no way of judging the angle at which light strikes our retina. But even if we did, this would not help, since as a matter of fact, we are not aware of making any inferences based on these angles (unlike Descartes's blind man). So we must look elsewhere.

Berkeley's explanation begins from the case of a blind man learning to apply the terms "higher" and "lower". A blind man could use touch to acquire the concepts of "higher" and "lower", by which he would mean farther from and closer to the earth, respectively. But when made to see, he would at first be unable to apply those terms to his visual ideas, as nothing in those ideas would indicate any fitness to be termed "higher" or "lower". Upon turning his head upward—applying the concept "upward" to the motion of his head—he would notice a corresponding change in his visual percept. The ideas which became visible would be termed "higher" in virtue of their correlation with the turning of the head upward; the ideas which disappeared would correspondingly be termed "lower." Over time, due to the constant succession of "upward" or "downward" movements by visual ideas of sky and ground, respectively, associations are created between the movements and the resulting ideas. In this way, visual ideas come to be called "higher" or "lower" due to their associations with the tactile ideas which originally had the name.

¹⁰⁹ *Optics* 134-137.

Berkeley states in *NTV* 92 that he uses the case of the blind man “to disentangle our minds from whatever prejudices” prevent us from understanding situation correctly. If we can consider the case fairly, we will agree that the blind man only comes to see heads as “higher” and feet as “lower” through associations, not through the immediately given visual ideas. But once we have adopted this account of the blind man, we should adopt it for ourselves. In our infancy, we were all in roughly the position of the blind man: we lacked the experience required for association visual ideas with tactile situation. But once we develop these associations, we can see things as higher or lower, despite the fact that our visual ideas themselves have no situation.¹¹⁰

Now for Berkeley’s resolution of the puzzle concerning the retinal image. The key move is his claim that the inverted retinal image is a *tactile* idea, not a visual one. The lower half of the retinal image—which we see only indirectly—is correlated with the part of the visual idea which we label “upper” (by virtue of its association with the turning of the head upward).¹¹¹ But there is no sense in which either the retinal image or the resulting visual ideas are both “upper” and “lower”. There is just a situated (tactile) retinal image and a visual idea which is associated with entirely different tactile ideas of situation.

One can object to Berkeley’s account at a number of points. For example, his definitions of “higher” and “lower” in terms of distance from the earth seem dubious; we might do better to define them relative to parts of a subject’s body.¹¹² But what is striking about his account is

¹¹⁰ Thanks to Katherine Dunlop for prompting me to clarify the structure of Berkeley’s argument.

¹¹¹ Berkeley does not provide an explicit account of the relationship between the retinal image and (immediate) visual ideas, so it is hard to say whether “correlation” is the word Berkeley would use to describe the relationship between the lower half of the retinal image and the upper half of the visual image. Obviously he would deny that the relationship is identity—one idea is tactile, while the other is visual.

¹¹² It is also difficult to see how to generalize this explanation for seeing left and right. We can judge how high

how a complex perceptual phenomenon can be explained with so few psychological resources. All we need is to accept association as a means of transitioning from idea to idea.

Associations can be relatively general or specific, and a general association might encompass many much more specific ones. In the case of situation, Berkeley appeals to associations between ideas typed very generally: head tilt and situation with respect to the subject. But this encompasses many much more specific association between particular degrees of head tilt and the degree to which a (tactile) idea is above or below the Earth. Specific degrees of head tilt are followed by specific ideas of situation, which will normally be followed by judgments concerning those ideas of situation. Once head tilt and situation have become associated, subjects will be able to perceive the situation of an object regardless of how far it is above or below the subject.

These correlations between subtle degrees of head movement and situation with respect to a subject are, of course, practically impossible for a subject to form explicit *beliefs* about. Even if I did manage to form a thought about some maximally determinate feeling of moving my head upward, I would not know what precise situation that feeling is associated with. And this is where the flexibility of association proves so useful. When subjects make judgments on the basis of the *suggested* tactile ideas of distance, no complex inferential process is required. Simple judgments of distance piggyback on the complexity of the underlying associations, which go unnoticed by the majority of subjects despite their invaluable psychological role.

something is by its distance from the Earth; by contrast, there is no external fixed point of reference by which we can judge how far left or right something is.

Berkeley would likely allow that, on certain disambiguations of “belief”, we can felicitously describe subjects as having beliefs about correlations between visual and tactile ideas. Subjects are certainly *disposed* to form tactile ideas of situation on the basis of their visual ideas. On a disposition conception of belief, this would suffice for a subject to believe that (for example) an idea that comes into focus with some particular degree of head tilt is some particular distance above the subject. But one advantage of Berkeley’s view is that he need not appeal to any *explicit* judgment or mental representation of these associations for them to perform the work he asks them to do. Associations can and often do develop between ideas without subjects being aware of the associations forming or believing that they have formed. This is why, according to Berkeley, it is so difficult to grasp the true nature of vision: the associations we rely on are established without our noticing, and our language does not distinguish between the associated ideas which we need to pull apart.

Descartes’s problem, by Berkeley’s lights, is that his explanation of visual perception generally and situation specifically is far too cognitively demanding. This is the dialectical purpose of his reference to “children” and “idiots” in *NTV* 90: Descartes requires them to draw inferences which we know they are not capable of making. What we need is an account of situation perception that can be extended to perceivers that cannot plausibly engage in the complex patterns of reasoning attributed to them by the geometric theorists. Since association merely requires repeated exposure to correlated ideas, not judgment or reflective thought, we can attribute associations to infants and the mentally handicapped without fear of contradicting ourselves or invoking a problematic new kind of judgment.

5 Implications

Berkeley's theory of vision is widely believed to have been proven false by more recent conceptual and empirical advances. Cognitive scientists take the mind in general and the visual system in particular to be an information-processing machine, where most of the information processing occurs beneath the level of conscious awareness. This means that Berkeley's claim in NTV 2 that vision cannot be seen "immediately", common ground between him and his interlocutors, is not true in the sense that he intends it. The visual system starts with the raw retinal stimulus caused by an object, compares the two patterns of stimulation, then infers from the differences between the patterns to the distance the object must be from the perceiving subject.¹¹³ In essence, the geometric theorists won out—if only by giving up their traditional claim that there are no subconscious mental states.

Association turns out not to be necessary for the purposes to which Berkeley put it. But this doesn't mean that the notion of association between ideas used by Berkeley was incoherent or defective, or that it has no application in contemporary philosophy of mind. In fact, association may still have a key role to play in twenty-first century theorizing about visual experience.

For one thing, some Berkeleyian explanations of visual phenomena that appeal to association may be largely correct. Egan (2008) critically discusses views on which the visual system somehow calculates the size of the moon from the perceived distance, which have trouble explaining that the moon seems both larger and *nearer* when it is at the horizon. For

¹¹³ Talk of comparisons and inferences should ultimately be reduced to talk of algorithms implemented by specific neural structures in the brain. See Marr (1982, chapter 1) for a discussion of the different levels at which processes such as perception can be analyzed.

these explanations to work, the moon must appear *farther* at the horizon so that the visual system calculates a *larger* size based on the same retinal image; yet subjects resolutely deny that the moon appears larger in any sense at the horizon. By contrast, one plausible explanation is that the landscape visible between the subject and the moon leads the moon to seem larger, given that a landscape between a subject and some object or region has so reliably correlated with great distances and sizes in the past. So a broadly Berkeleyian explanation is arguably called for in this case.

A second application of association is in explaining phenomenal contrast cases. Siegel (2010) introduced the notion of a phenomenal contrast case as a way to determine the contents of experience. We start with a pair of experiences that intuitively have a phenomenal difference, despite broad phenomenal similarity. We then determine the best explanation for the phenomenal difference. On Siegel's view, phenomenal contrasts are often best explained by attributing some further content to some experiences that makes a noticeable phenomenal difference. For example, a dendrologist's visual experience of a pine tree might be phenomenally different from a novice's, because her experience, but not the novice's, represents the property of pine-tree-hood.

Siegel uses the method of phenomenal contrast to argue that, in normal visual experiences of an object *o* by a subject *S*, the following two propositions enter the content of a subject's experience:

(SI) If *S* changes her perspective on *o*, then *o* will not thereby move.

(PC) If *S* substantially changes her perspective on *o*, her visual phenomenology will change as a result of this change.

Siegel notes that various conditionals like PC, but with consequents that refer to much more specific phenomenal changes, may also be represented by normal visual experiences.

Siegel introduces a case she calls “Odd”, in which a tiny doll appears in front of a subject at all times. Regardless of whether the subject changes her location or orientation, takes her glasses off, or closes her eyes, she continues to have a visual experience of the doll in front of her. Siegel claims that one’s experience of the doll in Odd would be phenomenally different from a normal experience (which she calls “Good”) in which one’s experience of the doll changes as one moves around. She then explains the phenomenal difference between Good and Odd with the claim that one’s experience in Good represents SI and PC, and one’s experience of the doll in Odd does not.

I agree with Siegel that there is a phenomenal contrast between Good and Odd which demands explanation. However, there is another explanation available. The phenomenal difference could be due to associations between kinds of phenomenal character that have previously occurred in regular succession. Good reliably triggers some visual imagery in the perceiver roughly matching the visual experience of the doll that the subject could reasonably expect to have after moving around it. In Odd, these associations are broken, the subject stops undergoing the relevant visual imagery, and a phenomenal difference is the result.¹¹⁴

Note how much more compelling this explanation of the phenomenal contrast is than an explanation that appealed to post-perceptual *inference*. It is not that Good consists of a single

¹¹⁴ Siegel (2010, chapter 3) considers a number of potential explanations for phenomenal contrasts generally, but she does not explicitly consider sensory imagery, nor does she consider it as an explanation for the contrast between Good and Odd specifically.

visual experience of the doll and then we *infer* on the basis of that experience that we would have certain visual experiences were we to move in some direction or other. This explanation would be far too cognitively demanding. Rather, the associationist explanation is that, due to our prior experience with perceptual changes caused by movement, we spontaneously undergo visual imagery that matches the experience we would normally have. No inference is necessary, nor is it necessary to appeal to complex conditional contents in the way Siegel does. The phenomenal difference can be accommodated on a sparse view of the content of visual experience, as long as we allow for pervasive visual imagery.

Is this a Berkeleyian view? Berkeley would likely articulate it differently: he would say that we mediate see the doll's perspectival independence rather than invoking visual imagery. But the core of the explanation is the same: we appeal to non-inferential associations between non-propositional contents. Whether we count the experience of the doll's independence as strictly perceptual is not central to Berkeley's methodology.

Of course, that this explanation of Siegel's case is viable does not mean that it is true. But it means that the dispute between Siegel's view and the Berkeleyian account just offered must be litigated on other grounds. It is no good to object to Berkeley's theory of vision by saying we "see distance"; he agrees, but provides a different account of how "seeing distance" occurs. Similarly, noting the phenomenal contrast between Siegel's cases is not enough to prove that visual experiences have causal content; the phenomenal contrast can be explained by visual imagery that subjects spontaneously undergo.

Associationist explanations of other contrast cases are less plausible. For example, visual imagery associated with experiences of pine trees seems unlikely to explain the phenomenal

difference between the expert and novice's experiences of the same tree. But given the likelihood that different phenomenal contrast cases are likely to have very different explanations, associationist appeals to visual imagery are an important candidate to have at the table.

References

- Alston, William (1995). "How to Think About Reliability." *Philosophical Topics* 23 (1):1-29.
- Atherton, Margaret (1990). *Berkeley's Revolution in Vision*. Ithaca: Cornell University Press.
- Bahrami, Bahador (2003). "Object Property Encoding and Change Blindness in Object Tracking." *Visual Cognition* 10 (8):949-963.
- Batty, Clare (2010). "A Representational Account of Olfactory Experience." *Canadian Journal of Philosophy* 40 (4):511-538.
- Bayne, Tim and Montague, Michelle (2011). "Cognitive Phenomenology: An Introduction." In Tim Bayne and Michelle Montague (eds.), *Cognitive Phenomenology*. Oxford University Press. pp.1-34.
- Bennett, Karen (2011). "Construction Area (No Hard Hat Required)." *Philosophical Studies* 154 (1):79-104.
- Berkeley, George (1975). *Philosophical Works; Including the Works on Vision*. M. R. Ayers (ed.). London: Dent.
- Bigelow, John (1986). "Towards Structural Universals." *Australasian Journal of Philosophy* 64 (1):94-96.
- Block, Ned (1990). "Inverted Earth." *Philosophical Perspectives* 4:53-79.
- (1999). "Sexism, Ageism, Racism, and the Nature of Consciousness." *Philosophical Topics* 134 (26) (1-2):39-70.
- (2007). "Consciousness, Accessibility, and the Mesh Between Psychology and Neuroscience." *Behavioral and Brain Sciences* 30 (5):481-548.
- Bonjour, Laurence (1980). "Externalist Theories of Empirical Knowledge." *Midwest Studies in*

Philosophy 5 (1):53-73.

----(2010). "The Myth of Knowledge." *Philosophical Perspectives* 24 (1):57-83.

Byrne, Alex (2001). "Intentionalism Defended." *Philosophical Review* 110 (2):199-240.

----(2009). "Experience and Content." *Philosophical Quarterly* 59 (236):429-451.

Casser, Laurenz (2020). "The Function of Pain." *Australasian Journal of Philosophy* 99 (2):364-378.

Chalmers, David (2006). "Perception and the Fall From Eden." In Tamar S. Gendler & John Hawthorne (eds.), *Perceptual Experience*. Oxford University Press pp. 49-125.

----(2019). "Three Puzzles about Spatial Experience." In Adam Pautz and Daniel Stoljar (eds.), *Blockheads!: Essays on Ned Block's Philosophy of Mind and Consciousness*. MIT Press. pp.109-138.

Chuard, Philippe (2011). "Temporal Experiences and their Parts." *Philosophers' Imprint* 11 (11):1-28.

Comesana, Juan (2010). "Evidentialist Reliabilism." *Nous* 44 (4)571-600.

Cutter, Brian (2021). "Perceptual Illusionism." *Analytic Philosophy* 62 (4):396-417.

Dainton, Barry (2000). *Stream of Consciousness: Unity and Continuity in Conscious Experience*. Routledge.

Descartes, Rene (1985). *The Philosophical Writings of Descartes, Volume 1*. Translated by John Cottingham. Cambridge University Press.

----(1985). *The Philosophical Writings of Descartes, Volume 3*. Translated by John Cottingham. Cambridge University Press.

Dixon, T. Scott (2018). "Plural Slot Theory." In Karen Bennett and Dean Zimmerman (eds.),

- Oxford Studies in Metaphysics Volume 11*. Oxford University Press. pp.193-223.
- Dogramaci, Sinan (2013). "Intuitions For Inferences." *Philosophical Studies* 165 (2):371-399.
- Dretske, Fred (1995). *Naturalizing the Mind*. MIT Press.
- Egan, Frances (2008). "The Moon Illusion." *Philosophy of Science* 65 (4): 604-623.
- Evans, Gareth (1982). *The Varieties of Reference*. Oxford University Press.
- Fine, Kit (1994). "Essence and Modality." *Philosophical Perspectives* 8 (Logic and Language):1-16.
- (1995). "Senses of Essence." In Walter Sinnott-Armstrong, Diana Raffman & Nicholas Asher (eds.), *Modality, Morality, and Belief: Essays in Honor of Ruth Barcan Marcus*. Cambridge University Press. pp.53-73.
- (2010). "Towards a Theory of Part." *Journal of Philosophy* 107 (11):559-589.
- (2017). "Form." *Journal of Philosophy* 114 (10):509-535.
- Flombaum, J.I. and Scholl, B.J. (2006). "A Temporal Same-Object Advantage in the Tunnel Effect: Facilitated Change-Detection for Persisting Objects." *Journal of Experimental Psychology: Human Perception and Performance* 32:840-853.
- Forrest, Peter (2016). "The Mereology of Structural Universals." *Logic and Logical Philosophy* 25 (3):259-283.
- Gilmore, Cody (2013). "Slots in Universals." *Oxford Studies in Metaphysics* 8:187-233.
- Greenberg, Gabriel (draft). "The Structure of Visual Content."
- Grice, H.P. & Alan R. White (1961). "The Causal Theory of Perception." *Aristotelian Society Supplementary Volume* 35 (1):121-168.
- Goldman, Alvin (1979). "What is Justified Belief?" In George Pappas (ed.), *Justification and*

Knowledge. pp.1-25.

----(2011). "Toward a Synthesis of Reliabilism and Evidentialism? Or: Evidentialism's Troubles, Reliabilism's Rescue Package." In Trent Dougherty (ed.), *Evidentialism and its Discontents*. Oxford University Press. pp.254-280.

Harman, Gilbert (1990). "The Intrinsic Quality of Experience." *Philosophical Perspectives* 4:31-52.

Hopkins, Robert (2012). "What Perky Did Not Show." *Analysis* 72 (3):431-439.

Huemer, Michael (2001). *Skepticism and the Veil of Perception*. Lanham: Rowman and Littlefield.

----(2006). "Phenomenal Conservatism and the Internalist Intuition." *American Philosophical Quarterly* 43 (2):147-158.

Jeshion, Robin (2010). "Singular Thought: Acquaintance, Semantic Instrumentalism, and Cognitivism." Robin Jeshion (ed.), *New Essays on Singular Thought*. Oxford University Press pp.105-141.

Johnston, Mark (2004). "The Obscure Object of Hallucination." *Philosophical Studies* 120 (1-3):113-183.

Kaplan, David (1989). "Demonstratives: An Essay on the Semantics, Logic, Metaphysics and Epistemology of Demonstratives and Other Indexicals." In Joseph Almog, John Perry & Howard Wettstein (eds.), *Themes From Kaplan*. Oxford University Press pp.481-563.

Kind, Amy (2013). "The Case Against Representationalism About Moods." In Uriah Kriegel (ed.), *Current Controversies in Philosophy of Mind*. Routledge pp. 113-134.

Koslicki, Kathrin (2015). "The Coarse-Grainedness of Grounding." *Oxford Studies in Metaphysics*

9:306-344.

Lee, Geoffrey (2014). "Extensionalism, Atomism, and Continuity." In L. Nathan Oaklander (ed.), *Debates in the Metaphysics of Time*. Bloomsbury Academic. pp.149-174.

Lewis, David (1980). "Visual Hallucination and Prosthetic Vision." *Australasian Journal of Philosophy* 58 (3):239-249.

-----(1986). "Against Structural Universals." *Australasian Journal of Philosophy* 64 (1):25-46.

Lycan, William (1996). *Consciousness and Experience*. MIT Press.

Malebranche, Nicolas (1980). *The Search After Truth and Elucidations of the Search After Truth*.

Translated by Thomas M. Lennon and Paul J. Olscamp. Ohio: Ohio State University Press.

Marr, David (1982). *Vision*. W. H. Freeman.

McDowell, John (1994). *Mind and World*. Harvard University Press.

McGrath, Sarah (2004). "Moral Knowledge by Perception." *Philosophical Perspectives* 18 (1):209-228.

Mendelovici, Angela (2013). "Pure Intentionalism About Moods and Emotions." In Uriah Kriegel (ed.), *Current Controversies in Philosophy of Mind*. Routledge. pp.135-157.

-----(2018). *The Phenomenal Basis of Intentionality*. New York, USA: Oxford University Press.

-----(forthcoming). "Singular Experiences (With and Without Objects)."

Millar, Boyd (2010). "Peacocke's Trees." *Synthese* 174 (3):445-461.

Montague, Michelle (2011). "The Phenomenology of Particularity." In Tim Bayne & Michelle Montague (eds.), *Cognitive Phenomenology*. Oxford University Press. pp.121-140.

-----(2013). "The Access Problem." In Uriah Kriegel (ed.), *Phenomenal Intentionality*. Oxford University Press. pp.27-49.

- Munton, Jessie (2021). "Visual Indeterminacy and the Puzzle of the Speckled Hen." *Mind and Language* 36 (5): 643-663.
- Mulligan, Kevin, Peter Simons, & Barry Smith (1984). "Truth-Makers." *Philosophy and Phenomenological Research* 44 (3):287-321.
- Ott, Walter (2017). *Descartes, Malebranche, and the Crisis of Perception*. Oxford University Press.
- Pautz, Adam (2006). "Can the Physicalist Explain Colour Structure in Terms of Colour Experience?" *Australasian Journal of Philosophy* 84 (4):535-564.
- (2007). "Intentionalism and Perceptual Presence." *Philosophical Perspectives* 21 (1):495-541.
- (2009). "What are the Contents of Experiences?" *Philosophical Quarterly* 59 (236):483-507.
- (2010). "Why Explain Visual Experience in Terms of Content?" In Bence Nanay (ed.), *Perceiving the World*. Oxford University Press pp. 254-309.
- (2017). "The Significance Argument for the Irreducibility of Consciousness." *Philosophical Perspectives* 31 (1):349-407.
- (2020). "The Puzzle of the Laws of Appearance." *Philosophical Issues* 30 (1):257-272.
- Peacocke, Christopher (1983). *Sense and Content: Experience, Thought and Their Relations*. Oxford University Press.
- (1992). *A Study of Concepts*. MIT Press.
- (1992). "Scenarios, Concepts, and Perception." In Tim Crane (ed.), *The Contents of Experience*. Cambridge University Press.
- (2001). "Phenomenology and Nonconceptual Content." *Philosophy and*

Phenomenological Research 62 (3):609-615.

Perky, C.W. (1910). "An Experimental Study of Imagination." *The American Journal of Psychology* 21 (3):432-452.

Pryor, James (2000). "The Skeptic and the Dogmatist." *Nous* 34 (4):517-549.

Quilty-Dunn, Jake (2020). "Perceptual Pluralism." *Nous* 54 (4):807-838.

Rashbrook-Cooper, Oliver (2017). "Atomism, Extensionalism, and Temporal Presence." In Ian Phillips (ed.), *The Routledge Handbook of Philosophy of Temporal Experience*. Routledge. pp.121-132.

Rodriguez-Pereyra, Gonzalo (2002). *Resemblance Nominalism: A Solution to the Problem of Universals*. Oxford University Press.

Rosen, Gideon (2010). "Metaphysical Dependence: Grounding and Reduction." In Bob Hale & Aviv Hoffmann (eds.), *Modality: Metaphysics, Logic and Epistemology*. Oxford University Press pp.109-135.

Schaffer, Jonathan (2009). "On What Grounds What." David Manley, David J. Chalmers & Ryan Wasserman (eds.), *Metametaphysics: New Essays on the Foundations of Ontology*. Oxford University Press pp. 347--383.

-----(2010). "Monism: The Priority of the Whole." *Philosophical Review* 119 (1):31-76.

-----(2017). "The Ground Between the Gaps." *Philosophers' Imprint* pp.1-26.

Schellenberg, Susanna (2018). *The Unity of Perception: Content, Consciousness, Evidence*. Oxford University Press.

Schwitzgebel, Eric (2008). "The Unreliability of Naive Introspection." *Philosophical Review* 117 (2):245-273.

- Shoemaker, Sydney (1982). "The Inverted Spectrum." *Journal of Philosophy* 79:357-381.
- Siegel, Susanna (2010). *The Contents of Visual Experience*. Oxford University Press.
- Simmons, Alison (2003). "Descartes on the Cognitive Structure of Sensory Experience."
Philosophy and Phenomenological Research 67 (3): 549-579.
- (2012). "Cartesian Consciousness Reconsidered." *Philosophers' Imprint* 12 (2):1-21
- Skrzypulec, Blazej (2015). "Two Types of Visual Objects." *Studia Humana* 4 (2):26-38.
- Smithies, Declan (2014). "The Phenomenal Basis of Epistemic Justification." In Jesper Kallestrup
& Mark Sprevak (eds.), *New Waves in Philosophy of Mind*. Palgrave MacMillan. pp.98-124.
- Speaks, Jeff (2009). "Transparency, Intentionalism, and the Nature of Perceptual Content."
Philosophy and Phenomenological Research 79 (3):539-573.
- Sperling, George (1960). "The Information Available in Brief Visual Presentations." *Psychological
Monographs: General and Applied*. 74 (11):1-29.
- Stalnaker, Robert (1982). *Inquiry*. Cambridge University Press.
- Stoljar, Daniel (2010). *Physicalism*. Routledge.
- Teng, Lu (2018). "Is Phenomenal Force Sufficient for Immediate Perceptual Justification?"
Synthese 195 (2):637-656.
- Travis, Charles (2004). "The Silence of the Senses." *Mind* 113 (449):57-94.
- Tye, Michael (1982). "A Causal Analysis of Seeing." *Philosophy and Phenomenological Research*
42 (3):311-325.
- (2003). *Consciousness and Persons*. MIT Press.
- (2008). "The Experience of Emotion: An Intentionalist Theory." *Revue Internationale de
Philosophie* 62:25--50.

- (2009). "Representationalist Theories of Consciousness." In Brian McLaughlin, Ansgar Beckermann and Sven Walter (eds.), *The Oxford Handbook of Philosophy of Mind*. Oxford University Press (2009).
- (2014). "What is the Content of a Hallucinatory Experience?" In Berit Brogaard (ed.), *Does Perception Have Content?* Oxford University Press. pp.291-310.
- (2018). "How to Think About the Representation Content of Visual Experience." In Limbeck-Lilienau, Christoph & Stadler, Friedrich (eds.), *The Philosophy of Perception: Proceedings of the 40th International Ludwig Wittgenstein Symposium*. De Gruyter.
- Wilson, Jessica (2014). "No Work for a Theory of Grounding." *Inquiry: An Interdisciplinary Journal of Philosophy* 57 (5-6):535-579.