

# Unconscious Perceptual Justification<sup>1</sup>

Jacob Berger, Idaho State University  
Bence Nanay, University of Antwerp  
Jake Quilty-Dunn, University of Oxford

## Abstract

Perceptual experiences justify beliefs. A perceptual experience of a dog justifies the belief that there is a dog present. But there is much evidence that perceptual states can occur without being conscious, as in experiments involving masked priming. Do unconscious perceptual states provide justification as well? The answer depends on one's theory of justification. While most varieties of externalism seem compatible with unconscious perceptual justification, several theories have recently afforded to consciousness a special role in perceptual justification. We argue that such views face a dilemma: either consciousness should be understood in functionalist terms, in which case our best current theories of consciousness do not seem to imbue consciousness with any special epistemic features, or it should not, in which case it is mysterious why only conscious states are justificatory. We conclude that unconscious perceptual justification is quite plausible.

**Keywords:** perception, consciousness, justification, dogmatism, internalism

## 1. Introduction

Perceptual experiences justify beliefs. A perceptual experience of a dog justifies the belief that there is a dog present. But there is much experimental evidence that perception can occur without being conscious, as in cases of pathological conditions such as blindsight or studies of masked priming in healthy individuals (see respectively, e.g., Weiskrantz 2009; Kouider & Dehaene 2007; for an overview of such evidence, see Berger 2014a). The question naturally arises: can and do unconscious perceptual states provide justification as well?

There is substantial evidence that unconscious perception can guide purposeful action and decision processes (for summaries, see, e.g., Milner & Goodale 1995; Jeannerod 1997). Consider patient P.S., studied by Marshall and Halligan (1988). Due to brain damage caused by an aneurysm,

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P.S. suffered from hemispatial neglect, a condition in which individuals lack conscious visual experience of one side of presented objects or scenes (in her case, the left side). P.S. was presented with pairs of images of houses. One of the houses in each trial was engulfed in flames, but only on the left side, which P.S. could not consciously see due to the brain damage. P.S. was asked which house she preferred to live in. She “thought this was a silly question (‘because they’re the same’)” (Marshall & Halligan 1988, p. 766). Strikingly, however, when obliged to provide an answer, she chose the non-burning house about 75-80% of the time.

A natural account of this experiment is that P.S. perceived the flames *unconsciously*, despite the lack of any reportable conscious awareness of the engulfed side of the house. Moreover, her unconscious perceptual states seem to inform her decision process about which house to choose to live in. After all, it is reasonable to prefer accommodations that are not on fire. Unconscious perception thus appears not only to have played a role in P.S.’ mental life, but also to inform her beliefs and desires in a rationally evaluable way—specifically, to make her believe in a justified way that one of the houses is aflame and to make her desire not to live in that house. P.S. might have instead chosen 80% of the time to live in the burning house, which (*ceteris paribus*) would seem to reflect negatively on her reasonableness. It thus seems natural to say that unconscious perception can justify or otherwise make rational the acquisition of certain beliefs.<sup>2</sup>

This example primarily concerns the possibility of an unconscious perceptual state—the unconscious perception of a house on fire—justifying an *unconscious* belief—the unconscious belief that the house is on fire. But it seems that unconscious perceptual states may in principle justify conscious beliefs too. In the example involving P.S., for example, if she forms the conscious belief

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<sup>2</sup> Some (e.g., Smithies 2011) have the intuition that there is no epistemic justification in cases like this. This is not an intuition we share, but our arguments below don’t hang on it; we mention P.S. to get a concrete case and the table and (hopefully) pump the reader’s intuitions in our favor. Byrne (2016) argues that granting justification in such cases threatens to render conscious experience epistemically inert, but in so doing he seems to assume that unconscious perceptual states are subpersonal rather than type identical to conscious perceptual states. He therefore seems not to make room for genuine personal-level perception that occurs unconsciously (e.g., 2016, 964). As noted in the next paragraph, we assume the opposite.

that the non-burning house is a better place to live, it is natural to hold that her unconscious perception of the house on fire justifies this conscious belief.

Consider the ordinary experience of sitting in a crowded place (such as public transportation) and suddenly feeling as though you are being watched. You might quickly look up to lock eyes with someone nearby. A reasonable explanation is that you unconsciously saw the person looking at you; this unconscious perception then caused, and likewise justified, the conscious belief that you were being watched (cf. Berger 2014a, p. 393). Rejecting this interpretation of the scenario would require holding that there were no rational grounds for thinking you were being watched—that the belief was rationally equivalent to one that simply pops into existence upon a bump to the head. It seems to us to be counterintuitive to deny that the conscious belief that one is being watched is in this case justified by the unconscious perception of a person's gaze in your direction. There is an evident rational connection between your unconscious perception and your conscious belief that is absent when the belief is merely caused by a bump on the head.

The central question for this paper is whether unconscious perception can in fact play this sort of rational and justificatory role. Some theorists have speculated that it can (e.g., Baergen 1992; Berger 2014b; Lyons 2016; Siegel 2017; Siegel & Silins ms).<sup>3</sup> We note, however, that the status of the evidence for unconscious perception is not uncontested. Ian Phillips (2016), for example, has challenged whether P.S.'s perception of the flames is truly unconscious, or whether she is merely reluctant to report seeing the stimuli. Our goal is not to argue for the existence of unconscious perception (though see Block 2016; Berger & Nanay 2016; Quilty-Dunn ms.). Instead, our question is: assuming that unconscious perception exists, can it justify our beliefs?

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<sup>3</sup> We restrict our attention to the question of unconscious *perceptual* justification. While it is plausible that there are unconscious beliefs (see, e.g., Strick et al 2011; Mandelbaum 2014), we will not investigate here the issue of whether or not unconscious beliefs provide justification.

There are three ways one could frame the epistemic relation between conscious and unconscious perception (Silins 2015, section 1.4). First, one could maintain that there is no epistemic difference between conscious and unconscious perception (Silins 2015 claims that this view is defended by, e.g., Burge 2003; Lyons 2009). On this view, unconscious perceptual states have the very same justificatory power as conscious perceptual states. Alternatively, one might argue that unconscious perceptual states can and do provide justification, but perhaps somewhat less than their conscious counterparts (however justification is quantified) (e.g., Silins 2011, pp. 336-337). Lastly, one might take the hardline position that unconscious perceptual states play no justificatory role at all (e.g., Smithies 2011, p. 23; Byrne 2016).<sup>4</sup>

Which view is correct depends on how we understand perceptual justification. On most versions of *epistemic externalism*, we need not have access to what justifies our beliefs; facts about what determines whether a state is justified may be external to the subject (for an overview, see, e.g., Goldman 2009). An externalist *reliabilist*, for example, might urge that a perceptual state provides justification for a belief just in case the perceptual state is formed in a suitably reliable way (e.g., Goldman 1979; Talbot 1990). For most versions of externalism, then, there would seem to be no reason to deny that unconscious perception justifies belief. Even unconscious perceptual states can be justificatory in virtue of being formed via reliable processes or satisfying some other externalist criteria.

Most versions of *epistemic internalism*, by contrast, would seem to rule out unconscious perceptual justification (we say most, not all – e.g., evidentialism, on which justification is determined by quality of evidence (Feldman & Conee 1985), is *prima facie* compatible with the

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<sup>4</sup> Of course, one might also endorse the view that unconscious perceptual states provide more justification than perceptual experiences, but we set this view (defended by, e.g., Strick et al 2011) aside for the purposes of this paper.

possibility of unconscious justification (Feldman & Conee 2001), including perceptual justification).<sup>5</sup>

According to a standard formulation of internalism, a subject *S*'s belief *B* is justified only if the reasons for *B* are accessible to *S*. If 'accessible' is interpreted as *introspectively* accessible, as it often is (e.g., Alston 1986; cf. Feldman & Conee 2001), then it would seem that unconscious perceptual states cannot justify beliefs because subjects plainly do not have introspective access to them.<sup>6</sup>

The literature on internalism is enormous—and we unfortunately cannot take it head on here. Rather, our goal is to challenge a currently popular approach to perceptual justification, often regarded as internalist, which might seem to rule out unconscious perceptual justification. Several epistemologists have recently endorsed versions of what Nicholas Silins (2015; section 1.4) calls 'the phenomenal approach'—what we'll call 'phenomenalism' for short—on which perceptual experiences provide justification for beliefs at least partly in virtue of their conscious phenomenal characters (for an overview, see, e.g., the essays in Tucker 2013). Since unconscious perceptual states do not have such character, it might seem that such views suggest that they cannot justify beliefs as well.

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<sup>5</sup> Another example is Susanna Siegel (2017), who develops a version of internalism on which unconscious mental states and processes can play a direct role in conferring or downgrading the epistemic status of perception. And though her notion of the "epistemic charge" of perception is typically formulated in terms of perceptual experiences (2017, p. 41), she also argues that unconscious perceptual states can be epistemically charged (pp. 101ff). Her discussion focuses on "pre-conscious" (p. 101) states that *cause* or *become* conscious perceptual experiences rather than unconscious outputs of perceptual processing that affect cognition directly (i.e., without causing an intervening conscious perceptual experience). The latter is our primary interest. As we read Siegel, her internalism about perceptual justification is neutral between saying that unconscious perceptual states confer justification directly upon beliefs or whether they only do so by causing conscious perceptual experiences that then justify beliefs. Siegel does argue that unconscious beliefs can transfer epistemic charge (p. 102) and that unconscious perceptual states are "plausibly epistemic resources all along" even when not accessed by the subject (p. 103). These theses seem to suggest that an unconscious perceptual state could in principle directly justify beliefs. In any case, as we shall see, our claim that unconscious perception has epistemic force is meant to argue explicitly that unconscious perception can justify beliefs independently of consciousness. We intend to remain neutral on whether the unconscious processes that deliver personal-level perceptual states are themselves epistemically evaluable (cf. Siegel 2017, chapter 3).

<sup>6</sup> Some theorists even build consciousness into their characterizations of rationality, thereby begging the question at hand. Benj Hellie, for example, proposes that "the core notion of rationality is something like manifest coherence of the stream of consciousness" (2011, p. 111). Though we will not offer a full characterization of rationality or justification here, we assume a suitably neutral characterization that would at least open the possibility of unconscious perceptual justification. Indeed, Hellie's characterization of rationality is questionable; one could argue that rationality requires only manifest coherence in the stream of one's *mental states*, not necessarily consciousness (see, e.g., Berger 2014b). One could also question whether "manifest coherence" is even necessary for rationality (e.g., Egan 2008).

Phenomenalism is typically not pursued in light of specific theories of what consciousness is and how it functions in the mind. We argue that, on most promising ways to understand consciousness, it is not clear that phenomenalism substantiates the assumption that perceptual experiences, but not unconscious perceptual states, provide justification. That is, we argue that phenomenal character is not necessary for justification—and so there can be unconscious perceptual justification.<sup>7</sup> To be clear, our focus will be *propositional* justification (i.e., whether unconscious perception provides good reason to form a belief) rather than *doxastic* justification (i.e., whether a particular belief is in fact formed in response to the good reason provided by an unconscious perceptual state).

After laying out some basic features of phenomenalism in section 2, we raise in section 3 a dilemma for phenomenologists: either consciousness should be understood in functionalist terms, in which case theories of consciousness may not imbue consciousness with any special epistemic status, or it should not, in which case phenomenalism cannot explain why only conscious states are justificatory. In section 4, we survey various theories of consciousness, arguing that none explain why perceptual experiences, but not unconscious perception, would have an epistemic import. We conclude in section 5 by sketching a view in the vicinity of phenomenalism that is compatible with unconscious perceptual justification.

## 2. Phenomenalism

We begin by discussing *dogmatism*, the view according to which perceptual experiences provide *prima facie* (though defeasible) justification for beliefs in virtue of their conscious phenomenal characters (see, e.g., Pryor 2000; Tucker 2010; Chudnoff 2011; Moretti 2015; see Teng forthcoming for discussion). That is, if one has a perceptual experience *E* with the content that *p*, then one is (absent

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<sup>7</sup> As we shall see, though we are skeptical that consciousness plays any role at all in justification, we remain neutral here regarding whether or not it plays *some* role.

defeaters) justified in believing that  $p$ ; moreover, it is the phenomenal character of  $E$  that bestow upon it this justificatory character. In a now classic paper, here is how James Pryor explains the view:

In my view, it's not the irresistibility of our perceptual beliefs, nor the nature of our concepts, which explains why our experiences give us the immediate justification they do. Rather, it's the peculiar "phenomenal force" or way our experiences have of presenting propositions to us. Our experience represents propositions in such a way that it "feels as if" we could tell that those propositions are true—and that we're perceiving them to be true—just by virtue of having them so represented (2000, p. 547, fn. 37).

To put it somewhat figuratively, perceptual experiences present the world in a phenomenal way that gives it an "oomph" that justifies beliefs about the world.

More recently, some have endorsed a related view, *radical dogmatism* or *phenomenal conservatism*, according to which what provides the relevant justification are so-called *seemings*, which are theorized to be components of perceptual experiences. Chris Tucker puts the view this way:

**(Radical) Dogmatism:** Necessarily, if it seems to  $S$  that  $P$ , then  $S$  thereby has *prima facie* (non-inferential) justification for  $P$  (2010, p. 529).

On this view, the reason why a perceptual experience of a dog *prima facie* justifies the belief that there is a dog is that it (perceptually) seems to one that there is a dog. Like Pryor, many theorists assume that such seemings have a special assertoric phenomenal character or force; Tucker writes,

But what is a seeming? A seeming that  $P$  is neither a belief that  $P$  nor an inclination to believe  $P$  (Huemer 2007: 30–1); it is a certain kind of experience with propositional content. What distinguishes seemings from other experiences is their peculiar phenomenal character. Huemer (2001: 77–9) refers to this character as "forcefulness," but I prefer the name "assertiveness." Tollhurst (1998) says that seemings, "have the feel of

truth, the feel of a state whose content reveals how things really are” (298–9). The phenomenology of a seeming makes it feel as though the seeming is “recommending” its propositional content as true or “assuring” us of the content’s truth (2010, p. 530).

Silins (2015, section 1.4) dubs this putatively conscious property of perceptual experiences (or their seeming components), whatever it is, ‘presentational phenomenology’ (for more on it, Silins cites Chudnoff 2012; cf. Siegel 2017, p. 45).

We should note two caveats about the relation between these views and phenomenalism. First, dogmatism and phenomenal conservatism *per se* are not necessarily committed to phenomenalism. They assert that phenomenal character of some sort is *sufficient* for perceptual justification, while phenomenalism asserts that it is *necessary*. Nonetheless, dogmatists and conservatives seem to locate the epistemic force of perception in phenomenal character in a way that does not seem friendly to the idea of unconscious perception. Pryor, for example, appears to use the terms ‘perception’ and ‘experience’ interchangeably, writing that his dogmatist view that perceptual phenomenology is sufficient for justification is an “epistemology of perception” (2000, p. 518), seemingly ruling out the possibility that perception (and perceptual justification) might outstrip the scope of conscious perceptual experience. This seems to suggest that Pryor endorses a phenomenalist dogmatism. Moreover, as far as we are aware, no dogmatist or conservative has ever defended the possibility of unconscious perceptual justification. At best, these views require that unconscious perception justify belief in a completely different manner than conscious perception; at worst, they suggest that unconscious perception could not justify belief. Dogmatist and conservative views may therefore suggest phenomenalism even if they are not explicitly committed to it.

Second, phenomenalism *per se* is not committed to dogmatism or phenomenal conservatism. A phenomenalist might hold that perceptual experiences are never sufficient for *prima facie* justification: for example, on a coherentist picture (for classic versions, see, e.g., Bonjour 1985;

Lehrer 1990), experiences might give justification only provided suitable background beliefs obtain. One can therefore be a phenomenalist without accepting the sufficiency claim distinctive of dogmatism and phenomenal conservatism.

In his original formulation of dogmatism, one of Pryor's main arguments for it seems to be that it is common sense. He writes,

For a large class of propositions, like the proposition that there are hands, it's intuitively very natural to think that having an experience as of that proposition justifies one in believing that proposition to be true. What's more, one's justification here doesn't seem to depend on any complicated justifying argument. An experience as of there being hands seems to justify one in believing there are hands in a perfectly straightforward and immediate way. When asked, "What justifies you in believing there are hands?" one is likely to respond, "I can simply see that there are hands." One might be wrong: one might not really be seeing a hand. But it seems like the mere fact that one has a visual experience of that phenomenological sort is enough to make it reasonable for one to believe that there are hands. No premises about the character of one's experience—or any other sophisticated assumptions—seem to be needed. I say, let's take these intuitive appearances at face value. Let's say that our perceptual beliefs in these propositions are indeed justified in a way that does not require any further beliefs or reflection or introspective awareness. They have a kind of justification which is immediate, albeit defeasible (2000, p. 536).

A serious problem with any version of phenomenalism, however, is that this notion of presentational phenomenology remains rather mysterious. Pryor himself recognized this, writing:

It is difficult to explain what this "phenomenal force" amounts to, but I think that it is an important notion, and that it needs to be part of the story about why our experiences give us the justification they do. I will have to develop these suggestive remarks elsewhere (2000, p. 547, fn. 37).

In what follows, we explore various conceptions of what presentational phenomenology might be. We ultimately conclude that none of the proposals prevalent in consciousness studies about what this ‘phenomenal force’ would entail give us reason to think that it would play any justificatory role.

### 3. The dilemma

To see the point, we raise a dilemma for phenomenalism. Though there is much disagreement about the nature of consciousness, there are broadly two options: on the one hand, one can adopt a non-functional account, on which consciousness is not understood in terms of its causal role (e.g., Jackson 1982; Chalmers 1996); alternatively, one can adopt a functionalist account, on which consciousness is understood in terms of a causal role of some kind (we use ‘functionalism’ here in a rather broad way).

The first horn of the dilemma is this: if one rejects a functionalist account, then it is unclear how or why presentational phenomenology would alter a perceptual state’s epistemic status. Suppose a non-functional view on which consciousness plays no causal role at all. In that case, the phenomenologists might conclude that the unconscious perceptual states of a philosophical zombie (Chalmers 1996) do not justify her beliefs. But the question is: *why* do the zombie’s perceptual states fail to justify? Here, it would seem that the only thing that the epiphenomenalist phenomenologist could say is that the fact that presentational phenomenology gives perceptual states’ their justificatory powers is *brute* (Chalmers 2003). But such a move by hypothesis does not explain (a) what about presentational phenomenology gives it this power and (b) why unconscious perceptual states cannot be justificatory (why they couldn’t *also* have similar brute powers). If we are looking for

reasons to think that unconscious perception cannot justify, then the view that perceptual experiences is primitively justificatory simply stipulates the issue away.<sup>8</sup>

One can instead simultaneously reject functionalism and epiphenomenalism about consciousness. Prime examples include so-called *biological theories* of consciousness, on which conscious states are specified in purely neural terms rather than at the functional level—in terms of recurrent feedback loops, for example (Lamme 2003; Block 2007). Biological theories can be reductionist or anti-reductionist (Block 2007 is an example of the latter). But a general problem with such views is that they make it hard to explain *why* consciousness plays the epistemic role it does. The mere fact that some perceptual state is tokened in one brain area while another perceptual state is tokened in another brain area is no reason to grant one state epistemic force over the other. We therefore put such primitivist views aside.

Now we turn to functionalist views of consciousness. Here, we argue that on most theories of consciousness, it is also far from clear why consciousness is necessary for a perceptual state's epistemic power. Our arguments in the following section are abductive. While we do not think that there are decisive reasons to think that the major theories of consciousness currently available rule out unconscious perceptual justification, we think that the best interpretation of such views is that they are compatible with it.

#### **4. Theories of consciousness**

Before surveying how various mainstream theories of consciousness conceive of the difference between conscious and unconscious perception, we note that there is good reason to think that

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<sup>8</sup> The phenomenalist might of course insist that there is some sort of *non-causal explanation* for the justificatory asymmetry between conscious and unconscious perceptual states, but it is difficult for us to see what sort of explanation that might be—especially in the case of biological phenomena—and we find no such explanation in the in the phenomenalist literature. Thus the burden would be on the phenomenalist to defend such an account (rather than leaving this alleged asymmetry unexplained).

unconscious perception can exert considerable impact on central cognition that seems epistemically evaluable. Consider again the neglect patient, P.S. In order for the burning house to differentially affect her decision process, P.S. must cognitively, as well as perceptually, register the information that one house is less preferable. Since her unconscious perceptual state presumably cannot directly enter into her decision process, she must encode the information that the house (*qua* house) is on fire in a way that can function as a premise in her decision. The best explanation of this phenomenon is that her unconscious perceptual state causes her to acquire the unconscious belief that one house is on fire, which in turn causes her to update her preferences and decide that the other house is preferable. That is, the same propositional contents and attitudes (e.g., belief that the house is on fire, preference for non-burning houses) implicated in explaining P.S.'s behavior would be implicated in explaining the behavior of a person who consciously saw the flames. So described, it would seem that the only relevant difference between the causal impact of P.S.'s perception and a conscious perception is that P.S. cannot report any conscious awareness of her perceptual or cognitive states and processes.<sup>9</sup>

As Nicholas Shea and Chris Frith put it in their recent review of the literature on the function of consciousness:

[A] leading strategy in scientific research on consciousness is in search of something stronger: tasks that can only be performed using conscious representations. For example, it has been variously claimed that consciousness is required in order: to integrate or bind perceptual features (Dehaene and Naccache 2001; Baars 2002; Tononi 2004); to keep a representation online in the absence of stimulation (Greenwald et al. 1996; Dehaene and Naccache 2001) or to integrate motivational states with causal learning (Dickinson and Balleine 2009). The history of this enterprise is not encouraging. Almost all proposed functions have been matched by

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<sup>9</sup> As noted above, our primary concern is to argue that unconscious perception provides propositional justification, and some arguments below allow for the possibility that unconscious perception may not suffice for doxastic justification due to contingent features of mental architecture. However, the points just made about P.S. suggest to us that not only does unconscious perception provide propositional justification, it can cause and doxastically justify beliefs as well.

plausible findings where the effect is shown to be produced in the absence of consciousness (Faivre et al. 2014; Soto et al. 2011 and Winkelman et al. 2005, respectively). Certainly, *there is no clear case of a task for which consciousness is required* (Shea & Frith 2016, p. 2, emphasis ours).

This is of course not to say that there is *no* causal difference between conscious and unconscious perception. It is simply to say that it is at best unclear that there are any functions that only conscious perception can perform. But if that is the case, what is the difference between conscious and unconscious perception?

To answer this question, we need a theory of consciousness—and in what follows we survey a few. What justifies our selections? As far as we can tell, these views are the main contenders among those working in consciousness studies, but we acknowledge there are many other theories out there. These alternative theories are, however, either somewhat idiosyncratic (e.g., Dennett’s (1991) multiple-drafts theory), exceedingly questionable (e.g., Hameroff’s (1994) quantum-microtubules theory), or variants of the theories that we do discuss (e.g., Tye’s (1995) PANIC theory, which is very similar to global-workspace theory). We of course cannot survey every existing theory, but much of what we say can be modified to apply to alternatives. We also note that each of the theories that we do discuss faces their own share of criticisms (for overviews, see, e.g., Lau & Rosenthal 2011; Berger 2014a). But since our goal here is not to evaluate these theories, but to explore whether and in what ways they may bear on the question of unconscious perceptual justification, we do not review such difficulties.

#### **4.1. Higher-order theories**

We begin with so-called *higher-order* (“HO”) *theories* of consciousness (e.g., Armstrong 1968; Rosenthal 1986; Lycan 1996; Carruthers 2005; Lau & Rosenthal 2011). Roughly, such views hold:

**Higher-order theories:** A perceptual state P is conscious iff one is suitably aware of being in P.

On the HO approach, a state's having phenomenal character (including presentational phenomenology) is extrinsically determined by one's awareness of that state. What it is for a perceptual experience of red to have reddish presentational phenomenology is simply for one to be suitably aware of oneself as seeing red.

HO theories are typically motivated by the commonsense observation that if one is in a mental state, but in no way aware of being in that state, then that state is not conscious. A logically equivalent claim is that a mental state is conscious only if one is somehow aware of it. There are many versions of how this folk-psychological gloss of consciousness is to be implemented. So-called *higher-order thought* ("HOT") theories, for example, maintain that the relevant awareness is engendered by suitable thoughts that one is in the relevant mental state (Rosenthal 1986) or dispositions to have such thoughts (Carruthers 2005). *Higher-order perception* ("HOP") views, by contrast, maintain that we are aware of our conscious mental states via quasi-sensory/perceptual states (e.g., Armstrong 1968; Lycan 1996). The common denominator of such HO theories is that they typically maintain that whether or not a perceptual state is conscious depends on one's having a suitable *extrinsic* mental state about that first-order state.<sup>10</sup>

In this framework, it is at best questionable that a state's being conscious would have anything to do with its epistemic force. If we hold that a state's epistemic force depends on its *intrinsic* features or causal profile alone—features that it would have regardless of its relations to other mental states—then epistemic force and consciousness neatly come apart. Since such awareness arguably does not modulate any intrinsic features of the state or its causal role (see, e.g.,

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<sup>10</sup> Some variants of the HO approach maintain that the relevant awareness is intrinsic to conscious states (e.g., Kriegel 2009); we set these accounts aside for the purposes of this paper.

Rosenthal 2005, p. 185), it is reasonable to conclude that whatever gives perceptual experiences their epistemic force is present in their unconscious counterparts as well. In other words, perceptual states' intrinsic features or causal roles determine their justificatory power—and the kind of extrinsic awareness that engenders consciousness does not impact that power.

If, in contrast, we hold that a state's epistemic force does depend on its relations to other states (which seems to be the mainstream position in epistemology), we get a more complicated picture. One version of this claim comes from Siegel (2017) who urges that a perceptual state's epistemic force depends on whether or not it has been problematically modified by background inferences. But even if epistemic force is relational in that way, it is not clear that the kinds of relations that HO theories posit are the relevant sort. While it is plausible that a perceptual state's inferential etiology might undermine its justificatory status, whether or not we are aware of a perceptual state seems unrelated to its justificatory powers. To put the point simply: There's no reason to think that having the thought "I see red" would add to the epistemic status of the visual state of seeing red, given that these are two separate states with distinct functional roles. .

One possible epistemic role for the HO thought "I see red" could be that it enables you to represent your perceptual state *as a reason* for belief, and to verbalize that reason if asked why you possess the relevant belief. Though some might endorse this requirement on justification (e.g., Brandom 1994; cf. Moran 2017), it is arguably far too stringent. Children seem to have justified beliefs on the basis of perception despite arguably not being able to represent and verbalize their reasons. Likewise, a squirrel arguably believes that there's a predator before it on the basis of seeing one, but it is doubtful that it represents its perceptual states as reasons. Furthermore, the ability to provide reasons might more plausibly be construed as necessary for doxastic justification, which

allows that unconscious perceptual states might nonetheless provide propositional justification.<sup>11</sup>

One might urge on general internalist grounds that the state of seeing red cannot justify the belief that one sees red unless one is suitably aware of that perceptual state. In the present context, however, this move would be question begging. Our argument is that nothing in the nature of HO states seems to confer necessary justificatory powers to perceptual states, so consciousness (as construed by HO theories) is not necessary for perceptual justification. Asserting that what enables HO states to confer justificatory powers is *that they confer consciousness* begs the question at hand.

#### 4.2. Global-workspace theory

HO theories are higher-order insofar as they maintain that a perceptual experience's having presentational character consists in one's having suitable awareness of that state. What unites first-order ("FO") theories, by contrast, is the denial of this assumption. But such theories nonetheless disagree about what FO property gives perceptual experiences' their conscious features. Perhaps the most prominent FO view currently is *global-workspace theory* ("GWT") (e.g., Baars 1988; Tye 1995; Dehaene et al 2006). While varieties of the view vary in their details, GWT in general posits a so-called global workspace—a central psychological/neural system (usually thought to be located in the frontal/parietal areas) that purportedly enjoys long-range connections to many brain areas—and holds that mental states are conscious just in case they are made available to this system:

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<sup>11</sup> Indeed, on standard HO theories, it is far from clear that the HO states in virtue of which perceptual states are conscious represent those first-order states *as reasons*. On a standard HOT version of the view, HOTs are theorized simply to make one aware of being in those states as perceptual states: they are simple thoughts such as "I see red," not more complex thoughts such as "I have a perceptual reason to believe that there is red." It is thus arguable that a creature would need additional abilities, beyond the ability to be in conscious perceptual states, to further represent those states as reasons. On this more demanding view, then, it is arguable that perceptual experiences *alone* would not provide justification. That is to say, endorsing this strong kind of internalism (coupled with a HO theory of consciousness) may even undermine dogmatism.

**Global-workspace theory:** A perceptual state P is conscious iff P is “in” the global workspace and so suitably available for broadcast to the rest of the mind/brain.

The basic idea behind GWT is that mental states are conscious when they have reached a suitable level of mental availability and so able to have widespread impact on a range of mental activity and behavior. GWT is typically motivated by neuroimaging data, which seems to reveal that the difference between instances of conscious and unconscious perception consists in differing levels of activations of frontal/parietal areas and widespread connections to other areas.

The question is this: if we accept GWT, why would a state’s epistemic force be affected by, or even correspond to, its being globally available? The global workspace is putatively a mechanism that allows a perceptual state to exert a greater functional impact on belief acquisition. The epistemic force of a perceptual state in providing propositional justification, however, is not beholden to the actual functional impact it has on belief acquisition. The question of whether or not a perceptual state provides propositional justification for a belief concerns whether or not that state’s impact on various aspects of mental life *would be* rational, not whether or not that state does in fact have an impact on various aspects of mental life.

Consider, by analogy, another kind of normative property: the legality of a particular statute. Whether or not the statute is legal depends on various factors regarding the legal system in which it is embedded; it does not depend on the existence of any actions that it would govern *were* they to occur. For example, suppose it is illegal to throw a banana at the president of the United States. The illegality of that action holds irrespective of whether anybody has in fact carried it out. Likewise, epistemic force is presumably an occurrent normative feature of perceptual states, a feature that they have whether or not one in fact has any beliefs to be justified or not. GWT may therefore

consciousness necessary for doxastic justification, but it is not thereby necessary for propositional justification.

It is also doubtful that one can only ever form the belief that *p* on the basis of perception of *p* via the global workspace. Evidence for unconscious perception (e.g., the case of P.S. discussed above) often involves some decision process that is affected by unconscious perception.

Presumably, such effects involve forming beliefs on the basis of perception without involving the global workspace. Thus GWT does not seem to entail that consciousness is necessary for doxastic or propositional justification. Note that one need not share our intuition that P.S.'s beliefs are *justified* by her perceptual states for this point to go through; one need only agree that her beliefs are *caused* by her perceptual states, and thus perception can cause beliefs independently of the global workspace.

One might think of a state's being available for global broadcast as being akin to its strength—akin to a belief's being more strongly held. But, put that way, it is less clear why a state's being available for global broadcast would be at all relevant to its epistemic force. After all, the mere fact that a belief is strongly held does not make it more justificatory than a weakly held belief. A more strongly held belief may *influence* more of one's mentality, but it may just as easily do so in an unjustified way as a justified way. For example, a narcissist's belief that she is a fantastic person is very strongly held. This belief may play an enormous role in her mental life and behavior, but may nonetheless be unjustified and responsible for widespread irrationality. Meanwhile, a prudent poker player might make reasonable judgments and bets based on justified beliefs about what hands the other players likely have, even though she may hold those beliefs relatively weakly.

#### **4.3. Information-integration theory**

Similar remarks apply to another recently popular theory of consciousness, *information-integration theory* (“IIT”) (Tononi 2004; Tononi et al 2016). Roughly, IIT holds:

**Information-integration theory:** A perceptual state P is conscious iff P is sufficiently informationally integrated with the rest of the system’s information-carrying states.

IIT was developed Giulio Tononi and his team of sleep researchers, who observed that states during sleep tend to be less informationally integrated with one another (as measured by the dynamics of causal connections between neurons) than states of consciousness. Tononi and colleagues thus proposed a measure of informational integration, *phi*, and hypothesized that states are conscious when they reach a suitable threshold of integration. IIT is similar to GWT insofar as both theories require that neural/mental states (potentially) interact with another to be conscious. Thus the phenomenalist might likewise claim that perceptual states have presentational phenomenology, and thus epistemic force, only if a state is sufficiently informationally integrated.

But such an account faces the same questions that undermined the GWT-based account of phenomenalism. A state’s reaching some threshold of integration modifies its causal relations to the rest of the mind, but as with GWT, this sort of modification is not necessary for the state to have epistemic force. While the kind of information a state carries is relevant to its justificatory status, there is no good reason to think that the information’s being integrated above some threshold is necessary or even relevant to its justificatory status. One might think that informational integration engenders coherence, which might be taken to be necessary for justification. But coherence concerns rational relations between beliefs, which is quite different than the technical notion of informational integration invoked by IIT (which can occur in low-level electrical systems as well as conscious perception). There is little reason to think the latter suffices for the former.

#### 4.4. Attentional theories

Perhaps a more promising approach to consciousness for the phenomenalist is what we will call ‘attentional theories’, theories that identify consciousness with attention (e.g., Posner 1994; Prinz 2000; Graziano & Kastner 2011; Prinz 2012):

**Attentional theories:** A perceptual state P is conscious iff P is suitably modulated by attention.

Attentional theories are typically supported by the well-known evidence that consciousness often disappears under attentional load, as in cases of *inattention blindness* (e.g., Mack & Rock 1998). And it does seem tempting to think attention is relevant to perceptual justification. Indeed, the idea that an inattentive perceptual state could justify a belief seems almost contradictory (though see Silins & Siegel 2014).

Whether or not attention is relevant to justification depends on what attention is—and there is much controversy about how to understand the phenomenon, and even whether it is a unitary construct. Here is one example. Some theorists propose that attention modulates the content of perception—making it, for example, more determinate (e.g., Nanay 2010; Stazicker 2011). For example, inattentively perceiving a strawberry may present it as being some shade of red or other, but attentively perceiving it will present it as being a particular shade of red. On this way of understanding attention, as long as we also assume that attention cannot be unconscious (an assumption not shared by at least some proponents of this way of thinking about attention) an argument could be made that only conscious perception can be justificatory. The general upshot

would be that the peculiar force of presentational phenomenology consists in its suitable level of determinateness.

A theoretical problem for this view is that it is unclear why determinacy should be necessary for epistemic force (see, e.g., the vast literature on the speckled hen and also Siegel and Silins 2015). Suppose an unattended (and thus, by hypothesis, unconscious) perceptual state represents merely the determinable property *red*, and that when attended (and thus made conscious), it comes to represent the determinate property *red<sub>s</sub>*. The attended perceptual state could justify the belief that the object is *red<sub>s</sub>* while the unattended state arguably could not. But there is no reason to think that the unattended perceptual state could not justify that belief that the object is red. We have justified beliefs about object in the periphery of our vision all the time! That is, if attention modulates the determinacy of perceptual contents, then it may modulate the determinacy of the belief contents that perception can justify. But it does not follow that unattended perceptual states cannot justify beliefs with determinable contents. The view on offer therefore fails to demonstrate that unconscious perceptual states have *no* epistemic force. At most, it demonstrates that their epistemic force is constrained to certain classes of contents.<sup>12</sup>

One of the main defenders of the attentional theory of consciousness, Jesse Prinz, instead identifies attention with the gateway to the psychological subsystem known as ‘working memory’. Working memory is the system that putatively stores information on the order of seconds in the service of ongoing tasks (Baddeley 1986; Luck & Vogel 2013). On Prinz’s view, then, attention’s role is encoding information into memory, not necessarily to modulate that information.

But this conception of attention makes the attentional view susceptible to the same sort of criticism that undermined GWT and IIT’s substantiation of phenomenalism. One might think that,

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<sup>12</sup> Another problem with this proposal is that there is a lot of experimental evidence that determinate contents can be unconscious (basically all the findings about unconscious perceptual state are of unconscious determinate perceptual states, see Koch and Tsuchiya 2007; Kentridge 2011).

if a perceptual state is not available to working memory, then it cannot justify downstream beliefs for it cannot cause or influence any such beliefs. But that at best demonstrates that unconscious perceptual states do not in fact justify any beliefs, not that they cannot justify them. This possibility does not undermine the idea that perceptual states would nonetheless retain their epistemic force to propositionally justify beliefs, since propositional justification does not require occurrent causal connections to beliefs. And as argued above, it is implausible that any conscious mechanism is strictly *necessary* to form beliefs on the basis of perception.

## 5. Conclusions

We naturally cannot evaluate all of the reasons to doubt that unconscious perceptual states can justify beliefs, nor can we explore all of the potential ways that consciousness modifies perceptual states. Perhaps the question is settled at the outset because some strong version of internalism is correct. But from our brief survey of theories of consciousness, we find it at best unclear why consciousness would be necessary for epistemic force. So if any of these major theories in the study of consciousness are correct, unconscious perceptual justification seems to be on the table. Presuming perceptual states do justify downstream beliefs, such justification is generated (at least partly) independently of consciousness.

We have not, of course, ruled out that consciousness may add to a state's justificatory powers. If, for example, the attentional view on which attention makes more determinate perceptual states' contents is correct, then one might argue that conscious perception can justify more beliefs, or offer stronger justification for belief, than unconscious perception. But since most theories of consciousness do not have this upshot, we think it is quite plausible that consciousness is not required for justification.

We need not, however, reject all aspects of phenomenalism *tout court*. Though we think that insights from consciousness studies question the view that consciousness is necessary for perceptual justification, modified versions of phenomenalism remain on the table. For example, if one is persuaded by the dogmatist's claim that perceptual *experiences* provide *prima facie* justification for beliefs, then one arguably should accept an even broader claim: that perceptual states, whether or not they are conscious, provide such *prima facie* justification. We then require an account of what it is about perception that gives it this status, if not its presentational phenomenology. Whatever that may be, future debates about the epistemology of perceptual belief may wish to downplay the focus on perceptual experience, and instead focus on the nature of perception, conscious or otherwise.

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