

The Epistemic Structure of Introspection

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ABSTRACT:

This paper argues that a simple but powerful principle lies at the heart of the epistemology of introspection. The principle is that introspective evidence is never misleading. The first half of the paper explains the principle. The second half of this paper showcases the explanatory benefits of the principle. In particular, I argue that the principle explains why introspective skepticism about one's own experiences is harder to entertain than perceptual skepticism about the external world, why all introspective errors (but only some perceptual errors) are rationally evaluable, and why introspective hallucinations are impossible. I also argue that the principle explains both the appeal and controversy of more familiar introspective principles concerning infallibility, justification, and luminosity. The result is a picture of introspection that reconciles its epistemic virtues with its epistemic limits.

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INTRODUCTION

Two philosophers are debating about introspection.¹ The first, the *optimist*, says that introspection is epistemically privileged. The optimist claims that introspection is sometimes infallible, that introspective judgments enjoy a special kind of justification, that all phenomenal facts are knowable on the basis of introspection, and that we are directly acquainted with our own experiences. The second, the *pessimist*, says that introspection is epistemically overrated. The pessimist points to the many cases in which introspection seems to go awry and argues that introspection is unreliable, causally mediated, and no more luminous or justified than perception. Which perspective is correct?²

This paper argues that a simple but powerful principle explains the insights of both the optimist and the pessimist. In doing so, this paper develops an account of introspection that aims to reconcile its epistemic virtues with its epistemic limits. On the view I develop, introspection is epistemically privileged in comparison to perception, but not because of any principles concerning infallibility or justification or what subjects are in a position to know; introspection is direct, but also causally-mediated; and all introspective judgments are susceptible to error, but not all errors are applicable to introspection. Here is the principle:

PERFECT EVIDENCE: Introspective evidence is never misleading.

¹ This paper is concerned only with introspection of experiences (as opposed to other kinds of mental states, such as propositional attitudes).

² Philosophers broadly aligned with the optimist perspective include Shoemaker [1994], Chalmers [2003], Horgan & Kriegel [2007], Gertler [2011], Balog [2012], Goff [2015], Smithies [2012 a, 2019], and Giustina [forthcoming]. Philosophers broadly aligned with the pessimist perspective include Churchland [1988], Dennett [1991, 2002], Block [1995], Lycan [1995], Rosenthal [2000], Williamson [2000], Blakemore [2002], Schwitzgebel [2008], Pereboom [2011], and Lee [2016]. For general overviews of the philosophy of introspection, see Stoljar & Smithies [2012], Schwitzgebel [2016], and Gertler [2017].

According to PERFECT EVIDENCE, introspective judgments are never false because of *evidential errors*, or errors of misleading evidence. In contrast, evidential errors occur for perception whenever a perceptual judgment is based on a non-veridical perceptual experience (such as a hallucination). Though introspection is immune to evidential errors, it is still susceptible to *basing errors*, or errors of improperly basing one's judgment on one's evidence. In other words, even though introspective evidence is never misleading, that does not guarantee that one makes good use of that evidence. This is a brief preview, but over the course of the paper, I will explain, motivate, and defend PERFECT EVIDENCE in detail.³

Though PERFECT EVIDENCE is interesting in itself, its real philosophical interest comes from its explanatory benefits. In particular, I argue that the principle provides a unified explanation of a number of epistemic asymmetries between introspection and perception, including why introspective skepticism about one's current experiences is much harder to entertain than perceptual skepticism about the external world, how introspective and perceptual errors relate to rationality, and why introspective hallucinations are impossible. I also argue that PERFECT EVIDENCE explains both the appeal and controversy of more familiar introspective principles concerning infallibility, justification, and knowledge.

The principal aim of this paper is to map the epistemic structure of introspection. In other words, I will explain how various epistemic principles about introspection relate to each other and I will develop a framework that enables us to better identify core disagreements about the epistemology of introspection. Though I will

³ Two similar views worth mentioning are Sturgeon [1994] and Smithies [2019]. Sturgeon has argued that experiences serve as their own evidence and Smithies has independently developed a view of introspection similar to the one developed here. However, those works differ from mine both in explanatory ambitions (Sturgeon aims to explain the mind-body problem, Smithies aims to explain the epistemic roles of consciousness, while I aim to show how PERFECT EVIDENCE explains certain epistemic asymmetries and other epistemic principles) and in philosophically important details (for example, I later argue that not all of a subject's experiences count as evidence for that subject).

also develop a positive account of introspection along the way, even those who disagree with my view can still agree that PERFECT EVIDENCE illuminates philosophical disputes about introspection.

In §1, I explain and defend PERFECT EVIDENCE. In §2, I discuss the explanatory benefits of PERFECT EVIDENCE.

§ 1 | PERFECT EVIDENCE

When I talk about experiences, I am talking about phenomenal character, or what it is like to have an experience. An *introspective judgment* is a judgment about the phenomenal character of an experience that is formed on the basis of introspection. The class of introspective judgments is a proper subclass of the class of *phenomenal judgments*, or judgments about the phenomenal characters of experiences. The *target experience* of an introspective judgment is the experience that the judgment is about, and an introspective judgment is *erroneous* just in case the content of the judgment mismatches the character of its target experience

What exactly is introspection, anyway? I take *introspection* to be the first-person knowledge-acquisition process by which we form judgments about our occurrent experiences.⁴ Putting it another way, it is the process that enables one to form judgments about one's experiences on the basis of those experiences. This definition serves as a neutral way of identifying the target phenomenon, and is consistent with a wide range of views about the epistemology, metaphysics, and psychology of introspection. Note that I use the term 'introspection' to denote a process that essentially involves both an experience and a judgment. It is possible to form a phenomenal judgment about one's experience that is not based on introspection, and it is possible

⁴ For pluralists about introspection, the arguments in this paper may be understood as targeting all processes that satisfying my definition of introspection. For those who prefer taking the products of introspection to be beliefs or knowledge (as opposed to judgments), my discussion can be reframed in those terms.

to attend to one's experience without forming a judgment about that experience, but neither of those phenomena are instances of the target explanandum.⁵

For the purposes of this paper, I will take for granted that introspective judgments are always causally related to their target experiences.⁶ However, not every instance of an experience causing a judgment about that experience is an instance of introspection. Suppose a mad scientist hooks your brain up to mine so that whenever you experience pain, I reflexively form the judgment that you are in pain (without any grasp of why it is that I formed that judgment). Although my judgment is caused by and about your experience, it is intuitively not an introspective judgment. For a judgment to count as introspective, the judgment must not only be caused by an experience but must also be based on that experience. For the moment, let us set aside questions about basing; I will discuss it in more detail soon.

PERFECT EVIDENCE

To get a handle on PERFECT EVIDENCE, it is best to begin with perception as a contrast case. On standard views of perception (where perceptual experiences provide defeasible evidence for perceptual judgments about the external world), there are two ways in which a perceptual judgment can be erroneous.

First, a perceptual judgment may be erroneous because of an *evidential error*, or an error of misleading evidence. For example, suppose I have a perceptual experience as of a watermelon in front of me and on the basis of my experience form the judgment that there is a watermelon in front of me. Unbeknownst to me, you had earlier slipped me a drug whose sole effect is inducing watermelon hallucinations. My

⁵ This is a verbal stipulation, rather than a stance on the nature of introspection. For example, Giustina [2019] argues that there is a kind of introspection that does not involve judgment, but that is arguably targeting a different explanandum.

⁶ Some philosophers have argued that there is a special class of introspective judgments that are constitutively (rather than causally) related to their target experiences (see, e.g., Chalmers [2003], Horgan & Kriegel [2007], Gertler [2011], Balog [2012], Goff [2015]). It is beyond the scope of this paper to discuss these views, but the account of introspection developed here can be naturally extended to accommodate such views.

perceptual judgment is erroneous because my evidence (namely, my perceptual experience) was misleading. In general, evidential errors are due to malfunctions in the *evidential process*, or the process connecting the target of the judgment (e.g., an external object) to the evidence for the judgment (e.g., a perceptual experience). In other words, evidential errors involve mismatches between targets and evidence. As a heuristic, evidential errors are generally taken to be errors that are not rationally evaluable. For example, a brain-in-the-vat is the victim of massive evidential errors, but intuitively the brain-in-the-vat is not irrational. Besides perception, other knowledge-acquisition processes susceptible to evidential errors include memory (e.g., false memories), testimony (e.g., false testimony), inference (e.g., false beliefs), and perhaps intuition (e.g., false intuitions).

Second, a perceptual judgment may be erroneous because of a *basing error*, or an error of failing to properly base one's judgments on one's evidence. For example, suppose I have a veridical experience of a watermelon. In this case, I have good evidence that there is a watermelon in front of me. But suppose I do not adequately make use of my evidence and I form the judgment that there is a cantaloupe in front of me.⁷ My perceptual judgment is erroneous, but not because it was based on misleading evidence. Instead, it is erroneous because I failed to form the right judgment on the basis of my evidence. In general, basing errors are due to malfunctions in the *basing process*, or the process connecting the evidence for a judgment (e.g., an experience) to the judgment itself (e.g., a perceptual judgment). In other words, basing errors involve mismatches between evidence and judgments. As a heuristic, basing errors are generally taken to be errors that are rationally evaluable.⁸ For example, someone affirms the consequent is making a basing error (and is arguably rationally at fault for the error). Basing errors occur with other knowledge-acquisition processes as well, such as when one forms a false judgment on the basis of a veridical memory, testimony, belief, or intuition.

⁷ As I discuss later, this case might necessarily involve a failure of rationality.

⁸ See Bondy [2018] for a recent discussion of the connection between basing and rationality.

According to PERFECT EVIDENCE, introspection is immune to the first kind of error—namely, errors of misleading evidence. Nevertheless, introspection is still susceptible to the second kind of error—namely, errors of improper basing. Notice that PERFECT EVIDENCE does not say anything about whether or not all of one’s experiences count as introspective evidence, whether or not the degree of confirmation by introspective evidence is always 1, how evidence relates to justification, or when one is in a position to know a fact on the basis of one’s evidence. These further issues will be discussed later, but at this point I simply wish to flag that they are left open by PERFECT EVIDENCE.

The result is a picture of introspection that looks different from standard pictures of perception. These two pictures are diagrammed below:

FIGURE 1

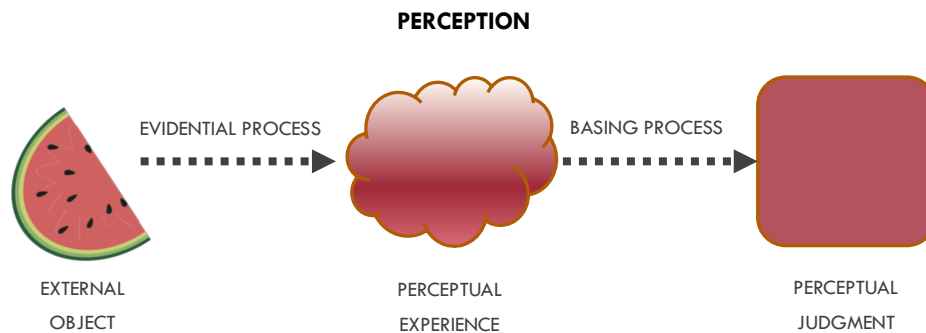
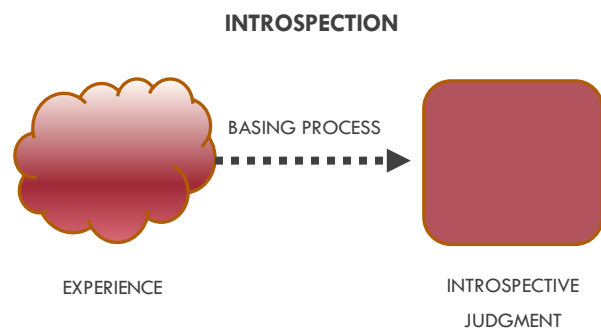


FIGURE 2



Though my focus is on introspection, let me make some brief remarks about the contrasting picture of perception. I have been presuming that perceptual experiences provide defeasible evidence for perceptual judgments, but not all philosophers accept that claim. Most notably, naïve realists and coherentists are likely to deny that evidential errors can occur for perception. For naïve realists, perceptual experiences stand in constitutive (rather than causal) relations to their targets, meaning that one cannot have a perceptual experience at all unless one is perceptually aware of an external object. For coherentists, only doxastic states (and not experiences) can be evidence.⁹ Nevertheless, both naïve realists and coherentists can still accept PERFECT EVIDENCE (even though they will deny that the principle identifies an asymmetry between introspection and perception). For the rest of the paper, I will take for granted that perception is susceptible to evidential errors, though this is primarily for expository (rather than dialectical) purposes.

EVIDENCE AND BASING

Before moving on to the explanation for PERFECT EVIDENCE, let me say more about how I am understanding the notions of evidence and basing.

Any evidence is evidence for some proposition. Suppose that one has evidence that P. If it is not in fact the case that P, then one's evidence is *misleading*, meaning that an evidential error has occurred. By contrast, if it is in fact the case that P, then (at least in normal circumstances) one's evidence is *veridical*. If one forms the judgment that Q on the basis of that evidence (where Q is not entailed by P), then one's

⁹ See Soteriou [2016] for an overview of naïve realism and Olsson [2017] for an overview of coherentism. Strictly speaking, there are versions of naïve realism and coherentism that can accept the possibility of evidential errors for perception. For example, a naïve realist could think that hallucinations provide the same evidence as perceptions (even though the two are fundamentally different kinds of mental states), and a coherentist could think perceptual experiences are evidence (but that only doxastic states can justify other doxastic states).

judgment *misfits* one's evidence, meaning that a basing error has occurred. By contrast, if one forms the judgment that P on the basis of one's evidence, then (at least in normal circumstances) one has *properly based* one's judgment on one's evidence (even in cases where the evidence is misleading).

I take the notions of evidence and basing to be interconnected: *evidence* is what one bases one's judgments on, and *basing* is the relation by which one uses one's evidence to form judgments.¹⁰ These are not definitions, but instead specifications of the theoretical roles most central to this paper.¹¹ In fact, I will remain neutral on whether evidence and basing are epistemic primitives or whether they are analyzable in terms of more basic concepts.¹² I will also remain neutral in the first half of the paper on how evidence and basing relate to other epistemic notions (such as justification, rationality, and knowledge), though I will explore these connections in detail in the second half of the paper. Note that staying neutral on these issues does not mean that the relevant notions of evidence and basing are impoverished; instead,

¹⁰ It is more common to characterize the first relatum of basing as a reason (instead of as evidence). Supposing experiences do not count as reasons, we could accommodate such a view by instead taking introspective judgments to be based on phenomenal facts (or propositions). It is also sometimes held that the second relatum of basing need not necessarily be a doxastic state. I am sympathetic to that claim, but it will not matter for the purposes of this paper. For an overview of philosophical work on basing, see Korcz [2015].

¹¹ A useful analysis of different theoretical roles of evidence is provided by Lyons [2016], who distinguishes between factual evidence (i.e., objective facts), psychological evidence (i.e., what we base our beliefs on), and justifying evidence (i.e., what justifies beliefs). I assume here that experiences (or phenomenal facts) are both factual evidence and psychological evidence, and I later discuss the view that experiences are also justifying evidence.

¹² For some examples of analyses of evidence, see Lyons [2009] (for a reliabilist account), Williamson [2000] (for a knowledge account), Schellenberg [2016] (for a capacities account), and Huemer [2007] (for an experiential account). For some examples of analyses of basing, see Marcus [2012] (for a representationalist account), Sosa [2015] (for a dispositional account), and Neta [2019] (for a hybrid account).

it means only that my arguments do not hinge upon any particular way of understanding the connection between evidence, basing, and other epistemic kinds.

There are some substantive claims about evidence and basing that I will simply take for granted. First, I assume that experiences are evidence. For those who prefer construing experiential evidence in terms of phenomenal facts or phenomenal propositions (rather than experiences themselves), my arguments could be reframed in those terms without loss. Second, I assume that evidence can be misleading. Even if you hallucinate a watermelon in front of you, you still have perceptual evidence that there is a watermelon in front of you. Third, I assume that something can be evidence for facts about itself. Though talk of evidence usually concerns cases where the evidence (e.g., a perceptual experience) is distinct from what it is evidence for (e.g., facts about an external object), something's being evidence for facts about itself might be thought of as a limit case where there is no metaphysical distance between the evidence itself and what the evidence is about.

At this point, it is worth addressing a few preliminary objections to PERFECT EVIDENCE that relate to basing and evidence. A first objection is that introspective judgments can be partially based on non-experiential evidence. For example, suppose I form an introspective judgment both on the basis of my experience and on the basis of my beliefs. Such a judgment would be susceptible to evidential errors, since doxastic evidence can be misleading. However, such a scenario is consistent with PERFECT EVIDENCE, since the misleading evidence is not introspective evidence. The source of error in the example lies outside of the introspective process, leaving untouched the claim that introspection is immune to evidential errors.¹³

A second objection is that it is psychologically implausible that perceptual judgments are based on perceptual experiences. When one forms a perceptual judgment, one seems to base one's judgment on the objects of perceptual experiences

¹³ For this reason, PERFECT EVIDENCE is formulated as the claim that introspection is immune to evidential errors, rather than the claim that introspective judgments are immune to evidential errors. Nevertheless, introspective judgments that are wholly (as opposed to partially) based on introspection are immune to evidential errors.

rather than on perceptual experiences themselves. I agree with this psychological observation, and for this reason take it to be more perspicuous to take perceptual experiences to be based on the contents of perceptual experiences than on perceptual experiences themselves. This better captures the psychology of perceptual judgments while still respecting the fact that perception is susceptible to both evidential errors and basing errors. But to simplify the prose, I will continue just talking about perceptual judgments being based on perceptual experiences.¹⁴

A third objection is that subjects do not necessarily have access to all their experiences (but do necessarily have access to all their evidence). Consider a view that holds both that accessing a mental state requires attention and that some experiences cannot be attended to. If evidence must be accessible, then such a view entails that not all of one's experiences count as evidence. However, PERFECT EVIDENCE does not claim that all of one's experiences count as introspective evidence; instead, it claims that introspective evidence is never misleading. If evidence requires access and not all experiences are accessible, then that is reason to give up the claim that all experiences count as introspective evidence (rather than reason to give up PERFECT EVIDENCE). For now, I will remain neutral on the relation between evidence and access, though we will return to the issue in the second half of the paper.

DIRECTNESS

What explains the fact that introspection is immune to evidential errors (while perception is not)? Though the main focus of this paper will be on the explanatory benefits of PERFECT EVIDENCE, it is worth taking a brief detour to address the explanation for PERFECT EVIDENCE itself. In my view, the fact that introspection is immune to evidential errors (while perception is not) is explained by the fact that introspection is direct (while perception is not).

¹⁴ Note that all my arguments are consistent with representationalism, the view that phenomenal character is grounded in representational content. However, I will take for granted the falsity of PURE TRANSPARENCY, according to which we can attend only to the contents of experiences (and not to experiences themselves).

The term ‘direct’ is used in a variety of ways in the philosophical literature on introspection. Before explaining what I mean, let me preemptively address some potential confusions. First, ‘direct’ is sometimes taken to mean non-causal, where saying that introspection is direct means that introspective judgments are constituted by their target experiences. Against this, my account is consistent with taking introspection to always be causally mediated. Second, ‘direct’ is sometimes taken to mean perfectly accessible, where saying introspection is direct means that no information about the phenomenal character of one’s experience cannot be accessed via introspection. Against this, my account is consistent with holding that there are principled limits to one’s access to one’s own experiences.

Instead, directness should be understood in terms of *epistemic mediums*, or evidence that is distinct from what it is evidence for. For example, perceptual experiences¹⁵ are epistemic mediums for perception: perceptual judgments are evidence for (but distinct from) the targets of perceptual judgments. Other knowledge-acquisition processes, such as memory, testimony, inference, and intuition, also arguably involve epistemic mediums (in particular, memories, testimonies, beliefs, and intuitions). By contrast, introspection arguably involves no epistemic medium, since experiences are both evidence for introspective judgments and the targets of introspective judgments. Whenever a judgment is based on an epistemic medium, that judgment is *indirect*. In contrast, whenever the evidence for a judgment is identical to the target of that judgment, the judgment is *direct*.¹⁶

¹⁵ For those who prefer more fine-grained ontologies for evidence, epistemic mediums can instead be characterized in terms of facts or propositions.

¹⁶ Could there be judgments that are neither direct nor indirect? The answer depends on somewhat esoteric issues about reference. Suppose it is possible to form an introspective judgment that is about the right half of one’s visual experience but that is based on the left half of one’s visual experience. The judgment is not indirect (the evidence that the judgment is based upon is identical to what it is evidence for), but it is also not direct (the basis for the judgment is distinct from the target of the judgment). My own view is that such cases are impossible for judgments wholly based on introspection. But even if such cases were possible, it is plausible that they would necessarily involve basing errors, since in such cases one’s

What exactly is the relationship between directness and PERFECT EVIDENCE? Strictly speaking, there is nothing contradictory about the idea of an indirect knowledge-acquisition process that is immune to evidential errors: all that is needed is for the epistemic medium for that knowledge-acquisition process to be guaranteed to be veridical. For example, in the case of perception, this would require that perceptual experiences be unable to misrepresent. Consequently, it is possible to accept PERFECT EVIDENCE even if one takes introspection to be indirect. However, such a view faces the challenge of explaining what the epistemic medium for introspection is and why that epistemic medium cannot misrepresent. This is a significant challenge, since there is little reason to think that evidential errors are impossible for standard indirect knowledge-acquisition processes, such as perception. In fact, if we accept the maxim that there are no necessary connections between distinct existents, it is hard to see how this explanatory challenge could possibly be met.¹⁷ Because of this (and for purposes of space), I will take for granted that PERFECT EVIDENCE is true only if introspection is direct.

This tension between PERFECT EVIDENCE and indirectness might tempt some towards a modus tollens instead of a modus ponens. In other words, some might take the above considerations to be reason for accepting a view where introspection has an epistemic medium and is susceptible to evidential errors. This move may be particularly attractive for philosophers who independently favor views where introspection involves an epistemic medium: for example, one might think that introspective seemings or higher-order mental representations are epistemic mediums that lie between experiences and introspective judgments.¹⁸

judgment necessarily misfits the evidence that it is based on (since the judgment and the evidence are about distinct things).

¹⁷ See Kriegel [2009] for a view that accepts both PERFECT EVIDENCE and epistemic mediums.

¹⁸ See Huemer [2001] and Chudnoff [2012] for examples of the former view, and Rosenthal [2000] for an example of the latter view. Note, though, that directness is compatible with taking introspection knowledge to require introspective seemings. For example, one might think that introspective seemings enable the basing relation to occur, but that the target experience is still part of the basis for the introspective judgment.

It is beyond the scope of this paper to address specific views that are inconsistent with PERFECT EVIDENCE, but there are some general reasons for disfavoring such views. In brief, rejecting PERFECT EVIDENCE leads to counterintuitive predictions concerning skepticism, rationality, and hallucinations. These will be explored in detail in the next section, when I discuss the explanatory benefits of PERFECT EVIDENCE. But here is a preview: if introspection is susceptible to misleading evidence, then we should be able to entertain first-person introspective skeptical scenarios (where we suppose that our own introspective evidence is systematically misleading), it should be possible for a perfectly rational subject's introspective judgments to be massively erroneous (because they properly based their judgments on bad introspective evidence), and there should be an introspective analogue of perceptual hallucinations (where the epistemic medium for introspection misrepresents in the same way as perceptual hallucinations).¹⁹ Since none of these consequences seems possible, we have reason to endorse PERFECT EVIDENCE.²⁰

Some might argue that evidential errors are possible even for direct knowledge-acquisition processes. A first objection concerns higher-order evidence. Suppose that has both first-order evidence (say, about the external world) and higher-order evidence (about one's first-order evidence). Suppose also that one's higher-order evidence is misleading, that one forms a false judgment about one's (total) evidence on the basis of one's (total) evidence, and that the judgment is false because of the misleading higher-order evidence. Such a case arguably involves an evidential error, despite the fact that the target of the judgment is identical to the basis for the judgment. However, in such a case the higher-order evidence still serves

¹⁹ Similar arguments for directness are briefly discussed in Smithies [forthcoming].

²⁰ Since this paper argues that there is a close relationship between PERFECT EVIDENCE and directness, these explanatory considerations are also reasons for favoring directness. Though I believe there are also arguments for directness independent of PERFECT EVIDENCE, I will not explicitly discuss those reasons. The aim of this paper is to explain PERFECT EVIDENCE and to showcase its explanatory power, rather than to provide independent justification for the explanation for PERFECT EVIDENCE.

as an epistemic medium, since the higher-order evidence is evidence about (but distinct from) the first-order evidence. In these kinds of cases, the judgment may be partially direct (insofar as the judgment is based on the first-order evidence) but also partially indirect (insofar as the judgment is based on the higher-order evidence).

A second objection concerns imperfectly correlated phenomenal properties. Suppose we take introspective evidence to consist of phenomenal facts rather than experiences themselves. Suppose also that experiences with property F tend to also have property G, that one forms the judgment that one's experience is G on the basis of introspecting that one's experience is F, and that one's experience happens to be a rare instance of an experience that is F but not G. In such a case, it seems that one's introspective evidence is misleading, even if we presume that introspection is direct. But as before, it is important to be careful about what one's introspective evidence is. The present objection takes the fact that one's experience is F to be evidence that one's experience is G. However, the basis for the judgment that one's experience is G must consist not only of the fact that one's experience is F, but also a background belief that that F-experiences are correlated with G-experiences. Consequently, the judgment that one's experience is G is either not formed solely on the basis of introspection or improperly based.²¹

A third objection is that introspecting an experience changes the phenomenal character of that experience. However, while this may cast doubt on the reliability of introspection, it does not cast doubt on directness. As a limit case, consider an alien whose experiences radically change whenever they begin introspecting their experiences. Perhaps the alien could not acquire any knowledge on the basis of introspection, and perhaps it would even be difficult for the alien to form introspective judgments at all. But the fact that the alien is structured in such a way is not reason to think that the alien's introspective judgments would be based on epistemic mediums. Likewise, whether and how introspection changes the phenomenal character of our own experiences is largely irrelevant to whether introspection is direct.

²¹ Another way to block this objection is to hold that one's introspective evidence includes the fact that one's experience is not G.

The picture of introspection that I have developed is in many ways analogous to the naïve realist’s picture of perception. In particular, naïve realists reject the claim that perception involves an epistemic medium and are likely to be sympathetic to the thesis that perception is immune to evidential errors. Of course, the principal challenge for naïve realism about perception—namely, the problem of hallucination—arguably does not arise for introspection. Setting aside that asymmetry, a good deal of the discussion of introspection developed in this paper could be applied to perception under a naïve realist framework. In fact, it is natural to regard the view of introspection developed in this paper as a kind of naïve realism about one’s own experience (as opposed to the external world).²²

§ 2 | EXPLANATORY BENEFITS

The rest of this paper takes PERFECT EVIDENCE for granted and discusses its explanatory benefits. In the first half of this section, I show how PERFECT EVIDENCE provides a unified explanation of why there is an asymmetry between skepticism about the external world and skepticism about one’s own experiences, the rational evaluability of introspective errors versus perceptual errors, and why introspective hallucinations are impossible. In the second half of this section, I argue that PERFECT EVIDENCE explains both the appeal and controversy of more familiar epistemic principles concerning justification, infallibility, and what we are in a position to know.

²² Consider how Brewer [2006] expresses an analogue of PERFECT EVIDENCE for perception when he says that “in perceptual experience, a person is simply presented with the actual constituents of the physical world themselves. Any errors in her world view which result are the product of the subject’s responses to this experience, however automatic, natural, or understandable in retrospect these responses may be. Error, strictly speaking, given how the world actually is, is never an essential feature of experience itself.”

SKEPTICISM

There is an asymmetry between perceptual skepticism (concerning one's perceptual judgments about the external world) and introspective skepticism (concerning one's introspective judgments about one's own experiences). Whereas it is easy to entertain perceptual skepticism, it seems impossible or incoherent to entertain introspective skepticism.²³ This asymmetry calls out for explanation.²⁴

To begin, consider the epistemic structure of skeptical scenarios. When we entertain skeptical scenarios about the external world, we nearly always stipulate that the subject's perceptual judgments go awry because of evidential errors. For example, the brain-in-the-vat has perceptual experiences representing an environment full of people and tables and watermelons, but in fact there are no people or tables or watermelons around them. The brain-in-the-vat might even be perfectly rational and never make any basing errors, yet unfortunately it still forms many false perceptual judgments on the basis of its perceptual experiences. Other skeptical scenarios, involving Boltzmann brains, Matrix machines, Cartesian demons, dreams, and drugs all have the same epistemic structure. The general schema for constructing a skeptical scenario is to imagine a subject suffering massive evidential errors while setting aside basing errors.

If skeptical scenarios maximize evidential errors and minimize basing errors, then PERFECT EVIDENCE explains why there is an asymmetry between perceptual skepticism and introspective skepticism. Since introspection is immune to evidential errors, it is impossible to construct a scenario where one's introspective judgments are erroneous because of massive evidential errors. Furthermore, if we normally set aside basing errors when entertaining skeptical scenarios, then that requires setting

²³ Some might point out that illusionists about consciousness contend that introspective skepticism is possible. However, illusionists typically agree that perceptual skepticism is far easier to entertain than introspective skepticism. See Frankish [2016] for discussion of this.

²⁴ For some other discussions of this asymmetry in skepticism, see Horgan et al [2006], Gertler [2012], Lee [2016], Smithies [2019], and Silins [forthcoming]. Note that all of these authors appeal to the asymmetry for different explanatory purposes (both from each other and from the discussion here).

aside all introspective errors. As a result, the standard schema for constructing skeptical scenarios is inapplicable to introspective.

Suppose we invert the epistemic structure of the skepticism schema, so that we consider scenarios where a subject has good evidence but bad basing abilities. Since introspection is susceptible to basing errors, this inverted skeptical schema is applicable to introspection. This means that introspective skepticism is possible, but only in a form that deviates from the epistemic structure of standard skeptical scenarios. An interesting consequence is that entertaining introspective skepticism is analogous to entertaining the possibility that one's perceptual judgments are massively erroneous even while taking for granted that one is perceiving veridically. Such scenarios are more bizarre than standard skeptical scenarios, and arguably flout the heuristic of presuming perfect rationality in thought-experiments. In fact, because inverted skeptical scenarios are rarely discussed, it is easy to overlook the fact that introspective skepticism is possible at all.²⁵

RATIONALITY

It is commonly held that basing errors are rationally evaluable while evidential errors are not. For example, a subject who forms a false judgment on the basis of a hallucination arguably might still be perfectly rational, but a subject who forms a false judgment by making a bad inference arguably must not be. A common maxim capturing this idea is that rational subjects are those that form judgments that fit their evidence. Since all introspective errors are basing errors, and since introspective evidence is never misleading, this suggests that all introspective errors are rationally evaluable.²⁶

Before examining that consequence, let us first consider why basing errors are rationally evaluable while evidential errors are not. The striking difference between the basing process and the evidential process is that subjects have control over

²⁵ See Schaffer [2010] and Bondy & Carter [forthcoming] for discussions of inverted skepticism.

²⁶ For discussions of the relationship between introspection and rationality, see Shoemaker [1994], Burge [1998], Smithies [2012 b, 2016] and Stoljar [2019].

the former but not the latter. If we grant that what one rationally ought to do is restricted by what one can do, it is plausible that a subject is rationally evaluable for an erroneous judgment only if they have control over the process that is the source of error for that judgment. For example, a brain-in-a-vat is not at fault for forming false perceptual judgments since it has no control over the evidential process that leads to its bad perceptual evidence. If we grant also that rational subjects form judgments that fit their evidence, then it is plausible that perfectly rational subjects always properly base their judgments on their evidence. This is because basing errors by definition involve a subject failing to form judgments that fit their evidence, so basing errors always violate that maxim. Taken together, these observations account for why basing errors are rationally evaluable (while evidential errors are not).

Is it plausible that all introspective errors are rationally evaluable? It may be tempting to think that even perfectly rational subjects are prone to introspective errors. For example, suppose one attempts to introspect the precise character of one's peripheral visual experience, or a complex emotional experience, or a rich multimodal perceptual experience, but makes a mistake because of the subtlety, complexity, or detail of the target phenomenal character. Intuitively, these introspective mistakes need not involve failures of rationality. Consequently, this seems to cast doubt either on the maxim that rational subjects form beliefs that fit their evidence or on PERFECT EVIDENCE itself.

Nevertheless, I suspect that the conclusion that all introspective errors are rationally evaluable can be reconciled with the intuitions motivating the kinds of cases described above. Observe that taking all introspective errors to be rationally evaluable does not entail that perfectly rational subjects are in a position to know all phenomenal facts about their experiences. Even if we presume that rational subjects form judgments that fit their evidence, there remains a question of what any given subject's introspective evidence is in the first place. If perfectly rational subjects can make false introspective judgments, then a natural move is to hold that not all of a subject's experiences count as introspective evidence.

To properly make that move, we would need an independent account of what makes any given experience count as introspective evidence. It is beyond the scope

of this paper to develop such an account, but let me briefly sketch what seems to me a promising route. To form an introspective judgment about one's experience, it is plausible that one must attend to that experience. But attention comes in degrees, and some aspects of experience may be harder to attend to than others.²⁷ If we presume that evidence must be accessible, that access to one's experiences requires attention, and that any given subject has different degrees of access to different aspects of their experiences, then we have independent reason for thinking that not all of a subject's experiences count as introspective evidence and the initial basis for developing an account of how that might work. If such an account is right, then one's introspective evidence can underdetermine the total set of phenomenal facts about one's experience. Consequently, it would be unsurprising if even perfectly rational subjects sometimes make false introspective judgments.²⁸

Suppose one's introspective evidence leaves open whether one's experience is F. In at least some cases, it will be rationally impermissible to judge that one's experience is F. But even if so, one might still be rationally permitted to guess that one's experience is F.²⁹ Since the rational norms that apply to judgment are different from those that apply to guessing, even perfectly rational subjects are liable to make false guesses about their experience on the basis of introspection. I suspect that the intuition that even perfectly rational subjects are susceptible to introspective errors is partly due to the fact that the term 'introspective error' could be understood

²⁷ See Watzl [2017] for an in-depth discussion of attention. See Block [1995] for a classic discussion of phenomenal character and access, and Block [2011] for a more recent discussion.

²⁸ There are other ways of justifying restrictions on introspective evidence. For example, another natural view is to hold that an experience counts as evidence only if it has self-presentational character (see Chudnoff [2012] for discussion of this idea) and that not all experiences have (the same degrees of) self-presentational character. The differences between these accounts does not matter for the purposes of this paper.

²⁹ There might still be rational norms on guessing: for example, it is plausible that one should make the guess that best fits with one's evidence. The point is that there may be circumstances where one's introspective evidence does not permit one to judge that P but does permit one to guess that P.

narrowly (as concerning only judgments) or broadly (as concerning any truth-evaluable attitude, including guessing). Perfectly rational subjects are susceptible to introspective errors in the broad sense, even if they are not susceptible to introspective errors in the narrow sense.³⁰

Is it possible to accept PERFECT EVIDENCE while denying that all introspective errors are rationally evaluable? To do so, one would have to either hold that some introspective errors are neither evidential nor basing errors or deny that all basing errors are rationally evaluable. The first approach requires identifying a new class of errors and explaining why some introspective errors fall under that class; the second approach requires identifying different classes of basing errors that differ with respect to rational evaluability and arguing that some introspective errors fall within the non-evaluable class. Both approaches are forced to give up on the maxim that rational subjects form judgments that fit their evidence. Speaking for myself, I am more optimistic about embracing the result all introspective errors involve failures of rationality and developing an account that limits which experiences count as introspective evidence. To simplify the discussion for the rest of the paper, I will presume from this point onwards that all introspective errors are rationally evaluable.

Supposing that is right, we have identified another epistemic asymmetry between introspection and perception. All introspective errors are basing errors, and all basing errors are rationally evaluable. In contrast, perceptual errors can be either basing errors or evidential errors, and evidential errors are not rationally evaluable. This also supplements our prior explanation for why introspective skepticism seems incoherent: in particular, it requires taking oneself to be massively irrational.

³⁰ What about probabilistic judgments? Let P be the judgment that there is a .8 chance that one's experience is F. It seems that a perfectly rational subject could judge that P even if their experience is not F. However, the veridicality of the judgment arguably depends on whether there is a .8 chance that the subject's experience is F, rather than on whether the subject's experience is in fact F. In other words, a perfectly rational subject could accurately judge that it is likely that their experience is F even if their experience is not F.

HALLUCINATIONS

Perception is susceptible to hallucinations; introspection is not. It makes sense to talk about misleading perceptual experiences, but there is nothing analogous for introspection. Putting it another way, there is an appearance-reality gap for perception that does not hold for introspection, since the target of introspection is appearances themselves. If we accept PERFECT EVIDENCE, this asymmetry is unsurprising. Perceptual hallucinations are always instances of evidential errors: perceptual experiences are the evidence for perceptual judgments, and perceptual hallucinations are cases where that evidence is misleading. But since introspection is immune to evidential errors, there is nothing that can play the same epistemic role for introspection. As a result, PERFECT EVIDENCE also captures the sense in which there is no appearance-reality gap for introspection.

There are some views of introspection that allow for the possibility of introspective hallucinations, or at least for mental states that play the same epistemic role as perceptual hallucinations. These are views that take introspection to have an epistemic medium: for example, one might think that introspective judgments are based on higher-order representations of first-order phenomenal states or that introspective judgments are based on introspective seemings that are distinct from both the experience and the judgment. Since such views exist, some might contend it is question-begging to assume that introspective hallucinations are impossible. However, there are some compelling reasons for disfavoring such views.

Suppose that introspective hallucinations are possible. Then it should be possible for a subject to properly base all their introspective judgments on their evidence yet for their introspective judgments to be false because their introspective evidence was hallucinatory. If we assume that hallucinations can provide the same evidence as veridical representations, then a subject suffering introspective hallucinations could have the very same introspective evidence as you have as you read this paper, despite having a radically different experience. Furthermore, it should be possible to apply the standard skepticism schema to introspection, where a subject's introspective judgments are systematically false because of massive evidential errors. Since evidential errors are not rationally evaluable, it should also be possible for such a

subject to be perfectly rational, despite having the same kind of introspective evidence as a normal subject. On top of all that, the proponent of introspective hallucinations cannot avail themselves of the explanations for the epistemic asymmetries that were provided earlier or the explanations for the epistemic principles that will be provided next. Once we combine these considerations with the initial implausibility of introspective hallucinations, there is strong reason for rejecting such views.

So far, this section has focused on epistemic asymmetries between introspection and perception with respect to epistemic phenomena—in particular, concerning skepticism, rationality, and hallucination. The rest of this section will focus on epistemic asymmetries with respect to epistemic principles—in particular, concerning justification, fallibility, and what we are in a position to know. In what follows, I argue that PERFECT EVIDENCE explains both the appeal and controversy of some more commonly discussed introspective principles.

JUSTIFICATION

The first principle, concerning justification, is SELF-WARRANT: introspective judgments are automatically justified.³¹ By ‘automatic’, I mean that introspective judgments are justified by default, simply in virtue of being a judgment formed on the basis of introspection. For present purposes, we can set aside questions about how strong this justification is and whether or not the justification can be defeated or undercut. PERFECT EVIDENCE does not entail that SELF-WARRANT is true, but it does have other consequences concerning justification that explain some of the appeal of SELF-WARRANT. To see this, consider how PERFECT EVIDENCE interacts with the two main theories of doxastic justification: evidentialism and reliabilism.

According to *evidentialism*, a judgment is justified just in case it is properly based on one’s evidence. Evidentialists need not think that introspective judgments are more justified than perceptual judgments, since the fact that introspection is immune to errors of misleading evidence does not mean that one’s introspective judgments are more likely to be properly based on one’s evidence. In fact, PERFECT

³¹ See Alston [1976] for an early argument for SELF-WARRANT.

EVIDENCE is consistent with thinking that it is particularly hard to make good use of one's introspective evidence.

Nevertheless, PERFECT EVIDENCE plus evidentialism entails that all justified introspective judgments are veridical. That is, since introspective evidence is never misleading, making good use of one's introspective evidence guarantees that one's introspective judgments are not only justified, but also true. In fact, it is natural for evidentialists to think that all justified introspective beliefs are introspective knowledge. If that is right, the evidentialist can even take PERFECT EVIDENCE to explain why Gettier cases do not seem possible for introspection.³² The upshot is that evidentialism does not entail that introspective judgments are automatically justified, but it does entail that the ones that are justified get an epistemic bonus. I suspect this consequence explains some of the appeal of SELF-WARRANT: even though introspective judgments may not be more likely than perceptual judgments to be properly based on one's evidence, the fact that there is a special connection between justification and truth may lead some to think that introspective judgments automatically enjoy a special kind of justification.

The other main theory of doxastic justification is *reliabilism*, according to which a judgment is justified just in case it is formed on the basis of a reliable process. Reliabilists also need not think that introspective judgments are more justified than perceptual judgments, since the mere fact that introspection is immune to errors of misleading evidence does not entail that one's introspective judgments are more reliable. In fact, PERFECT EVIDENCE is consistent with thinking that the process connecting experiences to introspective judgments is particularly unreliable.

Nevertheless, PERFECT EVIDENCE entails that one of the kinds of error that applies to perception does not apply to introspection. Without any empirical knowledge of the reliability of introspection and perception, it might seem antecedently more likely that introspection is more reliable than perception since there are

³² Gettier cases arguably always involve lucky coincidences in the evidential process. Since there is no evidential process for introspection, introspective Gettier cases are impossible. See Gettier [1963] for the classic paper on such cases.

more processes involved in perception where error could occur. I suspect this connection leads some to think that introspective judgments are generally more reliable than perceptual judgments, especially since there is a tendency to set aside basing errors when assessing the epistemic properties of a knowledge-acquisition process (as we saw in the case of skepticism). From there, it may seem a short leap to think that introspective judgments are automatically more justified. However, whether introspection is in fact more reliable than perception is ultimately an empirical question.

The upshot is that neither theory of justification entails that introspective judgments are automatically justified (or more justified than perceptual judgments), but both theories entail that introspective judgments have interesting consequences concerning justification.

INFALLIBILITY

The second principle, concerning error, is INFALLIBILITY: if a subject introspectively judges that their experience is F, then their experience is F.³³ Whereas this introspective infallibility principle has—at least in the past—sometimes been endorsed by optimists about introspection, almost nobody has been tempted to endorse the analogous infallibility principle for perception: if a subject perceptually judges that the world is G, then the world is G. As we will see, PERFECT EVIDENCE explains both the appeal of INFALLIBILITY and the asymmetry between introspective infallibility and perceptual infallibility.

There is a common set of moves used to motivate introspective infallibility. The first move is to appeal to examples concerning perceptual experiences that are

³³ Many philosophers who nowadays endorse infallibility theses do so because they accept the existence of constitutive introspective judgments, or introspective judgments whose contents are partially constituted by the experiences they are about. However, all of these philosophers still accept that some introspective judgments are fallible, even if they also think that some are infallible. Though there is not enough space to properly address constitutive views in this paper, the discussion in this section is largely independent of constitutive views and does not aim to explain the appeal or controversy of such views. See Chalmers [2003], Horgan & Kriegel [2007], and Gertler [2012] for some discussions of constitutive introspective judgments.

easy to introspect, such as a visual experience of redness at the center of one's visual field. The next move is to observe that even if one is mistaken that there is something red out in the world that is causing one's experience, it seems one cannot be mistaken that one is having a visual experience of red. Setting up cases in such a way invites one to focus only on evidential errors and to set aside basing errors, priming one for the judgment that introspection is infallible. If only evidential errors are considered when evaluating the reliability of a knowledge-acquisition process, then PERFECT EVIDENCE will lead one to think that introspection is infallible. Of course, once basing errors are on the table, it becomes obvious that introspection is fallible.

At this point, some might object that INFALLIBILITY was always meant to be restricted to perfectly rational subjects. We previously saw reasons for thinking that perfectly rational subjects do not make basing errors, indicating that INFALLIBILITY is true so long as we make the right restriction. But while abstracting from basing errors is sometimes philosophically illuminating, it is obfuscating in the case of introspection. The restricted version of INFALLIBILITY secures its truth only by abstracting away from precisely the kinds of errors that introspection is susceptible to. It is analogous to an infallibility thesis about mathematical judgments that is restricted to only ideal reasoners or an infallibility thesis about perceptual experiences that is restricted to only veridical perceivers. Rather than salvaging INFALLIBILITY by culling its counterexamples, we can get deeper insight into the epistemic structure of introspection through PERFECT EVIDENCE, which explains why the restricted version of INFALLIBILITY is true in the first place.³⁴

KNOWLEDGE

The third principle, concerning what one is in a position to know, is LUMINOSITY: if a subject's experience is F, then the subject is in a position to know on

³⁴ These arguments generalize to other epistemic principles with the same structure, such as INDUBITABILITY (if a subject judges that their experience is F, then they cannot rationally doubt that their experience is F) and INCORRIGIBILITY (if a subject judges that their experience is F, then no other subject can demonstrate that their experience is not F).

the basis of introspection that their experience is F. As with INFALLIBILITY, few philosophers have been tempted to endorse the analogue luminosity principle for perception: if a subject's environment is G, then the subject is in a position to know on the basis of perception that their environment is G. As with SELF-WARRANT, PERFECT EVIDENCE does not entail LUMINOSITY but does support it with the appropriate auxiliary premises.³⁵

It is somewhat tempting to think that LUMINOSITY does in fact follow from PERFECT EVIDENCE. Since introspective evidence cannot be misleading, it seems natural to think that one's introspective evidence puts one in a position to know all phenomenal truths about one's experience. However, in order get from PERFECT EVIDENCE to LUMINOSITY, we would need two further principles. First, we would need we would need COMPLETE EVIDENCE: one has introspective evidence for every phenomenal truth about one's experience. But as we have already discussed, this principle is not obvious, especially if we presume that evidence must be accessible. Second, we would need USABLE EVIDENCE: if one has good evidence that P, then one is in a position to know that P. However, this principle also requires independent motivation. For example, one might argue that making use of one's evidence requires the right kinds of basing processes and that not all subjects are able to implement the relevant basing processes for any arbitrary piece of evidence. Even if we ultimately have reason to endorse both these principles, the important point is that getting from PERFECT EVIDENCE to LUMINOSITY is non-trivial. Because of this, it is unsurprising that there is disagreement over LUMINOSITY.

Nevertheless, PERFECT EVIDENCE marks a key step towards LUMINOSITY. In fact, we can now explain the asymmetry in popularity between introspective luminosity versus perceptual luminosity. The fact that perception is susceptible to evidential errors means the initial premise needed to establish perceptual luminosity is obviously false. In contrast, the fact that introspection is immune to evidential errors

³⁵ For a classic argument against LUMINOSITY, see Williamson [2000]. For defenses of LUMINOSITY, see Weatherson [2004] and Smithies [2012 a].

means that that initial premise needed to establish introspective luminosity is secured. Consequently, LUMINOSITY is appealing because PERFECT EVIDENCE takes us part of the way there, but it is also controversial because PERFECT EVIDENCE does not take us all the way there.³⁶

CONCLUSION

This paper has argued that PERFECT EVIDENCE lies at the heart of the epistemology of introspection. To recap, I began by explaining PERFECT EVIDENCE in detail, and I argued that PERFECT EVIDENCE itself is explained by the fact that introspection is direct. Then I argued that PERFECT EVIDENCE provides a unified explanation for asymmetries between skepticism about the external world and skepticism about one's own experience, the existence of perceptual hallucinations and the non-existence of introspective hallucinations, and the rational significance of introspective errors versus perceptual errors. I also argued that PERFECT EVIDENCE explains why principles such as SELF-WARRANT, INFALLIBILITY, and LUMINOSITY are appealing for introspection but not for perception, as well as why there is reason to doubt such principles even for introspection.

The arguments of this paper concern the epistemic structure of introspection (and perception). As a result, most of the discussion generalizes to other knowledge-acquisition processes as well. For example, the considerations concerning evidence and basing, rationality and access, standard skepticism and inverted skepticism, and all the other epistemic asymmetries and epistemic principles are not idiosyncratic to introspection and perception: they straightforwardly generalize to memory, testimony, intuition, inference, and perhaps any other knowledge-acquisition process. In fact, we could consider analogues of PERFECT EVIDENCE, SELF-WARRANT, INFALLIBILITY, and LUMINOSITY for these other knowledge-acquisition processes and evaluate them using the same kinds of epistemic considerations.

³⁶ These considerations apply also to the justificatory version of LUMINOSITY: if a subject's experience is F, then the subject has justification for believing that their experience is F. See Smithies [2012 a] for a defense of this justificatory principle.

At the beginning of the paper, I contrasted two perspectives on the epistemology of introspection: the optimist's and the pessimist's. A core aim of this paper has been to develop an account of introspection that integrates the insights of both perspectives by reconciling introspection's epistemic virtues with its epistemic limits. On my view, introspection is always susceptible to error (because of basing errors), but not all errors are applicable to introspection (because of evidential errors); introspection is direct (in that it involves no epistemic medium) but also causally-mediated (in that introspective judgments are causally connected to their target experiences); and introspection is epistemically privileged when compared to perception, but not because of justification, infallibility, or what we are in a position to know. The result is a theory of introspection that is simple, but systematic and explanatorily powerful.

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