

***An Externalist Approach to Inferred Experience and Perceptual Justification***

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**Abstract:** This paper on cognitive penetrability examines Susanna Siegel's theory of inferred experience as it is presented in her book, *The Rationality of Perception*. I argue that certain aspects of her account contradict standard internalist inferences, and subsequently discuss a plausible externalist alternative. While preserving Siegel's inferential account of cognitive penetration, I develop a causal account of perceptual justification in an attempt to reconcile internalist and externalist intuitions about inferred experiences.

## **Introduction**

As empirical studies of the relationship between cognition and perception have increasingly shown, perception is often susceptible to subtle influences from cognitive states. Notably, instances of such “top-down” effects on perception can also be picked out in everyday experience. A suspicion that an insect is in the room may lead one person to feel a crawling sensation on her leg.<sup>1</sup> A fear of illness may lead another person to see his fingertips turning blue. To illustrate this more clearly, take the following case: I am walking through a grocery store in search of a banana. I stop at the sign that says “Bananas” and look down, and based on a deeply ingrained belief, I expect to see a yellow banana. Unbeknownst to me, the store has run out of bananas, and as a strange practical joke, one of the employees has placed a gray plastic banana where the bananas would normally be. If I pick up the replica banana, I will no doubt realize that it is not a real banana. But based on my belief about the color of bananas, the banana does not look gray to me. If asked at that moment, I might say that the banana was somewhere between gray and yellow. Certain conditions might even lead me to indicate that the banana was simply yellow.

Let’s call the above scenario the Gray Banana case. There is a stark contrast between my situation in this case and my situation in what we can call the Standard Yellow Banana case, in which I look at a yellow banana and perceive that there is a yellow banana without

the interference of my beliefs. In the Gray Banana case, it seems clear that something about my beliefs has interfered with the contents of my experience in a way that jeopardizes the experience's normal justificatory powers. How are we to explain occurrences of this sort? One suggestion comes in the form of cognitive penetrability theories, which generally posit that beliefs are capable of directly influencing certain properties of perceptual experiences. The veracity of some such theory would entail that any experiences that are altered by beliefs do not solely include information gained from one's immediate perceptual inputs, but that they also reflect the content of those intervening beliefs. In *The Rationality of Perception*, Susanna Siegel (2017) endorses such a view, and suggests that the occurrence of such a phenomenon can be explained with the introduction of a theorized inferential structure for experience. In Part II of *The Rationality of Perception*, Siegel focuses on establishing an account of the cases where an inference about the contents of perceptual experiences can penetrate (and thereby alter the content of) those experiences. Her account also delves into the implications that this may have for one's justification in believing the content of an experience that is altered by inference, leading to the eventual conclusion that inferences can lead to both detrimental and beneficial deviations from the "baseline" level of justification conferred by standard perceptual experiences.

In response to Siegel's account of inferred expe-

rience, I argue here that an account of deviations from baseline justification based on the rationality of underlying inferences is inadequate. According to my argument, Siegel's account of perceptual justification and inferred experiences cannot provide a satisfactory explanation of certain justificatory assessments, and this can be attributed to a broader problem with internalist views of cognitive penetrability. I subsequently develop an externalist condition, the *non-mental causal criterion of justification*, which sidesteps this internalist pitfall while also avoiding many of the shortcomings of standard externalist views. I go on to demonstrate that this criterion has the same intuitive force behind it that Siegel's account of perceptual justification does, and that it allows us to strike a balance between internalist and traditional externalist accounts of cognitive penetrability.

### **Siegel on Inferred Experience**

Siegel begins her account by introducing cases of *epistemic downgrade*, in which the inferential origins of an experience cause that experience to lose justificatory power.<sup>2</sup> Cases of epistemic downgrade typically involve ill-founded inferences overriding informative perceptual inputs. Roughly speaking, Siegel's account supposes that everyday perceptual experiences provide a baseline level of justification for believing their contents.<sup>3</sup> Further, she states that when an experience is inferred, one's level of justification in believing the ex-

perience's contents can fall below baseline.

However, the fact that an experience was produced by inference does not entail that the experience will be subjected to epistemic downgrade. While all ill-founded inferences lead to epistemic downgrade by Siegel's view, her account allows for non-downgraded experiences when an experience results from a *well-founded inference*. The category of well-founded inferences includes all inferences for which the inferential inputs adequately support the inferential output, for which the inferential inputs were themselves reached rationally, and for which no belief  $q$  that was inferred from a priori belief  $p$  is circularly used as an inferential input to offer additional support for belief  $p$ . Siegel argues that when an inferred experience meets these conditions, it is possible for it to confer the same baseline level of justification for believing its contents as a phenomenally identical uninferred experience.

Moreover, Siegel also contends that there can be cases where the justification that one has for believing the contents of an inferred experience exceeds baseline justification. For instance, this is possible in a case where a yellow banana perceptual input and a yellow banana inference both contribute to the formation of an experience, which we can call the Inferred Yellow Banana case. By her account, the Inferred Yellow Banana case will be an instance of *epistemic upgrade*, meaning that the Inferred Yellow Banana experience will provide more justification for believing its

contents than the Standard Yellow Banana experience. Siegel argues for this by analogy, employing the intuition that a person with both a perceptual experience of a yellow banana and background beliefs supporting the notion that she is looking at a yellow banana “could aggregate these two bits of support, [ending] up with more reason to believe that [the banana] is yellow than she would have with either the experience alone, or with the background beliefs alone” (Siegel 2017, 143). Similarly, she holds that the features of the inference and the features of the perceptual input in the Inferred Yellow Banana case aggregate, and that epistemic upgrade can result.<sup>4</sup>

Siegel’s inferential account of perception makes significant progress towards a more concrete explanation of the cognitive penetrability of experience. However, her views on perceptual justification create problems that threaten to undermine her entire account. One particularly troubling consequence of Siegel’s views is that inferences, given a set of amenable conditions, can sometimes lead to experiences that generate additional justification for believing their contents simply by virtue of their inferential etiology. There are several reasons to question the viability of this suggestion. Firstly, while there is a strong intuitive basis for the notion that a defective etiology can compromise the justificatory power of an experience, no such intuition supports the idea that the right kind of etiology can improve the justificatory power of an experience. More

subtly, it seems that this notion relies on an *internalist* condition for justification while also coming into conflict with it. For our purposes, if I am an internalist about justification, I must hold that a belief is justified if and only if it is justified by some mental fact.<sup>5</sup> This means that if two cases are identical with respect to mental facts, they must be identical with respect to justification. Siegel's view is reliant on internalism in that it distinguishes downgraded inferred experiences from other sorts of deceptive experiences by suggesting that bad inferences compromise justification. Siegel's view comes into conflict with internalism insofar as it is not clear that there are any mental facts that distinguish the Inferred Yellow Banana inference from the Gray Banana inference.

In order to see this problem more clearly, we can try to account for the justificatory differences between downgraded experiences and their non-downgraded counterparts. In order to do this, we need to define all factors that can play a role in perceptual justification. For instance, take the phenomenal character of experiences. As Siegel notes, epistemic downgrade excludes the possibility of an inferred experience deriving all of its justificatory power from its phenomenal character. If it could, we would be as justified in believing the contents of the Gray Banana experience as we are justified in believing the contents of the Standard Yellow Banana experience, given their shared phenomenal character. So if an account that relies only on the

phenomenal content of an experience cannot accommodate our intuitions about the justificatory power of experiences, what other factors must we include in an account of perceptual justification?

As already mentioned, Siegel identifies the inferential character of an experience as an additional source of justificatory power. However, this still does not lead to an adequate account of the justificatory power of experiences, not even in conjunction with phenomenal character. For instance, compare the Gray Banana case and the Inferred Yellow Banana case. Both cases feature the same well-founded inference altering the contents of perceptual experience, and the two cases are phenomenally identical. Nevertheless, Siegel holds that while the Gray Banana experience is an instance of epistemic downgrade, the Inferred Yellow Banana experience need not be. Despite sharing the same phenomenal and inferential characters, there is still a clear discrepancy between the justificatory status of the Gray Banana experience and that of the Inferred Yellow Banana experience that must be addressed. Thus, the inferential character of experiences does not seem like a plausible candidate in our search.

Only two relevant differences between the Gray Banana case and the Inferred Yellow Banana case remain: pre-conscious perceptual inputs<sup>6</sup> and the external facts that produce those perceptual inputs. Unfortunately, as far as an internalist account of justification is concerned, neither of these differences seems prom-

ising. In the case of perceptual inputs, Siegel argues that an inference's response to perceptual inputs is rationally assessable, and that the rationality of reaching a particular perceptual experience depends on the perceptual inputs to which the inference is responding. However, Siegel's account allows for the possibility that an inference overriding perceptual inputs can sometimes be epistemically responsible in certain circumstances, meaning that some cases much like the Gray Banana case could avoid epistemic downgrade.<sup>7</sup> The upshot of this is that there can be cases that are identical in all internal respects, and that Siegel's account must implicitly depend upon external facts in many of its justificatory assessments. As we know, external facts are not an admissible justificatory factor in an internalist account of justification. Given Siegel's prior commitment to an account of perceptual justification that does not rely on any external facts in its justificatory assessments, this predicament may stand as a threat to her entire account.

### **Inferred Experience and the New Evil Demon Problem**

While the difficulty of finding a set of justificatory factors that is consistent with Siegel's account is itself troubling, it is in fact just a symptom of a larger problem for Siegel's view. To illustrate this larger problem, I will be using a modification of the well-known new evil demon problem<sup>8</sup> (or "NEDP"). Briefly, the NEDP is

meant to offer convincing grounds for rejecting *externalism about justification*, or the view that justification can rely on non-mental facts, based on the following suggestion: If a person whose experience was phenomenally identical to mine was deceived about the existence of the external world, she would still be just as justified in her external-world beliefs as I am in mine. Given this idea's strong intuitive basis, its introduction demands a strong counterargument if externalism is to remain viable. However, the same intuition that motivates the NEDP also threatens to render internalism and epistemic downgrade incompatible with one another. In order to see this point more clearly, we can modify the NEDP scenario as follows: If an evil demon suddenly began to deceive you in such a way that all of your perceptual experiences from then on would result from your beliefs and associated inferences, would you lose justification for believing the content of your experiences? *Prima facie*, since there is no obvious reason to expect the etiology of your deception to alter the justificatory power of your experiences, the answer should be no. Yet this seems to contradict the very notion of epistemic downgrade, which suggests that the inferential etiology of an experience can influence its justificatory power.

This modification of the NEDP, referred to here as the Inference Demon case, allows us to examine the reasoning employed in theories of perceptual justification more closely. In the set of propositions below,

we refer to some person being deceived in the NEDP as Evil Demon Victim (EDV). We refer to some second person, whose perceptual experiences are phenomenally identical to EDV's experiences but are produced by the Inference Demon rather than the standard Evil Demon, as the Inference Demon Victim (IDV). We refer to some third person, whose perceptual experiences are phenomenally identical to both EDV's experiences and IDV's experiences but are produced by ordinary distal stimuli in a non-deceptive manner, as Non-Victim (NV). Take the following inconsistent tetrad of propositions:

- (1): I am less justified in my perceptual beliefs in the Gray Banana case than I am in the Standard Yellow Banana case.
- (2): EDV is just as justified in her perceptual beliefs as NV.
- (3): IDV is just as justified in her perceptual beliefs as EDV.
- (4): If (1), then IDV is less justified in her perceptual beliefs than NV.

The inconsistency among these propositions lies in the fact that (2) and (3) together establish an equivalence between IDV's justification and NV's justification, whereas (1) and (4) together lead to the conclusion that IDV cannot be as justified in her perceptual beliefs as NV. Some internalists might resolve the inconsistency by rejecting (1), and in doing so would reject the possibility of epistemic downgrade.<sup>9</sup> Some externalists might resolve the inconsistency by rejecting (2),

and in doing so would reject the intuition behind the NEDP.<sup>10</sup> Siegel is committed to both (1) and (2), and so must reject either (3) or (4) in order to overcome the inconsistency.<sup>11</sup>

Identifying a relevant difference between EDV's circumstances and IDV's circumstances would provide grounds for rejecting (3), and such a relevant difference might also explicate the justificatory difference between the Inferred Yellow Banana case and the Gray Banana case. At first glance, Siegel's claim that one is rationally responsible for the content of inferred experiences seems like a plausible premise in an internalist argument for rejecting (3). After all, if I hold certain beliefs, I can be held accountable for holding those beliefs. Matthew McGrath offers a similar defense of Siegel's view on the internalist grounds that inference leads experience to have a rational standing, making someone who is deceived by inference responsible for the contents of experience in a way that someone who is otherwise deceived is not (McGrath 2013).

However, this position runs into trouble when trying to explain cases where the irrational etiology of an experience is not a mental fact.<sup>12</sup> Further, McGrath and Siegel's form of internalism holds that one's justification supervenes on one's mental states, such that if there is a justificatory difference between someone who is deceived by inference and someone who is otherwise deceived, there must be some difference between the totality of one person's mental states and the totality

of the other person's mental states. Since beliefs and inferences that are formed responsibly can still lead to epistemic downgrade by Siegel's account (as we have already seen in the previous section), rational responsibility for an experience is precluded from offering a complete argument for rejecting (3).

The only remaining reply available to Siegel's view would involve rejecting (4), which appears to be the sturdiest of the four propositions. The reasoning behind this proposition is that if an inference alters the content of an experience, it does not seem to matter whether this alteration occurs as the result of a purely mental process or whether some non-mental event is what leads the perceptual experience to conform to one's inferences. In both the Inference Demon case and the Gray Banana case, the justification-compromising feature is the role that inferences have in the formation of perceptual experiences, not the location of the process that allows inference to carry over into perceptual experience. Any plausible argument against (4) would have to give some account of a justificatory difference between the two cases that could be explained in terms of the location of the inference-perception transition, which is not readily apparent.

The problem for Siegel's view, then, is that it provides us with no means by which to reject (3). The reply to (3) suggested by the account falls short because the rational responsibility account of epistemic downgrade cannot adequately distinguish between

cases where the content of a perceptual experience is at least partially determined by mental facts and cases where it is exclusively determined by non-mental facts. More broadly, it may appear as if any position that involves commitments to both (1) and (2) will run into the same trouble that Siegel's view does. If this were the case, any viable response to the inconsistent tetrad would have to reject (1), (2), or both. Nonetheless, it is my view that a response to the inconsistent tetrad that defends both epistemic downgrade and the intuition behind the NEDP is still possible on externalist grounds. There is a strong argument for accepting the resulting account of epistemic downgrade, and as we will see, this account raises serious doubts about the possibility of epistemic upgrade.

### **A Causal Criterion of Justification**

One plausible view on which we can reject (3) may be a causal account of justification, by which a perceptual experience can only provide adequate justification for believing its content if it has the right kind of causal etiology. In its crudest form, a causal criterion might specify that a baseline experience such that  $p$  must be caused by some object  $p$ . Importantly, some causal accounts of justification can explain the justificatory difference between the Gray Banana case and the Standard Yellow Banana case without relying on attributions of rationality and irrationality. In making the case for such an account of justification with regard

to inferred experiences, I will be starting with a set of roughly externalist assumptions. While it remains possible that a causal account of justification might be compatible with some form of internalism, the requirement that one must have introspective access to a causal connection in order to be justified in believing the contents of an experience is far stronger than is needed to deal with (3), and does not offer any clear benefits when dealing with inferred experiences.<sup>13</sup> Moreover, it is not clear that (2) could withstand such a position, which is a problem when trying to formulate an account that preserves the intuition behind the NEDP.

The notion of a causal account of justification may seem objectionable on the surface. The prospects seem particularly weak for a possible criterion of justification of the following sort: “In order to confer at least baseline justification for believing its contents, an experience must be caused by the thing that it represents”. Putting aside concerns about how to define conformity between the content of an experience and the cause of the experience, a criterion of this kind would also have strong externalist implications, not the least of which being that the Evil Demon Victim’s experiences would not confer baseline justification. Instead, a more moderate causal criterion is necessary if we are to reconcile the intuition that the EDV has baseline justification for believing the contents of her experiences with the intuition that the Inference Demon Victim does not.

I propose a more plausible causal criterion of

justification:

Non-Mental Causal Criterion of Justification: If I have baseline justification for believing the contents of an experience, the experience must be caused by some non-mental cause.

Such a criterion is particularly appealing for three reasons. Firstly, it can identify clear cases of epistemic downgrade with the same consistency that Siegel's account can, as demonstrated by its ability to properly differentiate between the Gray Banana case and Standard Yellow Banana case, while also capturing the motivation behind the notion of epistemic downgrade more fully. Secondly, it can offer an account of perceptual justification that is compatible with the intuition behind the NEDP without appealing to seemingly arbitrary criteria for justification.<sup>14</sup> Lastly, it can differentiate between the Evil Demon case and the Inference Demon case, giving us grounds to reject (3).<sup>15</sup> Thus, a "non-mental" causal criterion of justification accommodates both (1) and (2), unlike many other externalist views, while still proposing a solution to the inconsistent tetrad, unlike Siegel's view. Coupled with the intuitive strength behind the idea that experiences that are primarily the result of mental processes cannot justify beliefs in the same way that experiences produced by non-mental processes can, it seems that the non-mental causal criterion of justification has a great deal to recommend it as an alternate approach to

inferred experiences and, more broadly, to perceptual justification.

This criterion seems largely acceptable as a necessary condition for baseline justification, but several immediate problems make it clear that further adjustments are needed. Most notably, it may seem as if the Inference Demon experience actually is the result of some non-mental cause, namely the inference demon itself. This concern can be addressed without abandoning the intuition motivating our account. The idea behind developing a non-mental causal criterion is that having an experience that is not directly derived from a non-mental state compromises one's justificatory standing, and the Inference Demon experience clearly fits this description. Yet it seems that the non-mental causal criterion does not fully capture this idea. On closer inspection, the complication is not that the experience itself cannot be attributed to some non-mental cause, but rather that the contents of the experience cannot be attributed to some non-mental cause. A modified causal criterion that accommodates this observation will allow for a more conclusive account of the Inference Demon case, as it will clarify that the experience's causal inadequacy comes from the etiology of its contents, not from the etiology of the experience itself. Thus, incorporating this idea into the preliminary proposal yields the following new criterion of justification: If I have baseline justification for believing the contents of an experience, the contents of the expe-

rience must be caused by some non-mental cause.

Another problem arises when considering cases in which the content of an experience is indirectly caused by a mental state. Suppose that in the distant future, a virtual reality headset is created that can be connected to a human brain. If one's brain is properly outfitted with the right instruments and equipment, the headset allows its wearer to visually simulate the entire set of one's external-world beliefs. In this scenario, the cable leading from the back of my head to the headset plays the same role as the inference demon, insofar as it is a physical means by which my belief states are transmitted into my perceptual experience. But unlike the inference demon, whose deception is entirely mental, the simulation involves information displayed on a screen that produces the content of my perceptual experience. My belief states are plainly responsible for the content of my experience, but the physical intermediary nonetheless seems to fill the role of a non-mental cause. To exclude the possibility of baseline justification in such cases, we can stipulate that the non-mental cause of the content of a baseline experience cannot be *causally downstream* from a mental state with the same content.<sup>16</sup> Importantly, this still means that if a mental cause with a given content *p* has some non-mental effect that does not preserve content *p*, and if that non-mental effect goes on to cause a perceptual experience, the justificatory status of the experience is not compromised.

However, while the second modification is necessary in order to deal with cases where the content of an experience is indirectly caused by some mental state, it also risks contradicting common-sense cases of baseline justification where a mental state is responsible for some non-mental change. For instance, if I believe that I am out of bananas, and if this belief causes my decision to write myself a note that says “Buy bananas at the grocery store,” surely I have baseline justification for believing the contents of my experience when I glance at the note later. As it stands, the criterion fails to account for the fact that my mental state, despite having the same contents as my eventual perceptual experience, does not undermine the justificatory status of my perceptual experience in this case in the same way that it would if I was being deceived by an inference demon. The decision to write something down is not in the same class of mental states as beliefs, desires, and emotions, insofar as the latter kinds of states are not typically causally powerful in the same way that the former kind of state is.

In order to ensure that we do not deny baseline justification to such experiences, we can make one final modification to our criterion: The non-mental cause of the content of a baseline experience can be downstream from a mental state with the same content if the mental state is capable, in its present context, of producing some non-mental fact that corresponds to its content. My decision to write a note to myself does

not require some additional mental state for the note to be written, and thus does not compromise the justificatory status of a resulting perceptual experience. The belief that I am out of bananas, on the other hand, could not causally interact with the relevant facts without some intermediary mental state being present to do the “heavy lifting”, so to speak.<sup>17</sup> Adding this constraint makes room for certain mental states, namely those that are causally efficacious, on the grounds that such mental states do not compromise the justificatory basis of perceptual experiences in the same way that other mental states do. This modification is consistent with the intuition behind the non-mental causal criterion, as causally powerful mental states have the potential to make physical changes that would, in turn, produce experiences with veridical contents.<sup>18</sup>

Bringing these changes together leads us to the final version of our causal criterion,

**Non-Mental Causal Criterion of Justification (Modified):** If I have baseline justification for believing the contents of an experience, the experience must have some non-mental cause, and that non-mental cause must not be downstream from some non-efficacious mental state.

With this set of adjustments in place, the non-mental causal criterion seems to successfully differentiate between cases that are intuitively instances of epistemic downgrade and cases that are not. If this is so, then

as long as it remains consistent with (1) and (2) and provides reason to reject (3), the non-mental causal criterion may provide us with an externalist means by which to circumvent the problems presented for Siegel's account.

### **Non-Mental Causes and Epistemic Upgrade**

As we saw in Section 2 and Section 3, the phenomenal and inferential characters of an experience are inadequate in assessing the justificatory statuses of inferred experiences, meaning that any account of perceptual experience must single out at least one additional necessary condition for baseline justification. As we saw in Section 4, the condition offered by a non-mental causal account of perceptual justification fills this role. If we accept this account, it follows that we should accept that any experiential content that is not caused by the proper non-mental facts is an instance of epistemic downgrade. Thus, as long as we hold that causal relationships make some non-negligible contribution to the justificatory status of standard perceptual experiences, the contributions of phenomenal and inferential characters will never be sufficient for baseline justification.

If the non-mental causal criterion of justification holds, our verdict as to whether or not epistemic upgrade is possible will rely on whether or not the content of an inferred experience can be caused by the proper non-mental facts in the same way that the con-

tent of an uninferred experience can be caused by the proper non-mental facts. This is unambiguously not the case for the Gray Banana experience, as the color properties of the gray banana are causally unrelated to the color content of my perceptual experience of a yellow banana. The causal relationship is more difficult to establish in cases where the color content of a perceptual experience is not sensitive to the color properties of the object being perceived due to overdetermination, as in the Inferred Yellow Banana case. Given that the inference and the perceptual inputs would each be sufficient for producing a perceptual experience of a yellow banana,<sup>19</sup> the complication is that it may not be possible to individuate the two potential causal factors. One conceivable answer to this problem lies in Siegel's account of memory color, a means by which "the perceptual system stores information about colors things tend to have" to be "used in generating perceptual experiences" (Siegel 2017, 100). Siegel suggests that the memory color phenomenon and similar phenomena may be crucial in the inferential process of determining experiential content. Such phenomena are thought to be reliant on certain types of pre-conscious perceptual inputs being processed before others, making it possible for inferences to causally intervene in the standard development of perceptual experiences.

There are two plausible ways to interpret the implications of the memory color phenomenon here. The stronger interpretation is that while the causal in-

tervention of inference may not produce any phenomenal differences when compared to baseline experiences in insensitive cases, the inferred experience is etiologically different, and must therefore be treated differently on this basis. The result of this strict causal distinction between inferred and uninferred experiences would be that we can separate out the experiences that are formed inferentially and those that are not, and can explicitly point to the ways in which the causal relationship between observer and object is compromised by it. If this is so, we can reject the possibility of an inferred experience ever offering baseline justification for its contents due to its causal inadequacies, leading us to the conclusion that epistemic upgrade is not possible.

The weaker interpretation is that the two causes can be individuated, and that the inference can be assigned a greater causal role in the formation of the experience, but that the respective contributions of the inference and the pre-conscious perceptual inputs must both be taken into account. By this interpretation, insensitive inferred experiences are the result of an amalgamation of mental and non-mental causes, and will thus vary in degrees of epistemic downgrade based on the degree of causal influence from mental inputs. While the stronger interpretation may be more desirable in that it offers a more conclusive rebuttal of epistemic upgrade, the weaker interpretation has the advantage of allowing inferred experiences to maintain

baseline experience in some cases where inference does not disrupt the contents of an experience. Given the potential scope of cognitive penetration, the difficulties introduced by suggesting that all inferred experiences are downgraded experiences may be reason enough to accept the weaker interpretation.

## **Conclusion**

While *The Rationality of Perception* offers a great deal of insight into cognitive penetrability, Siegel's account of the justification of inferred experiences brings with it many of the problems associated with internalism. If the non-mental causal criterion of justification holds up under scrutiny, it may offer a powerful externalist alternative by which to make sense of inferred experiences. This criterion is meant to take the concerns that motivate both internalism and traditional externalism into account, proposing a means by which we can navigate the middle ground between the two. At the very least, its plausibility suggests that an externalist approach to perceptual justification can still accommodate certain internalist intuitions, and that a view of this kind may eventually yield a more satisfactory account of inferred experiences.

## **Notes**

1. While it is a controversial claim that bodily sensations of this kind constitute perceptual experiences, [David Armstrong, *Bodily Sensations* (London, Routledge & Paul, 1962)], I am taking the liberty of ignoring this controversy for illustrative purposes. At the very least, this case closely resembles perception in various relevant respects.
2. The account in this section is adapted from Susanna Siegel, *The Rationality of Perception* (Oxford, Oxford University Press, 2017), 57-145.
3. Broadly, we can think of baseline justification as the standard level of justificatory power held by everyday experiences. In reference to an inferred experience, “baseline justification” refers to the level of justification that one would have for believing the contents of a phenomenally identical experience that was produced in standard perceptual conditions. “Baseline experience” refers to such a phenomenally identical uninferred experience. Importantly, baseline justification is not the level of justification that one would have had for believing the contents of the phenomenally distinct experience that would have occurred in the absence of the relevant inference.
4. Siegel clarifies that baseline justification is a range of justificatory statuses rather than a single justificatory status, and that standard perceptual experiences can vary in terms of their placement within the baseline range. With this fact in mind, she argues that some cases of aggregation will be instances of epistemic upgrade, while others will remain within the baseline range. For more on this, see Susanna Siegel, *The Rationality of Perception* (Oxford, Oxford University Press, 2017), 145.
5. This is actually only one of several different kinds of internalism. This sort of internalist view, namely that one’s belief that *x* is justified by one’s mental states, can be more accurately characterized as “mentalism”. It is important that we take care to distinguish mentalism from the internalist view referred to as “access internalism” or “accessibilism”, which is that one’s belief that *x* is justified by one’s reflective access to justifying factors that justify a

belief that *x*. Unless otherwise specified, I will henceforth be using the term “internalism” to refer to mentalism. For more on this distinction, see Earl Conee and Richard Feldman, “Internalism Defended”, *American Philosophical Quarterly* 38, no. 1 (2001): 1-18. 6. This term comes directly from Siegel, and is used to refer to the raw perceptual information taken in from our surroundings that is combined with inferences in the formation of inferred experiences (Susanna Siegel, *The Rationality of Perception*, Oxford, Oxford University Press, 2017, 114). By “pre-conscious”, Siegel means that we do not have conscious access to these perceptual inputs.

7. In particular, Siegel argues that Bayesian analysis can distinguish between those cases where overriding perceptual inputs is epistemically appropriate and those where it is not. Roughly, she supposes that there is always a “proper weight” to assign to perceptual inputs, and that only those inferences “that fail to give pre-conscious input proper weight will be cases of [epistemic downgrade]” (Susanna Siegel, *The Rationality of Perception*, Oxford, Oxford University Press, 2017, 138). Siegel takes there to be cases where assigning proper weight results in “properly overriding a pre-conscious signal that the banana is gray with the prior probability that bananas are yellow” (Susanna Siegel, *The Rationality of Perception*, Oxford, Oxford University Press, 2017, 140).

8. Based on discussion in Stewart Cohen, “Justification and Truth”, *Philosophical Studies* 46, no. 3 (1984): 289-295.

9. For instance, Chris Tucker in “Why Open-Minded People Should Endorse Dogmatism” (*Philosophical Perspectives* 24, no. 1, 2010, 529-545) and Anil Gupta in *Empiricism and Experience* (Oxford, Oxford University Press, 2006).

10. For instance, Alvin Goldman in “What Is Justified Belief?” (in *Justification and Knowledge*, ed. George Pappas, Boston, D. Reidel, 1979, 1-25) and Jack Lyons in “Inferentialism and Cognitive Penetrability of Perception” (*Episteme* 13, no. 1, 2016, 1-28).

11. Siegel’s acceptance of (1) is clear, given that her view is constructed with (1) as one of its main premises. Her commitment to (2) is demonstrated by her account of common-sense justificatory

power in cases like seeing a mirage in a desert without realizing it. Her account suggests that unless you have good reason to think that you are currently being deceived by a mirage, “you would have good reason to think your surroundings are as liquidy as they appear, just as you have to think that your surroundings are as hilly and as bright as they appear” (Susanna Siegel, *The Rationality of Perception*, Oxford, Oxford University Press, 2017, 66).

12. Take the following case: Let’s say that A holds irrational beliefs that lead her to sign a deal with an evil demon, allowing the demon to alter her memory and deceive her about the external world. We can further stipulate that the totality of her mental states would be identical to those of B, who is deceived in the same way but has not signed a deal with an evil demon. Despite the irrational etiology of A’s deception and the arational etiology of B’s deception, it is not clear that we can offer an account of A being less justified in her external-world beliefs than B without appealing to the external differences between A’s situation and B’s situation.

13. For one example of a viable causal account of justification that is compatible with internalism, see Robert Audi, *The Structure of Justification* (Cambridge: Cambridge University Press, 1993), 332-352.

14. In particular, Alvin Goldman’s externalist account of the NEDP in “Strong and Weak Justification” (*Philosophical Perspectives* 2, no. 1, 1988: 51-69) has been criticized for the apparent arbitrariness of stipulating that justification varies based on whether or not one meets certain “normal-world” criteria. For one example of this criticism, see Matthew McGrath, “Siegel and the Impact for Epistemological Internalism” (*Philosophical Studies* 162, no. 3, 2013: 723-732).

15. To clarify, this is because the experience in the Inference Demon case is caused by mental states, namely the Inference Demon Victim’s beliefs and associated inferences, whereas the experience in the Evil Demon case is not. While some may worry that beliefs and inferences do not actually cause the experience in the Inference Demon case, closer examination reveals that this worry is unfounded. Inferences do not cause the connection between infer-

ences and experiences necessary for inferred experiences, but they still cause inferred experiences. Analogously, while the Inference Demon Victim's inferences do not cause the Inference Demon's deception, the inferences still cause the experience.

16. By some cause Cb being "downstream" from some antecedent cause Ca, I mean that Ca either causes Cb, or it causes some intermediary cause Cx that goes on to cause Cb, or it causes the first member of an ordered set of intermediary causes where each member goes on to cause the following member (e.g. Cx1 → Cx2 → Cx3), the last member of which causes Cb.

17. Note that even in the context of the Virtual Reality Headset case, this belief alone still could not lead to a baseline experience. While it would be able to produce a perceptual experience by way of the headset, it would still be precluded from causally interacting with the relevant facts. Only in causing a related, causally efficacious mental state could this belief be upstream from a baseline experience.

18. This is distinct from saying that mental states are only capable of producing baseline experiences if they produce veridical contents. Just as justification is not compromised in cases where the content of a mental cause is not transmitted to the content of a perceptual experience, baseline justification must also be possible in cases where a non-efficacious mental state causes an efficacious mental state and the efficacious mental state goes on to cause some non-mental fact.

19. For the inference, this means that it would produce the relevant perceptual experience when one's visual apparatus was presented with the right spatial information but indeterminate color information. For the perceptual input, this means that it would produce the relevant perceptual experience when one's visual apparatus was presented with the right spatial and color information without the intervention of an inference.

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