Folk Intuitions about the causal theory of perception: reply to Schwenkler and Fischer

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We appreciate the time and effort given by Schwenkler and Fischer in providing responses to our Ergo article, 'Folk Intuitions about the Causal Theory of Perception' (2016). Both raise a number of interesting issues. Here we will only address some of them. In Part I, we address a concern of Schwenkler's regarding the empirical approach we used and touch on a concern raised by both commentators involving necessary and sufficient conditions; in Part II, we address a worry of both commentators concerning the polysemous nature of 'see;' in Part III, we look at a worry raised by Fischer that some participants are interpreting the non-blocker cases to meet the causal condition; and in Part IV, we address a concern of Fischer's to the effect that Skype calls fly in the face of the no blocker condition we proposed.

I

Schwenkler raises a concern regarding the approach used in our study. We presented participants with hypothetical scenarios and asked whether the subject in the scenario 'sees.' He thinks other methods are available and may be better.

> [The concept of seeing] is embodied in our ordinary skillful facility with people and things, in particular the way that we navigate our social world in predicting what people will do and determining who is well-positioned to answer a given empirical question. I wonder if it's this everyday facility, and the discriminations it requires us to make, that should really be probed if our interest is in understanding the ordinary person's pretheoretical grasp of the concept of sight.

One example of the kind of study that might fit this template is Hare *et al.*'s (2000), in which it was found that subordinate chimpanzees take food from behind a barrier blocking the line of sight of a dominant male. Given the implications to the subordinate chimpanzee of taking food that the dominant male can see, this provides ecologically valid evidence that chimpanzees accept something like a no blocker condition.

As Schwenkler notes, the results of this kind of study need not conflict with the results of studies that use methods like ours (studies that probe concepts by asking subjects to rate the acceptability of various kinds of statements). The chimpanzee experiment in Hare *et al.*, for instance, complements the results of our study (2016). There could be cases, though, in which the results of experiments similar in kind to Hare *et al.*'s conflict with the results of studies like ours. We would then need to make a reasoned judgment between the two sets of results.

Devising further studies that probe the ordinary skillful facility in which the concept of seeing is embedded represents an interesting and promising avenue for future research. One potential limitation of this kind of methodology, however, is whether it could be used to test responses to the kinds of hypothetical cases that, following Grice, we used in 'Folk Intuitions...'(2016), and which are a staple feature of philosophical thought experiments. The reason for focusing on hypothetical cases is to identify conditions that are not just typically satisfied in cases of seeing but which are necessary and sufficient for seeing to occur. Probing the way that we ordinarily navigate the world seems likely to only provide evidence of the former.

Of course, Schwenkler's suggestion might be combined with the claim that there are no strictly necessary and sufficient conditions associated with concepts like *seeing* (Fischer suggests this in his comments). The methodology suggested by Schwenkler is reminiscent of Edward Craig's suggested method for investigating the concept of *knowledge* in *Knowledge and the State of Nature* (1990), and one of the things Craig suggests in that book is that it is possible to provide an analysis of our concept of *knowledge* in terms of what that concept enables us to do, without presupposing that it has necessary and sufficient conditions. Indeed, one might think the correct diagnosis of the many failed attempts to provide necessary and sufficient conditions for *knowledge* is that we cannot expect our ordinary practice to determine the application of our terms 'in freakish, perhaps wholly imaginary, circumstances in which some of the familiar indicators fall one way, some another' (1990: 16).

In reply, our study engages a debate in which it is typically assumed that there are necessary and sufficient conditions associated with philosophically interesting concepts, and that the way to discover these conditions is by considering intuitions about hypothetical cases. In keeping with this debate, we treat the claim that there are necessary and sufficient conditions associated with *seeing* as a working hypothesis; hence we suggested that it is our proposed no blocker condition, and not the causal condition, that provides a necessary condition for seeing. Of course, we are prepared to allow that it might turn out that this hypothesis is incorrect. This would at least be consistent with our negative claim that the causal condition is *not* a necessary condition. In fact, one way of interpreting the bimodal response to the non-blocker conditions would be as evidence of this kind of conceptual underdetermination. Whether this interpretation is plausible requires further investigation, including more detailed consideration of whether the no blocker condition is itself a necessary condition (something that we return to in Part IV).

II

Both commenters point out that 'see' is polysemous, and this raises concerns about whether participants are using the same sense of 'see' in the non-blocker and blocker cases. How should this be handled? The simple answer is by ensuring participants are understanding the word as intended. Easier said than done. We will come back to this. We will first look at a specific instance of the polysemous concern raised by Fischer.

The concern in question is that participants in the non-blocker cases are understanding 'see' in its phenomenal sense. Fischer says the following:

> [See] can be applied to cases of hallucination and allows us to say, e.g., that 'Macbeth sees a dagger' – in the sense that 'Macbeth has an experience like that of seeing a dagger' (Ayer 1956, 90). If Macbeth has an experience exactly like that of seeing a physical dagger (rather than like that of seeing an oddly translucent one), he can therefore be said to 'see a physical dagger' (Fischer & Engelhardt, 2017). When resorting to this phenomenal use, even participants who judge the snake-case to be one of hallucination can truly judge that 'you see the actual snake'.

This is an interesting comment, but in reply, we are not convinced that you can say correctly in a hallucination case that 'you see the actual snake,' especially when 'the' clearly designates a real, living snake. You could say in the phenomenal sense that 'you see *a* snake,' or maybe even that 'you see *a* physical snake.' However, we were cautious to avoid phrasing the prompt in these ways.

Of course, it is possible that our participants failed to recognize the relevant differences. If so, the question becomes 'why did they interpret 'see' phenomenally in the non-blocker cases and not in the blocker cases?' Drugs and brain stimulations (used in the non-blocker cases) may invite one to think of hallucinations, but then again presumably so would a virtual reality headset (used in one blocker case). (The word 'hallucinate' was used in the control for the snake, non-blocker case but not in the clock, non-blocker case.) Even if participants were more likely to think of hallucinations in the non-blocker cases, it is unclear why this would lead them to interpret 'see the actual' phenomenally.

Now to return to the more general concern with the polysemous nature of 'see.' How can we be sure that participants are understanding 'see' the same in all the cases, as intended? We largely agree with Fischer and his suggestions:

> Follow-up studies should incorporate norming work to identify and avoid unwanted pragmatic inferences, including interfering inferences from stereotypes associated with expressions other than those of interest. Debriefing questions could be used to assess participants' understanding in the main study. (Is this a case of hallucination or illusion or neither? How [as analogous to which of the following statements] do you interpret the final sentence? Etc.)

A note of caution. Norming work likely cannot be done simply by adding questions to an online survey. We have tried to do so, unsuccessfully. In the context of online studies, many participants write little or nothing to open ended survey questions. They likely cannot be forced to answer any questions, as ethics committees often require providing participants with the choice to abstain. However, even if you 'force' a response as a feature option (Qualtric survey software offers such an option), it is simply too easy for participants to type nonsense strings of characters. In fact, that may be the rational choice if a participant simply wants to complete the survey

quickly. Further, even if participants did write fuller responses, it would likely be infeasible to ask them to clarify their responses and to code them properly.

Rather, norming work is probably better done with semi-structured qualitative interviews or focus groups. This is neither quick nor cheap, but it can be revealing. We hope that our study has produced the proper formative research to enable future researchers to bid for funding to conduct such work. Note that qualitative interviews must be conducted according to current academic standards, for example, using interview guides with set standard and follow-up items, using audio-tapes/transcripts, and where possible using multiple independent coders for internal validity. For those interested in pursuing such research we recommend reading Braun & Clarke (2006).

III

We now turn to a different concern with our study. The concern is that some participants are interpreting the non-blocker cases to meet the causal condition, even though this was not intended. Fischer says the following:

> Participants' agreement ratings will then depend upon whether they conclude that this is a non-standard case of hallucination, or no hallucination. In the former case, participants will typically disagree with the target statement 'You see the actual snake' (but see below). In the latter case (no hallucination), elementary reasoning suggests that the drug must be modifying your perception of the snake actually in front of you, rather than having you 'see' something else, and participants will agree that 'you see the actual snake'. If this explanation is correct, their agreement is based on a conceptualisation of the case as involving a modified but unbroken causal link between the critical object O and the subject of perception, and does not support the conclusion that competent speakers fail to treat a causal link between them as necessary condition of *seeing*.

To better understand the bimodal response distributions we found for the non-blocker cases, we have already collected some participants' responses to modified cases. These participants were asked to respond to either a modified Clock case or a modified Snake Case. As in our previous, *Ergo* study, participants were asked to say whether they agreed with the statement 'You see the actual [clock or snake]' on a scale from 1 (disagree strongly) to 10 (agree strongly).

The modified cases were designed to clearly emphasize that there is no direct or plausibly indirect causal connection between the subject and the object. They thus help address Fischer's concern. The original and modified non-blocker cases are given in Table 1, with blue italic text indicating the alteration for the modified cases.

Clock	Original	**A scientist is stimulating your brain so that it looks to you as if there is a clock in front of you. As it happens, there really is a clock in front of you that matches exactly how things look to you, but the scientist would make it look to you as if there were a clock even if there were not one.**

	Modified	***A scientist has stopped your optic nerve from transmitting information. He then stimulated*** **your brain's visual region so that it looks to you as if there is a clock in front of you. As it happens, there really is a clock in front of you that matches exactly how the scientist has made things look to you, but the scientist would make it look to you as if there were a clock even if there were not one.**
Snake	Original	**You have taken a drug that affects your brain so that it looks as if there is a snake in front of you. As it happens, there really is a snake in front of you that looks exactly that way.**
	Modified	**You have taken a drug that** ***has stopped your optic nerve from transmitting information. The drug then stimulated*** **your brain's visual region so that it looks to you as if there is a snake in front of you. As it happens, there really is a snake in front of you that looks exactly how the drug has made things look to you.**

Table 1

The same comprehension questions and philosophical training criteria used to select participants in the original study were again applied to understand participants' responses. Figure 1 displays the percentage of participants who entered each response (1 to 10 on the Likert scale) to the original and modified cases.

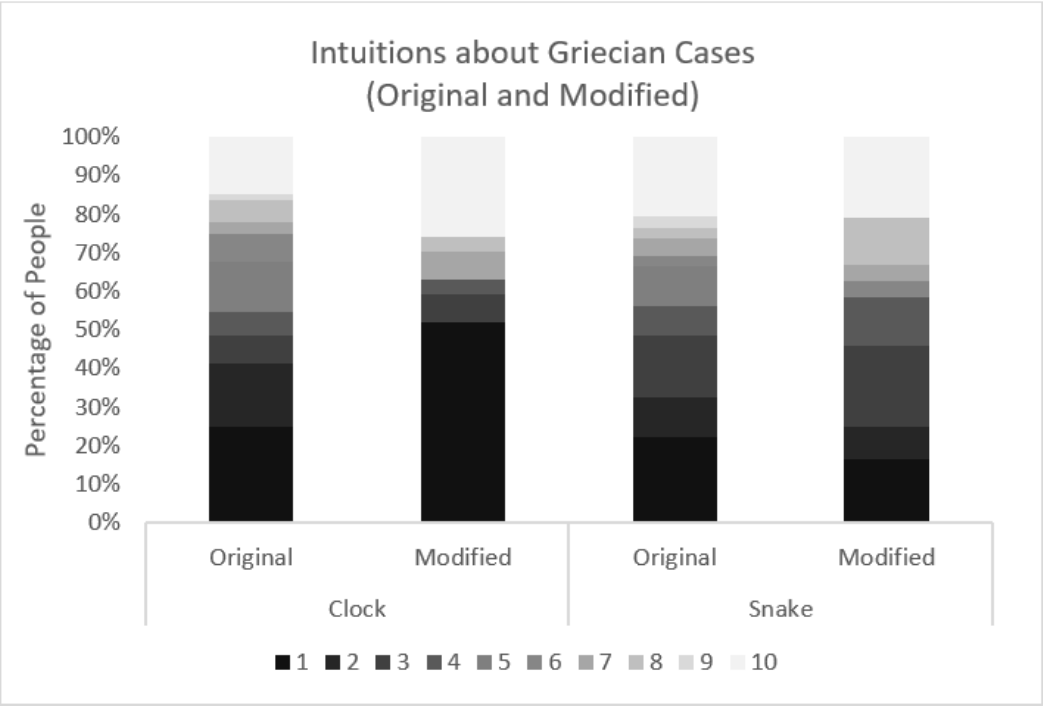

Figure 1

Regarding the original cases, 68% (46/68) of participants indicated some level of disagreement with the clock case and 66% (45/68) of participants did so for the snake case, i.e., answered 5 or below. Regarding the modified cases, 63% (17/27) of participants indicated some level of disagreement with the clock case and 58% (14/24) with the snake case. The results of a chi-square indicate that participants' responses to the original and modified versions were not different for either case type, clock: $X2(, N = 1) = 0.19$, $p = 0.66$, and snake: $X2(, N = 1) = 0.47$, $p = 0.49$.

This short study is just one attempt to better understand the non-blocker cases. It is not meant to be the last word on the relevant criticism or any others. We would be excited to work with other researchers to better understand participant responses using both quantitative and qualitative methods.

IV

In closing we wish to return to the no blocker condition we proposed in the *Ergo* paper. In our study, we examined the idea that the causal theory of perception is a conceptual truth. Because of the mass disagreement regarding non-blocker cases, we proposed instead that it is a no blocker condition that is the relevant conceptual truth, not the causal condition. Fischer thinks that video calls fly in the face of the no blocker condition we propose. Specifically, Fischer says the following:

> An informal survey suggests undergraduates overwhelmingly accept saying that 'you see the person you are Skyping with', while most do think that the direct line of sight is then blocked by physical objects.

In reply, you may see the person you are Skyping with, but do you see the *actual* person or an image of the person? Perhaps the answer seems obvious. It is only if participants think that you see the *actual* person and the line of sight is blocked that the no blocker condition is in trouble. Also, it is unclear whether 'the direct line of sight' (Fischer's words) can be blocked even though the line of sight is not. Perhaps the line of sight in Skype calls is indirect but ultimately unbroken. These are not questions we can answer here, but we do think that how 'see' operates for Skype calls is an important question relevant to the no blocker condition. We do not think it is known what the answer is as of yet and encourage further work.

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