



## Truth, success, and epistemology

### A response to Stokes's *Thinking and Perceiving*

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#### Abstract

In *Thinking and Perceiving*, Stokes challenges “the pernicious cognitive effects assumption”: the assumption that it would be epistemically problematic if our thoughts were to directly influence our perceptual experience. In doing so, Stokes takes himself to be supplementing the epistemological claims of philosophers like Siegel and Lyons with descriptive claims about human psychology. I argue that his conclusions are more radical than they first appear, to the extent that Stokes's project is at odds with the standard epistemological discussions of cognitive penetration.

#### Keywords

Cognitive penetration · Epistemology · Perception

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If our thoughts directly influence our perceptual experience, epistemological worries seem to arise. Philosophers have tended to assume that such a scenario, in which what we perceive is causally dependent on our beliefs and expectations, would result in epistemic concerns about circularity, unreliability, or double-counting (Vance, 2015). Stokes (2021) calls this “the pernicious cognitive effects assumption”, and one main aim of his book *Thinking and Perceiving* is to challenge the assumption: he argues that “there is no principled reason to assume that cognitive penetration, should it occur, is bound to produce epistemic problems” (p. 137).<sup>1</sup>

Stokes' challenge echoes recent claims by Jack Lyons and Susanna Siegel, who also argue that the cognitive penetration of perceptual experience doesn't necessarily undermine its epistemic role. Lyons (2011), for example, argues that the epistemic impact of cognitive penetration will depend on the mode of penetration:

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<sup>1</sup>All page references are to Stokes (2021) unless otherwise specified.

while some top-down influences could negatively affect the epistemic role of perception, others could potentially improve it. And Siegel (2017) has argued that while the justificatory force of a perceptual experience can be reduced by its etiology ('epistemic downgrade'), the converse is also possible: the etiology of an experience can increase its power to justify certain judgments ('epistemic upgrade'). Similarly to Lyons and Siegel, Stokes proposes that some top-down influences on perception could be "epistemically boosting, rather than downgrading" (p. 137) and could thus lead perceivers to "see better in a variety of ways" (p. 223).

Stokes' proposal, however, is notably bolder than those of Lyons and Siegel. Lyons and Siegel are mainly concerned with challenging the conditional claim at the heart of the pernicious cognitive effects assumption: they propose that *if* thinking were to affect perceiving, *then* we wouldn't necessarily run into epistemic worries. In *Thinking and Perceiving*, Stokes appeals to empirical evidence to argue for the truth of the conditional's antecedent. He proposes the thesis that 'thinking affects perceiving' (TaP), where this is a descriptive claim about cognitive architecture. He then draws on further empirical data about the performance of experts in specific perceptual domains to make the claim that 'thinking improves perceiving' (TiP), where this is a normative claim about the epistemic consequences of TaP. Stokes describes his project as building on the conceptual work of philosophers like Siegel to make empirical claims about human perception:

"What the architectural analysis given here does is supplement Siegel's epistemological model (which is defended as a conceptual possibility, not as a descriptive claim about human psychology) with a range of empirically grounded cases." (p. 178)

I will suggest that Stokes' position in *Thinking and Perceiving* is more radical than it first appears. Where previous debates about the epistemic consequences of cognitive penetration have assumed that epistemology is governed by norms of truth, Stokes' conclusions seem to require the adoption of a pragmatist epistemology which is governed by norms of success. As a result, I propose that Stokes' view of perceptual epistemology fundamentally contrasts with the views of philosophers like Siegel and Lyons, and thus his analysis cannot be understood merely as a supplement to existing epistemological models.

Traditionally, epistemological constraints have been defined in terms of truth-evaluable propositions. This is what Goldman calls "the familiar assumption" that epistemology centers on belief, and that belief aims at truth and error-avoidance (Goldman, 1995, p. 171). These assumptions are shared by internalists and externalists alike. Siegel's focus, for example, is on rationally evaluable inferences, where these are the epistemically appraisable transitions between beliefs. She is interested in how phenomenally identical experiences can provide different levels of justification for the belief *that p*, depending on how the experience has been modulated by cognitive inferences (Siegel, 2017). Lyons replaces talk of rational inference with talk of reliably truth-conducive processes, and explicitly states that

our evaluations of perception as epistemically better or worse rely on “truth-linked notions” like reliability, safety, sensitivity, and power (Lyons, 2011, p. 300).

When Stokes introduces the idea of perceptual experts as epistemically better perceivers, he seems initially to share the same traditional epistemological assumptions as Siegel and Lyons. Like Siegel, he proposes that the “experiences of perceptual experts contribute in a positive way to their *rational standing* as epistemic agents” (p. 178, my italics). Like Lyons, he acknowledges that perceiving better or worse can be a matter of “producing *accurate* representations of the environment with more or less frequency” (p. 189, my italics). But Stokes goes on to propose that many of the improvements which make perception epistemically better “are not improvements in accuracy or veridicality in this straightforward sense” (p. 200):

“improved sensitivity to behaviourally relevant patterns, organizational features, category- and diagnostic-specific information, less distraction, speed [...] are instead improvements in seeing what is relevant to a task and with increased speed and efficiency.” (p. 194)

Stokes is *not* merely making the (relatively uncontroversial) claim that our perceptual performance can improve in non-epistemic ways. We can all agree that there is some practical sense in which faster perceptual identification skills improve the success of our performance at certain tasks, for example, but traditional epistemology would not generally classify this as an *epistemic* improvement. This is where Stokes parts company with epistemologists like Lyons and Siegel: he proposes that such improvements in performance amount to a perceptual *epistemic* good.

“What the data show, if they show nothing else, is that experts perform more accurately, more rapidly, with less cognitive effort, and in ways that present advantages for working memory. Expertise is therefore an epistemic good simply because the expert is moving closer to an optimal cognitive stance on the world (or a part of it), where she can better acquire behaviourally relevant category and diagnostic information.” (p. 175)

For Stokes, epistemic agents aim at optimality rather than truth, where optimality is understood broadly in terms of success “along a variety of measures that align with aims for action, performance, and worldly engagement” (p. 229). Improvement along these sorts of measures would not, I take it, qualify as *epistemic* improvement for most traditional epistemologists, including Siegel and Lyons.

How does Stokes justify characterizing epistemic aims in terms of success rather than truth? He proposes that we take a virtue-based approach to epistemology. Virtue epistemologists address standard epistemological questions about knowledge, justification, and scepticism by appealing to the intellectual virtues of the agent, where these virtues can be understood as cognitive faculties (by reliabilist virtue epistemologists such as Sosa and Greco) or as character traits

(by responsibilist virtue epistemologists such as Zagzebski). Stokes suggests that where top-down effects on perception are epistemically enhancing, it is because they have increased the intellectual virtues of the perceiver: “Perceptual experts achieve skills that are best described as intellectual virtues” (pp. 149-150).

Stokes’ adoption of virtue epistemology, however, does not seem to be sufficient to justify his characterization of epistemic constraints in terms of success rather than truth. Notice that the virtue epistemologists quoted by Stokes are as truth-focused as other traditional epistemologists. For Sosa, an intellectual virtue is a reliably truth-conducive faculty, “a quality bound to help maximize one’s surplus of truth over error” (Sosa, 1991, p. 225); for Greco, intellectual virtues are faculties which “enable a person to arrive at truth and avoid error in some relevant field” (Greco, 2002, p. 287); and for Zagzebski, acts of intellectual virtue have the epistemic end of reaching the truth (Zagzebski, 1996, p. 271). None of these virtue epistemologists frame epistemic improvement in terms of (non-truth-governed) success, and so they cannot help Stokes to make the case that improvements in the speed or practicality of perceptual performance are *epistemic* improvements. What Stokes needs is an approach to virtue epistemology which shifts the scope of epistemology away from truth-apt belief and towards more generally successful action and performance. Such a variety of virtue epistemology may exist, but Stokes does not give us reason to adopt it. And if he did adopt such an approach, he would no longer be engaged with the existing debates over the epistemic consequences of cognitive penetration, which characterize epistemic constraints in terms of truth.

My aim here is not to argue against Stokes’ claims in *Thinking and Perceiving*. It is rather to highlight that his conclusions are more radical than they first appear, making few points of contact with the epistemological literature on cognitive penetration which Stokes takes himself to be supplementing. We might, for example, understand Stokes’ approach as a move from ‘mentalism’ to ‘pragmatism’ (Fodor (2008)). According to the mentalist standpoint, the paradigmatic goal of a cognitive agent is to ascertain truth: behaviors are only rational insofar as they are produced by a valid (truth-preserving) reasoning process. According to the pragmatist standpoint, the paradigmatic goal of the cognitive agent is to act successfully, where the success of a behavior is measured by its consequences (e.g. its adaptive benefits) rather than by the validity of the processes which produced it. Some proponents of the pragmatist approach go so far as to claim that we can understand rationality in terms of non-truth-linked success. Some philosophers have characterized rationality as “getting ahead, cognitively, in the world” (Dennett, 1987, p. 97), and rational norms as constrained by “functionality, not veridicality” (Chater et al., 2018, p. 800).<sup>2</sup> If Stokes were to take this pragmatist approach to rationality, he could retain his claim that experiences of perceptual

<sup>2</sup>The project of explaining rationality, on these approaches, becomes “the problem of explaining the production, in social, environmental, and technological context, of broadly appropriate adaptive response” (Clark, 2001, p. 143).



experts “contribute in a positive way to their *rational standing as epistemic agents*” (p. 178, my italics), but he would not longer be engaging with Lyon’s or Siegel’s concept of theoretical rationality.

If Stokes is proposing to adopt a pragmatic conception of epistemology, then interesting questions arise about the relationship between Stokes’ descriptive claims about cognitive architecture (TaP) and his normative claims about the architecture’s epistemic consequences. Much of the philosophical interest in the cognitive architecture of perception and cognition is grounded in the assumption that the epistemic status of a cognitive capacity is a matter of the sorts of processes which produced it: their rationality, or reliability, for example. If we switch a success-based version of epistemology, then claims about the architecture seem less relevant. The more we focus on success rather than truth as our epistemic goal, the less reason we have to suppose that cognitive architecture will provide the answers to our epistemological questions.

## References

- N. Chater, T. Felin, D. Funder, G. Gigerenzer, J. Koenderink, J. Krueger, D. Noble, S. Nordli, M. Oaksford, B. Schwartz, K. Stanovich, & P. Todd (2018). Mind, rationality, and cognition: An interdisciplinary debate. *Psychonomic Bulletin & Review* (Vol. 25, pp. 793–826). <https://doi.org/10.3758/s13423-017-1333-5>
- Clark, A. (2001). Reasons, robots and the extended mind. *Mind and Language*, 16(2), 121–145. <https://doi.org/10.1111/1468-0017.00162>
- Dennett, D. C. (1987). *The intentional stance*. MIT Press.
- Fodor, J. A. (2008). *Lot 2: The language of thought revisited*. Oxford University Press.
- Goldman, A. I. (1995). Social epistemology, interests, and truth. *Philosophical Topics*, 23(1), 171–187. <https://philpapers.org/rec/GOLSEI>
- Greco, J. (2002). Virtues in epistemology. In P. K. Moser (Ed.), *The Oxford handbook of epistemology* (pp. 287–312). Oxford University Press. <https://doi.org/10.1093/0195130057.003.0010>
- Lyons, J. (2011). Circularity, reliability, and the cognitive penetrability of perception. *Philosophical Issues*, 21(1), 289–311. <http://www.jstor.org/stable/41329425>
- Siegel, S. (2017). *The rationality of perception*. Cambridge University Press.
- Sosa, E. (1991). *Knowledge in perspective: Selected essays in epistemology*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511625299>
- Stokes, D. (2021). *Thinking and perceiving: On the malleability of the mind*. Routledge.
- Vance, J. (2015). *Cognitive penetration and the tribunal of experience* (Vol. 6, pp. 641–663). <https://philpapers.org/rec/MICCPA-4>
- Zagzebski, L. T. (1996). *Virtues of the mind: An inquiry into the nature of virtue and the ethical foundations of knowledge*. Cambridge University Press.

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