

Critical Discussion: Virtue Epistemology and Extended Cognition: A Reply to Kelp and Greco

Krist Vaesen

Received: 16 August 2011 / Accepted: 21 August 2012 / Published online: 8 September 2012
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Abstract Elsewhere, I have challenged virtue epistemology and argued that it doesn't square with mundane cases of extended cognition. Kelp (forthcoming, this journal) and Greco (forthcoming) have responded to my charges, the former by questioning the force of my argument, the latter by developing a new virtue epistemology. Here I consider both responses. I show first that Kelp mischaracterizes my challenge. Subsequently, I identify two new problems for Greco's new virtue epistemology.

1 Introduction

The main intuition driving many dominant virtue theories of knowledge is the idea that knowledge necessarily involves the exercise of cognitive ability. Knowledge is believing the truth not because of some form of epistemic luck (as in Gettier cases), but because of the correct application of one's cognitive abilities. This sort of view is famously espoused by, among others, Greco (2007),¹ Riggs (2007),² and Sosa (2007).³

Elsewhere, I have challenged the virtue-theoretic idea that cognitive ability is a necessary condition for knowledge, by presenting a scenario in which knowledge

¹ Greco [p. 57]: "[...] knowledge attributions can be understood as credit attributions: when we say that someone knows something, we credit them for getting it right."

² Riggs [p. 329]: "[...] knowledge is, complications aside, credit-worthy true believing."

³ Sosa [p. 92]: "[b]elief amounts to knowledge when apt: that is to say, when its correctness is attributable to a competence exercised in appropriate conditions."

and cognitive ability dissociate. The scenario concerned a subject *S* who, according to intuition, knows that *p*, even though her believing the truth (rather than a falsehood) is not attributable to herself; rather, she believes truly in virtue of a feature of her extended cognitive environment. The scenario reads as follows:

SISSICASE: Sissi is a baggage inspector at the local airport. The baggage scanners at the airport have recently been equipped with a false positive engine; the machine periodically superimposes images of illegal objects onto the images actually produced by the scanner. The false positive engine was installed because research has shown that it keeps baggage inspectors dramatically more alert. Upon viewing a suspicious image, operators can click on the image to find out whether it is a false positive or not. Her supervisor Joseph, a cognitive engineer who was actually involved in the design of the device, has informed Sissi how the machine works. Currently Sissi is inspecting a piece of luggage which contains a bomb. Thanks to the new device her vigilance is at peak level, so that she notices the bomb on-screen. When she clicks on the image, she finds out she isn't looking at a false positive, and thus forms a true belief regarding the contents of the suitcase. As such, the bomb is intercepted and a catastrophe prevented from happening.

I argued that even such an uncontroversial instance of extended cognition as SISSICASE—where human cognition is just taken to be strongly dependent on external resources—poses a problem for the virtue epistemologist.⁴ The reason for this is that Sissi deserves the title of knowledge, even though her cognitive success is attributable to the technology (or to the person installing it), rather than to herself. After all, without the false positive engine, Sissi would have been inattentive and would have formed a *false* belief.⁵

Evidently, Sissi's cognitive faculties play *some* role in her cognitive success. But the same holds for Gettier cases. Think of Chisholm's dog-looking-like-a-sheep scenario. If Roddy forms the belief that there is a sheep in the field and his belief is true, not because what he sees is a sheep (it's in fact a dog), but because a sheep,

⁴ Whether such a weak account still qualifies as "extended cognition" is up for debate. Adams (2012) thinks that it is a weak account of extended cognition indeed; Aizawa (2012) accepts but doesn't endorse such parlance; Menary (2012), in contrast, argues that my account is more one of cognitive outsourcing than of cognitive extension. All (myself included) agree, however, that on a much stronger version of the thesis of extended cognition, cognizers do not merely depend heavily on external resources, but these external resources may literally become part of the cognizing mind (Clark and Chalmers 1998; Haugeland 1998; Rowlands 1999; Clark 2008). Although I am sympathetic to this stronger version of the thesis, I do not want the force of my argument to depend on one's willingness to accept it. That is, I want to make as few controversial assumptions as possible and, clearly, heavy dependence on external resources (or, in my perhaps somewhat unfortunate terminology, weak extended cognition) better fits that bill than assumptions of strong cognitive extension (i.e. *sensu* Clark and others). Incidentally, at the end of the paper I return to these stronger positions; I show that one way of saving virtue epistemology is to give SISSICASE a strong reading, and to think of SISSI plus the machinery as one integrated cognitive system.

⁵ Structurally, my argument is similar to one by Lackey (2007). Still, my argument doesn't require one to make controversial assumptions about the existence of innate knowledge; nor about whether blindly believing a testifier can ever yield knowledge (see Vaesen 2011, p. 516).

well-hidden behind a rock, *is* grazing in the field, Roddy's perceptual faculties are relevant, but insufficient to explain his true belief. So to rule out knowledge in these cases, cognitive ability must be more than just one of the causal factors responsible for success; it must be the most salient one.

My charge thus, as Greco (forthcoming, p. 4 of ms) recognizes, is best characterized as a dilemma. The first option is to give the ability condition a strong reading, i.e. cognitive ability is the most salient feature explaining cognitive success. The problem with this horn of the dilemma is that knowledge is incorrectly ruled out in SISSICASE. The second option is to relax the ability condition so that cognitive ability is just one of the many causal factors giving rise to *S*'s truly believing that *p*. On this horn of the dilemma, however, one fails to rule out knowledge in Gettier cases and thus the main motivation for adopting a virtue-theoretic account of knowledge is undermined.

2 Kelp Misses the Dilemma

Kelp (forthcoming, this journal) argues that SISSICASE poses no new problem for virtue epistemology; that SISSICASE can be dealt with in familiar virtue-theoretic ways. Kelp forgets to mention, however, that these familiar virtue-theoretic responses suffer from problems that are just as familiar.

Kelp's preferred virtue-theoretic response to SISSICASE draws on Sosa (2007).⁶ Kelp agrees with Sosa that

what matters to satisfaction of the ability condition is whether the agent's cognitive success *manifests* ability on his part, where an ability, according to Sosa, "is a disposition [...] that would in appropriately normal conditions ensure (or make highly likely) the success of any relevant performance issued by it."

Applied to SISSICASE: when operating the new scanner and forming a true belief that there is a bomb in the suitcase, Sissi *manifests* a disposition that would ensure that she believes truly in appropriately normal conditions.

I think Kelp is right that Sissi's success manifests her cognitive ability, but wrong that manifestation of cognitive ability is sufficient for immunizing SISSICASE. This has to do with the second horn of my dilemma: manifestation doesn't adequately rule out knowledge in Gettier-style arguments (a point I made in fact in Section 5 of my paper; for the same point, see Pritchard's (2009) response to Kelp's earlier endorsement of Sosa's account).

Think of Chisholm's dog-looking-like-a-sheep scenario again. Roddy's perceptual dispositions are assumed to be reliable, and thus to ensure true beliefs in appropriately normal conditions. These perceptual dispositions definitely play a role in Roddy's cognitive success. So Roddy's cognitive success manifests his cognitive

⁶ In fairness to Kelp, he also imagines a response by Greco. I here ignore this imaginative response, and instead discuss Greco's actual response in Sect. 3.

ability. Still, according to mainstream intuition, Roddy doesn't deserve the title of knowledge.

Or consider the following case, due to Turri (2011), whose argument is directed directly at Sosa's (rather than Kelp's) manifestation account:

A competent, though not masterful, inspection of the crime scene would yield the conclusion that a man with a limp murdered Miss Woodbury. Holmes saw through it and had already deduced that Dr. Hubble poisoned the victim under pretense of treating her.

Holmes also recognized that the scene would fool Watson, whose own inspection of the scene was proceeding admirably competently, though not masterfully. Watson had, after years of tutelage, achieved competence in applying Holmes's methods, and while Holmes was no sentimentalist, he didn't want Watson to be discouraged. "Look at him," Holmes thought, "measuring the distance between footprints, noting their comparative depth, and a half dozen other things, just as he ought to. There's no doubt where this will lead him—think how discouraged he will be." Holmes then resolved, "Because he's proceeding so competently, I'll see to it he gets it right!"

Holmes sprang into action. Leaving Watson, he hastily disguised himself as a porter, strode across the street to where Hubble was, and kicked him so hard that Hubble was thereafter permanently hobbled with a limp. Holmes then quickly returned to find Watson wrapping up his investigation.

"I say, Holmes," Watson concluded triumphantly, "whoever committed this brutal crime has a limp."

"Capital, Watson!" Holmes grinned. "I'm sure he does." (Turri 2011, p. 5)

Watson's belief that the criminal has a limp is true, and markedly manifests his cognitive powers. Yet, it doesn't seem to amount to knowledge.

It isn't clear at all how Kelp's manifestation account can be made immune to Roddy's case, or to similar Gettier-style arguments, like the one of Holmes and Watson, without falling prey to the first horn of the dilemma. Perhaps Kelp could ask for a quantitatively more demanding version of manifestation. For instance, he could try the idea that *S* knows that *p*, only if *S*'s cognitive success *most prominently* manifests *S*'s cognitive powers; what Roddy's and Watson's success most prominently manifests is luck, not cognitive ability. Unfortunately, that proposal pushes us back to the other horn of the dilemma, for it mis-diagnoses SISSICASE; Sissi's success seems a manifestation of Joseph's cognitive powers (his idea of equipping the baggage scanner with a false positive engine) rather than those of Sissi.

Alternatively, Kelp may follow a (further unexamined) suggestion by Turri (2011, p. 6), and try to put qualitative constraints on manifestation; cognitive success must manifest cognitive ability *in the right way* (or so). I leave it to Kelp, however, to work out the details of such an account.

3 New (and not so New) Problems for Greco

John Greco (forthcoming), in contrast to Kelp, admits the force of my argument, and proposes a new virtue epistemology in response.⁷ That is, Greco grants that SISSICASE undermines the idea that a true belief's being attributable to cognitive ability is to be understood in causal-explanatory terms. Instead, Greco proposes, the attributability relation should be thought of in pragmatic terms.

How is this pragmatic account spelled out? Greco conjoins ideas of Craig (1990), Sosa (1991), Hawthorne (2004) and Stanley (2005) into a proposal about the *function* of the concept of knowledge:

[[$G_{function}$]] [...] the concept of knowledge functions so as to flag good information and good sources of information for use in practical reasoning. Put differently, the concept of knowledge is used to identify actionable information and sources of actionable information.

The corresponding *content* of the concept of knowledge is defined by Greco as follows (p. 16 of ms.):

[[$G_{content}$]] *S* has knowledge only if *S*'s believing the truth is attributable to *S*'s intellectual abilities. And that is so just in case *S*'s abilities contribute to *S*'s believing the truth in a way that would regularly serve relevant needs for information.

According to Greco, $G_{content}$ provides a solution to the dilemma posed by SISSICASE. Sissi's cognitive ability contributes to her believing the truth in the right way, that is, in a way "that would regularly serve relevant informational needs (p. 17 of ms.)." Sissi exploits the baggage scanner in such a way that true belief is produced in a generally regular, dependable way. In Gettier cases, Greco continues, this doesn't hold: a true belief is produced, and the subject in question even contributes to that, but it is not the sort of cognitive/causal route that could be regularly exploited for practical purposes. In light of that, the subject is denied the title of knowledge—and virtue epistemology is saved.

Although I am sympathetic to this pragmatic move, it doesn't work as it stands. Greco's new proposal faces two problems.

3.1 A Problem for $G_{content}$

A simple Temp-style case is sufficient for showing that Greco, in particular $G_{content}$, sets the bars for knowledge too low. Consider Ferdinand. Ferdinand likes to be up to date with respect to room temperature, and therefore regularly consults a thermometer on the wall. Ferdinand doesn't know that the thermometer is defective and that it fluctuates randomly within a given range. Nonetheless, Ferdinand's readings are reliable, since unbeknownst to him, a benevolent demon sees to it that,

⁷ In fact, Greco's new virtue epistemology is not just issued by SISSICASE, but also by a case of Lackey (2007) concerning testimonial knowledge.

whenever Ferdinand consults the thermometer, room temperature is adjusted so that it actually corresponds to what is displayed on the device.

In this case, Ferdinand exploits the thermometer so as to produce true temperature beliefs in a regular, dependable way. After all, Ferdinand is a good informant with respect to temperature: he gets temperature readings right all the time! Yet, according to mainstream intuition, Ferdinand should not be attributed knowledge. In sum, as it stands $G_{content}$ doesn't rule out knowledge in simple Temp scenarios.

3.2 A Conflict Between $G_{function}$ and $G_{content}$

Greco's point of departure, as per $G_{function}$, is the idea that the concept of knowledge serves to flag informants possessing actionable information. The corresponding content of the concept is given by $G_{content}$. However, it is not clear at all why $G_{content}$ would be a suitable characterization of the content of a concept of knowledge that is functionally characterized along the lines of $G_{function}$.

To appreciate the conflict between $G_{function}$ and $G_{content}$, consider a simple TrueTemp case. Suppose that I as an attributor know that Franz's temperature beliefs are true because a benevolent demon implanted a TrueTemp device in Franz's brain. Suppose, moreover, that my decision to air Franz's room is dependent on the room's temperature—if temperature exceeds X degrees, I open the windows, else, I keep them closed. When I ask Franz about the room's temperature, it doesn't really matter whether Franz's temperature beliefs are true thanks to himself, or thanks to a benevolent demon; as long as I know that there is a suitable causal path ensuring the truth of Franz's temperature beliefs, his true beliefs will properly inform my decision. In the scenario just described Franz thus possesses actionable information, even though his believing the truth is not attributable to the dependable contribution of his cognitive abilities.

Likewise, S 's merely having a true belief that p may be sufficient for S to possess actionable information regarding p , however un-dependably S 's true belief was produced. Adapting an example of Hawthorne (2002), Marie-Antoinette may retrieve the information that Vienna is the capital of Austria from a book full of mistakes—with the information regarding the capital of Austria being a rare exception. Marie-Antoinette's believing the truth is not attributable to a dependable way of information-gathering, yet her belief definitely qualifies as actionable. If she were to decide to travel to the capital of Austria, the information she possesses certainly is of use.

What these scenarios show is that $G_{content}$ is too demanding to mirror the functional specifications given by $G_{function}$. If, per $G_{function}$, actionable information is what the concept of knowledge picks out, referring to intellectual abilities in $G_{content}$ seems unnecessary and, without further argument, out of place.

This conflict between the supposed function and content of the concept of knowledge presents a new dilemma for Greco. Either Greco retains $G_{content}$, and gives up $G_{function}$; or he retains $G_{function}$, and gives up $G_{content}$. Let's examine the implications of either option.

First, giving up or modifying $G_{function}$ so that it fits better with $G_{content}$ is like putting the cart before the horse. $G_{function}$ was invoked to restrict, clarify and justify the content of the concept of knowledge (not the reverse). As Greco rightly puts it: the purpose should explain the content (not the reverse).

On the second horn of the dilemma, Greco saves $G_{function}$, which means he should be willing to attribute knowledge to Franz and Marie-Antoinette. That would make for a remarkable, but not entirely unpalatable position. After all, there is a sense in which the concept of knowledge seems admissible in the scenarios alluded to, namely when ‘knowing that p ’ is construed as ‘being cognizant of p ’. Returning to Hawthorne’s adapted example, suppose Marie-Antoinette is sitting in a room with several other people, and I ask you to count how many people in the room know that Vienna is the capital of Austria. Most likely, you would count Marie-Antoinette in, and this in virtue of her being cognizant of the fact that Vienna is the capital of Austria. While this weak sense of knowing may be inconsistent with the eventual semantics of the concept of knowledge, it certainly is consistent with $G_{function}$.

The main problem with the second horn of the dilemma is rather that $G_{content}$ needs to be altered. If knowledge picks out actionable information, perhaps $G_{content}$ must be defined just in terms of true belief. But however we fill in the details of $G_{content}$, it is not sure at all that one can change it so that it both better corresponds to $G_{function}$ and at the same do what it was supposed to, namely to save virtue theoretic approaches to knowledge in the face of extended cognition. At first blush, the challenge seems substantial.

4 Conclusion

Extended cognition poses a problem for certain formulations of virtue epistemology, I argued before. Apparently, that claim remains valid today. To suitably deal with my challenge, Kelp needs to make his response Gettier-proof; and Greco needs to make his response both Temp-proof and internally more consistent. Alternatively, Kelp and Greco may abandon their robust virtue epistemology, and embrace a weaker version, according to which knowledge involves a *significant amount* of cognitive ability, as opposed to being *primarily* creditable to cognitive ability. On such a weaker virtue epistemology (see also Pritchard 2010; Vaesen 2011, p. 527), Sissi’s success attests to her cognitive ability, even though primary credit would go to the machinery/Joseph. Finally, there is also a third alternative (see Vaesen 2011, p. 526): virtue theorists may interpret SISSICASE as an example of the strong variant of extended cognition I alluded to (see footnote 4). On this construal, the processes going on in the machinery are considered genuinely cognitive, as belonging to “Sissi the extended cognitive agent“. On this condition, Sissi’s (now extended) faculties would remain the most salient feature explaining her true belief, and Kelp’s and Greco’s robust virtue epistemologies would be saved. Note, however, that such a strong reading of SISSICASE is quite radical; I suspect that even radical extended cognition theorists (such as Clark) would resist so characterizing SISSICASE.

Acknowledgments Research by Krist Vaesen was supported by the Netherlands Organisation for Scientific Research (NWO).

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