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Revisiting Online Intellectual Virtues

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Paul Smart's and Robert Clowes's "Intellectual Virtues and Internet-Extended Knowledge" (2021) in response to my "Online Intellectual Virtues and the Extended Mind" (2020) raises some important questions for the proposal of intellectual virtues in an online environment. These questions aim both at the motivation for a virtue responsibilist reaction to the Internet, and at my success of combining virtue responsibilism and cognitive integration. Moreover, they suggest that there might be a better way to take up virtue responsibilist ideas when we focus on how people judge online sources to be trustworthy. I am in much agreement with the general directions of their questions, but I take the lessons to be slightly different. In general, I remain more hopeful for the role of online intellectual virtues as proposed by Heersmink (2018).

The structure of this reply closely follows Smart's and Clowes's presentation. I will first reassess the motivation behind online intellectual virtues. Then, second, I address worries about whether we can avoid the generalized extended knowledge dilemma by choosing a multidimensional framework for cognitive integration. Finally, I will discuss Smart's and Clowes's positive proposal in the third part.

### **How Important are Online Epistemic Hazards in the Call for Intellectual Virtues?**

My initial contribution paints a picture that is well-known in discussions of epistemic aspects of the Internet. I start by observing that the Internet as an epistemic source brings about some epistemically harmful consequences: misinformation (Lynch, 2016), reproducing harmful stereotypes (Noble, 2018), filter bubbles and echo chambers (Simpson, 2012; Miller and Record, 2013; Nguyen, 2020; Cinelli, De Francisci Morales, Galeazzi, Quattrociocchi, and Starnini, 2021). Barely any mentioning of the positive sides of the Internet as a source of knowledge. With the Internet as an epistemically hostile place in mind, I then propose online intellectual virtues as the antidote that can help us bypass all the epistemic hazards. These online intellectual virtues are instances of more general intellectual virtues (e.g., curiosity, open-mindedness, etc.) applied to an online environment. These virtues are suggested to safeguard us from the epistemic hazards found on the Internet.

Smart and Clowes rightfully ask us to stop for a moment and reconsider whether this is an adequate characterization of the Internet. Should we start with all the epistemic hazards in mind? Are we selling the epistemic benefits too short by focusing on all these hazards? They suggest that we should look at different ways the Internet can be used, and that it is not so obvious whether the Internet in general can be classified as an epistemically hostile environment if we look closely enough.

I agree with their suggestions. Moreover, I agree that evaluating the Internet as an epistemic source is a difficult task that cannot be done by locking in only on Google Search. So in this regard, my discussion of online intellectual virtues and the extended mind was incomplete. Smart and Clowes also point out that even for Google Search it is difficult to assess which epistemic hazards are present. Here we are confronted with a general methodological problem when we deal with Google Search and the speed at which it can change. What was empirical evidence in 2016 cannot be reproduced anymore. Whenever a problematic search

result is published and discussed the algorithms change soon afterwards, often in a way that makes it impossible to tell from the outside what exactly changed. Did the algorithm become better at avoiding stereotypes, or did it just become better at hiding well-known instances of prejudice?

This is a challenge for me (and Heersmink 2018) to the extent that we motivate online intellectual virtues as a response to empirically evidenced problems. There are at least two plausible ways to go from here. First, we can generalize from previous problems to the likelihood of yet to be discovered problems. Given that so far we have always found problems sooner or later, we should adopt online intellectual virtues as a safeguard. I am unsure whether this is a good way to go. I prefer a different route. We can, second, provide an argument for online intellectual virtues that is independent of epistemic hazards on the Internet. Let me sketch such an argument.

Intellectual virtues, such as intellectual carefulness, are thought of as acquired character traits that can be described as a mean between two vices. Being intellectually timid, afraid to form beliefs even when it would be appropriate, is a vice. Being intellectually careless, too quick in forming beliefs even when it is inappropriate, is a vice on the other extreme. The intellectually careful agent shows the right amount of care given the concrete situation at hand. What exactly the right amount of care is will be difficult to tell, but clearly, in an epistemically hostile environment much more care is called for than in an epistemically friendly environment. However—and this is the important point—even epistemically friendly environments call for intellectual carefulness. Intellectual virtues are not meant exclusively for hostile environments. They aim to characterize epistemic agents and their performances in general. An intellectually careful agent will be appropriately careful given the environment. If they were overly careful in an epistemically friendly environment, they would not act virtuously.

This discussion of intellectual carefulness generalizes to online intellectual virtues. Once we see these as virtues that aim for a mean between two vices and we recognize that this mean is dependent on the concrete situation, it becomes clear that we need online intellectual virtues even if there were no epistemic hazards on the Internet. We do not need these online intellectual virtues only as a safeguard against hazards, but we need them to engage with the Internet in a virtuous way in general. Suppose Wikipedia is an epistemically friendly part of the Internet because of mechanisms that ensure the reliability of Wikipedia, as can be argued with Halfaker and Riedl (2012) and Tollefson (2009). To make full use of this favorable environment a user needs to be appropriately trusting of Wikipedia. If a user is overly skeptical of Wikipedia they will miss out on many true beliefs. What the virtuous user needs is the right amount of carefulness, which in this case amounts to not questioning Wikipedia too frequently. Being overly skeptical is being too careful and hence intellectually vicious. This gives us an argument for online intellectual virtues based on the Internet as an epistemically friendly environment. An intellectually virtuous user of Wikipedia will be no more and no less careful than is appropriate, and will be so at least partially in virtue of their background knowledge of Wikipedia.

Smart and Clowes are right to push back against the overly pessimistic picture of the Internet that often motivates online intellectual virtues. But the lesson to take away is not that we should give up on online intellectual virtues, but rather that all this doom and gloom

about the Internet was not necessary to motivate online intellectual virtues in the first place. Even the most favorable environments require virtuous agents.

### **Avoiding the Generalized Extended Knowledge Dilemma**

With this new motivation for online intellectual virtues in place, I can now look at the challenge posed by Smart and Clowes to my attempt of combining these virtues with Heersmink's (2015) multidimensional approach to cognitive integration. Given that Clark's and Chalmers's (1998) version of the extended mind thesis does not go well with online intellectual virtues, I suggested that Heersmink's version fares better. Heersmink proposes a multitude of dimensions on which we can evaluate the integration of an artifact: Information Flow, Reliability, Durability, Trust, Procedural Transparency, Informational Transparency, Individualization, Transformation.

Whereas Clark and Chalmers require the automatic endorsement of information that is provided by the external artifact, Heersmink is not committed to such a condition. In his framework, an artifact can be overall highly integrated without high integration on the trust dimension, and hence without automatic endorsement. As long as the artifact is still sufficiently integrated on the non-trust dimensions we can have an overall extended mind. My suggestion was that this is exactly what we look for to combine online intellectual virtues with a version of the extended mind thesis. An agent with online intellectual virtues can cognitively integrate a website highly on most dimensions without much integration on the trust dimension. Tentatively stated, "there might be room for combinations of agents and artifacts that still count as showing an overall high degree of cognitive integration while being virtuous epistemic agents" (Schwengerer 2020, 8).

Smart and Clowes doubt that this approach succeeds and provide two examples to illustrate their reasoning. In a nutshell, they worry that the dimensions besides trust also bring about problems for virtuous agents, which they capture in the generalized extended knowledge dilemma.

### **The Extended Knowledge Dilemma (Generalized)**

The properties that work to ensure that an external resource can be treated as a candidate for cognitive incorporation are also, at least in some cases, the very same properties that work to undermine or endanger the positive epistemic standing of the technologically-extended agent (Smart and Clowes 2021, 17).

If they are right, then just making sure that integration on the trust dimension stays appropriately low will not be enough to make us virtuous agents. In the worst case, we also need less integration on other dimensions to be virtuous, effectively giving up on having extended minds. I remain more hopeful.

If I want to endorse both online intellectual virtues and a version of the extended mind thesis I need at least to limit the scope of the generalized extended knowledge dilemma. The

multidimensional approach provides the theoretical tools to do just that. If some of the dimensions can be epistemically neutral, then they can contribute to cognitive integration without endangering the epistemic standing and intellectual virtues. Implicitly I made such a suggestion when I proposed to keep integration on the trust dimension low, but be highly integrated on the other dimensions of Heersmink's framework. I committed myself to the idea that only the trust dimension is relevant for online intellectual virtues. Smart and Clowes argue that other dimensions are epistemically relevant as well, pointing to individualization and the relation of processing fluency to the transparency dimensions. I agree that individualization and fluency affect agents and their intellectual virtues, but I think there is a way to conceptualize this effect without giving up on the possibility of extended agents with online intellectual virtues. I can analyze the effect at least in two different ways:

- (1) Individualization and transparency directly influence our epistemic states, and therefore they make us less intellectually virtuous.
- (2) Individualization and transparency influence trust and trust influences our epistemic states. Hence, properties belonging to the trust dimension make us less intellectually virtuous.

Smart and Clowes seem to opt for (1), but the same processes can be conceptualized according to (2). And following my suggestions in *Online Intellectual Virtues and the Extended Mind* (2) still gives a person enough room to be intellectually virtuous and have an extended mind. If different dimensions become epistemically efficacious only by going through the trust dimension then it would be in principle possible to keep integration on the trust dimension appropriately low, while ranking highly on all other dimensions. All we need to do is to stop the influence of non-trust dimensions on the trust dimension. This leaves me with two main questions: Why should we take (2) over (1)? And even if it is in principle possible to keep integration on the trust dimension appropriately low, is it also possible in practice?

The former question is difficult to answer in a general manner. Partially this is the result of some vagueness with the notion of trust involved.<sup>1</sup> Heersmink introduces the trust dimension as follows:

The notion of trust in the literature on EMT concerns our attitude towards the truth value of information. When we trust information, we typically think it is true. When we distrust information, we either think it is false or we are not sure whether it is true (Heersmink 2015, 587).

Heersmink provides further analysis of explicit and implicit trust but does not give us a more concrete, general definition. My short characterization of this dimension follows Heersmink and holds that trust captures the degree to which one takes the information provided by an artifact to be correct (Schwengerer, 2020, p. 7). If we accept this conception of the trust dimension it seems to be the only dimension that is related to an assessment of truth. If this

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<sup>1</sup> Coincidentally a reviewer for my initial paper (2020) already pointed to this vagueness of the notion of trust in play in the extended mind debates. I think they are right that the notion of trust is often underspecified. Perhaps Nguyen's (Forthcoming) notion of trust as an unquestioning attitude might be a good option to go.

is right, then any change to assessing the truth value of information functions via the trust dimension. That might give us the first indication in favor of (2).

A different approach in favor of (2) can be motivated by looking at the empirical evidence that Smart and Clowes themselves point out. They (as Smart 2018a already did in his) worry about processing fluency effects that show that a procedural transparency dimension influences our judgments and therefore our epistemic states.<sup>2</sup> It is well established that the speed and ease of processing information influences epistemic states (Alter and Oppenheimer, 2009). But processing fluency effects cannot establish (1).

Instead, the empirical evidence (e.g. Reber and Schwarz 1999) for epistemically relevant processing fluency effects point to a change in judgments of truth due to processing fluency. Applying this to interactions with an artifact in Heersmink's framework, I take it that the causal origin of processing fluency effects can be located in the dimension of procedural transparency. However, the effect itself is not located in the procedural transparency dimension. The change in judgments of truth is part of the trust dimension—it changes the degree to which one takes the information provided by an artifact to be correct. Hence, there is no need to adjust the procedural transparency dimension, as long as we find ways to keep integration on the trust dimension appropriately low. The threat of the generalized extended knowledge dilemma can thus be avoided.

I remain hopeful that a similar strategy can be applied to other proposed examples of dimensions other than trust directly influencing the epistemic states of an extended agent. For instance personalization of Google Search can qualify as high individualization, but is in itself no problem as long as the trust dimension is kept appropriately low. Only if individualization leads to an inappropriate integration on the trust dimension intellectual virtues are threatened.

So far I have been defending that in principle intellectually virtuous extended agents are possible. But perhaps Smart and Clowes are more worried that this possibility cannot be achieved in practice. Even if (2) is the best way to go, we still often end up with higher integration on the trust dimension than is appropriate because some of the other dimensions increase trust in an artifact in a way that is not warranted. The result is an extended, but not particularly virtuous agent. Here I agree with the worries. For extended agents to be intellectually virtuous we need to prevent the trust dimension from being inappropriately manipulated by the other dimensions. We need to find ways in which we can stop or compensate that high integration on a non-trust dimension can increase integration on the trust dimension. This is an open challenge, but I remain hopeful that it can be met.<sup>3</sup>

### **A Different Place for Virtue Responsibility?**

Smart and Clowes suggest an alternative place for virtue responsibility accounts. They propose that intellectual virtues are relevant for judgments on the trustworthiness of artifacts

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<sup>2</sup> Roughly, the degree of fluency and effortlessness in interacting with an artifact.

<sup>3</sup> And I am working on my own attempt in “Promoting Vices: Designing the Web for Manipulation” (unpublished manuscript).

and therefore play a role in deciding whether we should cognitively integrate an artifact. Hence they state:

In short, we see a role for intellectual virtue in the acquisition of a particular kind of knowledge, namely, knowledge about the trustworthiness (or reliability) of particular online systems for particular epistemic purposes. It is this knowledge that makes the automatic endorsement of online content epistemically justified. [...] We can accept that intellectual virtue plays a causal (developmental) role in the formation of extended epistemic systems, but we do not need to see the exercise of intellectual virtue as an intrinsic part of the operation of such systems (Smart and Clowes 2021, 18).

I agree that intellectual virtues are important to acquire knowledge about the trustworthiness of particular online systems—or artifacts more generally. Hence, I am on board with their positive proposal. However, I take this to be a supplemental approach to online intellectual virtues as proposed by Heersmink (2018) and myself. Intellectual virtues can be important for both knowing which online systems to trust, and for engaging with these systems in an epistemically appropriate way. And there is a clear path on how these two interact.

Think back to intellectual virtues as traits located at a mean between two vices, such as intellectual carefulness between timidity and carelessness. Intellectual virtues have no static mean, but rather depend on the situation one is in. Some situations demand that one is more careful, some call for being less careful. The intellectually virtuous agent is as careful as the situation demands. However, this requires a judgment on how careful one ought to be in the situation. And this is the place for knowledge about the trustworthiness of particular online systems. So I suggest thinking of our engagement with online systems in two steps, in both of which intellectual virtues find a home. First, intellectual virtues have a role in acquiring knowledge about the trustworthiness of a particular online system. Then, second, intellectual virtues have a role in regulating our operation of the online system guided by the prior judgment of how trustworthy the system is taken to be.

## Conclusion

I want to end with one final consideration that Smart and Clowes bring up and that only found its way in the final sentence of my initial paper (Schwengerer 2020, 10): online intellectual virtues can help us to navigate epistemic hazards in an online environment, but they must not become an excuse for us to ignore engagement with the Internet on a societal level. Smart and Clowes worry that “[t]he virtue responsibilist assumes that it is individual citizens who ought to be responsible for their own cyber-epistemic well-being” (Smart and Clowes 2021, 9). I do not think this is quite fair to virtue responsibilist, although I do agree that the position sometimes presents itself implicitly with individualist leanings, and that there is a risk that these leanings lead to an unproductive way to approach the epistemology of the Internet (cf. Smart 2018b, 53). I explicitly reject those leanings.

Virtue responsibilism does not need to shift responsibility only to individuals. Instead, it can and should be just one part of an overall strategy to understand and improve our epistemic relation to the Internet. Virtue responsibilism does not stop us from *also* demanding

governmental regulations of online systems.<sup>4</sup> What we aim for is not only that our engagement with websites is virtuous. We also want the Internet to be an epistemically friendly environment, one in which being virtuous allows for a trusting attitude. Regardless of whether we have online intellectual virtues, an epistemically friendly online environment requires a different kind of intervention—a change in society, not individuals.

Overall there is much agreement between Smart and Clowes and me. They provide an important contribution that pushes back on some assumptions that need much more attention. We need a broader focus on epistemological aspects of the Internet, and we should not overemphasize epistemic hazards. Moreover, the virtue responsibilist approach to the Internet has to do more work to show that it can be combined with a version of the extended mind thesis. I am hopeful that this can be done, and that Heersmink's multidimensional framework provides us with the theoretical grounds to achieve that. But there is a large gap between what a framework allows in principle, and whether we can be intellectually virtuous extended minds in practice. Nevertheless, it is worth a try.

## References

- Alter, Adam L., and Daniel M. Oppenheimer. 2009. "Uniting the Tribes of Fluency to Form a Metacognitive Nation." *Personality and Social Psychology Review* 13 (3): 219-235.
- Cinelli, Matteo, Gianmarco De Francisci Morales, Alessandro Galeazzi, Walter Quattrociocchi and Michele Starnini. 2021. "The Echo Chamber Effect on Social Media." *Proceedings of the National Academy of Sciences of the United States of America* 118 (9): 1-8.
- Clark, Andy and David Chalmers. 1998. "The Extended Mind." *Analysis* 58 (1): 7-19.
- Halfaker, Aaron and John Riedl. 2012. "Bots and Cyborgs: Wikipedia's Immune System." *Computer* 45 (3): 79-82.
- Heersmink, Richard. 2018. "A Virtue Epistemology of the Internet: Search Engines, Intellectual." *Social Epistemology* 32 (1): 1-12.
- Heersmink, Richard. 2015. "Dimensions of Integration in Embedded and Extended Cognitive Systems." *Phenomenology and the Cognitive Sciences* 13 (3): 577-598.
- Lynch, Michael Patrick. 2016. *The Internet of Us: Knowing More and Understanding Less in the Age of Big Data*. New York: W.W. Norton and Company.
- Miller, Boaz and Isaac Record. 2013. "Justified Belief in a Digital Age: On the Epistemic Implications of Secret Internet Technologies." *Episteme* 10 (2): 117-134.
- Nguyen, C. Thi. forthcoming. "Trust as an Unquestioning Attitude." *Oxford Studies in Epistemology*.
- Nguyen, C Thi. 2020. "Echo Chambers and Epistemic Bubbles." *Episteme* 17 (2): 141-161.
- Noble, Safiya Umoja. 2018. *Algorithms of Oppression*. New York: New York University Press.
- Reber, Rolf and Norbert Schwarz. 1999. "Effects of Perceptual Fluency on Judgments of Truth." *Consciousness and Cognition* 8: 338-342.
- Schwengerer, Lukas. 2020. "Online Intellectual Virtues and the Extended Mind." *Social Epistemology*. 1-11. doi: 10.1080/02691728.2020.1815095.

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<sup>4</sup> E.g., The European Union's General Data Protection Regulation



- Schwengerer, Lukas. "Promoting Vices: Designing the Web for Manipulation." Unpublished Manuscript.
- Simpson, Thomas W. 2012. "Evaluating Google as an Epistemic Tool." *Metaphilosophy* 43 (4): 426-445.
- Smart, Paul R., and Robert W. Clowes. 2021. "Intellectual Virtues and Internet-Extended Knowledge." *Social Epistemology Review and Reply Collective* 10 (1): 7-21.
- Smart, Paul R. 2018a. "Emerging Digital Technologies: Implications for Extended Conceptions of Cognition and Knowledge." In *Extended Epistemology* edited by J. Adam Carter, Andy Clark, Jesper Kallestrup, S. Orestis Palermos and Duncan Pritchard, 266-304. Oxford: Oxford University Press.
- Smart, Paul R. 2018b. "(Fake?) News Alert: Intellectual Virtues Required for Online Knowledge!" *Social Epistemology Review and Reply Collective* 7 (2): 45-55.
- Tollefsen, Deborah P. 2009. "Wikipedia and the Epistemology of Testimony." *Episteme* 6 (1): 8-24.