Is Searching the Internet Making us Intellectually Arrogant?

J. Adam Carter (University of Glasgow) and Emma C. Gordon (University of Edinburgh)

Overview

Matthew Fisher, Mariel Goddu, and Frank Keil (2015) have argued, on the basis of experimental evidence, that 'searching the Internet leads people to conflate information that can be found online with knowledge "in the head"' (2015, 675), specifically, by inclining us to conflate mere access to information for personal knowledge (2015, 674).

- This has important ramifications if true: it means that searching the internet will lead us to claim much more knowledge than we really have.
- Though (as we'll suggest) the matter of *whether* they've shown what they think they have depends on certain assumptions in both epistemology, the philosophy of mind and cognitive science.

Overview

The talk will have three main parts:

First, we briefly detail Fisher et al.'s results and show how, on the basis of recent work in virtue epistemology (e.g., Tiberius and Walker 1998; Roberts and Wood 2007; Tanesini 2016), their interpretation of the data supports the thesis that searching the Internet is conducive to the vice of **intellectual arrogance**.

Overview

Second, we argue that this arrogance interpretation of the data rests on an implicit commitment to cognitive internalism, and we show how the data can be given a very different explanation in light of the **hypothesis of extended cognition** (e.g., Clark and Chalmers 1998; Clark 2008)—one which challenges the extent to which Fisher et al. are entitled to insist that subjects are actually conflating access to knowledge for personal knowledge in the first place.

Overview

Third, we suggest how, against the background of extended cognition rather than cognitive internalism, we have some reason to think that searching the Internet might actually foster (in certain circumstances) **virtuous intellectual humility**.

Fisher et al's hypothesis

Fisher et al begin by noting two normal tendencies:

First tendency: It's well-documented that our self-assessments are often inflated (e.g., Dunning 2012; Pronin 2009; Alicke et al. 1995), even when we're estimating how good we are at offering good explanations in familiar domains (e.g. Fernbach et al. 2013).

Second tendency: we are increasingly in the habit of outsourcing many of our cognitive tasks to the Internet. For example, while we might store in biomemory where to *find* particular information (e.g., which search terms to use, which websites or apps to consult), we rely on the Internet to actually store this information for us (Clark 2008; 2015; Sparrow, Liu, and Wegner 2011; Lynch 2014; 2016).

Fisher et al's hypothesis

Fisher et al: In combination, these tendencies might lead us to think that we know more than we actually do!

Now, one might think that we're surely consciously aware that we're looking to an external source, e.g., the Internet, when we are. However, Fisher et al. (2015) suggest that the Internet's reliable and almost immediate provision of huge amounts of expert information makes it different from other external sources, and that these features might 'cause us to lose track of our reliance upon it, distorting how we view our own abilities' (2015, 675).

More specifically, the thought is that while we might be entirely aware that we have acquired certain knowledge from the Internet, *we might over-estimate how much of the sum total of knowledge is stored internally.*

Conflation hypothesis: Online searches lead to an illusion whereby 'externally accessible information is conflated with knowledge "in the head"' (2015, 682).

Fisher et al's experiments

In support of the **conflation hypothesis**—Fisher et al. draw from experiments showing what they see as (various forms of) **mistaken increases in self-assessed knowledge as a result of online searching**.

- The first two experiments show that searching for explanations on the Internet increases one's self-assessed ability to answer questions about an unrelated topic. Meanwhile, a third shows that this result occurs even after time, content and features of the search process have been controlled for.
- Another three experiments show that this tendency comes not from (i) general overconfidence, or (ii) a different understanding of what counts as internal knowledge. Rather, it comes from a genuine misattribution of the sources of knowledge.

Fisher et al's conclusion

Of course, one alternative interpretation of their data is that search activity merely leads us to think that we have better access to knowledge. So, they take pains to point out that their follow-up studies show that participants *really do think* they have more individual knowledge (not just better access).

Fisher et al. posit that the 'illusion of knowledge' in these cases comes from the act of searching itself. The increase in self-assessed knowledge generalizes across popular/effective and less popular/effective search engines, and is seen even when the search engine doesn't produce relevant answers (or even any answers) to the search queries inputted.

From knowledge conflation to intellectual arrogance?

We want to now consider how the conflation thesis appears to naturally motivate a further and potentially more philosophically vexing conclusion: **that online searching indirectly facilitates (at least a kind of) intellectual arrogance**.

Specifically, searching may cause our intellectual self-conceptions—in particular, *our self-conceptions about what knowledge we're entitled to lay claim to*—to be artificially inflated in a way that is conducive to vicious inferences about one's entitlements and standing in relation to others.

(It is, after all, a short step from thinking one knows more than one does, to acting in characteristically arrogant ways that reflect such a misconception)

From knowledge conflation to intellectual arrogance?

Why this *matters:*

1. **If online searching fosters intellectually vicious arrogance** (even indirectly), then--provided an individual's intellectual worth is at least partly a matter of her intellectual character traits (along with her knowledge base)--**it looks as though we have some (defeasible) reason to curtail or modify the mechanisms of online searching in light of Fisher et al.'s findings**.
2. Also, this, would (in light of the ubiquity of cognitive outsourcing) be a concerning result with implications not only in epistemology but in the philosophy of education (i.e., where plausible epistemic aims include the inculcation of intellectual character development).

From knowledge conflation to intellectual arrogance?

Why this *matters:*

1. **If online searching fosters intellectually vicious arrogance** (even indirectly), then--provided an individual's intellectual worth is at least partly a matter of her intellectual character traits (along with her knowledge base)--**it looks as though we have some (defeasible) reason to curtail or modify the mechanisms of online searching in light of Fisher et al.'s findings**.
2. Also, this, would (in light of the ubiquity of cognitive outsourcing) be a concerning result with implications not only in epistemology but in the philosophy of education (i.e., where plausible epistemic aims include the inculcation of intellectual character development).

Next: Some ground clearing is necessary in order to see how such an 'arrogance' interpretation could most plausibly stated in connection with Fisher et al.'s results.

From knowledge conflation to intellectual arrogance?

Initial caveat: Arrogance is plausibly not merely, or even necessarily, just a matter of over-estimation of one's own abilities or knowledge states (e.g., Tiberius and Walker 1998; Roberts and Wood 2007; Tanesini 2016)

So, from the simple fact that the conflation hypothesis trivially entails an over-estimation of one's own knowledge states, it wouldn't thereby follow trivially from the conflation hypothesis that online searching makes individuals more intellectually arrogant. That said, the propensity to over-estimate one's knowledge states can play—albeit indirectly—an important role in fostering intellectual arrogance.

Thus: The move from the conflation hypothesis to intellectual arrogance is thus best understood as an **indirect** rather than a direct one.

Three accounts of intellectual arrogance

Three leading characterisations of intellectual arrogance:

(i) the entitlement model

(ii) the self-delusion model and

(iii) the interpersonal model.

Three accounts of intellectual arrogance

Three leading characterisations of intellectual arrogance:

(i) **the entitlement model**

(ii) the self-delusion model and

(iii) the interpersonal model.

Three accounts of intellectual arrogance

Entitlement model (e.g., Roberts and Wood 2007, 243), intellectual arrogance is 'a disposition to "infer" some illicit [intellectual] entitlement from a supposition of one's superiority, and to think, act, and feel on the basis of that claim'.

- Consider 'the college president with two doctorates who thinks himself competent to speak with correcting authority in all the fields of his faculty' (Roberts and Wood 2007, 243). On the entitlement model, what accounts for his intellectual arrogance is not his overestimation of his ability, per se.
- More specifically, it's his inference from his high opinion of his abilities to a claimed entitlement to behave in certain ways toward others.

Three accounts of intellectual arrogance

Three leading characterisations of intellectual arrogance:

(i) the entitlement model

(ii) the self-delusion model and

(iii) the interpersonal model.

Three accounts of intellectual arrogance

Self-delusion model (e.g., Tanesini 2016), intellectual arrogance is 'bounded up with delusional wishful thinking'—in particular, by acquiring the frame of mind in which the '"mine-ness" of a thought' is taken by one to be a marker of its truth.

- For example, on this model, the intellectual arrogance of presuming (all things equal) that one's own opinion should be given special weight in comparison to others is explained by one mistakenly taking the 'mine-ness' of her thought as indicating more than it does about the truth of a belief.

Three accounts of intellectual arrogance

Three leading characterisations of intellectual arrogance:

(i) the entitlement model

(ii) the self-delusion model and

(iii) the interpersonal model.

Three accounts of intellectual arrogance

Interpersonal model (e.g., Tiberius and Walker 1998) intellectual arrogance involves a high opinion of one's intellectual worth, on the basis of which one infers a comparative intellectual superiority over others.

- As with the entitlement model, the interpersonal model locates intellectual arrogance not in the beliefs one has about one's aptitude, simpliciter, but in the inferences that one is disposed to draw from such beliefs.
- The entitlement model is neutral with respect to the interpersonal character of the vice of intellectual arrogance (e.g., some infer entitlements to behave toward others in certain ways, others might not). In contrast, Tiberius and Walker are taking a crucial feature of intellectual arrogance to be the comparative attitudes one infers about oneself in relation to others, and how this manifests in hierarchical and non-reciprocal relationships with others (1998, 382).

Three accounts of intellectual arrogance

Despite their individual differences, notice that all three accounts of intellectual arrogance involve at least some kind of high opinion of one's own intellectual status, where 'high' can be understood along the lines of 'above the mean', or 'meriting intellectual praise'.

Three accounts of intellectual arrogance

Such a high self-intellectual opinion, which is precluded by some accounts of intellectual humility (e.g., Church and Samuelson, forthcoming), is thus a crucial enabling condition of intellectual arrogance on each of the three above accounts.

This is so on the (i) **entitlement** and (ii) **interpersonal** accounts because it is from such a high opinion of one's own intellectual merit that the arrogant individual makes intellectually vicious inferences about (i) what she's entitled to (*entitlement model*), and (ii) how she compares to others (*interpersonal model*),

This is also so on the **self-delusion model,** because such a self-directed opinion underscores one's appraisal of the epistemic status of one's own beliefs.

From knowledge conflation to intellectual arrogance?

Putting this all together, if Fisher et al. are right that searching the Internet causes us to systematically overestimate how much knowledge we can rightly claim for ourselves, *then* doing so is conducive to increased estimates of one's own (personal) intellectual self-worth—exactly the sort of increase that is a crucial element of intellectual arrogance according to all three models canvassed.

This is, prima facie, a consideration that militates against online searching, at least from a perspective where what matters is one's intellectual character.

Two natural replies would be ...

Two salient responses to the worry sketched in §2 would be to either

(i) contest the empirical data or

(ii) to accept it and then argue that the intellectual benefits of online searching outweigh the deleterious effects doing so is likely to have on one's intellectual character in such a way as to offset any reason for curtailing online searching.

However, we will be opting for a third strategy.

Rather …

We think there is scope to accept Fisher et al.'s empirical results, but to view them through the lens of a very different kind of philosophical assumption about the bounds of human cognising than that on the basis of which Fisher et al. are interpreting their results—namely, cognitive internalism.

Cognitive internalism (e.g., Adams and Aizawa 2001; 2008; 2010) an individual's mind is (in short) in her head. Put more carefully: the material realisers of cognitive processes (e.g., memory, inference, introspection, etc.) are exclusively intracranial processes, which play out inside the head.
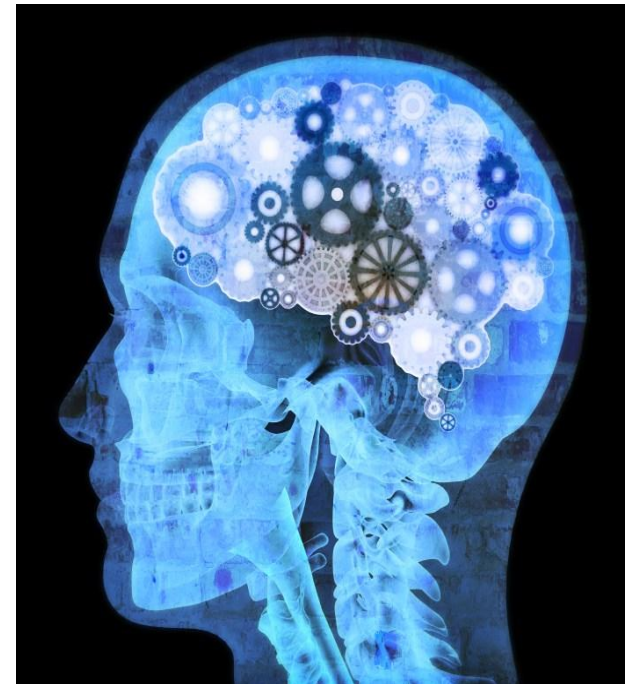
Cognitive internalism

Cognitive internalism implies that memory knowledge—viz., knowledge one has in virtue of what one remembers—is internal knowledge, knowledge one has in virtue of one's intracranial cognitive processes and states representing the world correctly.
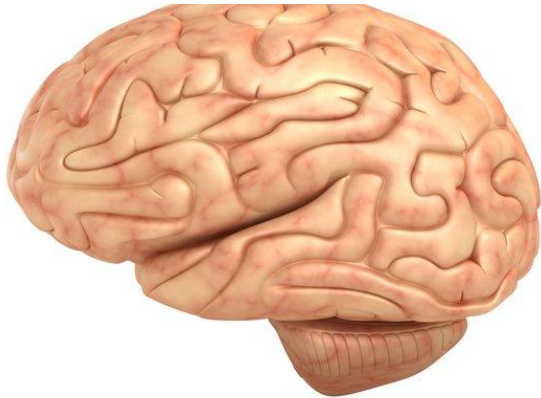
Cognitive internalism

Cognitive internalism implies that memory knowledge—viz., knowledge one has in virtue of what one remembers—is internal knowledge, knowledge one has in virtue of one's intracranial cognitive processes and states representing the world correctly.

Necessarily, if this position is assumed, then the following is true: for any individual, S, and item of information I, if I is stored **outside (but not inside) S's head**—no matter what is true about S's access to I—S lacks memory knowledge of I. If I is easily accessible to S, **then S at best knows how to find I**. But S can't possibly know I despite such access, given where I is stored.

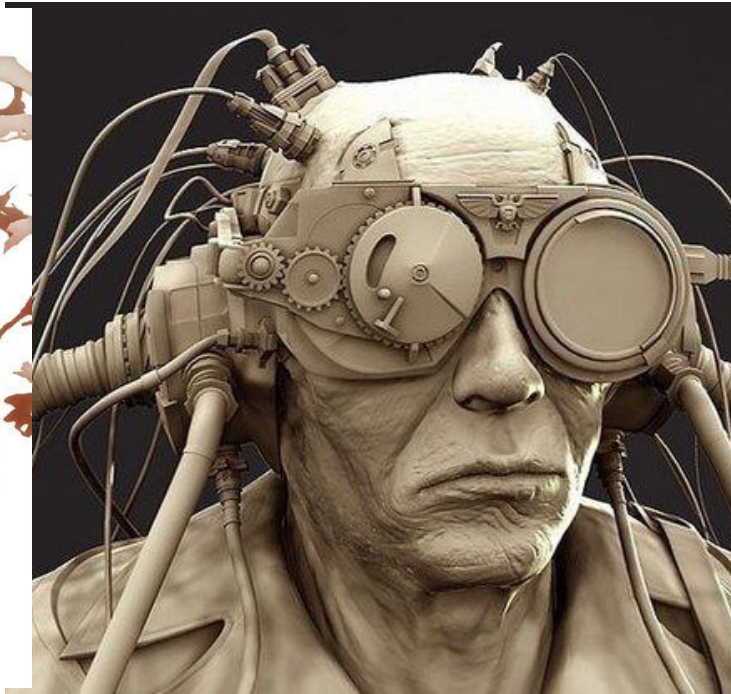# Fisher et al take internalism for granted

Fisher et al.'s conflation hypothesis presupposes cognitive internalism.

If the view were not already in hand, then it should be an entirely **open question** whether one is conflating access to knowledge with personal knowledge

Extended cognition

Extended cognition

Extended cognition

Inga: Inga has a normally functioning biological memory. When she learns new information, she stores it in her biological memory (as is typical and familiar) and it is her biological memory which she consults when she needs old information.

Otto: Otto suffers from Alzheimer's disease, and like many Alzheimer's patients, he relies on information in the environment to help structure his life. Otto carries a notebook around with him everywhere he goes. When he learns new information, he writes it down. When he needs some old information, he looks it up. For Otto, his notebook plays the role usually played by a biological memory (1998, 8).

Extended cognition

Parity Principle: If, as we confront some task, a part of the world functions as a process which, were it to go on in the head, we would have no hesitation in accepting as part of the cognitive process, then that part of the world is part of the cognitive process.

SUPERSIZING THE MIND

EMBODIMENT, ACTION, AND COGNITIVE EXTENSION

• • •

ANDY CLARK

bioprejudice
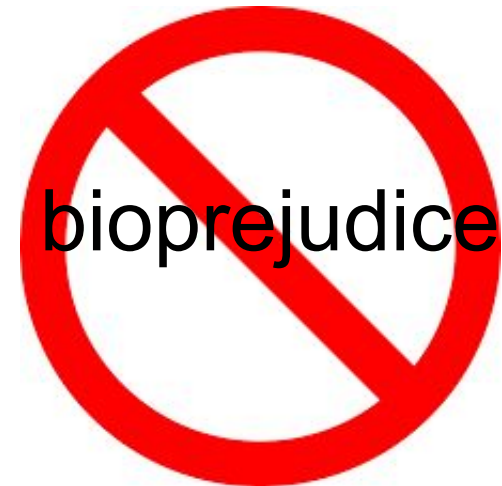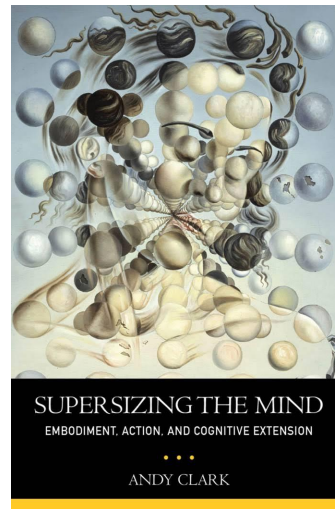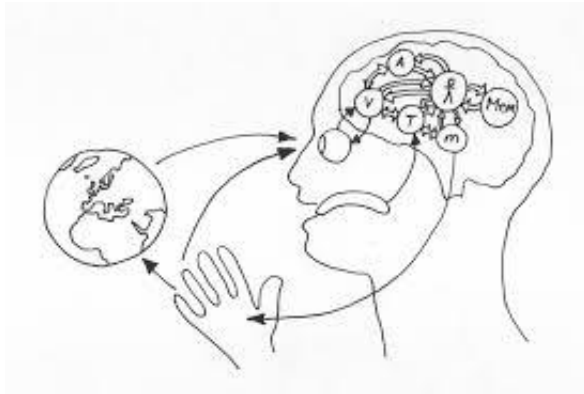
Extended cognition

Clark's "Trust and Glue" Integration Conditions

(1) 'That the resource be reliably available and typically invoked.'"

(2) 'That any information thus retrieved be more-or-less automatically endorsed. It should not usually be subject to critical scrutiny. [...] It should be deemed about as trustworthy as something retrieved clearly from biological memory.'

(3) 'That information contained in the resource should be easily accessible as and when required.'

Extended cognition

Extended cognition ... extended knowledge?

Extended cognition: thesis about the metaphysics of mind

Extended *knowledge*: an epistemological thesis

How to link the two?

Extended cognition ... extended knowledge?

Pritchard: satisfying the kinds of integration conditions that are needed for **extended cognition** (e.g., Clark's Glue and Trust conditions) might well also suffice to satisfy at least one plausible version of **virtue reliabilism.**

Virtue reliabilism: one knows a proposition only if one's true belief is the 'product of a reliable belief forming process which is **appropriately integrated within S's cognitive character**, such that her cognitive success is to a significant degree creditable to her cognitive agency' (2010, 137-7);

Extended cognition ... extended knowledge?

Mr. Truetemp (Lehrer 1990): Thermometer not integrated as in original example.

- Virtue Reliabilism: TrueTemp doesn't have knowledge
- Over time, as the thermometer becomes more integrated, epistemic intuitions change
- Pritchard: Provided Truetemp at some point take a kind of cognitive ownership of the thermometer, it can be included in an extended belief forming process such that he knows by virtue reliabilist lights.

Extended cognition ... extended knowledge?

Otto, if he similarly integrates his notebook into his belief forming process (i.e., Trust and Glue) and satisfies a kind of cognitive ownership condition, then over time what is (by the lights of extended cognition) an extended memory process can (like Inga's biomemory) support knowledge.

Extended cognition ... extended knowledge?
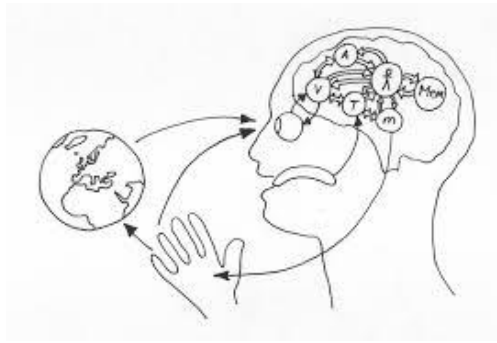
In short, the kinds of arguments that we've seen support classifying Otto as knowing extracranial information in his notebook are going to apply *mutatis mutandis* for our information stored in gadgets and on the web, provided that we interact with our gadgets in an *analogously responsible and epistemically virtuous manner*.

An alternative explanation...

Extended knowledge gloss: Even if Fisher et al are right that the boundary between personal and interpersonal knowledge is becoming increasingly blurred, at least **some externally stored information plausibly falls in the category of personal rather than interpersonal knowledge**.

An alternative explanation...

Extended knowledge gloss: Even if Fisher et al are right that the boundary between personal and interpersonal knowledge is becoming increasingly blurred, at least **some externally stored information plausibly falls in the category of personal rather than interpersonal knowledge**.

Objection: But is it really *personal* knowledge?

An alternative explanation

Richard Heersmink (2016) has argued that the personal character of **extended memory knowledge is crucial to personal identity**. He sums up the key contours of this position thusly:

"On an extended and distributed approach to cognition, external information is under certain conditions constitutive of memory. On a narrative approach to personal identity, autobiographical memory is constitutive of our diachronic self [...] [E]xternal information can be constitutive of one's autobiographical memory and thus also of one's diachronic self (2016, 1)." (Data)

Putting it all together

- It looks as though there may be **less conflation taking place in the studies reported by Fisher et al. than they are assuming**.
- This of course would depend on factors not reported by the studies, including the participants' causal histories of interaction with the devices in question, and we can expect that there will be room for plenty of variability here.
- Nonetheless, against a background openness to extended cognition, there is room to surmise that at least some (and perhaps a significant amount of) information Fisher et al. are classifying as interpersonal would fall within the category of personal knowledge.
- More generally, this means that their results, viewed through a different lens, looks much less amenable to the kind of arrogance interpretation of the results that looked very plausible against a background commitment to cognitive internalism.

Putting it all together

- And furthermore, it's considerably less clear how, on either of the models of intellectual arrogance which take one's relation to others as essential to intellectual arrogance (i.e., the entitlement and interpersonal models), arrogance is cultivated by claiming extended knowledge.
- Typically it's common knowledge to interlocutors with online access that their interlocutors have access to much of the same information as they do.
- Relational attitudes of intellectual superiority of the sort that the entitlement and interpersonal models take to be endemic to intellectual arrogance thus seem to require a kind of *intellectual differentiation* that extended knowers, in virtue of mutually recognised common access, will be less inclined to claim.

Intellectual humility?

We want to close by suggesting how, on our alternative way of thinking about the results sketched, ubiquitous access to the internet could in fact have an opposite kind of effect, in that it could help to actively foster intellectual humility!

Intellectual humility?

We want to close by suggesting how, on our alternative way of thinking about the results sketched, ubiquitous access to the internet could in fact have an opposite kind of effect, in that it could help to actively foster intellectual humility!

Intellectual humility?

According to one prominent contemporary account of epistemic humility, defended by Whitcomb et al. (2015), **virtuous intellectual humility** is at its core, a matter of **owning our own intellectual limitations**—something that can be manifested behaviourally by (among other ways) **a willingness to appropriately defer and**, as Baehr (2015) argues, **to avail oneself willingly to fact-checking**.

Intellectual Humility: Owning Our Limitations

DENNIS WHITCOMB
Western Washington University

HEATHER BATTALY
California State University, Fullerton

JASON BAEHR
Loyola Marymount University

DANIEL HOWARD-SNYDER
Western Washington University

Intellectual humility?

Consider, for example, Ward's (2013) suggestion that that internet users are inclined to treat the internet as an 'all- knowing expert'

Such observations, paired with a *cognitive internalist* reading of Fisher et al.'s data, threaten to enable the inculcation of arrogance, in that they are considerations that would facilitate the conflation of knowledge access with personal knowledge (from which further inferences may be drawn).

Intellectual humility?

But, notice that these very same features can **play an entirely different kind of role against the kind of 'active' cognitive externalist background**.

A propensity to treat the internet as an 'all-knowing expert' and the fact that it reliably provides informative responses are precisely the kinds of features which make **extended knowers ready fact-checkers**.

Online access, appreciated in this way, offers a dual role of (i) facilitating extended knowledge while at the same time (ii) **making it easier for an individual's false claims to be verified by the very same mechanism-type on which the original knowledge was claimed**.

Intellectual humility?

But, notice that these very same features can play an entirely different kind of role against the kind of 'active' cognitive externalist background.

A propensity to treat the internet as an 'all-knowing expert' and the fact that it reliably provides informative responses are precisely the kinds of features which make **extended knowers ready fact-checkers**

Intellectual humility?

- We do not intend to submit that online access will outright cause intellectual humility.
- Instead, we think it is important to register how aspects of online searching that would tend to promote intellectual arrogance if cognitive internalism is assumed could actually militate in the opposite direction within the framework of extended epistemology, by facilitating the ways we can own our intellectual limitations.

Thank you for listening!