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1   Introduction

The stated goal of Mona Simion's outstanding monograph *Resistance to Evidence* is fairly modest: to develop an epistemological theory that can correctly classify cases of intuitively impermissible evidence-resistence as impermissible, and furthermore explain *why* they are epistemically impermissible.

This goal conceals a larger ambition: to develop a novel framework of epistemic normativity writ large that proposes to locate its roots, provides new externalist accounts of central notions in epistemology (such as evidence and justification), and defends positive epistemic duties. This framework is constructed by giving a creative spin to the traditional idea that our cognitive capacities have the epistemic function of generating knowledge, coupled with the innovative insight that these capacities are *input-dependent*. Whereas epistemologists have thought of our cognitive capacities on the model of the heart, which functions to pump the blood that circulates within the body, we should think of these capacities instead on the model of lungs, which have as their task both processing oxygen and grasping enough of it from the environment.

Beyond this central thread, the book includes stimulating discussions of epistemic dilemmas, skepticism, and the nature of disinformation. The latter is especially illuminating: by characterizing disinformation as ignorance-generating content (*not* maliciously spread falsehoods), the account elegantly unifies disparate cases of disinformation.

Additionally, Simion offers a detailed critical survey of central recent theories of epistemic normativity: evidentialism; externalist views; social normative accounts; and telic and responsibilist virtue epistemology. She poses strong challenges to each competitor view, which proponents will need to address. Given its scope, the book would provide an excellent resource around which to structure a graduate seminar on contemporary analytic epistemology, as well as a useful reference guide.

2 Overview

Evidence-resistance is a commonplace and politically significant phenomenon. It includes testimonial injustice, where subjects fail to form beliefs based on reliable testimony due to prejudice; failing to believe claims that contradict one's political party or ideology; and anxiously suspending judgment on issues where there is scientific consensus. It covers distortions that matter in intimate contexts, such as unwarranted optimism about one's chances of success at difficult endeavors or the good character of one's friends; as well as cases where false beliefs are supported by vicious attention or perceptual unresponsiveness.

This is a heterogeneous collection. It includes both failing to *form* beliefs in light of available evidence and *maintaining* beliefs despite counter-evidence. Crucially, resistance to evidence in this conception encompasses resistance to *available* but *unpossessed* evidence. Competing epistemological views struggle to criticize agents in such cases. After all, the orthodox (though no longer uncontested; see Flores and Woodard 2023) view is that epistemic norms only cover evidence the agent has, not evidence they fail to gather.

Simion challenges this orthodoxy, constructing a unified and extremely elegant account of epistemic normativity on which agents' relationship to unpossessed evidence is subject to epistemic norms. First, she argues that we have capacities with the (etiological) function of generating knowledge. Second, and crucially, she claims that these capacities are *input-dependent*: they malfunction when they fail to gather enough of their proper input. Conclusion: when subjects fail to take up available evidence, their knowledge-generating capacities epistemically malfunction, much as one's lungs biologically malfunction if one fails to breathe in enough oxygen when it is available. If epistemic norms can be derived from the (epistemic) function of cognitive capacities, then both failing to take up available evidence and failing to adjust beliefs accordingly are violations of epistemic norms.

Not only does the account correctly classify these difficult cases, it also allows us to demarcate evidence-resistance from what Simion terms 'justified evidence rejection', which occurs when subjects permissibly do not update on available evidence. Paradigmatically, the latter happens when propaganda and misinformation drown out higher quality sources, so that the agent's overall balance of evidence supports false views. In such cases, an agent's beliefs may fail to constitute knowledge even if their knowledge-generating capacities are functioning well. The problem is with the environment, not with the agent, unlike in cases of impermissible evidence-resistance.

In addition to implying that there are epistemic norms on evidence-gathering, this account has the revisionary consequence that there are positive epistemic norms: *obligations* to form beliefs in some occasions, not merely *permissions* to do so. Specifically, an agent is under the epistemic obligation to form a belief if there is sufficient undefeated evidence available to them supporting that belief.

Clarifying the scope of this obligation requires an account of evidence and the conditions in which it is *available* to an agent. On Simion's sophisticated externalist view, evidence consists in *knowledge-indicators*: facts that raise the probability (on the subject's total body of evidence) of the proposition for which they are evidence. (Symmetrically, defeaters are *ignorance-indicators*: facts that make that proposition

less probable.) Availability, in turn, is clarified by appeal to the central element in Simion's account: knowledge-generating capacities. Whether a fact counts as evidence for a subject is not a matter of whether it is 'in the head', or of whether the subject could easily uptake it. Instead, it is a matter of whether knowledge-generating capacities in cognisers of their type can easily take up that fact.

Consequently, agents do not get off the epistemic hook for failing to gather evidence by being distracted, lazy, or finding it psychologically uncomfortable to engage. However, they can plead epistemically innocent on knowledge-related grounds: if they are focused on a specific inquiry, general facts about their environment that are not relevant to that inquiry do not count as available to them. Putting everything together, the result is a revisionary account where agents have epistemic duties to uptake the largest amount of available facts (for cognisers of their type engaged in their inquiries, selecting which facts to uptake in order of availability) and update their internal picture of the world accordingly.

This account has many virtues. The idea that there can be input-level malfunction for epistemic capacities is compelling, and offers a powerful explanation of the intuition that failing to gather available evidence can be an epistemic failure. This expands epistemology beyond its myopic focus on the evidence that agents *have* without divorcing the study of inquiry from epistemology, and it gives us concrete grounds to criticize agents who stick their head in the sand but achieve internal coherence. Encompassing input-level failures should become a requirement on any epistemological framework.

The book is also poised to make significant contributions outside epistemology. It provides a helpful taxonomy of failures to update in light of evidence, separating out cases that are normatively unalike. Academic and popular discourse on misinformation and irrationality would do well to be sensitive to such normative distinctions, and researchers should consider them when conducting empirical studies on the roots of false beliefs or designing ameliorative interventions.

In the rest of this review, I will focus on questions about the foundational aspects of Simion's epistemological framework, namely, her attempt to locate the source of epistemic normativity in biological capacities with epistemic functions (§3 and §4), as well as questions about how to extend her account to cover a wider array of cases (§5).

3 Is the function of our cognitive systems to generate knowledge?

For Simion, cognitive capacities with the epistemic function of generating knowledge are the source of epistemic normativity. Simion understands functions *etiologically*, following Millikan (1987). The function of a capacity is to produce some effect *E* just in case (a) tokens of that capacity have produced *E*-effects, (b) producing *E*-effects benefited the agent or their ancestors, and (c) the fact that the capacity had those benefits (partly) explains why it exists in the subject. Simion further understands functions as *tied to specific domains* (e.g., to epistemology, biology, or aesthetics), according to the benefit produced. If the benefit is knowledge, the function is epistemic.

Hence, for our cognitive capacities to have generating knowledge as their function, the following must hold: (a) human cognitive systems have produced knowledge; (b) knowledge is an (epistemic) benefit; and (c) the fact that our cognitive capacities' production of knowledge benefited our ancestors contributes to the explanation of why our current cognitive systems exist in us.

At first blush, all of these hypotheses seem very plausible. Bracketing radical skepticism, we sometimes know things and this is beneficial to us. It also seems plausible that this fact helps explain our current cognitive systems (insert the typical story about how cavemen who could track reality were better at escaping predators, passing on their cognitive structures).

But this first pass raises a question: why should we think that the relevant function is generating knowledge, as opposed to, say, generating knowledge *when practically useful*, or *except if doing so would be uncomfortable*? Such functions also satisfy the three points above: our cognitive systems yield such outcomes, these outcomes benefit agents, and it is plausible that this fact explains the shape of our cognitive capacities. Indeed, one might think that it is the fact that our cognitive systems produced knowledge when useful—*and* otherwise, produced fantasy, false belief, and delusion—that explains why we have the cognitive systems we do.

Multiple theorists have argued along these lines in recent years. Based on Gilbert (2009)'s work and the vast research tradition on cognitive dissonance, Mandelbaum (2019) argues that human cognition has as a central component a 'psychological immune system' meant to systematically shelter us from despair even if this results in ignorance. Williams (2021) argues that belief formation and revision are highly sensitive to social rewards and punishments, suggesting that they function at the service of non-epistemic goals. Funkhouser (2017) has gone as far as to argue that beliefs' function is to signal affiliation to groups, not only or primarily to track reality. McKay and Dennett (2009) directly argue that some beliefs that do not constitute knowledge may 'be best conceived as design features... systematically adaptive in the evolutionary past' (McKay and Dennett 2009, 493). It is a short step to claiming that our cognitive systems have the shape they do partially because they produced such misbelief.

Simion could perhaps respond that none of this bears on the *epistemic* function of our cognitive capacities, but only on their biological function. I find this hard to square with the etiological account of function, which grounds functions in their contributions to survival or biological fitness. Independently of this point, we can rephrase the initial concern as follows: in light of systematic deviations from epistemic standards at the service of non-epistemic goals, why should we think that our cognitive systems have a purely epistemic function?

Going further, even if our cognitive systems have a purely epistemic function, why think that such a function will be 'generating knowledge' in a sense apt for deriving anything resembling standard epistemic norms? Bortolotti (2020) argues that many of our irrational beliefs are *epistemically innocent*: they provide long-run epistemic benefits to agents. If this is right, it lends plausibility to the idea that, if our cognitive systems have an epistemic function, it is to generate a motley of beliefs that constitute knowledge and epistemically innocent beliefs, not to generate each belief if and only if it constitutes knowledge.

I think that these challenges can be met. But doing so requires carefully engaging

with work in psychology. In , I examine the patterns of evidence-resistance described by the above theorists to argue that they indicate the presence of evidence-responsiveness capacities masked by motivational factors. In line with this, one could perhaps amend Simion's account to state, not that our cognition *altogether* has the epistemic function of generating knowledge, but that it includes capacities that have such a function—which can be masked by other cognitive sub-systems, producing the distinctive intertwining of evidence-resistance and evidence-responsiveness that we find in humans. This would require accepting the possibility of internal masks, which Simion rejects (p. 34), though not for reasons central to her overall framework.

4 Biological vs. social sources of epistemic normativity

To move from etiological function to substantive epistemic norms, Simion starts by noting that functions come with norms that prescribe how to proceed to reliably enough fulfill that function under normal conditions. These norms are at play for hearts and lungs, indeed for any etiological function, valuable or not. As Simion recognizes, such norms are not necessarily standards that we should care about and that are suitable for guiding how we conduct our lives.

To secure this 'normative oomph' for epistemic norms, Simion again appeals to biology. Doing well epistemically (i.e., securing knowledge), she says, is biologically generally good for us. This makes the epistemic domain in itself valuable, securing the 'oomphiness' of epistemic norms (pp. 104–5).

This strikes me as too quick. Let's bracket worries about whether it is true that doing well epistemically is generally good for us, which the previous section called into question. My focus will be on the purported connection between biological goodness and normative oomph.

To start, what is good for an agent's survival or thriving might not be good for a larger 'us'. For instance, hoarding resources in conditions of scarcity is helpful for individual survival and biological fitness, but clearly there is no oomphy norm urging us to do so. Perhaps Simion could respond that what matters is whether a behavior is good for our survival as a species. However, this response fails, for what is good for a species does not entail norms on individuals, at least in the weightier sense in which epistemic and ethical norms seem to bind. The function of the uterus is to receive and nourish a fetus until birth, and we can derive functional standards on uteruses from this function. But these norms put *no* pressure on individual people with uteruses to get pregnant and carry fetuses to term.

Maybe there is a different sense in which a connection to survival and biological fitness secures normative oomph, but I don't see any general principle in the offing here. Without it, Simion's own account falls prey to the criticisms she levies on attempts to locate the source of epistemic normativity in social norms in chapter 3. Specifically, much as social norms include bad norms that do not track genuine oughts, biological norms also include bad norms that we do not want to apply to agents. The two potential sources for epistemic normativity appear to be on a par in this regard.

I think the social deserves another chance. Simion herself makes moves toward accommodating the role of the social in constructing epistemic normativity at two

points. First, she starts from the knowledge-generating function of practices of inquiry when arguing that our cognitive systems have that same function (p. 101). Why not focus on practices of inquiry all along? Fleisher (2024) follows this route, grounding epistemic normativity on social practices (not cognitive systems) with epistemic functions. Notably, this approach is not vulnerable to objections Simion levies at other social normative accounts, as it explicitly restricts the relevant practices to those that actually promote epistemic aims.

Second, Simion grants that what it is for evidence to be available to an agent depends on their social role (p. 135). Social roles have constitutive functional properties, some of which generate constitutive epistemic norms of proper functioning. What counts as evidence available to an agent is the evidence that these role oughts state that they ought to gather. For example, recent developments in a medical doctor's field of expertise count as available to her (tracking a doctor's duty to be aware of these), but not to a member of the general public.

Once we allow for role obligations to play a role in substantively delimiting epistemic oughts, why not go further? One could focus on our universal social role as potential testifiers, with epistemic norms as role-oughts that derive their normative oomph from the social importance of transmitting knowledge (Craig 1991, Hannon 2018). The fact that what is at play is a social role that is distinctively tied to epistemic goods allows this view to evade worries about sanctioning bad social norms.

More ambitiously, a social strategy for explaining the origins of epistemic normativity can be framed as a thorough inversion of Simion's account. Here is a sketch of a picture I develop at greater length in Flores forthcomingb. We have socially-grounded interests in identifying those on whom we can safely rely to transmit knowledge. Such interests may lead us to take special interest in, out of the tangled coil of human cognition, the sub-systems of human cognition that have a knowledge-generating function. In agreement with Simion, these sub-systems come with function-associated norms. But their distinctive oomph comes not from their contribution to survival—shared by cognitive sub-systems aimed at protecting self-esteem—but from the social value that we place on being able to identify knowers and rely on one another as testifiers.

Indeed, perhaps our knowledge-generating cognitive systems arose—and develop in particular agents—in part because we are pushed into the role of knowers by our shared social need to be able to identify good testifiers. Participation in corresponding knowledge-generating practices shapes our malleable cognitive systems, entrenching, solidifying, and bolstering our individual-level knowledge-generating capacities. In other words, these capacities might result from enculturation upon a layer of sparser cognitive resources, augmenting and transforming our cognitive systems (McGeer 2021). On such a picture, the benefits of knowledge support the existence of knowledge-generating capacities via social mechanisms, not purely biological ones, providing an alternative spin on the etiological picture of function that goes outside the agent's head.

5 Motivated reasoning and malfunction beyond the input-level

Throughout the book, Simion focuses almost exclusively on input-level malfunctioning. This makes sense in the context of arguing that epistemology needs to be expanded to cover failures to respond to unpossessed evidence. At the same time, the book leaves under-explored how cognitive capacities can malfunction once the subject receives evidence.

A lot can happen after receiving evidence that is *not* rationally updating on that evidence. We often struggle with evidence we get, play with different interpretations of it, and are unsure what to think. If we dislike that evidence—perhaps because it goes against cherished beliefs—we often scrutinize it in the hopes of finding some reason to discard that evidence or a new explanation for it that allows us to only minimally adjust our worldview.

For instance, upon reading a study that goes against a political position one passionately holds, one might look for reasons to find the authors not credible (Lodge 2006). Alternatively, one might think carefully about the study and devise alternative explanations for the data. Given that the probability of a hypothesis depends on its competitors, this reduces the degree of evidential support that the study provides against one's preferred position. Myriad studies on motivated reasoning provide examples of this sort, illustrating how, upon receiving evidence, our cognitive systems sometimes respond by *generating* (or retrieving, or gathering) both apparent and genuine evidence to enable maintaining a preferred position.

Such phenomena are systematic, not one-off performance failures of knowledge-generating capacities. Nor are they well-understood as input-level malfunctioning, at least if we think of the input-level as excluding anything that happens once available evidence enters cognition (as I think Simion does). In particular, subjects neither fail to uptake knowledge-indicators nor take wishes as input (against Simion's suggestion at a point (p. 109)). Instead, they take (purported) facts as input, and process them deviantly. To offer a comprehensive account of the normativity of evidence-resistance, then, more needs to be said about what it is for knowledge-generating capacities to malfunction once evidence is in the subject's cognitive system.

Simion herself appears skeptical of research on motivated reasoning, noting (correctly) that many of the studies purporting to establish the occurrence of motivated reasoning have alternative explanations, and posing her account of evidence-resistance as a competitor (chapter 1). However, it remains extremely plausible that motivated reasoning at least sometimes occurs (Williams 2023). That suffices for it to be the case that not all evidence-resistance results from input-level malfunction.

Other cases of evidence-resistance also do not seem to lie at the input-level. For instance, we make performance mistakes and fail to see connections between facts that are in our ken due to computational limits. Many heuristics and biases (Kahneman 2011) distort the processing of (possessed) evidence. And, arguably, we set epistemic parameters governing how we handle possessed evidence in a range of different ways (Flores 2021). For example, agents set evidential thresholds governing how much ev-

idence they require before adjusting their beliefs at various levels (Morton and Paul 2019). Accounting for this vast range of cases requires the notion of epistemic malfunction to be filled in and expanded.

This point has practical downstream implications. Simion only briefly mentions two strategies for addressing evidence-resistance: flooding with evidence (as a solution for justified evidence rejection), and cognitive flexibility training (for evidence-resistance as epistemic malfunction). But these strategies are ill-equipped to address motivated reasoning. Cognitive flexibility can be put at the service of more effective motivated reasoning. And flooding with counter-evidence, if met defensively, will similarly fail to change beliefs. To be put at the service of a comprehensive package of ameliorative strategies, Simion's account needs to be developed to explicitly cover motivated reasoning, as well as the many interpretive machinations that happen once evidence is in a cognitive system.

6   Conclusion

I want to finish with a reminder of the important reasons why the book merits deep engagement. First, Simion's epistemological framework provides powerful new conceptions of key epistemological notions such as evidence, justification, suspension, or defeat. Second, her incisive and detailed criticisms of alternative views will significantly advance debates in the field. Third, the normative distinctions she draws between kinds of evidence-resistance are clarifying within and outside philosophy. Fourth, the central insight on the possibility of input-level malfunction, and the corresponding unified incorporation of evidence-gathering into epistemology, should become the default view.

Finally, the book bolsters an exciting trend in contemporary epistemology: the development of sophisticated, powerful versions of externalism, such as Sosa (2021)'s, Lasonen-Aarnio (forthcoming)'s, or Hughes (2024)'s. While holding steadfast onto the externalist insight that epistemic assessment is deeply tied to external goods (knowledge and truth), these views accommodate and explain internalist intuitions about credit-worthiness, action-guidingness, and luck. By focusing epistemic assessment on piercing through the veil of ideology instead of achieving coherence within its distortions, they provide more apt verdicts in the real world (cf. Srinivasan 2020, Hughes 2024). Simion's account exemplifies all these virtues, providing a promising new path forward in this project.*

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