Belief and the failure to act or infer: Non-locality is only a small part of the explanation.

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Funding: This research was funded in whole, or in part, by the Arts and Humanities Research Council (AH/W005077/1). The funder had no role in the preparation of this manuscript or the decision to submit for publication. For the purpose of open access, the author has applied a CC BY public copyright licence to any Author Accepted Manuscript version arising from this submission.

People report believing many things, about many different kinds of topics. They claim to believe that distant stars influence events in their lives and that the cat's already been fed; that the 2020 US presidential election was stolen and that unsupported objects fall to the ground; that all life on Earth evolved from a common ancestor and that they ruined Coke when they changed the formula. These disparate (apparent) beliefs have a variety of effects on agents' cognitive lives and their behavior. Some seem to influence a vast proportion of their inferences and behavior: no one ever forgets that unsupported objects fall to the ground or fails to take it into account in their actions. Others seem compartmentalized, failing to affect behavior and inference even when their contents seem directly relevant.

In the light of the variety of contents of beliefs and especially of their cognitive and behavioral effects, some theorists have argued that 'belief' refers to more than one kind of psychological state. According to views of this sort, some beliefs – we might call them *factual beliefs*, following Van Leeuwen (2023) – have the functional role of guiding behavior and inference whenever their content is relevant. Others – Van Leeuwen's *credences* – have the function of signalling allegiance and providing a normative outlook.[1] These different functions entail correspondingly different functional properties. Factual beliefs are responsive to evidence and drive behavior systematically. Credences are insensitive to evidence, compartmentalized, and don't drive behavior when getting things right really matters.

[1] In addition to Van Leeuwen, Sommer has two other belief splitters in mind: Dan Sperber (1997; 2000) and Robert Abelson (1986; Abelson and Prenctice 2014).

Those theorists who argue that ‘belief’ refers to more than one kind of psychological state advance theories that turn on the properties of cognition. The difference between belief kinds is a psychological difference. In the target article, Joseph Sommer (n.d.) argues that we can explain the evidence the belief splitters point to more parsimoniously, and without postulating different belief kinds, by reference to properties of the *world*, rather than the minds of agents. The apparently different functional properties of different kinds of beliefs is explained by the distribution of the evidence that supports them, not by any difference in how these beliefs are psychologically realised.

On Sommer’s view, beliefs that Van Leeuwen categorizes as credences are supported by *non-local* evidence, and their functional differences from factual beliefs are (largely) explained by that fact:

- *Disagreement*. People appear ready to converge on beliefs about their immediate surroundings, but disagree heatedly when it comes to claims about religion and politics. Belief splitters argue that the best explanation for this difference posits that religious and ideological beliefs aim not at representing the way things really are, but at signalling or bringing about group membership (Funkhouser, 2022). In contrast, Sommer argues that the difference arises from the fact that the evidence for these kinds of claims is widely dispersed, and people can therefore only possess some of it. Possession of different evidence explains a failure to converge in beliefs.

- *Evidence-insensitivity.* Splitters argue that such insensitivity is a feature, not a bug: an allegiance-signalling belief that too easily updated in the

light of evidence could not serve as a mark of membership. Sommer argues, in contrast, that evidence-insensitivity arises from non-locality. Your argument against my belief may seem compelling, but I am in possession of only a small fraction of the evidence I (implicitly) take to support my belief. The experts I trust may have compelling rebuttals to your points. If I trust them more than I trust you, a failure to update may be rational for me.

- *Failure to cause behavior*. Splitters sometimes argue that bizarre or extreme beliefs make good signals of group membership: they are credibility-enhancing because they burn believers' bridges with the outgroup (Mercier, 2020), and because their extremity ensures that they will be vanishingly rare among those who do not belong to the in-group (Van Leeuwen, 2023). But their extremity would make them unacceptably costly if they were allowed too generally to control behavior. Instead, they are compartmentalized to contexts where they may be safely acted on. Sommer points out that apparent compartmentalization can be explained by non-locality. The non-locality of the evidence for my belief may entail non-locality of cues to act consistently with it. The apparent compartmentalization of the behaviors demanded by religion to contexts in which it is salient, for example (the so-called Sunday effect, for instance; Malhotra 2010) is unsurprising, given the non-locality of the evidence for the religion.[2]

[2] Sommer argues that non-locality "cannot readily explain" two other properties of credences: their failure to govern inferences broadly (29) and differences in the terminology people find appropriate to use to describe attitudes (31). So far as I can tell, though, the same account he gives of apparent compartmentalization to contexts explains equally well the lack of cognitive governance. I've argued that the linguistic differences Sommer points to arise as responses to the *content* of the attitudes referred to, rather than the *nature* of the attitudes (Levy, 2024b).

The locality/non-locality distinction tracks real properties of the world, and Sommer is right to invoke it to explain a variety of phenomena. He is also right, I believe, in thinking that the concept of 'belief' refers to a unique psychological kind. In this response, though, I will argue that non-locality is only one, and a relatively insignificant, part of the explanation for the apparent functional differences between beliefs of different kinds. These differences are in fact principally (but not solely) explained by a property highly correlated with non-locality: the deferential content of the belief. Those beliefs that fail to exhibit the full range of functional roles characteristic of mundane factual beliefs are very largely those we acquire via testimony. Because such beliefs are also often those for which evidence is non-local, and non-locality helps explain why we rely on testimony with regard to them, Sommer has been misled into thinking that non-locality is the crucial explanatory property.

The failure of non-locality

Beliefs are psychological states that aim at truth (Shah & Velleman, 2005). To believe something is to take the world to be a certain way. In a common metaphor, beliefs are *maps* of the world (Ramsey, 2013). We form beliefs – to continue the mapping metaphor – to enable us to navigate the world. The function of beliefs is to guide behavior adaptively, and to play this role they must depict the world accurately. Searching for food requires accurate representations of what is edible and where it might be located; avoiding danger requires accurate representations of which animals are predators and which are harmless, and how firm the terrain is, and so on. The mapping function of beliefs requires them to possess certain properties.

Since beliefs aim at representing how the world is, they must be responsive to evidence. Evidence is information that the world is or is not a certain way: that inflation is going up, not down, or that we're out of milk. A state that did not respond to such evidence would not be able to play belief's characteristic role in guiding behavior. For the same sort of reason, beliefs must be able to interact with other states to enable us to draw inferences; the fact that the patch of food we were exploiting yesterday is in the same direction as a fire is a reason to draw the conclusion we should look elsewhere. Since the function of belief is to guide adaptive behavior, beliefs should not be compartmentalized: whenever their content is relevant, they should guide inference and behavior.

Splitters point to apparent failures of (purported) beliefs to exhibit these properties as evidence that some beliefs do not play the mapping role. Sommer points instead to the non-locality of evidence. In most cases in which evidence is non-local, agents must acquire their beliefs via testimony.[3] For example, I might acquire beliefs about the unemployment rate by deference to economists, because the job market experiences of my friends may be unrepresentative: the evidence is widely distributed and must be aggregated. I acquire beliefs about a heatwave in a distant city from the news because, while the evidence is highly localized, it is not local to *me*.

Sommer argues that non-locality explains why my beliefs fail to update in response to evidence. If an acquaintance says that economy is in dire shape, citing their experience on the job market, I might sympathise but continue to

[3] Sommer maintains that this is true only of *some* agents: non-experts. Experts are in a position to "see all the evidence" (9); ideas that for us are "black boxes" are for them "white boxes" (19). This is a mistake: experts grapple with only a limited range of the first-order evidence that bears on their claims, and interpret it using tools and against the background of theories they accept on the basis of testimony (Gerken, 2022). In fact, acquiring expertise consists, in important part, in learning to whom and how to defer (Levy & Varley, 2024).

think that unemployment is low. I know that economists have access to non-local evidence, on the basis of which they form their beliefs, and deference to their testimony seems to me a much better route to justified belief than deference to one person's experiences. Equally, I may resist someone's assertion that the heatwave is fake news because I trust my source more than I trust this person.

But evidence need not be non-local for agents to be required to form beliefs on the basis of testimony, and (therefore) for the resulting beliefs to exhibit the sort of properties Sommer aims to explain. Consider mathematical proofs. Mathematical evidence is as local as you like, since mathematics is *a priori*. There is nothing outside the proof that is needed to assess its validity. But most of us will need to defer to mathematicians for our belief that a proof is valid.

We ought to defer even in many cases where we have all the evidence and we seem to ourselves to be able to draw justified inferences on its basis. Think of the Monty Hall problem. The setup of this problem is as follows: a grand prize is hidden behind one of three doors; the contestant has no way of knowing which and must choose at random. Having chosen, the host opens one of the two *other* doors, revealing that there's no prize behind it. Should the contestant stay with their original choice or switch for the next and final round? Most people have the intuition that the contestant should be indifferent between switching and staying; the odds are 50% either way. When Marilyn Vos Savant argued that switching raised the probability of winning to 2/3 in *Parade* magazine, she was met with outrage and received more than 10,000 letters deriding her, some from people with PhDs in mathematics (Tijms, 2022). She was right, however, and her detractors would have done better to defer to her. It remains true that those who struggle to see why she was right should defer. It isn't because the evidence is

non-local that we ought to have defer – it isn't. It's because those who lack expertise cannot interpret the evidence adequately for themselves and need expert guidance.

When agents lack the expertise to assess a claim, they typically ought to defer to experts, and having done so, they ought to resist updating their beliefs in the face of a wide variety of evidence (in brief, they should update their beliefs only if presented with strong evidence that the expert consensus has changed or was different all along, or that the experts they have deferred to are unreliable). Expertise is often needed for apt judgment when evidence is widely distributed; that's a central reason why cases like these are highly correlated with non-locality. But as we've just seen, there are cases in which expertise is needed for apt judgment while evidence is entirely local: mathematics cases, and cases in which statistics are cited to support or undermine a view, for example. I may form the belief that a statistical analysis is unreliable – and therefore that the conclusion a psychology paper argues for is unsubstantiated – on the basis of reading a blogpost by Andrew Gelman, for example, thereby overriding my own assessment of the (entirely local) evidence.

It is therefore not non-locality of evidence that typically explains why people resist updating their beliefs in the light of apparently strong evidence; it is the fact that they formed these beliefs on the basis of testimony, and the source of this testimony is judged by them to be more reliable than the evidence that is supposed to count against it. Apparent evidence-insensitivity is explained by deference. Sommer argues that we rationally dismiss evidence against our beliefs because we think there may be non-local evidence "that would vindicate me if only I had access to it" (23). That might sometimes be true, but much more

often we dismiss such evidence because we think that if it is reliable, the experts we defer to would already have taken it into account (this is a variant of Goldberg's (2010) coverage principle: *if that were true I would have heard about it by now*). In many such cases, after all, we are well aware that access to the evidence would not improve our epistemic position in the slightest: we would still need to defer to experts.

Disagreement is also typically explained by reference to deference. We typically disagree about politics and about factual claims (like the state of the economy) not because the evidence local to us represents only a fraction of the total evidence, but because we form our beliefs by deference to different (apparent) experts (Bullock, 2011; Slothuus & Bisgaard, 2021; Zaller, 1992). Again, the non-locality of evidence is an important part of the explanation for why such deference is required: we defer to political elites because they appear to be positioned to aggregate information that is inaccessible to us. But that's by no means the only reason we defer to political elites. We defer to the testimony of those we take to share our values and who are more competent than we are at assessing evidence (Sperber et al., 2010); political elites on 'our side' seem to satisfy these criteria (Levy, 2021).

Behavior and inference

While deference to testimony explains disagreement and a failure to update in the light of apparently strong evidence, it does not explain the full range of cases in which people seem to fail to act consistently with their beliefs. Sommer rightly notes that some such cases can be explained by non-locality: when the cues to act are themselves non-local, people may not notice that action (or inference) is called for (c.f. Levy, 2018). Since non-locality of evidence is often part of the

reason why we are required to defer to experts, it is unsurprising that it also helps to explain some cases in which we acquire beliefs by deference and fail to act consistently with them. However, others remain unexplained by non-locality or by deference.

Consider a belief that is important to a person's identity and accessed frequently. While the person may overlook some occasions on which actions consistent with it are called for, the accessibility of the state makes it unlikely that non-locality can do all the explanatory work. Take the 'Pizzagate' conspiracy theory, according to which senior Democrats were engaged in satanic abuse and pedophilia at a (named) Washington, D.C. pizzeria. As Sommer discusses, few of the many millions of Americans who claimed to believe the conspiracy theory acted on it, despite the obvious urgency of action (Mercier, 2020). Sommer also mentions some reasons why people might fail to act on the theory despite believing it: the restaurant may be very distant, and any action dangerous. No doubt these sorts of considerations played a role in explaining inaction, but if people truly believed that children were being abused at a specific location and nothing was being done about it, some would surely have organized and taken action. After all, if the polling data with regard to Pizzagate was accurate, there would be several hundred thousand believers within easy driving distance of D.C., and thousands of those people would be gun owners (not a few would be police officers).

While I reject Sommer's explanation for the failure of conspiracy theorists to act consistently with their beliefs, I agree with him that this failure is not good evidence that 'belief' names more than a single psychological kind. In addition to the considerations he cites, which certainly explain *some* failures to act

consistently with reported beliefs, there are two other major causes of a failure to act consistently with professed beliefs.

First, the sorts of beliefs that motivate the splitters are often *impoverished* in their content. That is, they have relatively few inferential (and therefore behavioral) connections with other beliefs. In such cases, we may not merely fail to act consistently with them; we may actually act in ways that conflict with them, not because we fail truly to believe them, but because we don't see how to act consistently with them.

Consider (true) beliefs about evolution. Such beliefs are, of course, usually acquired on the basis of testimony, from teachers, parents, or professors. There is, however, evidence that even those with some college education about evolution tend to reason in ways inconsistent with it (Shtulman, 2006; Shtulman & Harrington, 2016). That's unsurprising: understanding evolution is *hard*. It is unsurprising that our impoverished representation, one with little more content than *all life on Earth descended from a common ancestor*, doesn't cause much belief beyond assertion. We have impoverished representations of many difficult topics, ranging across, science, politics, and even morality (it is difficult to know how exactly to act consistently with my belief *that all people are equal*). It's not because I don't believe these things that I fail to act consistently with them; it's because I don't know *how* to act consistently with them. Splitters often cite the apparent compartmentalization of religious beliefs as evidence for their view (Sperber, 1996; Van Leeuwen, 2023), but this apparent compartmentalization is at least partly due to the impoverishment of many religious representations (Levy, 2024b).

Impoverishment of content itself often arises from deference: we often acquire nothing more from those we defer to than the bare proposition that such-and-such is the case. But it may also arise from other sources: some beliefs may be acquired in the course of normal development – because they are maturationally natural (McCauley, 2011) – and have an impoverished content. On some views, supernatural beliefs are maturationally natural, but the resulting representations are amorphous.

The second reason why people may fail to act consistently with their professed beliefs is, simply, that they don't believe what they report. People may insincerely or falsely report believing things for many reasons: to signal their allegiances or to express their attitudes, because they find it amusing, or because they are mistaken about their own beliefs. There is evidence for all three causes of false belief report (Levy, 2024a, forthcoming).

One route to reporting beliefs insincerely is what is known as *expressive responding* (Hannon, 2021): when people report a belief to express their support for a view or a person. Much of the evidence for expressive responding is open to other interpretations (Levy & Ross, 2021), but some is compelling. Taking advantage of the then-current controversy over the claim that Trump's first presidential inauguration was the biggest such event in history, Schaffner and Luks (2018) gave their participants photographs of the first Trump inauguration and the first Obama inauguration, asking them, simply, which photo had more people. A substantial minority of Trump voters (but not Clinton voters or independents) chose the photo depicting the Trump inauguration. It is very implausible that they sincerely believed that the photo showed more people;

rather, they chose the photo to express their support for Trump (see Ross and Levy, 2023 for replication).

Just as there is evidence for expressive responding, there is evidence for trolling. Litman et al. (2023) replicated and extended the CDC's finding that 4% of Americans were ingesting bleach to treat or prevent COVID-19 (Gharpure et al., 2020). However, they included sincerity checks in their study and eliminated those who failed these checks (for example, those who reported having previously died from a heart attack, or being able to name every US senator ever from memory). Controlling for insincerity and removing respondents who on follow up reported accidentally ingesting cleaning products or accidentally clicking 'yes' to the question reduced the number of those who sincerely reported deliberately ingesting cleaning products to zero.

Our own work on conspiratorial beliefs has also produced evidence for widespread insincerity (Ross et al., 2024). We found that those respondents willing to endorse a made-up and obviously incredible conspiracy theory ("The Canadian Armed Forces have been secretly developing an elite army of genetically engineered, super intelligent, giant raccoons to invade nearby countries") endorsed a far higher number of pre-existing conspiracy theories than those who rejected the made-up theory. For example, while 68% of the (104) participants who endorsed 'racoons' also reported believing that "the idea of man-made global warming is a hoax that was invented to deceive people," only 14% of the (940) participants who rejected 'racoons' reporting believing that global warming is a hoax. For more bizarre conspiracy theories, e.g., the theory that 5G towers spread coronavirus, the number of sincere believers was near zero

I suggest that a failure sincerely to believe the Pizzagate conspiracy theory is a central reason why people failed to act consistently with it. Indeed, Lopez and Hillygus (2018) flagged a full 55% of respondents who reported believing the theory as likely insincere.

Finally, people may sincerely but falsely report their beliefs. Beliefs are not transparent to us: it takes work to discover what we believe, and we may be mistaken in attributing beliefs to ourselves (Carruthers, 2013). The literature on choice-blindness shows that people can be relatively easily manipulated into self-attributing a belief at considerable variance from their true attitudes (Hall et al., 2013; Johansson et al., 2014). Now, conspiracy theories are highly entertaining (van Prooijen et al., 2022), as is evidenced by how often they feature in films and series. Political conspiracy theories may be especially gratifying to imagine, because they position the person as the independent thinker who sees through the illusion, and the noble warrior against the lies. It is unsurprising if people come to be sufficiently absorbed in a fantasy of this sort, they may mistakenly come to think they believe it.

An agent might actually become a true believer by this sort of route, but there is plentiful evidence that it remains a fantasy for many of those who are absorbed in them. Think of the evidence cited for the claim that the COVID-19 pandemic was preplanned: the fact that “delta omicron” is an anagram of “media control”, the purported fact that “ovid” is Latin for “sheep” and 19 was the number for “surrender,” the fact that a still from the 2019 film *Captain America* depicts both an advertisement for Corona beer and an advertisement for pasta that features an image that looks a little like an electron microscope image of the virus (Levy,

2022). All of this is so obviously so far from being genuine evidence in support of the claim that the pandemic was preplanned that it's *very* hard to believe that those who cite it are even trying to represent how the world is. Some of those who have come to reject these sorts of 'beliefs' report that they were sincere, however. They weren't believers. Nor, however, were they manifesting any sort of unfamiliar psychological attitude.

Conclusion

Non-locality likely explains some of the departures from the behavioral profile characteristic of beliefs. In particular, the non-locality of evidence may entail the non-locality of cues to behavior and inference, and agents may resist updating on evidence because they are aware that evidence that is inaccessible to them may rebut or undermine it. But non-locality is only a small part of the explanation for the sorts of evidence that motivates splitters.

Most of the work is instead done by the deferential content of belief: the fact that we form so many of our beliefs on the basis of testimony from those we take to be better placed to assess an issue than we are. Non-locality is part of the explanation for why deference is necessary in many domains, but it is deference, and not non-locality, that is the fundamental reason why we might seem to fail to act or infer consistently with our belief, and why we continue to disagree. This is demonstrated by those cases in which we form beliefs on the basis of testimony even while evidence is entirely local.

Neither deference nor non-locality do all the explanatory work, however: in addition the impoverishment of many representations (itself typically due to their

origin in deference) explains the functional profiles of some beliefs. In all these cases, the agent genuinely believes what they profess to believe, whether the representation is rich or impoverished.

In yet other cases, agents do not genuinely believe what they purport to believe. We need not follow the splitters in postulating novel psychological kinds to explain these cases, however. Insincerity and fantasy are familiar psychological phenomena. Beliefs always aim at truth: believing agents do their best to represent how the world really is. When agents profess beliefs that don't aim at truth, they're either insincere or mistaken.

References

Abelson, R. P. (1986). Beliefs Are Like Possessions. *Journal for the Theory of Social Behaviour*, *16*(3), 223–250. https://doi.org/10.1111/j.1468-5914.1986.tb00078.x

Abelson, R. P., & Prenctice, D. A. (2014). Beliefs as possessions: A functional perspective. In A. R. Pratkanis, S. J. Breckler, & A. G. Greenwald (Eds), *Attitude Structure and Function* (pp. 361–381). Psychology Press.

Bullock, J. G. (2011). Elite Influence on Public Opinion in an Informed Electorate. *American Political Science Review*, *105*(3), 496–515. https://doi.org/10.1017/S0003055411000165

Carruthers, P. (2013). *The Opacity of Mind: An Integrative Theory of Self-Knowledge*. OUP Oxford.

Funkhouser, E. (2022). A Tribal Mind: Beliefs That Signal Group Identity or Commitment. *Mind and Language*, *37*(3), 444–464. https://doi.org/10.1111/mila.12326

Gerken, M. (2022). *Scientific Testimony: Its roles in science and society*. Oxford University Press.

Gharpure, R., Hunter, C. M., Schnall, A. H., Barrett, C. E., Kirby, A. E., Kunz, J., Berling, K., Mercante, J. W., Murphy, J. L., & Garcia-Williams, A. G. (2020). Knowledge and Practices Regarding Safe Household Cleaning and Disinfection for COVID-19 Prevention—United States, May 2020. *MMWR. Morbidity and Mortality Weekly Report*, *69*(23), 705–709. https://doi.org/10.15585/mmwr.mm6923e2

Goldberg, S. C. (2010). *Relying on Others: An Essay in Epistemology*. OUP Oxford.

Hall, L., Strandberg, T., Pärnamets, P., Lind, A., Tärning, B., & Johansson, P. (2013). How the polls can be both spot on and dead wrong: Using choice blindness to shift political attitudes and voter intentions. *PloS One*, *8*(4), e60554. https://doi.org/10.1371/journal.pone.0060554

Hannon, M. (2021). Disagreement or Badmouthing? The Role of Expressive Discourse in Politics. In E. Edenberg & M. Hannon (Eds), *Political Epistemology* (pp. 297–318). Oxford University Press. https://doi.org/10.1093/oso/9780192893338.003.0017

Johansson, P., Hall, L., Tärning, B., Sikström, S., & Chater, N. (2014). Choice Blindness and Preference Change: You Will Like This Paper Better If You (Believe You) Chose to Read It! *Journal of Behavioral Decision Making*, *27*(3), 281–289.

Levy, N. (2018). In Praise of Outsourcing. *Contemporary Pragmatism*, *15*(3), 344–365. https://doi.org/10.1163/18758185-01503005

Levy, N. (2021). Echoes of covid misinformation. *Philosophical Psychology*, *0*(0), 1–18. https://doi.org/10.1080/09515089.2021.2009452

Levy, N. (2022). Conspiracy theories as serious play. *Philosophical Topics*, *50*(2), 1–19.

Levy, N. (2024a). Believing in Shmeliefs. *Ergo, an Open Access Journal of Philosophy*, *11*(18). https://doi.org/doi.org/10.3998/ergo.6158

Levy, N. (2024b). There's more belief than Van Leeuwen believes. *Mind & Language*, *39*(4), 584–589.

Levy, N. (forthcoming). Betting on Scams. *Social Epistemology*.

Levy, N., & Ross, R. M. (2021). The Cognitive Science of Fake News. In M. Hannon & J. de Ridder (Eds), *The Routledge Handbook of Political Epistemology* (pp. 181–191). Routledge.

Levy, N., & Varley, R. (2024). Mind the Guardrails: Epistemic Trespassing and Apt Deference. *Social Epistemology*, *0*(0), 1–17. https://doi.org/10.1080/02691728.2024.2400560

Litman, L., Rosen, Z., Hartman, R., Rosenzweig, C., Weinberger-Litman, S. L., Moss, A. J., & Robinson, J. (2023). Did people really drink bleach to prevent COVID-19? A guide for protecting survey data against problematic respondents. *PLOS ONE*, *18*(7), e0287837. https://doi.org/10.1371/journal.pone.0287837

Lopez, J., & Hillygus, D. S. (2018). *Why So Serious?: Survey Trolls and Misinformation* (SSRN Scholarly Paper No. ID 3131087). Social Science Research Network. https://doi.org/10.2139/ssrn.3131087

Malhotra, D. (2010). (When) are religious people nicer? Religious salience and the ``Sunday Effect'' on pro-social behavior. *Judgment and Decision Making*, *5*(2), 138–143.

McCauley, R. N. (2011). *Why Religion is Natural and Science is Not*. Oxford University Press. https://www.amazon.com/Why-Religion-Natural-Science-Not/dp/0199341540/ref=sr_1_1?

crid=XKHSCWGFQY1N&keywords=robert+mccauley&qid=1580733250&sprefix=robert+mccau%2Caps%2C211&sr=8-1

Mercier, H. (2020). *Not Born Yesterday: The Science of Who We Trust and What We Believe*. Princeton University Press.

Ramsey, F. P. (2013). *The Foundations of Mathematics and Other Logical Essays* (R. B. Braithwaite, Ed.). Martino Fine Books.

Ross, R. M., Gleeson, K., Wilson, S., Ashton, L., & Levy, N. L. (2024). *Do people sincerely believe conspiracy theories that they endorse?* OSF. https://osf.io/zsncr

Ross, R. M., & Levy, N. (2023). Expressive Responding in Support of Donald Trump: An Extended Replication of Schaffner and Luks (2018). *Collabra: Psychology*, *9*(1), 68054. https://doi.org/10.1525/collabra.68054

Schaffner, B. F., & Luks, S. (2018). Misinformation or Expressive Responding? What an Inauguration Crowd Can Tell Us about the source of Political Misinformation in Surveys. *Political Opinion Quarterly*, *82*(1), 135–147.

Shah, N., & Velleman, J. D. (2005). Doxastic Deliberation. *Philosophical Review*, *114*(4), 497–534. https://doi.org/10.1215/00318108-114-4-497

Shtulman, A. (2006). Qualitative differences between naïve and scientific theories of evolution. *Cognitive Psychology*, *52*(2), 170–194. https://doi.org/10.1016/j.cogpsych.2005.10.001

Shtulman, A., & Harrington, K. (2016). Tensions between science and intuition across the lifespan. *Topics in Cognitive Science*, *8*(1), 118–137.

Slothuus, R., & Bisgaard, M. (2021). How Political Parties Shape Public Opinion in the Real World. *American Journal of Political Science*, *65*(4), 896–911. https://doi.org/10.1111/ajps.12550

Sommer, J. (n.d.). In the Mind or in the World? Types of Beliefs and the Locality of Evidence. *Psychological Inquiry*.

Sperber, D. (1996). *Explaining Culture*. Blackwell Publishers.

Sperber, D. (1997). Intuitive and reflective beliefs. *Mind & Language*, *12*(1), 67–83.

Sperber, D. (2000). Metarepresentations in an evolutionary perspective. In D. Sperber (Ed.), *Metarepresentations: A multidisciplinary perspective.* (pp. 117–137). Oxford University Press.

Sperber, D., Clément, F., Heintz, C., Mascaro, O., Mercier, H., Origgi, G., & Wilson, D. (2010). Epistemic Vigilance. *Mind & Language*, *25*(4), 359–393. https://doi.org/10.1111/j.1468-0017.2010.01394.x

Tijms, S. (2022). Monty Hall and “the Leibniz Illusion”. *CHANCE*, *35*(4), 4–14. https://doi.org/10.1080/09332480.2022.2145124

Van Leeuwen, N. (2023). *Religion as Make-Believe: A Theory of Belief, Imagination, and Group Identity*. Harvard University Press.

van Prooijen, J.-W., Ligthart, J., Rosema, S., & Xu, Y. (2022). The entertainment value of conspiracy theories. *British Journal of Psychology*, *113*(1), 25–48. https://doi.org/10.1111/bjop.12522

Zaller, J. R. (1992). *The Nature and Origins of Mass Opinion*. Cambridge University Press. https://doi.org/10.1017/CBO9780511818691