Information about a Human Mind versus the World:

An Important Factor Underlying Differences Among Beliefs

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Sommer (this issue) asks an important question: why do different beliefs differ from one another? The target article proposes that characteristics of the world, rather than characteristics of human psychology, account for this difference. Specifically, the world provides what Sommer (this issue) refers to as *local* evidence—evidence that is readily accessible to one's senses—supporting some beliefs (e.g., the sun really exists, which people can confirm by looking at the sky, feeling the warmth of the sun on their skin, and so on) but not others (e.g., God really exists, which people cannot confirm in the same way). Sommer (this issue) further argues that this difference in locality underlies difference in consensus; people agree about whether the sun exists because the evidence is easily accessible to nearly everyone in the same way, whereas people disagree about whether God exists because this latter claim lacks local evidence. It is this difference in locality, and subsequently consensus, that accounts for differences among beliefs.

This account grapples with a consequential issue in the study of beliefs and offers a thought-provoking response to the question it poses. This account also raises at least two questions: is locality the crucial factor to consider when explaining differences across beliefs? And, if not, what other factor may provide a compelling account for these differences?

Locality of Evidence

Sommer (this issue) posits locality of evidence as one main driver of differences across beliefs. Yet, four pieces of evidence suggest that locality may not lead to distinctions between, for example, factual and ideological beliefs.

First, factual beliefs seem to be a prime candidate for local evidence. Using the example above, the factual claim that the sun exists is supported by perceptual evidence such as the visibility of the sun in the sky and the feeling of warmth on one's skin when one is bathed in sunlight on a warm summer day. However, many factual beliefs are not supported by evidence that is readily available to the senses. For instance, many people believe that germs exist despite never having seen germs, and they act on the basis of this belief (wash their hands, cover their mouths when coughing, and so on). They hold this belief based on others' testimony; in other words, someone they trust has told them that germs exist, and as a result, they adopted this belief for themselves (Harris, 2012). The *consequences* of germs may be perceptually apparent—people can perceive when they are sick—but this perceptual evidence, on its own, is insufficient to produce a belief in germs, as evidence by thousands of years of human history during which people experienced illness without the belief in germs as well as the opposition to germ theory when it was first introduced. Indeed, some (e.g., Harris & Koenig, 2006) have argued that testimony supports both scientific and religious beliefs, raising questions about the extent to which a sharp distinction exists between these different ways of knowing.

Second, ideological beliefs (beliefs that are shared with others in one's society and that help to explain social realities, such as moral, political, and religious beliefs; Jost, 2006) seem to be a prime candidate for non-local evidence. Again returning to the example above, the religious belief that God exists does not seem to be supported by perceptual evidence on which everyone can agree; it is impossible to see God directly or to feel God on one's skin in the same way that one can see the sun and feel its rays. However, people who hold ideological beliefs sometimes point to perceptual evidence to support their views. For instance, some religious believers report a physical experience of God speaking to them (Luhrmann, 2012). These are not mentally ill

participants who are "hearing voices"—they clarify that they do not hear God with their ears in the same way that they hear other people—but, nevertheless, some believers report having a perceptual experience of hearing God, albeit one that differs from their perceptual experience of hearing humans.

One possible rejoinder to this line of argument is that ideological beliefs lack *shared* perceptual experience. If only some people have the perception of hearing God speak, but most people have the perceptual experience of the seeing the sun in the sky, locality may still explain differences between ideological and factual beliefs. However, it is possible that many people have the same perceptual experience in both cases and what varies is differences in interpretation. When looking up in the sky, most everyone interprets the information their senses are giving them as indicating that the sun exists. People who do not believe in God may experience the same perceptual cues as people who say that God has spoken to them, but interpret those cues differently (e.g., as products of their own brainwaves rather than an external agent). Similarly, two siblings may both grow up in poverty and attain middle class status as adults. These two people have access to much of the same perceptual information (e.g., what it feels like to go to bed hungry) and much of the same local evidence about the consequences of poverty in people's lives, but they may come to radically different conclusions about the appropriate political response. Here, it is not the case that non-local evidence forms the foundation of an ideological belief about how society ought to respond to poverty. Rather, shared perceptual information supports a political belief in both cases, but the content of that belief differs depending on how people interpret and use the evidence they observe. For instance, one person may use the local evidence they have gathered to conclude that no one should suffer in the ways they did, while another may use that same evidence to infer that others ought to be able

to move out of poverty in the same way she did, without additional government assistance.

Third, people distinguish between different types of beliefs even when the locality of the evidence supporting those events does not differ. For example, using corpus data, Heiphetz and colleagues (2021) found that people are more likely to use the word "think" when describing factual beliefs and the word "believe" when describing ideological beliefs. They then conducted a controlled experiment to follow up on these naturalistic data. In the experimental work, participants completed phrases such as "she ____ that aspirin is not a cure." In one condition, this phrase appeared at the end of a paragraph describing a factual basis for this belief, such as a woman having taken aspirin many times before and never experiencing relief from her headaches. In another condition, an identical phrase appeared at the end of a paragraph describing a religious basis for this belief, such as a woman adhering to the beliefs she had learned from the religious organization to which she belongs. Both beliefs are based on local evidence (the woman's own bodily experience of continuing headaches or her personal exposure to her church's teachings about medication). However, participants distinguished between beliefs supported by factual evidence versus religious teaching, using the word "believe" more often to complete the latter types of sentences. While Sommer (this issue) argues that it is difficult to know what to make of such language differences, one possibility is that they reflect a difference in the type of belief to which people are referring, similarly to other contexts in which linguistic differences are taken as markers of distinct categories (e.g., Barrett et al., 2001; Mott & Solomon, in press; Niemi et al., 2021).

Fourth, Sommer (this issue) points out that differences in locality drive differences in consensus; the more a belief is based on local evidence, the more consensus emerges regarding that belief. If this is the case, might it be the case that consensus, rather than locality *per se*, is an

underlying factor shaping differences among beliefs? Some evidence indicates that beliefs supported by a large degree of consensus act differently than more idiosyncratic beliefs. For instance, consensus can drive people to express beliefs that differ from those they would express in private (Asch, 1956), and people report that beliefs supported by a strong degree of consensus are more central to identity than beliefs about which many people disagree (Heiphetz et al., 2017). Might consensus itself also underlie differences among beliefs? Perhaps one factor underlying differences across beliefs is indeed a psychological one: the extent to which different people agree and, consequently, the type of information that people perceive different beliefs to provide.

Information about the Believer and the World

Using the example of factual, religious, and preference-based beliefs, one line of work has provided evidence that one factor underlying differentiation among beliefs may be the type of information people expect each type of belief to provide. An initial set of studies (Heiphetz et al., 2013) exposed 5- to 10-year-old children and adults to information about pairs of characters in which two people held conflicting beliefs. For example, the characters disagreed about whether germs were big or small, about whether God could do miracles or no one could do miracles, and about which color is the prettiest one. After learning about each disagreement, participants indicated whether only one person or both people could be right. Both children and adults were most likely to say that only one person could be right when answering questions about factual beliefs and least likely to provide this response when answering questions about preference-based beliefs, with religious beliefs falling between these extremes. In other words, the more consensus exists about a particular type of belief, the more likely participants were to perceive that belief as a matter of a singular truth; in contrast, the more disagreement exists about

a belief, the more likely participants were to report that multiple perspectives could be correct. This result generalizes beyond the specific beliefs tested in this initial work; for instance, 4- to 6-year-olds and adults are more likely to report that only one person can be right in a disagreement concerning widely shared moral beliefs (e.g., whether it is better to perform a kind behavior or a mean behavior) than in a disagreement about controversial moral beliefs (e.g., which of two kind behaviors is better; Heiphetz & Young, 2017).

Follow-up work investigated *why* children and adults might perceive ideological beliefs to occupy an intermediate position between factual and preference-based beliefs (Heiphetz et al., 2014). Here, 8- to 10-year-olds and adults learned about one character's beliefs at a time, rather than viewing characters in pairs, and indicated how much each belief revealed about the world as well as about the person holding the belief. Children and adults reported that correct factual beliefs revealed more information about the world than about the person, preference-based beliefs revealed more information about the person than the world, and religious beliefs revealed a moderate amount of information about both the world and the person. Participants' judgments here track consensus information. Nearly everyone agrees that germs are small; when encountering this claim, observers learn information about the world (germs are in fact small) but not about the person (someone making the claim that germs are small is not distinguishing herself from most other people, because most other people would share this belief). In contrast, a wide variety of beliefs exist about which color is the prettiest. Therefore, when encountering the claim that green is the prettiest color, observers have not learned an objectively correct piece of information about the world, but they have learned something about the person holding the belief that distinguishes her from other people. Religious beliefs occupy an intermediate space between these two extremes. A person who expresses the belief that God can do miracles is making a

claim that, on its face, provides information about the world (that God exists and has the capacity to make miracles happen). However, not everyone would agree with this claim, so the belief also provides information about the believer that distinguishes her from other people.

Thus, it is possible that consensus distinguishes different types of beliefs from one another, but that the crucial underlying variable associated with consensus is not locality but rather the extent to which a particular belief is informative about the world versus the person holding the belief. Typically, the more consensus exists about a belief, the more that belief provides (and is perceived by participants to provide) information about the world. In contrast, the less consensus exists about a belief, the more that belief provides (and is perceived by participants to provide) information about the person holding the belief. Therefore, one main factor accounting for differences among beliefs may be the extent to which the beliefs are informative about identity, revealing something about the person holding the belief, versus the extent to which they are informative about something in the world external to the believer.

Conclusions

The target article considers a question with wide-ranging implications: what differentiates one type of belief from another? It argues that the main distinction is something in the world—namely, the extent to which local evidence supports the belief—rather than something in the human mind. Yet, it is possible that a psychological process does lead people to distinguish among different beliefs. Specifically, a distinction may exist based on the extent to which people perceive a particular belief to provide information about the world versus the person holding the belief. It may be people's judgments about how much a belief tells them about the world, rather than the evidence that exists in that world, that leads to distinctions among different types of beliefs.

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