

Porosity Is the Heart of Religion

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Abstract

When scholars and scientists set out to understand religious commitment, the sensation that gods and spirits are real may be at least as important a target of inquiry as the belief that they are real. The sensory and quasisensory events that people take to be the presence of spirit—the voice of an invisible being, a feeling that a person who is dead is nonetheless in the room—are found both in the foundational stories of faith and surprisingly often in the lives of the faithful. These events become evidence that gods and spirits are there. We argue that at the heart of such spiritual experiences is the concept of a porous boundary between mind and world, and that people in all human societies have conflicting intuitions about this boundary. We have found that spiritual experiences are facilitated when people engage their more porous modes of understanding and that such experiences are easier for individuals who cultivate an immersive orientation toward experience (*absorption*) and engage in practices that enhance inner experience (e.g., prayer, meditation). To understand religion, one needs to explore not just how people come to believe in gods and spirits, but how they come to understand and relate to the mind.

Keywords

absorption, belief, mind, porosity, religion, spiritual experience

Despite the phenomenological orientation of William James, a tower in the landscape of psychology, many modern psychologists do not study experience. Cognitive psychologists largely study cognition per se, not the feel of thought. A developmental psychologist is more likely to study the mechanisms that drive changes in children's thinking and imagining than how the sensation of thought changes over time. Similarly, as interest in religion has exploded in recent years, psychologists who study religion have focused almost entirely on belief, rather than experience. There have been exceptions (e.g., Hood, 2001; Pekala, 2013; Taves, 2009; Wildman, 2011), but the issues that have gripped most researchers have been about the social implications of belief in certain kinds of gods (A. B. Cohen et al., 2003; Henrich, 2020; Norenzayan et al., 2016), about what people believe that gods know (McNamara et al., 2021; Willard & McNamara, 2019), and about the evolutionary underpinnings of beliefs about spirits (Barrett, 2004; Boyer, 2001). To be clear, these are important questions. But it is also important to pay attention to experience, particularly in the case of religion, which James (1902/1935) observed was “bathed in sentiment” (p. 486).

After all, focusing first and foremost on belief encourages the researcher to ask why someone believes in something that in many cases the researcher takes not to be true. The research problem becomes one about cognitive mistakes: How could someone believe in something as irrational as the existence of a being who is invisible but supremely powerful, or a being who knows everything, even one's innermost thoughts and desires? (And do people *really* believe this?) Yet people who pray often see the apparent foolishness of belief in gods and spirits as clearly as the skeptic does. Many passages in the Gospels presume that it is absurd to believe in Christ, and the psalms are full of laments at prayer's failure.¹ Many ethnographies describe doubt and uncertainty about spirits among the people who are being described; people say that spirits are inherently unknowable and cannot really be understood (e.g., Graeber, 2015). Even those who are committed

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to the reality of gods and spirits do not speak or behave as if they hold their religious beliefs in the same way that they hold matter-of-fact beliefs about the world (Lubrmann, 2020; Van Leeuwen et al., 2021). Christians, for example, may say that their god can do anything, but they never ask him to feed the dog.

To begin with phenomenology shifts attention away from the somewhat misleading emphasis on irrational belief toward events that are often deeply important in the lives of religious people: a sense of being spoken to, a spiritual vision, a feeling of presence.

Everyone Has Conflicting Intuitions About the Mind

All humans distinguish mind from world. This distinction takes on different forms and different meanings across cultural settings (Lillard, 1998, Lubrmann, 2011), but at a basic level, human societies accept that thoughts, feelings, and awareness are different from bodies and the material stuff of the world (Bloom, 2004). In a recent study across field sites in the United States, Ghana, Thailand, China, and Vanuatu, we documented differences in the way people carve up the world of mental life—but there was one striking commonality: Children and adults in all settings distinguished cognition (reasoning, thinking) from the more mundane aspects of bodily existence (hunger, pain, and the like; Weisman et al., 2021). We take this as adding to a long tradition of evidence that the experience of conscious awareness—the experience of having a mind, distinct from one's body and the rest of the material world—is phenomenologically basic for humans.

And yet, the nature of the relationship between mind and world is complicated. Most humans develop an understanding of ordinary perception in which, broadly speaking, people have openings in their body through which they gain an inner representation of an outer world—they see, they hear, they smell, and so forth. However, that basic model of the mind-world relationship does not make sense of firsthand experiences in which mindlike stuff—thoughts, insights, emotions, plans—seems to cross the mind-world boundary in other ways. A powerful dream can give one the sense of somehow having been visited by another person, perhaps a dead person, or a sense of having left one's body to go somewhere else. The anthropologist Edward Burnett Tylor (1871) thought that these experiences were so powerful that they were the basis for the human belief in spirits. Even when people are fully awake, if a mental image of someone comes to mind, they may feel as if that person wants something from them, even if that person is far away. When people feel deeply angry at someone who then gets hurt, they can

feel guilty and responsible. When they are suddenly filled with inspiration, they might feel that the spark came from outside. People seek out others who exude “positive energy,” avoid places with “bad vibes,” make wishes they hope will come true, and stare at a golf ball on a television screen to make it roll into a hole.

The very independence of human thought might suggest to people that not all their thoughts are their own. After all, thoughts often behave like wayward teenagers. People cannot stop their grief or joy or anger at will, nor can they control their anxious, tormenting, or obsessive worries, at least not without a great deal of work. The seeming independence of thought lies not only with the emotions, as anyone who has been told not to think of a pink elephant can attest. Thought may have what James (1890) called a quality of “myness,” but it certainly does not behave like something one owns or that follows one's intention, the way one can intend to raise an arm and then do it. In fact, many human experiences involve some sense of mental causation, as if thought could act on its own in the world of its own volition, as if thought had the power to alter the world directly without any actions on the thinker's part (Legare & Gelman, 2008).

Inspired by Taylor (2007), we call this intuition *porosity*: the idea that the boundary between mind and world is at least somewhat permeable, and that thoughts can cross over the boundary in ways that go beyond ordinary perception and action. Sometimes that crossing feels as if it carries information: When people talk about individuals who are “psychic,” they mean that those people know things that they could not perceive directly. Sometimes that crossing feels as if it carries power: When people talk about “cursing,” they can mean that one human's bad intention leaves that person's own mind and does harm upon another. Both information and power can be imagined to flow outward, as when someone sends a mental message or a curse out into the world; or the information or power can be imagined to flow inward from world to mind, as when the psychic receives a message, or when the cursed person is overcome with confusion, fear, or illness. In many cases, cultural ideas related to porosity might involve both inward and outward flow, such that mindlike stuff (information, power) is believed to pass out of one mind and into another, as when two people with an especially intimate connection—mother and daughter, twins—are understood to communicate entirely with their minds, or when one person is thought to curse another by inserting malevolent thoughts into the other person's mind.

We suggest that porous models of the mind-world boundary make more sense of certain aspects of the experience of thought—the feeling of traveling in a

Table 1. The Structure of Porosity, With Illustrative Examples and Questions Raised

Direction of flow	Content crossing the mind-world boundary	
	Information	Power
Outward	<p>Examples: A person sends a mental message out into the world without taking any material actions (e.g., a daughter sends a distress signal to her mother from a distance, a dying person speaks to his loved ones in a dream).</p> <p>Question raised: Could my thoughts and plans leak out into the world?</p>	<p>Examples: A person's thoughts, feelings, or intentions affect the world directly without the person taking any material actions (e.g., a witch curses someone with her stare, a person's prayer heals an ailing loved one).</p> <p>Question raised: Could my emotions affect the world without any action on my part?</p>
Inward	<p>Examples: A person receives information he or she could not have perceived directly (e.g., a spirit medium receives a message from the dead, a prophet receives a command from God, a psychic has a vision of the future).</p> <p>Question raised: Are my ideas and feelings my own?</p>	<p>Examples: A person's mind is influenced, positively or negatively, by immaterial forces (e.g., the recipient of a curse is overcome with confusion, fear, or illness; an artist is inspired; a person is possessed).</p> <p>Question raised: Could someone change my intentions and make me do something I would not otherwise do?</p>

dream, the spark of inspiration—than more mundane models of ordinary perception and action. In doing so, they also open up possibilities and raise questions that more mundane models leave closed (see Table 1). Can thoughts affect the world directly? According to the mundane model, they cannot—but if the mind-world boundary is porous, perhaps what one thinks has real consequences in the world no matter what one does. To whom do one's thoughts, feelings, ideas, and intentions belong? According a mundane model, they are obviously one's own—but if the mind-world boundary is porous, some of them might have been placed in one's mind by someone else (a loved one, an enemy, a witch, a muse). Are thoughts and feelings private? According to a mundane model, they are—but if the mind-world boundary is porous, someone might be able to gain access to one's mind and see one's innermost desires, plans, or fears; or perhaps one's thoughts might leak out into the world. Can one's mind exist outside of the body? According to a mundane model, it cannot—but if the mind-world boundary is porous, perhaps one's mind might become untethered from the body and travel through the world independently when one is asleep, or after one dies.

Porosity is not exotic. Notions of a porous mind-world boundary are documented not only in ethnographic work by anthropologists but also in psychological studies, even those limited to secular Westerners. For example, many American college students say they would hesitate to get on a plane after dreaming that a plane has crashed (Morewedge & Norton, 2009), or that they would be able to sense and be affected by strong emotions lingering in a room long after the person who

experienced them had left (Savani et al., 2011). At the same time, porosity is hardly obvious. All humans—not just secular Westerners—have intuitions that their thoughts and feelings are their own, that their minds are private, and that thoughts cannot affect the world unless they are put into action. In other words, the idea that the mind-world boundary is porous is at the same time both intuitive and counterintuitive.

Indeed, we argue that all humans have conflicting intuitions about the relationship between inner experience and outer world (see Table 2). These conflicting intuitions occur in diverse cultural settings. The privacy of the mind is a hallmark of post-Enlightenment Euro-American societies (Taylor, 2007), but many readers will relate to the intuition that individuals who are closely connected might somehow know each other's thoughts in times of trouble. Humans across diverse cultural settings appear to have deep intuitions that the mind is located in the body, and that when the body dies, so too does the mind (Astuti & Harris, 2008)—and yet many readers will have had the feeling that something of the mind of the dead person lives on. People might believe that they generate their own thoughts, and at the same time speak casually of thoughts “popping” into their minds, as if of their own accord. And although people might believe that thoughts are immaterial and ephemeral, and do nothing unless acted upon, when a friend faces difficulty, they might say, “My thoughts are with you,” as if those thoughts have power.

We suggest that different local social worlds offer people different invitations to attend to, interpret, and resolve these conflicting intuitions, so that people in some settings, compared with others, more confidently

Table 2. Some Conflicting Intuitions About the Porosity of the Mind-World Boundary

Dimension	Nonporous intuitions	Porous intuitions
Causation	My thoughts do not affect anyone else but me, and then they have effect only because I act because of them.	My thoughts cause consequences outside my body, either by providing knowledge to another mind directly or by affecting another mind or body directly.
Ownership	The contents of my mind are my own: All of my thoughts and feelings originate in me.	The contents of my mind are not always my own: Thoughts and feelings can be placed into my mind by others.
Privacy	The mind is private: Only I know what I am thinking and feeling unless I express it through my speech and actions.	The mind is not always private: Special people, under special circumstances, can gain direct, unmediated access to my thoughts and feelings, or my thoughts and feelings might leak out into the world.
Location	My mind is always located in my body. When my body dies, my mind dies.	My mind can leave to enter another body or to travel to another place. When my body sleeps or dies, my mind can leave the body and be somewhere else.

assert that the mind can exist outside the body (e.g., as a soul), that the mind is not entirely private (e.g., that spirits can read thoughts), that not all thoughts are self-generated (e.g., that dreams can convey knowledge of the future), and that thoughts can heal, curse, harm, and so forth, given the right conditions. We use the term “cultural invitations” to acknowledge that individuals are not required to hold these beliefs, but rather, these ideas are offered as ways of drawing inferences about how thought works. In some cultural and religious settings, people encounter strong and frequent cultural invitations to conceptualize the mind-world boundary as porous; these ideas facilitate the kinds of extraordinary sensory experiences that become so important to people of faith.

Porosity Is at the Heart of Magic and Religion

Porosity is at the heart of many spiritual experiences. Possession events occur when another mind is felt to replace a person’s own and take control of the body, so that the possessed person talks and behaves as another being (E. Cohen, 2007). People who report Holy Spirit experiences often report that they feel a great force, even a current, that comes from an external god and moves through their body (Taves, 2009). Those who hear a spirit speak often do not hear the voice speaking out loud but instead hear it in their own minds, as if another mind has placed words within them; even when the voice feels audible, they say that no one else can hear (Lubrmann, 2020).

Cultural invitations to porosity are central to most systems of magic and religion. People fear sorcerers because sorcerers can put thoughts into their minds—thoughts to give up, or to fall in love with the wrong person. They worry that “big” gods know what they are

thinking and can punish them (Norenzayan, 2013). An amulet becomes powerful because the magician acts and speaks with an intention that becomes somehow embedded in the object. A prayer becomes powerful because a human speaks words with intentions that move an invisible being to act. In both of these latter cases, the human actor might attribute the agency of the action to a god, or expect that special words and actions are necessary, but the human intention is always crucial. This has long been a puzzle to the secular perspective: A god may be understood to be omnipotent and omniscient, but the faithful understand that they need to pray with focused intention for the prayer to take effect.

We have found that porosity beliefs are directly related to the sensory and quasisensory experience of gods and spirits. In a large comparative project with adults in the United States, Ghana, Thailand, China and Vanuatu (Lubrmann et al., 2021), we operationalized porosity in two ways. Sometimes, we asked participants to respond to brief vignettes designed to elicit intuitions about porosity, including whether one person’s thoughts and feelings might have effects on other people (e.g., “Suppose that in a distant community, very much like this one, there’s a man named Charles; one day Charles realizes that his neighbor, Michael, is really, really angry at him. . . . Suppose Charles got sick after Michael got angry with him. Do you think Michael’s anger could be the cause?”). Other times, participants assessed whether certain porosity-related events do or do not happen, responding to belief statements that emerged directly out of fieldwork (e.g., “Spirits can use human thoughts and feelings to hurt people”; “Some people use special powers to put thoughts in other people’s minds and make them do something, like fall in love”). Both measures of porosity were highly reliable in each of the five countries and statistically differentiable from our

measures of spiritual experience overall; in addition, we observed robust patterns of group differences consistent with the idea that people in certain cultural and religious settings are exposed to and endorse more porous models of the mind-world boundary.

We found that the more an individual endorsed the idea of porosity, the more that individual also reported having felt the presence of a spirit, heard a voice, seen a vision, or experienced a range of other events people usually judge to be supernatural (Luhmann et al., 2021). This was true no matter how we assessed porosity; no matter whether we spoke with religious adults or secular adults; no matter whether we conducted in-depth, probing interviews, short face-to-face interviews, or pen-and-paper surveys; and no matter whether we spoke with Christians or with practitioners of traditional local religions. The more porosity people affirmed, the more they said that they had had vivid spiritual experiences. In some fundamental way, gods and spirits felt more real to them.

We argue that an understanding of the mind-world boundary as porous facilitates experiences in which that boundary appears to be crossed. A skeptic might reasonably ask whether the causal relationship should be reversed: whether spiritual experience might lead someone to infer that the mind-world boundary is porous. To this skeptic, we would reply that, in most people's lives, cultural beliefs precede spiritual events. People are socialized from an early age into a social world in which people have various expectations about how thoughts work and about whether some people, in some circumstances, have thoughts that enter other people's bodies, or are able to know what others are thinking even if those others do not tell them. Many of the striking spiritual experiences that motivated our work on this topic have been reported by adults (James, 1902/1935; Luhmann, 2020; Taves, 2009). Although the arrow of causality is almost certainly bidirectional, it seems likely that culturally supported beliefs about thoughts play an important causal role for many people.

Absorption and Practice Allow People to Engage With Porous Possibilities

Yet culturally supported beliefs about the mind do not fully determine the way people think about thinking. People switch between modes of thought when they go to school and to church. Deeply religious people function perfectly well with secular colleagues at work. In fact, most people live with a cognitive flexibility around the relationship of their faith to the everyday. They do not allow their faith commitment to the world as it should be to violate the reality constraints of the world as it is. A famous Islamic hadith asks whether

one should tie up one's camel or leave the camel untied and trust in Allah. Trust in Allah, the hadith says, but do not forget to tie up your camel (Tirmidhi, 1900, Hadith 2517).

In our work, at least two other factors beyond beliefs about porosity seem to affect whether someone experiences gods and spirits because, we believe, they help the porous interpretation of mind to feel more plausible. They allow people to switch more readily into a religious model of thinking.

The first factor is *absorption*, an immersive orientation toward experience. The capacity for absorption is usually measured by responses to a 34-item scale that explores whether people can "lose themselves" in their sensory experiences, whether they capable of conjuring up vivid events in their imagination, whether they ever experience the world the way they did as a child, and so on (Tellegen & Atkinson, 1974). In the five-country study described earlier, absorption was independently associated with reports of spiritual-presence events even after we statistically controlled for people's endorsement of porosity beliefs, and this relationship held true both across all field sites and within each of these diverse cultural and religious settings considered alone (Luhmann et al., 2021; see also Lifshitz et al., 2019; Luhmann et al., 2010). We think that the absorption scale captures two kinds of capacities: (a) an ability to temporarily suspend reality testing and to experience without any immediate judgment about whether what is experienced is real and (b) an ability for vivid mental imagery and a sensorially rich inner world. Together, they would have the effect of allowing people to engage deeply, vividly, and without skepticism with the more porous side of their conflicting intuitions about the mind and world.

The second factor is practice in prayer and ritual, which we have found to increase the frequency of spiritual-presence events and the sense of the realness of gods and spirits (Luhmann et al., 2013). Many prayer practices involve cultivation of an inner sense through repeated use of inner-sensory imagery. Sometimes such cultivation is implicit, as in many evangelical prayers in which people talk to God, stand in God's throne room, invite Jesus into the room, and so forth. Sometimes—as in shamanic practice, Buddhist meditation, and Ignatian prayer—this cultivation is explicit. In Tibetan Buddhism, for example, practitioners are given specific mental images to hold and transform in their minds (Beyer, 1978). Practitioners report that with practice, their mental imagery feels sharper. (Indeed, experimental work has found that these practices do result in more vivid mental imagery; e.g., Lutz et al., 2009). Practice also likely allows people to overcome their own hesitations about whether gods and spirits, even if they exist, actually respond to

their prayers and invocations. All-night drumming ceremonies, elaborate initiations, and playful engagements such as having coffee with Jesus likely lead participants to more willingly sidestep their expectations about an ordinary world and to feel that the gods are there (Boyer, 2013). In this sense, prayer and ritual may train the capacity for absorption, although more work is needed to establish the relationship between the two.

Both the trait of absorption and the practice of prayer and ritual may allow people to navigate their conflicting intuitions about porosity, to engage with their more porous intuitions, and to experience in the moment without assessing strictly whether what they have experienced is real.

Conclusions

This, then, is our theory, grounded in the phenomenology of spiritual experience. All humans distinguish between inner experience and the outer world, and yet they have conflicting intuitions about the relationship between the two. Different social worlds offer different cultural invitations for resolving these conflicts, and people are able to engage more deeply, more vividly, and less skeptically with the more porous side of these intuitions when they have a greater personal capacity for absorption and a sustained practice of prayer and ritual. The more deeply and vividly people engage with a porous model of the mind, the more likely they are to have the kinds of remarkable sensory experiences that are often deemed spiritual and the more they feel that gods and spirits are truly present.

Recommended Reading

- Harris, P. L. (2015). *Trusting what you're told*. Harvard University Press. A comprehensive argument that children have a realist orientation to their world and that they acquire supernaturalist ideas from listening to the talk of adults.
- James, W. (1935). (See References). The classic text on the phenomenology of spiritual experience.
- Lillard, A. (1998). (See References). The first psychological text to document the range of models of mind across cultures.
- Luhrmann, T. M. (2020). (See References). The book that provides the broader background for this article's discussion of absorption and training in spiritual practice.
- Luhrmann, T. M. (Ed.). (2020). Mind and spirit: A comparative theory [Special issue]. *Journal of the Royal Anthropological Institute*, 26(S1). A collection of articles that presents the broader background for this article, including the scholarly context and an in-depth ethnographic summary of spiritual experience and models of mind in different settings.

Transparency

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Note

1. Examples include Mark 3–5 and Psalms 22 and 88 (for illustration, see *King James Bible*, 1611/2022).

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