Feeling Is Believing: Inspiration Encourages Belief in God

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Abstract

Even without direct evidence of God's existence, about half of the world's population believes in God. Although previous research has found that people arrive at such beliefs intuitively instead of analytically, relatively little research has aimed to understand what experiences encourage or legitimate theistic belief systems. Using cross-cultural correlational and experimental methods, we investigated whether the experience of inspiration encourages a belief in God. Participants who dispositionally experience more inspiration, were randomly assigned to relive or have an inspirational experience, or reported such experiences to be more inspirational all showed stronger belief in God. These effects were specific to inspiration (instead of adjacent affective experiences) and a belief in God (instead of other empirically unverifiable claims). Being inspired by someone or something (but not inspired to do something) offers a spiritually transcendent experience that elevates belief in God, in part because it makes people feel connected to something beyond themselves.

Keywords

religious beliefs, judgment, cognitions, open data, open materials

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A belief in God is a leap of faith—a supposition based not on straightforward empirical proof but on an intuitive guess that there is a superior, powerful supernatural being that reigns over the universe. Although philosophers have tried for centuries to concoct logical proof of God's existence (or nonexistence), for most laypeople, God beliefs develop less systematically. In fact, people with a more analytic cognitive style are less likely to be believers (Pennycook, Cheyne, Seli, Koehler, & Fugelsang, 2012). Theists often arrive at their belief system not rationally but experientially (Shenav, Rand, & Greene, 2012)—for example, through powerful "conversion experiences" or seemingly inexplicable sensory experiences (Davies, Griffin, & Vice, 2011).

Previous research has identified several correlates of theism, religiosity, and spirituality. The religious have been shown to be higher in prosociality (Norenzayan & Shariff, 2008) and psychological well-being (Smith, McCullough, & Poll, 2003). Psychologists and philosophers have argued that people attach themselves to religious faith in order to satisfy specific needs. Religion is enticing, in part, because it can provide a refuge for the socioeconomically distressed (Wimberley, 1984), offer a sense of belonging for those who have suffered affiliative setbacks (Aydin, Fischer, & Frey, 2010), reduce an aversive sense of uncertainty about the world (Hogg, Adelman, & Bagg, 2010), help explain the inexplicable (Mynchenberg, 2000), and serve to buffer existential anxiety (Norenzayan & Hansen, 2006).

Instead of adding to the list of needs that theism satisfies, we instead probed more deeply the experiential origins of belief in God. When direct empirical verification of a claim is currently impossible, we posit that people are persuaded by *experiential evidence* intuitions, feelings, or experiences that are consistent with (even if they do not necessitate) the claim's truth. Below, we argue that feeling inspired may encourage a belief in God because inspiration offers a transcendent experience that produces feelings of connection to something greater than the self. Such feelings are phenomenologically consistent with God's existence

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Inspiration itself is a broad construct that includes motivational components (feeling inspired to . . .), but-more relevant for our argument-feelings of transcendence that accompany being inspired by someone or something (Thrash & Elliot, 2003, 2004). When inspired, one transcends the self-a spiritual experience that turns attention outward to something better than ordinary concerns, something profound (Thrash & Elliot, 2003). By encouraging self-transcendence, inspiration fosters connection (Hart, 1998; Stephan et al., 2015). Durkheim (1912/1995) argued that religion is legitimated through moments of collective effervescence-inspirational episodes that emerge in social contexts, encouraging experiencers to feel bound to others, thereby deepening their religious commitment (Shilling & Mellor, 1998). According to one understanding, such inspiration-created connectedness may have a local affiliative effect-reinforcing relationships among believers during religious ritual. But according to the experiential-evidence account, transcendence fuels feelings of broader connectedness-both to fellow man and something grander-even when experienced outside of overtly religious contexts. Belief in God entails seeing all of humanity and the universe as an integrated whole, connected by an omnipotent creator (Krause & Hayward, 2015; Sundararajan, 2002). Transcendence-fueled connectedness offers experiential support for these possibilities, explaining why inspiration gives phenomenological plausibility to God.

The experiential-evidence account emphasizes how certain feelings (transcendence, connectedness) permit the sensing of God, thereby differentiating itself from a purely cognitive spreading-of-activation accountthat the conceptual accessibility of inspiration primes thoughts of God and of God's existence. Our account is more specific than a *mood-congruence* account (Johnson & Tversky, 1983), which would argue that inspiration-as a positive affective state (Thrash & Elliot, 2003)-elevates belief in positively valenced entities, of which God may be one. Our proposal is also distinct from emotion-specific congruence (DeSteno, Petty, Wegener, & Rucker, 2000): Such effects emerge when people experience emotion X (e.g., anger) and conclude that "the world is an X place," therefore X things (e.g., dishonest car transactions) occur frequently. Not only has inspiration been said not to be an emotion (Clore, Ortony, & Foss, 1987) but also our focus is not on the frequency of inspirational episodes. We argue that a component (transcendence) and consequence (connection to something greater) of inspiration are themselves phenomenologically consistent with Critcher, Lee

and thus supportive of an otherwise unknowable claim. When DeSteno et al. (2000) showed that anger enhances the perceived frequency of car dealers selling lemons, it was because angry people feel that the world is an unfair place where things happen to make them angry, not because anger helps people sense the sellers' presence.

Study 1a

In Study 1a, we tested whether people who dispositionally feel more inspiration (but not necessarily chills, another intense emotionally laden experience) are also more confident in God's existence. For exploratory purposes, we also measured participants' conception of God as loving (vs. controlling). This measure allowed us to test whether the relationship between dispositional inspiration and belief in God would be dependent on a particular conception of God or would be robust to such variation.

Method

Participants. Three hundred fifty-seven undergraduates at the University of California, Berkeley, participated online. They completed this study as part of a pretest for an unrelated study. We prespecified a certain amount of time during which we would run the lab study (until the end of the semester). Research assistants—who precommitted to work on the study from 5 to 10 hr a week—would try to recruit as many participants as they could in that time. Participants received course credit or \$15 for completing both the web-based and (unrelated) lab portions.

Procedure. All participants completed the Dawkins (2006) belief-in-God scale and the loving-versus-controlling-God scales (in a counterbalanced order) before completing measures of participants' tendency to experience inspiration as well as the chills (also in a counterbalanced order).

Dawkins belief-in-God scale. Dawkins (2006) developed seven statements that reflect a continuum between a definitive belief that God does not exist (atheism) and a certainty that God exists (theism). We rephrased each of Dawkins's items so it appeared to reflect another person's characterization of their own belief in God. For example, the middle-of-the-road item read, "God's existence and non-existence are exactly equiprobable." Participants were given the instructions, "Compared to these people, how certain are you in God's existence?" For each statement, participants responded on a 5-point scale: *a lot less certain* (1), *somewhat less certain* (2), *about how I feel* (3), somewhat more certain (4), and a lot more certain (5). In this way, regardless of the content of the statement (or even whether Dawkins ordered the statements accurately), higher numbers reflect stronger belief in God ($\alpha = .84$).

A loving (vs. controlling) God. We used Benson and Spilka's (1973) 10 semantic differential items that assessed whether people conceived of God as loving versus controlling. Participants responded to the prompt, "Independent of whether you believe in God, report what your image of 'God' is." All responses were made on 7-point scales with only the end points of 0 and 6 labeled. Five items measured whether God was perceived to be loving (e.g., loving vs. hating), and another 5 items measured whether God was perceived as controlling (e.g., demanding vs. not demanding). We reverse-scored items such that higher and lower scores reflected a greater perception of God as loving or controlling, respectively (α = .87).

Inspiration. To measure participants' typical experience with inspiration, we used four items from Thrash and Elliot's (2003) eight-item inspiration scale. Participants saw two general inspiration prompts (i.e., "I experience inspiration" and "I feel inspired") and answered the same two questions about each prompt: "How often does this happen?" and "How deeply or strongly?" Participants responded to the items on 7-point scales anchored at 1 (*never/not at all*) and 7 (*often/very deeply or strongly*). The measure had good internal reliability ($\alpha = .86$). The other four items, which relate to the distinction between byinspiration and to-inspiration, were used in later studies.

The chills. Maruskin, Thrash, and Elliot (2012) determined that two higher-order factors define the experience of "the chills": *goosetingles* and *coldshivers*. Goosetingles derives from a combination of goosebumps and a tingling sensation, whereas coldshivers reflects a mix of coldness and a literal physical shake. Maruskin et al. (2012) supplied five-item scales for each. For the goosetingles and coldshivers scales, we prompted participants with "How often do you experience the following sensations of getting goosebumps or positive tingling sensations?" and "How often do you experience the following sensations of experiencing a coldness or shivering in response to a negative emotionally evocative event?" respectively. Responses to the goosetingles (e.g., "feel hairs stand-onend somewhere on my body") and coldshivers (e.g., "feel myself shiver or shake") items were made on 9-point scales: never or almost never (1), every few years (2), about once a year (3), every few months (4), about once a month (5), about once a week (6), every few days (7), about once a day (8), and a few times a day (9). Participants saw the goosetingles ($\alpha = .90$) and coldshivers ($\alpha =$.89) scales in a counterbalanced order.

Results

First, and as predicted, the more participants reported feeling inspired in their day-to-day lives, the more strongly they believed in God, r(344) = .22, p < .001, 95% confidence interval (CI) = [.11, .31]. But belief in God was correlated neither with the frequent experience of goosetingles, r(350) = .06, 95% CI = [-.05, .16], nor coldshivers, r(342) = .04, 95% CI = [-.07, .14], ps > .26 (see Table 1 for all correlations). In addition, when partialing out the influence of both goosetingles and coldshivers, we found that the correlation between inspiration and belief in God remained significant, partial r(333) = .20, p < .001, 95% CI = [.10, .30].

Second, we wanted to determine whether the correlation between inspiration and belief in God depended on how people conceived of God—that is, as a positive, loving figure or as a negative, controlling authority. We regressed belief in God on inspiration (standardized),

Measure	1	2	3	4	5
1. (Dispositional) inspiration					
2. Belief in God	.22***				
	[.11, .31]				
3. Goosetingles	.30***	.06			
	[.20, .39]	[05, .16]			
4. Coldshivers	.20***	.04	.59***	—	
	[.10, .30]	[07, .14]	[.52, .65]		
5. God is loving (vs. controlling)	.20***	.37***	.10	04	_
	[.10, .30]	[.27, .46]	[01, .20]	[14, .07]	

Table 1. Correlations Between Measures From Study 1a

Note: Values in brackets are 95% confidence intervals. ****p* < .001.

conception of God as loving versus controlling (standardized), and their two-way interaction. By standardizing the inputs, each main effect reflected the average main effect across the sample (given that it was conditional on the other predictor's average value). A strong main effect of conception of God suggested that people who are more confident that God exists tend to see God as relatively more loving than controlling, $\beta = 0.33$, 95% CI = [0.23, 0.43], t(337) = 6.53, p < .001. But a continued main effect of inspiration showed that even when accounting for individual differences in how God was conceived, more feelings of inspiration predicted greater belief in God, $\beta = 0.15$, 95% CI = [0.05, 0.25], t(337) = 2.95, p = .003.

Finally, the Inspiration × Loving Conception of God interaction was not significant, $\beta = 0.05$, 95% CI = [-0.05, 0.15], t(337) = 1.07, p > .28. This shows that even though believers saw God as more of a loving figure than did nonbelievers, inspiration predicted increased belief in God regardless of whether people conceived of God in a positive or negative way. This suggests it is unlikely that the connection between inspiration and belief in God is a mood-congruence phenomenon.

Study 1b

In Study 1b, we extended Study 1a in two primary ways. First, we wanted to make certain that people who felt more inspiration were not simply more confident in the existence of any unverifiable possibility (e.g., the existence of life on other planets). Second, we included a second measure of belief in God—one that has been used in previous research (Shenav et al., 2012).

Method

Participants. Three hundred ninety-three undergraduates at the University of California, Berkeley, completed the study in the lab. We followed the same guidelines for sample-size determination as in Study 1a, running as many participants as research assistants' schedules would allow before the end of the academic semester.

Procedure. Participants completed two measures from Study 1a: the Dawkins belief-in-God scale ($\alpha = .75$) and the four-item dispositional-inspiration measure ($\alpha = .93$). We added three additional measures: two (control) belief scales modeled after the Dawkins belief-in-God scale, as well as two items from Shenav et al.'s (2012) belief-in-God measure. All measures except the inspiration measure were completed first, in a random order. After an unrelated 15-min study, participants completed the inspiration measure.

Other (control) belief scales. We created two belief scales that paralleled in form the Dawkins belief-in-God scale: one measuring belief in life on other planets and the other measuring belief in the spread of democracy. For each scale, participants saw seven statements that expressed increasingly certain beliefs that life existed on other planets or that democracy would spread. Each statement was designed to parallel the corresponding Dawkins belief-in-God measure as closely as possible. For example, the item, "I cannot know for certain but I think God is very improbable and I live my life under the assumption that he is not there," was transformed to "I cannot know for certain but I think [life on other planets is very improbable/democracy is very unlikely to spread] and I live my life under the assumption that [no such life is there/democracies will not spread]." Both the scale measuring belief in life on other planets ($\alpha = .69$) and the scale measuring belief in the spread of democracy $(\alpha = .72)$ had reasonable internal reliability. Note that both scales measure belief in unverifiable possibilities. One belief-that democracy is likely to spread-is presumably a positive event. This will help again in differentiating the experiential-evidence and mood-congruence accounts.

Shenav belief-in-God measure. Shenav et al. (2012) used a five-item belief-in-God measure. Three of their items did not measure religious belief in the moment, however, but instead measured participants' history with religion. We retained the items that asked about participants' beliefs in the moment. After reading the prompt, "When you consider your beliefs about the existence of God and an immortal soul, to what extent would you consider yourself a confident atheist or a confident believer?" participants saw the prompts "on the existence of God" and "on the existence of an immortal soul." Participants responded to each on 7-point Likert-type scales ranging from 1 (*confident atheist*) to 7 (*confident believer*). The two items were very highly correlated, r = .81, and thus were averaged.

Results

First, and replicating Study 1a, participants who tended to be more inspired were those who showed a stronger belief in God—both on the new Shenav et al. measure, r(379) = .22, p < .001, 95% CI = [.12, .31], and the previously used Dawkins measure, r(379) = .10, p = .054, 95% CI = [-.00, .20]. (See Table 2 for all correlations.)

Second, we tested whether participants who felt more inspired were in general more confident in other uncertain or positive possibilities. Contradicting this possibility, inspiration correlated neither with belief in

Measure	1	2	3	4	5
1. (Dispositional) inspiration					
2. Belief in God (Dawkins)	.10 [†] [00, .20]	_			
3. Belief in God (Shenav)	.22*** [.12, .31]	.49*** [.41, .56]	—		
4. Belief in life on other planets	.02 [08, .12]	.19*** [.09, .28]	13** [23,04]	_	
5. Belief in spread of democracy	.01 [09, .11]	.26*** [.16, .35]	.03 [07, .13]	.33*** [.24, .42]	_

Table 2. Correlation Between Measures From Study 1b

Note: Values in brackets are 95% confidence intervals. $^{\dagger}p < .06$. $^{**}p < .01$. $^{***}p < .001$.

life on other planets, r(379) = .02, p = .756, 95% CI = [-.08, .12] nor with belief in the spread of democracy, r(379) = .01, p = .776, 95% CI = [-.09, .11]. If dispositional inspiration correlated with belief in God because it makes affectively positive possibilities seem more probable (as a mood-congruence account would anticipate), we would have expected the latter correlation to be significant. Furthermore, controlling for both of these scales did not disrupt the relationship between the measure of inspiration and the (similarly formatted) Dawkins belief-in-God measure, partial r(377) = .10, p = .057, 95% CI = [-.00, .20], or the Shenav measure, partial r(377) = .23, p < .001, 95% CI = [.13, .32].

Study 2

Whereas Studies 1a and 1b revealed that frequent experiences of inspiration predict belief in God, in Study 2, we probed the causal question by asking participants to relive inspirational or noninspirational episodes. This allowed us to test whether recent, salient experiential evidence enhances belief in God. Furthermore, we aimed to localize the effects of inspiration on belief in God to the transcendent (feeling inspired by someone or something) as opposed to the motivational (feeling inspired to do something) component (Thrash & Elliot, 2004). In Study 2, we had participants relive experiences from their own pasts that they identified as "inspired by," "inspired to," or emotionally neutral episodes, and then we assessed their belief in God.

Method

Participants and design. Given our interest in achieving a large sample size, we recruited participants from both an undergraduate subject pool at the University of California, Berkeley (n = 94), as well as Amazon's Mechanical Turk (MTurk; n = 113) simultaneously. Because the

study began late enough in the academic semester, it was clear that following Studies 1a and 1b's sample size, determination guidelines would not be sufficient. The MTurk sample size was determined by taking the funding lab's monthly MTurk budget and dividing it among studies being run online that month. This split was not done evenly, but instead studies were weighted according to how many conditions they had and whether they were being run entirely online. Each of the 207 participants was randomly assigned to one of three conditions: *inspiredby, inspired-to*, or a *neutral* control condition.

Procedure. Each participant was randomly assigned to write about and relive a memory characterized by one of three experiences: feeling inspired by something or someone; feeling inspired to do something; or feeling neutral, emotionally calm, and even mildly bored. The advantage of such manipulations (DeSteno et al., 2000; Strack, Schwarz, Gschneidinger, 1985) is that they should assure that participants relive experiences that actually evoke inspiration for them. Next, they completed the seven-item Dawkins belief-in-God measure used in the previous studies (α = .80). We measured baseline belief in God using the two-item Shenav belief-in-God measure used in Study 1b (r = .75). Whereas Study 1b's Shenav belief-in-God items were assessed using a 7-point scale, participants in Study 2 responded on a 10-point scale with the end points 1 (confident atheist) and 10 (confident believer).

For exploratory purposes, we assessed the extent to which participants had rational and intuitive thinking styles. Berkeley participants completed the baseline belief-in-God measure and the measures of rational and intuitive thinking at least 24 hr before coming to the lab. MTurk participants completed the same baseline belief-in-God measure immediately before the main experiment and the measures of rational and intuitive thinking immediately after the experiment. Analyses using the thinking-style measures are reported in the Supplemental Material available online.

Participants in both inspiration conditions first received a definition of "inspiration" that was adapted from the Oxford English Dictionary: "Inspiration is defined as 'a breathing in or infusion of some idea, purpose, etc, into the mind; the suggestion, awakening, or creation of some feeling or impulse, especially of an exalted kind.'" At that point, the instructions differed by condition. The language and descriptions used in each inspiration manipulation were guided by Thrash and Elliot's (2004) development of the two constructs.

Participants in the inspired-by condition were asked to recall a time that they felt inspired by someone or something, not a time in which they felt inspired to do something:

Please think about a time when you were inspired by someone or something. When we say "inspired by," we do not mean you were specifically inspired to do something. Instead, we mean that someone or something awakened in you an exalted feeling—an appreciation of something grand beyond your ordinary capacities, an experience that carried you beyond mundane concerns of everyday life to experience something important and beautiful.

Those in the inspired-to condition received instructions that asked them to think of a time in which they were inspired to do something. Although to-inspiration typically has its origin in by-inspiration (one is inspired by something or someone to do something), our manipulation focused people on the inspired-to elements:

Please think about a time when you were inspired to do something. When we say "inspired to," we do not mean you were simply inspired by something or someone. We instead also mean a time when you felt strong enthusiasm to go beyond your ordinary capacities; an energizing moment when you were highly motivated to overcome your challenges and pursue your goals and reach your dreams; a time when you felt an exalted feeling of passion.

Much as Thrash and Elliot (2004) used a "normalexperience" control condition in understanding what differentiated inspirational episodes, we used a neutralcontrol condition that relied on this prompt: "Please think about a time when you felt emotionally calm and neutral, and perhaps even mildly bored." In all three conditions, participants were first asked to type a few words that would identify what the experience was.

On the next page, participants in all conditions were prompted to write "a detailed and vivid description of the experience." To encourage participants to literally recreate the feelings in the moment, we continued the instructions as follows: "While writing it, try to relive the way you felt [inspired by something/inspired to do something/calm and neutral] during the experience." Participants were told that they would not be able to proceed to the next screen for 3 min and to "please do your best to write for all three minutes."

We conducted a validation study on MTurk (n = 64). As reported in the Supplemental Material, the manipulations worked as intended, encouraging people to recall and relive episodes that differed in by-inspiration and to-inspiration but not positive emotions. For our main study, we also identified the participants who discussed God in their recollections (n = 15). All effects reported below that are significant at p < .05 remained so with these 15 participants excluded. We discuss this issue more fully, as well as provide a reanalysis of the data from Study 3 applying the same exclusion, in the Supplemental Material. In Study 4, we skirted this issue by exposing participants in the inspiration condition to the same nonreligious content.

Results

Given that we had clear a priori predictions concerning how our manipulations should influence belief in God, we tested our hypotheses using a pair of contrast codes. According to our predicted contrast, participants who relived an inspired-by experience (2) should show elevated belief in God compared with those who relived an inspired-to experience (-1) or a neutral experience (-1). Our models controlled for and tested the orthogonal contrast-inspired-to (1), inspired-by (0), neutral (-1)-whose statistical significance would call into question the goodness of fit of the predicted contrast. We regressed the postmanipulation (Dawkins) beliefin-God measure on the two contrasts and the premanipulation (Shenav) belief-in-God measure. The predicted contrast was significant, $\beta = 0.16$, 95% CI = [0.04, 0.28], t(203) = 2.66, p = .009. The orthogonal contrast did not achieve significance, $\beta = 0.03$, 95% CI = [-0.09, 0.15], t < 1.

Did the inspiration manipulation elevate belief in God for all participants, or did it particularly have this effect for those who tended to (or not to) already believe in God? We first standardized the baseline belief-in-God measure. We then created 2 two-way interaction terms that reflected the product of each contrast code with the premanipulation, baseline

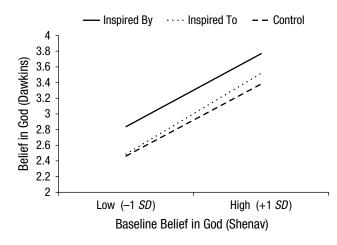


Fig. 1. Belief in God by condition for participants in Study 2 whose baseline belief in God was low (-1 *SD*) or high (+1 *SD*).

belief-in-God measure. Neither the Baseline Belief in God × Predicted Contrast interaction, $\beta = -0.01$, 95% CI = [-0.14, 0.12], t < 1, nor the Baseline Belief in God × Orthogonal Contrast interaction, $\beta = 0.02$, 95% CI = [-0.10, 0.14], t < 1, was significant. In other words, even though premanipulation belief in God strongly predicted postmanipulation belief in God, $\beta = 0.49$, 95% CI = [0.37, 0.62], t(201) = 7.98, p < .001, reliving an inspired-by experience enhanced belief in God for believers and skeptics alike. The predicted means by condition for participants 1 standard deviation above and below the baseline belief mean are presented in Figure 1.

Study 3

In Study 3, we replicated the inspired-by and control conditions from Study 2 but extended that study in three ways. First, participants reported on the degree of inspiration and emotion they experienced during the manipulation. Establishing mediation through inspiration, but not adjacent affect-laden states, would (a) establish the importance of inspiration in elevating belief in God and (b) make nonparsimonious the non-experiential, cognitive account that the inspiration manipulation only primes a belief in God. Although making concepts accessible may make them more cognitively available, it is unclear why they would enhance confidence in their existence, especially given that the belief-in-God measures themselves much more directly prime the God concept.

Of course, establishing the importance of the inspiration experience to our effects would do little to test our account of how inspiration operates. Toward this second goal, we included measures of spiritual *transcendence* (Pekala, 1991) and *connectedness*. The former was used by Thrash and Elliot (2004) to measure the core component of by-inspiration most relevant to our account. The latter is a new measure we created to capture the feeling of connectedness to something greater. We argue that transcendence evokes connectedness, which offers experiential evidence of God.

Third, we wanted to empirically differentiate our findings from those of Valdesolo and Graham (2014), who found that awe—an inspiration-related emotion elevates belief in God through an intolerance of uncertainty. Also, one unique signature of awe is a feeling of personal insignificance, a small self (Bai et al., 2017; Keltner & Haidt, 2003; Piff, Dietze, Feinberg, Stancato, & Keltner, 2015; Shiota & Keltner, 2007; Spilka, Hood, & Gorsuch, 1985). We added Valdesolo and Graham's awe manipulation and these awe-related mediators to explore similarities and differences with past research.

Method

Participants. A total of 2,369 Americans recruited via Amazon's MTurk participated in exchange for nominal monetary compensation. Each participant was randomly assigned to an inspired-by, awe, or neutral control condition. One hundred twenty participants failed an attention check that asked them to identify the manipulation to which they had been exposed. This left 2,249 participants in all results reported below. The interested reader may wish to consult Supplemental Material, Study A, the exploratory study for which Study 3 played a confirmatory role. Although Study A's sample size had been determined using the rule for online studies laid out in Study 2, we devoted a month of MTurk resources to the confirmatory replication, Study 3.

Procedure. The inspired-by and neutral control condition manipulations were essentially the same as those used in Study 2 (see the Supplemental Material for the slightly modified wording), but in this case we did not measure baseline belief in God. In this way, we made no reference to our study's focus in advance of the manipulation. Although this vastly reduced the statistical power of our tests (thus explaining one reason why particularly large sample sizes are wise), it means participants were entirely naive to our study's purposes when they completed the manipulations. Participants had to spend at least 3 min writing about and reliving their experience.

The awe manipulation was that used by Valdesolo and Graham (2014), a 5-min excerpt of the BBC's *Planet Earth* documentary. Because we wanted to replicate previous manipulations—our own writing manipulation and Valdesolo and Graham's (2014) video manipulation—to understand similarities and differences in how and why these inspiration and awe manipulations influence belief in God, we intentionally left in the difference in form between the manipulations (writing or video). We report a study in the Supplemental Material (Study B) that tested the consequences of watching a video that prompts inspiration and one that encourages awe. This allowed us to more carefully explore inspiration and awe's similarities and differences in how they affect belief in God.

Participants then completed five measures in a random order: intolerance of uncertainty, spiritual transcendence, connectedness and personal insignificance (always paired together), and belief in God. The beliefin-God measure was the 10-point, two-item Shenav composite (r = .77) used (as the baseline belief-in-God measure) in Study 2. Finally, participants completed measures describing what emotions they experienced in the lab while engaging in the writing or video task. More details on these measures are included below.

Intolerance of uncertainty. The intolerance-of-uncertainty measure consisted of the nine items from the ambiguity subscale from the Need for Closure scale (Webster & Kruglanski, 1994). Participants responded to each item on a 6-point scale with the following labels: 1 (*strongly disagree*), 2 (*moderately disagree*), 3 (*slightly disagree*), 4 (*slightly agree*), 5 (*moderately agree*), and 6 (*strongly agree*). An illustrative item—the one with the highest loading—is "I feel uncomfortable when someone's meaning or intention is unclear to me." The scale had good internal reliability ($\alpha = .77$).

Transcendence. Participants responded to four items from the Meaning subscale of Pekala's (1991) Phenomenology of Consciousness inventory ($\alpha = .81$). Following Thrash and Elliot (2004), we label this spiritual transcendence. For each item, participants read two statements (Statement A and Statement B) that could characterize how they felt during the recall task. Participants indicated their relative agreement with the two propositions on 7-point scales ranging from 1 (*entirely Statement A*) to 7 (*entirely Statement B*). The midpoint of 4 was labeled "*Statement A and Statement B equally*." The highest loading item reflected agreement with "I experienced very profound and enlightening insights of certain ideas and issues" as opposed to "I experienced no profound insights besides my usual cognitive understanding of things."

Connectedness and personal insignificance. To assess connectedness and personal insignificance, we included six items that were written for the purposes of this research. Participants were asked to think about "how you feel in this moment" and to indicate whether each of six sentiments was aroused in them. The six statements appeared in a random order. Participants responded on 7-point scales ranging from 1 (*definitely not*) to 7 (*definitely yes*). The midpoint of 4 was labeled "*Somewhat*."

We submitted the six items to an exploratory factor analysis with varimax rotation to make sure they divided into two factors as expected. And indeed, each item loaded on the intended factor (all loadings > .81). Four items loaded on a connectedness factor ($\alpha = .86$): "I feel connected to those around me"; "I feel connected to the human race"; "In this moment, I feel a part of something bigger than myself"; and "I feel connected to something larger than or beyond myself." Two items related to *personal insignificance* (r = .53): "I feel small in the grand scheme of the universe" and "In this moment, I very much feel I am simply one among many in the world."

Experiences during the manipulation. Participants were exposed to the general inspiration, by-inspiration, to-inspiration, awe, and positive emotion prompts used to validate the manipulations in Study 2. But instead of asking participants to characterize their feelings during the event they recalled, we asked participants how they felt while reliving the experience or watching the video. That is, participants were prompted with, "When you wrote about the episode [watched the video clip] a few minutes ago, to what extent did you just then feel . . ." We saw strong correlations between the measures assessing general inspiration (r = .82). The positive emotion scale showed good internal reliability ($\alpha = .73$).

Results

Whereas Study 2 used three conditions for which we had a priori predictions about how they would influence belief in God, in Study 3, our a priori predictions centered only on the inspired-by and control conditions. That is, we included an awe condition to determine whether any effect awe may or may not have on belief in God occurs for a similar or dissimilar reason (i.e., operates through the same or different candidate mediators) than inspiration's elevation of belief in God, the finding we did expect to replicate. That said, to maximize our power in testing how candidate mediators operated on belief in God, we used a single model with dummy variables (for the inspiration and awe manipulations). To begin, we regressed belief in God on the two dummy codes. The full results and two other primary regression models are presented in Table 3.

Replicating our earlier results, Study 3 showed that reliving an inspired-by experience prompted a stronger belief in God (M = 7.05, SD = 2.97) than did reliving a neutral experience (M = 6.63, SD = 3.04), $\beta = 0.06$, 95%

Predictor	Model 1			Model 2			Model 3		
	β	t	95% CI	β	t	95% CI	β	t	95% CI
Condition dummy codes									
Inspired-by	0.06	2.51*	[0.01, 0.11]	-0.12	-4.32***	[-0.17, -0.06]	-0.16	-6.43***	[-0.21, -0.11]
Awe	0.01	< 1	[-0.03, 0.06]	-0.09	-3.28**	[-0.15, -0.04]	-0.12	-5.16***	[-0.17, -0.08]
Manipulation checks									
Inspiration (general)				0.07	2.02*	[0.00, 0.15]			
Positive emotions				0.10	4.04***	[0.05, 0.15]			
By-inspiration				0.23	6.29***	[0.16, 0.30]			
To-inspiration				0.01	< 1	[-0.06, 0.07]			
Awe				-0.01	< 1	[-0.07, 0.05]			
Potential mediators									
Spiritual transcendence							0.23	9.61***	[0.18, 0.28]
Connectedness							0.33	14.03***	[0.28, 0.37]
Personal insignificance							-0.09	-4.63***	[-0.13, -0.05]
Intolerance of uncertainty							0.05	2.83**	[0.02, 0.09]

Table 3. Results of the Regression Analyses Predicting Belief in God (Study 3)

Note: CI = confidence interval.

p < .05. p < .01. p < .001.

CI = [0.01, 0.11], t(2246) = 2.51, p = .012. Awe did not have the same effect (M = 6.71, SD = 3.05), $\beta = 0.01$, 95% CI = [-0.03, 0.06], t(2246) = 0.57, p = .570. Modifying the dummy codes and rerunning the model allowed us to see that the inspired-by manipulation prompted a stronger effect on belief in God than the awe manipulation, $\beta = 0.05$, 95% CI = [0.00, 0.09], t(2246) = 2.14, p = .032.

As we detail below and in Studies A and B in the Supplemental Material, although inspiration appears to be a more prototypical inducer of belief in God than awe, given that awe inductions operate on some of the same mediators and can also prompt inspiration, the exact influence of any given inspiration versus awe induction is difficult to predict a priori. In other words, asking whether inspiration or awe more strongly predicts belief in God is a bit like asking whether diet or exercise causes more weight loss. The answer lies in the details of each intervention: how strongly the specific instantiation of diet or exercise operates on the relevant mediators and not on any relevant suppressor.

The inspired-by manipulation promoted more general inspiration, by-inspiration (strongly even with toinspiration controlled), to-inspiration (weakly once by-inspiration was controlled), positive emotions, and awe (but not as much as the awe manipulation) compared with the neutral control condition. The awe manipulation promoted more general inspiration, byinspiration, to-inspiration, and positive emotions than the control condition, but not as much as the inspiredby condition. A set of more detailed analyses can be found in the Supplemental Material.

The primary value of these manipulation checks is not in these main effects of condition. After all, showing that the inspiration manipulation had stronger effects on self-reported inspiration than self-reported awe in part reflects that the manipulation itself asked people to vividly relive an inspiration-related episode. Participants may have acquiesced to a demand effect and mischaracterized their own internal states. Instead, the primary value of these measures is in our subsequent tests of whether the influence of inspiration on belief in God can be predicted through self-reported byinspiration, above and beyond other affect-related, experiential mediators. If the inspiration manipulation check measures were distorted by demand, then they would be at a disadvantage in predicting variation in who responded to the manipulation with elevated belief in God. That is, given any demand-induced bias on these self-report experience measures should weaken the measure's relationship with belief in God, it makes our analyses of interest particularly conservative. (See Lupoli, Jampol, and Oveis, 2017, for a similar logic and approach to studying the consequences of experiential manipulations.)

Did the inspired-by manipulation elevate belief in God because it encouraged the feeling of by-inspiration, or might its effects have been explained by some other reason? Even though the awe manipulation did not elevate belief in God, we also aimed to assess to what extent self-reported by-inspiration has incremental validity in accounting for belief in God above and beyond whatever predictive validity self-reported awe may offer. We regressed belief in God on general

	Condition						
Variable	Inspired by	Awe	Neutral (control)				
Transcendence	5.09 (1.28) _a	4.42 (1.47) _b	3.26 (1.76) _c				
Connectedness	5.31 (1.27) _a	4.88 (1.42) _b	4.14 (1.58)				
Personal insignificance	5.04 (1.58) _b	5.49 (1.41) _a	4.87 (1.56)				
Intolerance of uncertainty	4.27 (0.81) _{a,b}	4.20 (0.87) _b	4.30 (0.81) _a				

Table 4. Potential Mediators' Means by Condition From Study 3

Note: Standard deviations follow means in parentheses. Means in the same row that do not share a subscript differ significantly (p < .05).

inspiration, positive emotion, by-inspiration, to-inspiration, awe, and the condition dummy codes.

Consistent with our primary prediction, experienced by-inspiration most strongly predicted belief in God, $\beta = 0.23$, 95% CI = [0.16, 0.30], t(2241) = 6.29, p < .001. Not only did self-reported by-inspiration predict belief in God above and beyond self-reported awe, awe had no unique effect, $\beta = -0.01$, 95% CI = [-0.07, 0.05], t <1. The positive emotion composite had significant predictive power, $\beta = 0.10$, 95% CI = [0.05, 0.15], t(2241) =4.04, p < .001, as did general inspiration, $\beta = 0.07$, 95% CI = [0.00, 0.15], t(2241) = 2.02, p = .043. The independent influence of positive emotions was not replicated in Study A but was in Study B (see the Supplemental Material). To-inspiration had a nonsignificant effect, $\beta = 0.01$, 95% CI = [-0.06, 0.07], t < 1.

Armed with stronger evidence that the *experience* of by-inspiration—not the mere reading of inspiration-related content—explained why the inspired-by manipulation influenced belief in God, we tested our candidate mediators. Table 4 summarizes between-conditions differences on these potential mediators, and Table 5 shows their zero-order correlations with each other and with belief in God.

The inspired-by manipulation offered a spiritually transcendent experience and elevated connectedness. The awe manipulation had significant effects on the same two variables but to a lesser extent than did the inspired-by manipulation. The awe manipulation prompted greater feelings of personal insignificance than the inspired-by condition, which itself encouraged

Table 5. Correlations Between Measures in Study 3

Variable	2	3	4	5
1. Transcendence	.54***	.11***	01	.33***
2. Connectedness	_	.27***	.02	.38***
3. Personal insignificance		_	.14***	.02
4. Intolerance of uncertainty			_	.05*
5. Belief in God				—

*p < .05. ***p < .001.

more personal insignificance than the control condition. Notably, the awe condition led to diminished intolerance of uncertainty compared with the control condition (cf. Valdesolo & Graham, 2014).

We proceeded to test whether the inspired-by manipulation (compared with the control) enhanced belief in God through spiritual transcendence and connectedness, both separately as well as in sequence. We found a significant indirect effect through spiritual transcendence and connectedness, in that sequence, 95% CI = [0.4228, 0.6297]. But also, there was a significant indirect effect through spiritual transcendence that was not explained through connectedness, 95% CI = [0.5802, 0.9289]. Although not replicated in Study A or Study 4, there was a weaker effect through connectedness only, 95% CI = [0.1245, 0.3254]. The beta weights above the lines in Figure 2 summarize these models. We refer the interested reader to the Supplemental Material for additional analyses as well as a discussion concerning the sequencing of our mediators.

To summarize, being inspired by something offers a spiritually transcendent experience that elevates belief in God, in part because it offers a feeling of connectedness to something greater. That is, transcendence left people with a connected feeling that is consistent with a world in which God serves as a unifying presence. Notably, this evidentiary pathway differs from (but does not rule out) an emotion-congruence account (if one were to liberally assume inspiration is an emotion) by which the inspired simply believe that the world is filled with inspiring events. The experiential-evidence account instead identifies specific experiential components and consequences of inspiration to identify how such episodes make God's existence and presence feel more likely.

Study 4

Study 4 built on the previous studies in two ways. First, we left the predominantly Christian cultural context of the United States to conduct the study in Korea—a country where nonreligious people and Buddhists combine

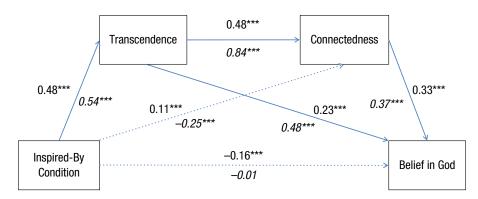


Fig. 2. Summary of the regression analyses that characterized the sequential mediation models tested in Studies 3 and 4. Numbers in Roman type are from Study 3. Numbers in italics are from Study 4. All values are betas from regression models in which the dependent variable was predicted simultaneously by all preceding variables. In Study 3, all models also included the awe-condition dummy code, personal insignificance, and intolerance of uncertainty. Only those pathways that are consistently significant (i.e., across Studies 3, 4, and A) are represented by solid arrows (as opposed to dotted arrows; ***p < .001).

to form a majority. Second, we manipulated inspiration by having participants watch an inspirational or relatively uninspiring clip. Although standardizing the elicitor meant that perhaps not all participants would find the manipulation inspiring, this change assured that all participants' inspiring content was secular.

Metbod

Participants. One hundred twenty-nine South Koreans recruited through an online panel service participated in the study. The sample size was determined using the rule for online studies laid out in Study 2. Unlike in our previous studies, we had information on participants' age (M = 41.77 years) and sex (51.2% male). Participants were randomly assigned to one of two conditions: *inspiration* or *control*.

Procedure. Participants watched one of two video clips. Afterward, participants reported their reactions to the clip. Next, they reported their feelings of spiritual transcendence ($\alpha = .94$) and connectedness ($\alpha = .93$) while watching the clip. These items were nearly equivalent to those used in Study 3. Besides being translated into Korean, each spiritual-transcendence item was modified to reflect agreement with a single statement instead of relative agreement with two statements. Finally, participants indicated their belief in God. At that point, participants indicated their religious affiliation.

Inspiration manipulation. Participants in the inspiration condition saw a recording of a televised talent show audition. A contestant named Choi Sung-bong introduced himself as a manual laborer who had been a homeless boy selling gum to get by. Defying audience (and judges') expectations, he offered an inspiring performance that left listeners moved. The control clip was the music video for "Gangnam Style": Professional singer Psy sang and danced comically with others to a catchy beat. Both clips were similar in length (4–5 min).

Experiences during the manipulation. Participants reported their feelings while watching the clip by answering six items. A factor analysis with varimax rotation identified the presence of two factors. Two items composed the inspiration factor. Participants indicated whether the clip inspired them and moved them (r = .71). Four items composed the enjoyment factor. Participants indicated whether they enjoyed the clip, it made them feel good, the clip was good, and (reverse-scored) it made them feel skeptical ($\alpha = .79$). The patterns of significance and non-significance reported below do not change if we omit the skeptical item, which admittedly does not have the same face validity in assessing enjoyment of the clips. Participants responded to all items on scales ranging from 1 (*not at all*) to 7 (*very much*).

Belief in God. We measured belief in God with a single item. Translating "God" into Korean is a tricky task. Many translations are religion specific—for example, "Hananim" (Protestant), "Haneunim" (Catholic), or "Bucheonim" (Buddhist). Given our interest in referring to God more generally, we follow Park and Jung's (2011) lead, who referred to a more general God as "the Ultimate Being" and "the Absolute Being." Participants indicated whether they felt God exists on a scale ranging from 1 (*not at all*) to 7 (*very much*).

Results

As intended, the inspirational clip made people feel more inspired (M = 5.67, SD = 1.00) than did the control

Predictor	Model 1			Model 2			Model 3		
	β	t	95% CI	β	t	95% CI	β	t	95% CI
Condition dummy code									
Inspiration clip	0.34	4.07***	[0.17, 0.51]	-0.14	-1.47	[-0.34, 0.05]	0.02	0.83	[-0.12, 0.15]
Manipulation checks									
By-inspiration				0.79	7.81***	[0.59, 0.98]			
Enjoyment				-0.11	-1.28	[-0.28, 0.06]			
Potential mediators									
Transcendence							0.45	4.67***	[0.26, 0.65]
Connectedness							0.38	4.54***	[0.21, 0.55]

Table 6. Results of the Regression Analyses Predicting Belief in God (Study 4)

Note: CI = confidence interval.

p < .001.

clip (M = 3.93, SD = 1.41), t(127) = 8.07, p < .001, d = 1.43, 95% CI for the mean difference = [1.13, 2.17]. The inspirational clip was actually enjoyed somewhat less (M = 4.88, SD = 1.15) than was the control clip (M = 5.41, SD = 0.90), t(121.06) = -2.91, p = .004, d = 0.51, 95% CI for the mean difference = [-0.89, -0.17]. But consistent with our key prediction, the inspirational clip encouraged a stronger belief in God (M = 3.91, SD = 1.69) than did the positive, control clip (M = 2.75, SD = 1.53), t(127) = 4.07, p < .001, d = 0.72, 95% CI for the mean difference = [0.59, 1.72]. The full results of this and two other key regression analyses predicting belief in God are summarized in Table 6.

To test the robustness of the effect of the inspirational video on belief in God, we examined whether it was moderated by participants' religious affiliation. We categorized the participants into three groups: Christians (n = 47), Buddhists (n = 20), and the nonreligious (n = 60). Two participants who reported other religious affiliations were omitted from these analyses. A strong main effect of religious affiliation, F(2, 121) = 6.61, p =.002, $\eta_p^2 = .10$, indicated that Christians (M = 3.78) and Buddhists (M = 3.82) had a stronger sense that God exists than did nonreligious participants (M = 2.80). But crucially, religious affiliation did not moderate the effect of inspiration on belief in God, F < 1, attesting to the generality of the basic effect.

We wanted to make sure that it was the degree of inspiration caused by the video, not merely some inspiration-unrelated feature of its content, that explained the elevated belief in God. Following a similar approach to that used in Study 3, we regressed belief in God on condition and the inspiration and enjoyment composites. The more inspired participants were, the more strongly they believed in God, $\beta = 0.79$, 95% CI = [0.59, 0.98], t(125) = 7.81, p < .001. Enjoyment of the clip did not have the same effect, $\beta = -0.11$, 95% CI = [-0.28, 0.06], t(125) = -1.28, p = .204. The effect of condition was

eliminated, $\beta = -0.14$, 95% CI = [-0.34, 0.05], *t*(125) = -1.47, *p* = .144. These findings support our contention that the inspirational video enhanced belief in God because of the heightened inspirational experience.

Next, we tested our candidate mediators: transcendence and connectedness. The inspirational video was labeled as more of a spiritually transcendent experience (M = 4.72, SD = 1.22) than was the positive control video (M = 3.09, SD = 1.33), t(127) = 7.24, p < .001,d = 1.28,95% CI for the mean difference = [1.18, 2.07]. But also, the inspirational video prompted more of a feeling of connectedness (M = 4.35, SD = 1.21) than did the positive control video (M = 3.81, SD = 1.35), t(127) =2.40, p = .018, d = 0.43, 95% CI for the mean difference = [0.10, 0.99]. When we regressed belief in God on transcendence, connectedness, and condition, we found results quite similar to those in Study 3. Both spiritual transcendence, $\beta = 0.45$, 95% CI = [0.26, 0.65], t(125) =4.67, p < .001, as well as connectedness, $\beta = 0.38$, 95% CI = [0.21, 0.55], t(125) = 4.54, p < .001, had independent effects in accounting for belief in God. But also, spiritual transcendence and connectedness were strongly correlated, r(127) = .71, p < .001, 95% CI = [.61, .79].

As in Study 3, we tested sequential mediation models to better understand the experiential-evidence pathway by which the inspiration manipulation elevated belief in God. The beta weights beneath the lines in Figure 2 summarize the results from Study 4. Just like in Study 3, we found a significant effect of the inspiration manipulation on belief in God through spiritual transcendence and connectedness, in that sequence, 95% CI = [0.4919, 1.3655]. In addition, like before, we found an indirect effect through spiritual transcendence that was not explained through connectedness, 95% CI = [0.2956, 0.9247]. Although in Study 3 we found a weaker positive indirect effect through connectedness on its own (and a null effect in Study A), in Study 4 we found a

relatively weak negative one, 95% CI = [-0.5901, -0.1301]. Although this finding is intriguing, given the inconsistencies observed across our three studies, we hesitate to speculate on the meaning of this residual negative effect. Instead, what is consistent is that Study 4, in a new cultural context, reveals further support for our hypotheses that (a) inspiration offers a spiritually transcendent experience that offers experiential evidence of God's existence and (b) such a transcendent experience elevates belief in God in part because it makes one feel broadly connected to others and something greater.

Of course this mediation model has been supported with largely correlational evidence. With that concern in mind, we conducted an additional study. In Study C (see the Supplemental Material), a direct manipulation of connectedness enhanced belief in God. This lends confidence to our model's assumption that connectedness gives rise to a belief in God. Still, it remains possible that a belief in God causes connectedness as well.

General Discussion

Writing for the adolescent-targeted Biblical website 412teens.org, Lona Bailey (n.d.)-a self-described "Christian author from Tennessee"-fielded the question "Does God exist?" After speculating why God does not simply "show up in our bedrooms or school cafeterias and prove to everyone He is for real" (para. 2), Bailey noted where she sees evidence of God: "the sunset, the depth of the ocean, . . . the millions of atoms that make up our bodies" (para. 4). Although Bailey cited the complexity of these phenomena as evidence of a holy creator, the present account would instead focus on their inspirational quality. After all, few people claim to see evidence of God in other complex, but less inspirational facts of Nature-that water has a higher freezing point than mercury, that the ratio of every circle's circumference to diameter is 3.1415, or that North American weather patterns move from west to east. In addition, even when an inspiring phenomenon can be explained in physical terms (e.g., sunsets are caused by the earth's rotation), that they can still be experienced as inspiring is what seems to elevate them to divine status.

Building on recent perspectives that argue for an intuitive or experiential origin to the belief in God, we used a mix of correlational and experimental methods to show that the experience of inspiration is a contributor to a belief in God. Feeling inspired by someone or something offers a spiritually transcendent experience, which elevates belief in God in part because it encourages the feeling of connectedness to something greater than the self. We identify two possible constraints on generality. First, we tested our ideas only in American and Korean samples. Second, we found that inspiring events that encourage feelings of personal insignificance may undermine these effects.

Do people believe that God is directly revealing himor herself during inspiring episodes? Reconsider the two mechanistic pathways we identified. The direct influence of transcendence on belief in God may demonstrate that transcendent episodes-ones identified as sacred, reverent, meaningful, and profound-offer a direct glimpse of God's realm. That is, people may believe that they are directly sensing God's creations. However, the influence of transcendence through connectedness offers an indirect evidentiary pathway. People's broad feelings of connectedness are not themselves an identification of the inspiring elicitor as a product of God but instead a phenomenological consequence that is compatible with a world over which God has a divine, unifying influence. In this, people experience what could be a consequence of God. Such experiential evidence of God is therefore indirect. Although Study 2 found that inspiration strengthened confidence in God's existence for believers and skeptics alike, one possibility is that these groups may differ in their belief about whether God has a direct hand in inspirational episodes. Believers and skeptics may predominate on the direct and indirect pathways, respectively.

Although other states that offer spiritually transcendent experiences may also encourage a belief in God, Study 3 demonstrated that adjacent emotions can have other consequences that suppress such effects. More specifically, awe—to the extent it is inspirational—may also enhance a belief in God. However, both Study 3 and Study A found that awe, elicited by vast stimuli, may lead to feelings of personal insignificance that reverse these effects. One possibility is that feeling personally insignificant contradicts a common understanding of God as an entity who values and plays an active role in people's lives.

Graham and Haidt (2010) criticized psychologists for reducing theistic beliefs to individual-level cognitive phenomena, a perspective that can blind researchers to the fundamentally social, community-binding function of religion. We both heed and flip this concern. Neglecting the socially binding nature of religion discounts the fullness of its societal role but also ignores a pathway by which individuals' feeling of connection to something beyond the self lends intuitive resonance to God's existence. Whether connectedness offers experiential evidence of other uniting entities or principles (e.g., a perception of universal moral values) is itself worthy of future exploration, one that could explain correlates of religiosity.

Action Editor

Leaf Van Boven served as action editor for this article.

Author Contributions

C. R. Critcher and C. J. Lee developed the basic idea for this research. C. R. Critcher was involved in designs for Studies 1a through 3, and C. J. Lee was involved in designs for Studies 2 and 4. C. R. Critcher was involved in data analyses for all studies, whereas C. J. Lee was involved only for Study 4. C. R. Critcher and C. J. Lee drafted different parts of the manuscript and provided critical revisions to each other's writing.

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Declaration of Conflicting Interests

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Supplemental Material

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Open Practices



All data and materials have been made publicly available via the Open Science Framework and can be accessed at https:// osf.io/rwvc4/. The complete Open Practices Disclosure for this article can be found at http://journals.sagepub.com/doi/ suppl/10.1177/0956797617743017. This article has received badges for Open Data and Open Materials. More information about the Open Practices badges can be found at http://www .psychologicalscience.org/publications/badges.

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