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Skepticism: Genuine unbelief or implicit beliefs in the supernatural?



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ABSTRACT

We examined whether skeptics hold implicit supernatural beliefs or implicit cognitive underpinnings of the beliefs. In study 1 (N = 57), participants read a biological or a religious story about death. The story content had no effect on skeptics' (or believers') afterlife beliefs. Study 2 examined the relationships between religious and non-religious paranormal beliefs and implicit views about whether supernatural and religious phenomena are imaginary or real (n1 = 33, n2 = 31). The less supernatural beliefs were endorsed the easier it was to connect "supernatural" with "imaginary". Study 3 (N = 63) investigated whether participants' supernatural beliefs and ontological confusions differ between speeded and non-speeded response conditions. Only non-analytical skeptics' ontological confusions increased in speeded conditions. The results indicate that skeptics overall do not hold implicit supernatural beliefs, but that non-analytically thinking skeptics may, under supporting conditions, be prone to biases that predispose to supernatural beliefs.

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1. Introduction

Do all people have at least implicit belief in the supernatural (i.e., paranormal)? This is a hot topic of debate because it has the potential to reveal some of the fundamental principles of how human minds work.

Most scholars seem to answer yes to the above question. It has been argued, for example, that supernatural reasoning is a stable feature of human cognition (Legare & Visala, 2011) and that even atheists display implicit religious beliefs (Bering, 2010; Uhlmann, Poehlman, & Bargh, 2008). In the same vein, it has been argued that belief in psychological immortality is a cognitive default which can be activated in appropriate contexts even among nonbelievers (Astuti & Harris, 2008; Kemmerer & Gupta, 2006).

Recently, many researchers interested in gauging supernatural beliefs at an implicit level have started to use implicit methods, such as response times, scrambled-sentence tests and subliminal religious primes. These methods have considerably advanced the field. However, the research has often overlooked individual differences in supernatural beliefs. If an experimental manipulation increases the sample mean of supernatural thinking, supernatural thinking may not increase among all participants, for example among non-believers. To justify the argument that even non-believers have implicit supernatural beliefs, non-believers should be analyzed separately from the believers.

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Separate analyses have been conducted mainly with groups based on religious beliefs. The results are contradictory. Sometimes implicit manipulations intended to bring out supernatural beliefs impact believers and nonbelievers similarly (Gervais & Norenzayan, 2012b, Experiment 2; Randolph-Seng & Nielsen, 2007; Shariff & Norenzayan, 2007, Study 1), sometimes they have a different (Inzlicht & Tullett, 2010) or no effect on non-believers (Dijksterhuis, Preston, Wegner, & Aarts, 2008; Gervais & Norenzayan, 2012b, Experiments 1 and 3; Shariff & Norenzayan, 2007, Study 2; Weisbuch-Remington, Mendes, Seery, & Blascovich, 2005). For example, a meta-analysis across over 90 studies recently showed that while religious priming has strong effects on a variety of prosociality measures, religious priming does not affect non-religious people (Shariff, Willard, Andersen, & Norenzayan, 2015).

While many recent studies have used implicit *methods*, they have not addressed supernatural *beliefs*, let alone implicit supernatural beliefs. Examples of dependent variables include allocating money to strangers (Shariff & Norenzayan, 2007), public self-awareness and socially desirable responding (Gervais & Norenzayan, 2012b), cheating (Randolph-Seng & Nielsen, 2007), self-regulation (Laurin, Kay, & Fitzsimons, 2012), thoughts about authorship of various actions (Dijksterhuis et al., 2008), and cardiovascular responses (Weisbuch-Remington et al., 2005). Although important information has been obtained with these studies, the results may not inform us about actual beliefs, as several scholars have brought up (Gendler, 2008; McKay & Dennett, 2009; Randolph-Seng & Nielsen, 2007). Rather, the results probably tell us more about how religious primes activate associatively-linked contents and stereotypical representations of religious people.

We know of only a few studies on the effects of experimental manipulations on supernatural beliefs in which skeptical individuals have been compared to believers. In Jong, Halberstadt, and Bluemke's (2012) study, even non-believers found it more difficult to judge religious concepts, such as God or Angel, as imaginary after writing down thoughts and feelings about their own future death than after writing about feelings and thoughts related to watching TV. In Järnefelt, Canfield, and Kelemen's (2015) study, non-religious individuals significantly more often judged pictures of natural phenomena (e.g., mountain or hurricane) to be intentionally created when responding under speeded conditions than under normal response conditions. Although the results seem to suggest that even non-religious individuals implicitly see non-living phenomena as purposefully made by some being, it is noteworthy that non-religious individuals judged, on average, that the majority (84–62%) of the natural phenomena they saw were not purposefully made by some being. The same inconclusiveness is found in Bering's (2002) study where the participants read a story about a protagonist who met an unexpected death. After the story prime, only ca. 30% of the participants who had reported that they do not belief in life after death stated that the protagonist's emotions, desires and epistemic processes may continue after death. In contrast, a vast majority of the non-believers stated consistently that the protagonist's mental states had ceased after death. These inconsistent findings may indicate either that skeptics differ from each other, that skeptics react to different manipulations in different ways, or both.

Thus, while arguments about people's implicit supernatural beliefs are abundant, empirical research is sparse and contradictory. Moreover, research on the implicit cognitive underpinnings of the beliefs is nonexistent. Besides examining the impact of religious priming on explicit supernatural beliefs (Study 1) and the correspondence between implicit and explicit supernatural beliefs (Study 2), we therefore also addressed the impact of experimental manipulations on implicit supernatural beliefs and the cognitive base of the beliefs (Study 3).

2. Study 1: Religious vs. secular context

The first study was inspired by a study conducted in Madagascar. Astuti and Harris (2008) presented participants a narrative about a man's death in two contexts, one secular and the other focusing on the ancestral practices associated with the afterlife. In the secular context, adult participants claimed that death brings an end to most bodily and mental processes, but in the context of the religious narrative, they more frequently claimed that mental processes continue even after death. These findings have led researchers to suggest that whatever explicit disposition adults show toward afterlife beliefs, they have two co-existing conceptions of death, natural and supernatural, and that these beliefs are influenced by the ways in which a narrative about death is framed (Cohen, Burdett, Knight, & Barrett, 2011; Harris, 2011; Harris & Astuti, 2006; Legare, Evans, Rosengren, & Harris, 2012; Whitehouse, 2011). Astuti and Harris's (2008) study was, however, conducted with participants of whom only some were literate. In the present study, we examined whether the results replicate in Finland, that is, in a western country with a high literacy rate and a strong public education system. Because the vast majority of the discussion on implicit supernatural beliefs and their cognitive underpinnings has centered on religiosity only, the present study analyzed both religious believers and skeptics, and paranormal believers and skeptics.

2.1. Method

2.1.1. Participants

Fifty-seven Finnish individuals participated (34 women, mean age = 33.5 years, age range 19–63). Of the participants, 9% were upper secondary school students, 47% were university or polytechnic students and 44% were working. Religious affiliations were Christian (42%), Non-Christian religions (4%) or none (54%). In this study, as well as in Studies 2 and 3, the participants' received no compensation for their cooperation.

Twenty-two of the participants were drawn from our participant pool, other participants were recruited using opportunity sampling. Responses to the Revised Paranormal Belief Scale (RPBS, Tobacyk, 2004) were used to measure the degree of

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