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What is the causal relationship between death anxiety and religious belief?

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ABSTRACT

The virtues of Hilbert's mathematical problems – or, at least, the best of them – were that they were simply and unambiguously stated, enticingly difficult, and generated yet more advances in mathematics than just the solution of the problems themselves. In the spirit of Hilbert, albeit in empirical mode, we pose the following question to scholars of religion: *What is the causal relationship between death anxiety and religious belief?* This question we decompose into four sub-questions: *Do people fear death? Does religiosity covary systematically with death anxiety? Does death anxiety cause or enhance religious belief? Does religious belief mitigate death anxiety?* On the face of it, this focus on the fear of death seems parochial; it is indeed narrow in scope, but so were most of Hilbert's mathematical problems. Besides getting at a prominent intuition among laypeople and academics alike – that people are religious because they fear death – the route to answering our question will require scholars of religion to work together across disciplines, clarify our terms, design better measures and manipulations, and conduct cross-cultural research. Thus, as Hilbert put it, we believe that “the gain which science obtains from the problem” will be great.

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Throughout the ages, philosophers, theologians, and social scientists have speculated that the fear of death is an important motivation for religious belief, which in turn serves to reduce this fear. However, there is remarkably little support for this widely held view. First, there is little evidence that people do chronically fear death to any significant degree. Second, the relationship between dispositional death anxiety, to whatever extent it exists, and religious belief is unclear, especially in non-Western and non-Abrahamic cultures. Third, the field lacks the experimental and longitudinal evidence needed to test causal hypotheses about the motivational power of death anxiety and, conversely, the emotion regulative efficacy of religious belief.

Do people fear death?

The available evidence – from open-ended responses, fear surveys, and death anxiety scales, for example – suggests that death anxiety is fairly low in the general population (e.g., Kirkpatrick, 1984; Lyons, 2005; Templer & Ruff, 1971; for review, see Jong & Halberstadt, 2016). However, there are significant limits to our current understanding, including our understanding of death anxiety itself, a construct that includes fear of the dying process, fear of what waits for us after death, fear of nonexistence, and fear for those left behind, among other facets. One consequence

is that fear of death tends to vary with the measure used, and it is unclear whether such variance reflects measurement artifacts or genuine differences in how fearsome different aspects of death actually are. Furthermore, almost all current methods of assessing death anxiety are based on self-report, a poor choice of methodology given many theories' assumption that death anxiety is often suppressed or denied in some way (e.g., Kübler-Ross, 1969; Pyszczynski, Greenberg, & Solomon, 1999; Wong, Reker, & Gesser, 1994). Indirect or "implicit" measures of death anxiety, such as psychophysiological or hormonal responses, and response time methods such as the Implicit Association and Stroop tests, are necessary to assess the thoughts and emotions that death might automatically elicit. Finally, the evidence that does exist has been collected almost entirely from Western, English-speaking participants. Thanatocentric theories of religion ambitiously conjoin two pancultural human phenomena – death and religion – and evidence for or against them will need to be commensurate with their scope.

Does religiosity covary systematically with death anxiety?

Whether or not people in general fear death, there is clearly variance in how much or how frequently they do so. To what extent is this variance explained by their religiosity? Different theories predict, and different datasets reveal, different relationships. Many studies, mostly run in North America, testing largely religious individuals, have found negative correlations between death anxiety and religiosity, but others have found no correlation at all (Ellis & Wahab, 2013; Jong et al., 2016). One reason may be that the true relationship is *curvilinear*, and indeed almost all of the (very few) studies that have tested for curvilinear effects have found them (Jong et al., 2016). Alternatively, the relationship may vary from context to context, depending on factors such as the content of culturally dominant religious ideas, or the prevalence or salience of death in the environment.

Does death anxiety cause or enhance religious belief?

Thanatocentric theories make causal claims as well as correlational ones, namely that fear of death motivates an increase in religiosity. Results of studies testing this claim have been ambivalent, however. Reminders of death generally increase religious belief among religious participants, but effects on nonreligious participants vary from study to study, as do the effects on participants' willingness to accept *others'* religious beliefs (Jong, Halberstadt, & Bluemke, 2012; Norenzayan & Hansen, 2006; Vail, Arndt, & Abdollahi, 2012). Furthermore, as in the literature on trait religiosity, researchers have relied almost exclusively on self-reports. One study, an exception, found that reminders of death increase implicit religious belief (i.e., time to associate supernatural agents and "existence" concepts) similarly for religious and nonreligious individuals; the disjunction between explicit and implicit measurement requires further investigation. What is more, researchers rarely manipulate death anxiety *per se*, but rather "mortality salience" (by asking people to write about their own death; e.g., Rosenblatt, Greenberg, Solomon, Pyszczynski, & Lyon, 1989), and there is in fact very little evidence that the mortality salience procedure has any effect on participants' emotional states at all. Future experimental research should attempt ethical manipulations of fear, and also take advantage of natural high-mortality contexts (e.g., hospices) in longitudinal designs.

Does religious belief mitigate death anxiety?

Even if death anxiety increases religious belief, it cannot be assumed that religious belief "works," that it effectively reduces fear of death. Nobody has adequately addressed this second half of the thanatocentric model, in part because it requires manipulation of religious belief. Although many researchers have primed religious concepts (Shariff, Willard, Andersen, & Norenzayan, 2015), priming involves exposure to religious ideas, not persuasion that those ideas are valid. Experimental techniques to temporarily increase or decrease participants' religious beliefs are still underdeveloped, but

are an essential tool for establishing their causal effects on death anxiety (among other phenomena). They are not the only tool, however: again, longitudinal studies on the effects of various aspects of religiosity on death anxiety at a later point should also be pursued.

The question we pose here is eminently empirically tractable, though answering it will require more conceptual clarity, methodological innovation, and collaborative effort. Terms like “religiosity” and “death anxiety” are too often underspecified, and their assessment via self-report is susceptible to well-known biases and inaccuracies. We also lack validated manipulations of both death anxiety and religious belief, both of which are important for establishing causality. The empirical challenge ahead of us will likely require the skills and expertise of experimental psychologists, but also those of specialists in cross-cultural, clinical, and psychophysiological research.

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