

afterlife beliefs is considerably shorter than Bering supposes. Afterlife beliefs may fall out quite directly from how our common-sense dualism is conceived. It may follow from our dualism that the destruction of a person's body has no bearing whatsoever on the existence of his or her mind/soul – much as it is entailed by my common-sense conception of the apple and orange in my refrigerator that eating the apple will leave the orange intact. Most of the work in explaining afterlife beliefs on this view, therefore, will be done by a detailed account of our concepts of our body, mind/soul, and their interrelations (and how the question of an afterlife arises).

Regardless of the extent of the gap between our common-sense dualism and afterlife beliefs, discovering how one gets from the former to the latter will require a detailed characterization of our dualist conception, something we currently lack. We would thus do well to examine the features of our conception of the mind/soul that are implicated in our conceiving the mind and body as distinct. It will not do simply to say that we conceive of the body and soul as ontologically distinct, and leave it at that, because we must understand the particular type of distinctness involved, and how it is grounded in the concepts of body and soul. (Objects and events are also ontologically distinct categories, but are interdependent in ways that bodies and souls are not.) We should examine our conceptions of ourselves as conscious beings, selves, experiencers, and “witnesses”; of the mind/soul as being essentially private, “internal,” subjective, or phenomenal. For it is something about these conceptions, arguably, that makes the mind/soul seem so utterly unlike anything physical, that destroying the body can leave the mind/soul intact.

One way to tap children's understanding of the privacy and “innerness” of conscious phenomena is to explore children's understanding of dreams, imagery, and sensations, conceived of as private and “internal.” I shall hint at some possible directions for research, with a few anecdotes. (Since I am not a psychologist, they should be taken with a grain of salt; with that said, their purpose is merely to illustrate some questions for investigation.) At age three, my daughter appeared to understand the idea that dreams involve “pictures in her head,” and seemed able to sing her favorite song “in her head” and report when she had finished. She insisted that others could not see the pictures or hear the sounds “because they were hers,” and found the suggestion that others might see them or hear them silly. (Interestingly, she also insisted that she did not *see* the pictures in her head; they were just there.) This conception of privacy also applied to sensations like pain. Also at age three, she went through a brief stage of lying about having hurt herself (for sympathy, hugs, etc.) when noticing her baby sister receiving attention. That she confidently lied about feeling pain in the presence of others suggests she believed her sensations were accessible only to herself.

Another matter to explore is children's capacity to conceive of objects, properties, and events in their experience as *merely phenomenal*. I have in mind the capacity to grasp that what appears in dreams is “not real,” as well as grasping the concepts of hallucination (including radical hallucination, as in “The Matrix”), illusion, after-images, and the appearance–reality distinction more generally. One way to get at some of these issues may be to probe children's understanding of “inverted qualia,” the idea that what you visually experience when looking at objects we both call “blue,” for example, might be qualitatively very different from what I experience when looking at those objects. This idea can be explored intrasubjectively by adapting one of a child's eyes to bright light, and then having the child look at a uniformly colored object one eye at a time. The object's color will appear to alternate between two different shades. Assuming the child does not infer that he or she is causally affecting the object by blinking, some understanding of the concept of phenomenal color might be expected to reveal itself.

Conceptual abilities of these sorts enable Descartes to doubt away the physical world while his mind/soul (plus phenomenology)

remains. This is a first step in Descartes' argument for dualism. However, it is also already very close to the idea of an afterlife, since it is the idea of a mind/soul existing without the physical world. This too suggests that the distance from our common-sense dualism to afterlife beliefs may be short, at least if our common-sense dualism is Cartesian in relevant respects.

Social cognition of religion¹

William Sims Bainbridge

Division of Information and Intelligent Systems, National Science Foundation, Arlington, VA 22230.

wbainbri@nsf.gov <http://mysite.verizon.net/wsbainbridge>

Abstract: Research on religion can advance understanding of social cognition by building connections to sociology, a field in which much cognitively oriented work has been done. Among the schools of sociological thought that address religious cognition are: structural functionalism, symbolic interactionism, conflict theory, phenomenology, and, most recently, exchange theory. The gulf between sociology and cognitive science is an unfortunate historical accident.

Bering is entirely correct that religious beliefs can help us understand the evolution of human social cognition, but I would go further to say that research on religious cognition could become the first span of a substantial bridge between the cognitive and the social sciences. Broad territories in my own field, sociology, are cognitive in nature, and I would venture to say that the largest troves of systematic data relevant to religious cognition have been collected by sociologists. Some of these data are freely available, such as the General Social Survey (sda.berkeley.edu) or the many questionnaire datasets at The Association of Religion Data Archives (www.thearda.com).

One function of Bering's article is to alert readers to the impressive group of cognitive or developmental psychologists and cultural anthropologists who have done so much good work on religious cognition over the past decade. This group, however, has ignored vast bodies of relevant social science literature, probably for two reasons. First, any new school of thought needs to mature in intellectual isolation, until its ideas are sufficiently well developed to stand critical scrutiny. We can call this the *allopatric principle of cultural innovation*, by analogy with allopatric speciation in biology: New cultural movements develop more readily under conditions of social isolation from existing movements.

Second, sociology, political science, to some extent economics, and even important portions of social psychology remained aloof thirty years ago when the multidisciplinary field of cognitive science was being formed. This tragedy was largely the result of misunderstandings and prejudices, augmented by turf defense and an unwillingness to do the hard work required to bring the disciplines together. Major schools of thought in sociology – structural functionalism (Parsons et al. 1951) and symbolic interactionism (Blumer 1969) – were predominantly cognitive, emphasizing concepts such as overarching values, social roles, group identity, and definitions of the situation. But these approaches made little use of rigorous statistical methodologies, and thus may not have seemed “scientific” enough to be included in cognitive science. For all its emphasis on ideology, the Marxist movement that was so influential in sociology claimed to be materialist, an example of false consciousness if ever there was one. However, Marxism informed conflict theory, and a cognitive scientist can draw from that broader tradition an awareness that sometimes language and even cognition itself may be moves in a game of social power (Habermas 1971).

A psychologist seeking cognitive research in sociology might find it in unexpected places. Cognitive scientists tend to dissociate themselves from behaviorism, which in psychology disparaged speculations about internal mental states. However,

in sociology behaviorism was remarkably cognitive in nature, as illustrated by the extended analysis of the exchange of advice for approval in *Social Behavior* by George C. Homans (1974). Influenced by Homans, later sociologists developed the exchange theory or rational choice explanation of religion: Humans seek many rewards that are not available, following cognitive explanations that become progressively supernatural in nature as the humans continually fail to attain the deeply desired reward. If the recent cognitive theories of religion lack an essential ingredient, it is the motivation that drives people to act upon religious cognitions, and to build complex and costly religious institutions. Sociological exchange theory often makes use of artificial intelligence computer simulation. This methodology has been applied profitably to religion, and one direct reinforcement neural net program showed that deprivation can cause an agent to develop minimally counterintuitive beliefs (Bainbridge 2006).

Phenomenological sociology and its cousin ethnomethodology are among the least rigorous approaches, but they still may have something to contribute. Bering's reports about how people conceptualize death are reminiscent of the insightful early work by theorist Alfred Schutz about the phenomenology of time. Schutz is especially famous for his work on multiple realities, which can be distinguished because their subjective flow of time is different, and religious experiences are a case in point (Schutz 1971). Less well known is his theory that humans conceptualize the future as a kind of past, seen as if it had already occurred (Schutz 1967), a contradiction not unlike that when people conceptualize a dead person: Dead is to alive as future is to past.

Potentially relevant empirical research in sociology is of many kinds, including historical accounts of the thoughts of religious leaders, ethnographies of religious movements, and a very well developed tradition of questionnaire research. Bering discusses suicide, and official statistics have been analyzed in ways relevant to cognition, suggesting that the power of faith to deter suicide is declining in advanced societies (Bainbridge, in press). Given Bering's emphasis on death, it is worth noting that the General Social Survey contains several questions about how people conceptualize the afterlife, and that the same questions have been administered to members of radical religious groups, allowing comparisons of such beliefs as how erotic the afterlife is (Bainbridge 2002).

Bering talks about morality, but does not introduce the extensive quantitative research on how religious faith does or does not shape behavior. Especially relevant is the research on juvenile delinquency. Consider the phenomenon I call the *Stark effect*, because Rodney Stark discovered it: "Religious individuals will be less likely than those who are not religious to commit delinquent acts, but only in communities where the majority of people are actively religious" (Stark 1996, p. 164). That is, in primarily secular communities, adolescents who believe in supernatural sanctions for misbehavior are just as likely as their irreligious peers to steal or vandalize property. In communities where the majority of adolescents are religious, the beliefs of the individual child are indeed predictive. Thus, cognition alone may not deter antisocial behavior.

A further complication is that many studies show that the Stark effect does not apply to hedonistic behaviors, and religious adolescents are less likely to use drugs or engage in sexual experimentation even in very secular areas. Perhaps religion serves an advisory function, helping to guide the adolescent's cognitive deliberations away from danger (Bainbridge 1992). This research area is still unsettled, and studies by cognitive scientists would be especially welcome.

NOTE

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Parenting, not religion, makes us into moral agents

Benjamin Beit-Hallahmi

Department of Psychology, University of Haifa, Haifa 31905, Israel.
benny@psy.haifa.ac.il

Abstract: The universal early experience of all humans, which means being totally dependent on caretakers who attempt to inculcate impulse control, should be considered as the psychological framework for the creation of significant supernatural agents. The same early experiences put us at the center of a moral universe, but there is no necessary connection between the two processes. We do not need disgruntled ancestors to make us behave; disgruntled parents will do.

"What came into existence beside the dead body of the loved one was not only the doctrine of the soul, the belief in immortality and a powerful source of man's sense of guilt, but also the earliest ethical commandments" (Freud 1915, p. 295). Bering, like Freud, ties religion to death and morality, and makes the startling theoretical claim that we should regard religion as an evolutionary adaptation, because it supports viewing the self as a moral agent. The universal tendency to tie misfortune (and blessings) to supernatural agents buttresses group cooperation and thus has great evolutionary value. One problem with this notion is theoretical, and has to do with cooperation and reputation effects. According to Ohtsuki et al. (2006), cooperation is a fundamental aspect of all biological systems, and among humans it can evolve even in the absence of reputation effects, but Henrich (2006), points out that the reputation effect may act to stabilize maladaptive and immoral behaviors.

Accounting for the parallel development of morality and religion should involve both panhuman experiences and innate tendencies. Both innate architecture and panhuman socialization processes lead to the universal perception of the self as moral agent. Evolved architecture leads, indeed, to an innate readiness to over-detect causality and intentionality. The three kinds of behavior described here – supernatural agents, ghosts, and magical thinking ("Princess Alice") – can all be accounted for by the general hyperactive agency detection mechanism, which operates to detect not just biological processes, or activity, but another consciousness or another mind. The survival value of detecting, and negotiating with other minds is so great that it accounts for this hyper-vigilance. Friend-foe identification enables us to be cared for and then take care of others.

Our early experience of our own consciousness and that of other conscious beings leads to our belief in the enormous power of the mind, our eternal soul. It was William James who already stated: "Religion, in fact, for the great majority of our own race, means immortality and nothing else" (James 1902, 1961, p. 406). Souls are important because they give us more information about promised immortality. The supernatural premise is fleshed out, so to speak, by enumerating the entities in the spirit world, most of whom must be human souls before birth and after death.

Some dead agents are psychologically important because we have known them and interacted with them; they informally join the pantheon outside the official hierarchy. The author's analysis of the role of the souls of the ancestors ignores the fact that dead ancestors were once live parents.

Our innate architecture also produces egocentrism, attachment-seeking, and the panhuman process of socialization. The human baby is hard-wired to seek a caretaker and find security as soon as it comes out of the womb (Bowlby 1973). The baby's helplessness is matched by the caretaker's readiness to create it in her own image. Socialization of the young aims at impulse control. They are asked to reduce their egocentrism and impulsivity in return for parental love. Whatever we call morality is tied to powerful bonds developed between children and caretakers. In all cultures, love is finite and conditional, and punishments and the withdrawal of love are frequent and swift.