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NOTES

1. This is as in various physical resurrectionist beliefs, such as the Anabaptist doctrine of “soul-sleep,” in which the soul is said to hibernate, or lie in wait, until it may reanimate the physically reconstituted body.

2. The simulation constraint hypothesis is indirectly supported by recent findings of egocentric social cognitive biases in adults (Epley et al. 2004). Epley and his colleagues found that participants’ eye gaze preferentially moved to privileged visual space in response to an experimenter’s ambiguous referential communication. For example, the command “move the bunny” elicited automatic eye gaze toward a stuffed bunny that could be seen by the participant, but which was occluded from the experimenter’s perspective, over a chocolate Easter bunny to which both the participant and experimenter had visual access. The authors argue that these findings show that egocentrism is just as prevalent in adults as it is in young children. Adults, however, more rapidly correct their egocentrism to adjust for others’ limited knowledge (e.g., by quickly shifting their gaze and moving the chocolate Easter bunny). If, as Epley et al. (2004) reason, individuals do become better with experience at making adjustments to correct for their initial egocentric views, but then rely on simulation to revise their social attributions, then even the best perspective-taking skills should falter when it comes to reasoning about dead agents’ “perspective-less” minds. This is because any attempt at correcting for egocentrism by using simulation would still run up against simulation constraints (e.g., “does he *know* that he’s dead?”) and generate attributions of continued psychological functioning. Indeed, this is what is generally found.

3. The atrocities of the Holocaust forced many survivors to question God’s “benevolent” intentions, apparently prompting some Jews to revise their theological views to accommodate the possibility that God is in fact morally corrupt. Nowhere is this theme more salient than in the semi-autobiographical chronicles of Holocaust survivor Elie Wiesel. In *Gates of the Forest*, Wiesel (1966, p. 197) writes:

In a concentration camp, one evening after work, a rabbi called together three of his colleagues and convoked a special court. Standing with his head held high before them, he spoke as follows: “I intend to convict God of murder, for he is destroying his people and the law he gave to them . . . I have irrefutable proof in my hands. Judge without fear or sorrow or prejudice. Whatever you have to lose has long since been taken away.” The trial proceeded in due legal form, with witnesses for both sides with pleas and deliberations. The unanimous verdict: “Guilty.” . . . [But] after all, He had the last word. On the day of the trial, He turned the sentence against his judges and accusers. They, too, were taken off to the slaughter. And I tell you this: if their death has no meaning, then it’s an insult, and if it does have a meaning, it’s even more so.

4. In his *Bridge of San Luis Rey* (1927/1955), Thornton Wilder fictionalizes the sad tale of a collapsed bridge in eighteenth century Peru that brought five travelers to their deaths in the abyss below. In two chapters, one titled “Perhaps an Accident” and the other titled “Perhaps an Intention,” Wilder describes how the resident monk, Brother Juniper, troubled by the seeming arbitrariness of this horrific event, embarks on a “scientific experiment” to reveal why God chose to end the lives of *these five* people rather than *some other five*, by collecting and analyzing the facts and details of each person’s value in terms of goodness, piety, and usefulness. Alas, “the thing was more difficult than he had foreseen” and his quest for spiritual understanding went unresolved. In a case of life imitating art, 14 people lost their lives in 2001 when a runaway tugboat rammed two barges into an interstate bridge and caused about a dozen

cars to collapse into the Arkansas River. One of the victims was a young army captain and father of four from California on his way home to Virginia. *The Oklahoman* newspaper reported that his commanding officer, echoing the thoughts of Brother Juniper, “pondered the odds of making a 2,929-mile drive and landing on a 500-foot stretch of bridge that, in the most bizarre of accidents, plummeted precisely as he crossed it. ‘If [he] just stopped at a rest stop or stopped to get gas . . . There’s just so many variables—and the timing.’” (Owen 2002).

Open Peer Commentary

Simulation constraints, afterlife beliefs, and common-sense dualism

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Abstract: Simulation constraints cannot help in explaining afterlife beliefs in general because belief in an afterlife is a precondition for running a simulation. Instead, an explanation may be found by examining more deeply our common-sense dualistic conception of the mind or soul.

Early on in his stimulating target article, Bering notes that the ability to conceive of an afterlife requires a dualistic conception of the relation between the conscious mind or soul and the body; and he is sympathetic (as I am also) to the idea that our common-sense concept of the mind/soul is dualistic, and in all likelihood innate. An important question for Bering is “how . . . we get from the common-sense dualism of infants to beliefs of the afterlife [. . .]” (target article, sect. 1, para. 4). And a major part of his answer is given by his “simulation constraint hypothesis,” the idea that afterlife beliefs are explained by our attempts to mentally simulate “what it’s like to be dead”: putting ourselves “into the shoes” of dead agents, we are compelled to ascribe to them mental states.

While simulation constraints may help explain the specific types of mental states we project into the afterlife (as Bering argues), I do not think they can help explain why people believe in an afterlife in the first place. The point of a mental simulation, after all, is to generate conclusions about an agent’s mental states or behaviors (with the type of simulation run depending on the types of mental states or behaviors about which one wishes to derive information). The cognitive mechanisms involved in planning simulations, accordingly, must assume the existence of a mind – namely, that mind into the nature of which one aims to gain insight through simulation. But this must hold for the afterlife case too: prior to simulating a dead agent’s mind, it must be assumed there is a mind to simulate. But that *already* is to assume an afterlife. This mind/soul may be taken to be phenomenally rich, or relatively barren (experiencing “darkness,” “nothingness,” or what have you), but it must be taken to exist, at least implicitly. Notice that Bering seems to grant this in referring to “simulation strategies to derive information *about the minds* of dead agents” (sect. 2.1, para. 1, emphasis mine). It follows that nothing about a simulation itself can explain our belief in an afterlife, since some such belief or assumption is a precondition for the planning and running of any such simulation.

If that is right, how might afterlife beliefs be explained? I believe that the route from our common-sense dualism to

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

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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,