of dead agents. The weakest part of Bering's contribution is precisely his evolutionary speculations. It is not much of an argument to say that supernatural illusions *may* have had fitness-enhancing effects, and that if this is so, then they *might* represent a specific cognitive adaptation (see Sterelny 2003). Bering hints at the problem of the evolution of cooperation but does not really explore it (see Axelrod 1990; Nowak & Sigmund 1994; 2005; Nowak et al. 2004; Richerson & Boyd 2005). Saying that the ability to entertain ideas about supernatural agents "might have led" our ancestors to accept the moral norms of their community raises more questions than it solves (see Boyer 2004; MacIntyre 2004; Pyysiäinen 2006). As I see it, Bering's ingenious experimental work is best interpreted within the standard model. Developing evolutionary arguments about morality and cooperation would require a more rigorous methodology.

An unconstrained mind: Explaining belief in the afterlife

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Abstract: Bering contends that belief in the afterlife is explained by the simulation constraint hypothesis: the claim that we cannot imagine what it is like to be dead. This explanation suffers from some difficulties. First, it implies the existence of a corresponding belief in the "beforelife." Second, a simpler explanation will suffice. Rather than appeal to constraints on our thoughts about death, we suggest that belief in the afterlife can be better explained by the lack of such constraints.

Why do so many people believe in life after death? According to Bering's simulation constraint hypothesis, the common-sense belief in the afterlife originates in part from the difficulty of mentally simulating a scenario in which one does not exist. Such an act of simulation is difficult because it invites one to imagine what it would be like (in the technical sense of "what it is like," from Nagel 1974) not to exist – an impossible feat. Because one cannot imagine what it would be like to be dead by imagining what it would be like not to exist, one imagines instead what it would be like to exist apart from one's body. This leads to the belief in psychological persistence after physical death.

If the simulation constraint hypothesis is correct, then, we believe in life after death because we cannot imagine ceasing to exist after death. But it is no easier to imagine one's nonexistence after death than it is to imagine one's nonexistence before the start of bodily life (say, before conception). What the simulation constraint hypothesis predicts, then, is belief in a stronger form of psychological immortality than the one Bering considers, namely, belief in the afterlife coupled with belief in the "beforelife." The question is: Do these two beliefs have equal currency?

This is an empirical question, and answering it will require careful experimental investigation, using methods similar to those described in the target article. This investigation is ongoing (Bering, personal communication). But there is reason to suspect that the answer to the question is no. There appears to be a far greater prevalence of belief in the persistence of the soul after bodily death relative to belief in the preexistence of the soul before bodily life.

In historical and contemporary Christianity, for example, the dominant views of the soul are creationism and traducianism. According to these views, the soul originates at the moment of conception, either by a creative act of God (as in creationism) or by generation from the souls of one's parents (as in traducianism). Thus, both creationists and traducianists deny that the soul exists prior to conception. Though some Christian sects, such as Mormonism, insist on the preexistence of the soul relative to conception, this is very much a minority view in Christian theology, both past and present. The same is true of Judaism and Islam. By contrast, belief in the continuing existence of the soul after death is shared by most major world religions, including Christianity, Judaism, and Islam. While this discrepancy might be explained in other ways, it suggests that belief in the afterlife and belief in the beforelife are not equally at home in common sense. If that turns out to be true, the simulation constraint hypothesis is in trouble.

Fortunately, we can explain the common-sense belief in life after death just as well without appealing to the idea of constraints on simulation. Instead, we can appeal to the relative absence of such constraints. In the target article, Bering himself gestures towards the explanation we have in mind: "[T]he nature of the body's role in producing the subjective experiences of emotions, desires, and beliefs seems not as amenable to children's scientific theories of dead minds (or, indeed, even to adults' formulation of scientific theories regarding phenomenal consciousness and the brain, e.g., *qualia*)" (sect. 2.1, para. 6).

Here's how the story goes in a bit more detail. Children and adults alike tend to think of the mind in general – and phenomenal consciousness in particular – in terms that are sharply distinct from, and even cognitively opposed to, the terms in which they think of physical-causal mechanisms such as the brain and other parts of the body (Robbins & Jack 2006; see also Bloom 2004). Those links between the mental and physical that we do understand to exist are few and far between, and they apply only to a limited range of mental states (Bering & Bjorklund 2004). Hence, our thoughts about the physical do little to constrain our thoughts about the mental.

In particular, the thought that our body will give out at some point in the future does not lead us to think that our mind will do the same. Indeed, our cognitive architecture may dispose us to reach the opposite conclusion. The very fact that the mental and the physical seem so starkly different may lead us to believe in mind–body dualism. It's a short step from belief in dualism to the belief that at least some psychological states, such as conscious thoughts and feelings (which seem terminally resistant to causal-mechanical explanation; see Robbins & Jack 2006), will persist after death.

Evolution's lost souls

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Abstract: The target article speaks loudest about what it cannot see – that man exists in God. Its claim that supernatural beliefs are "evolved errors" rests on unwarranted assumption and mistaken argument. Implications for evolutionary study are considered.

Either man is the child of God, or he is not. If he is divine, he is soulful and immortal, he transcends nature (is supernatural) and transcends psychology. If he is not divine, he is soulless and mortal, he is part of nature and his beliefs about soul and afterlife are errors and illusions of folk psychology.

The target article is clear about the facts. Infants are common-sense dualists who do not see people in the same way they see material objects. Children hold natural beliefs in an afterlife. Children reason better about the omniscient mind of God than about the limited minds of people and animals. Undergraduates

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