Letters to the Editor

Four Errors Commonly Made by Professional Debunkers

To the Editor:

In an editorial previously published in this Journal (Grossman, 2002), I coined the term "fundamaterialist" to characterize a person whose attitude towards materialism is the same as the fundamentalist's attitude towards his or her religion. In each case, the attitude is one of unwavering certainty towards the chosen ideology. For fundamaterialists, materialism does not appear to be an empirical hypothesis about the real world; it appears to be a given, an article of faith, the central tenet of his web of belief, around which everything else must conform. As all philosophers know, it is always logically possible to hold onto any a priori belief, no matter what the evidence to the contrary, by making enough *ad hoc* assumptions; so I am not at all surprised that Keith Augustine, in his recent articles in this journal (2007a, 2007b, 2007c) was able to sustain his faith in materialist ideology even in the face of near-death experiences (NDEs). This letter will not be a response to anything Augustine wrote, but rather is directed more to the scientists who might be "taken in" by some of the fallacious reasoning that he and other debunkers customarily employ. I will discuss four such fallacies, three briefly, the other at greater length.

Augustine committed the first fallacy in his very first sentence, when he claimed that "a survivalist interpretation of the phenomena … is severely undermined by the overwhelming evidence for the dependence of consciousness on the brain" (Augustine, 2007, p. 3). But that is nonsense. William James (1898) showed, more than a hundred years ago, that (1) the most that the facts of neurology can establish is a correlation between mental states and brain states and (2) correlation is not causation. The data of neuroscience will always be neutral with respect to the hypotheses of (1) causation or materialism and (2) what James called "transmission," the hypothesis that the brain merely transmits an already existing consciousness into the

particular form that is us. Neuroscience cannot in principle distinguish between these two hypotheses.

A second kind of error that Augustine and his fellow materialist ideologues frequently commit is to believe that a hypothesis of the form "some As are Bs" is refuted by producing many As that are not Bs. Survival researchers have amassed considerable empirical evidence to suggest that the hypothesis "Some NDEs involve veridical perception" is true. Augustine's counterargument appeared to consist of little more than producing examples of NDEs with nonveridical perception. But the fact that some NDEs have hallucinatory features does not argue against the hypothesis that other NDEs do involve veridical perceptions. If the survivalists' hypothesis were that all NDEs involve veridical perception, then Augustine would have had a point, and his examples would have falsified that hypothesis. But, as all philosophers know, the word "some" has very different logical properties than the word "all."

The third fallacy involves a deep confusion between the concept of evidence and the concept of proof. Science deals with evidence, not proof. The concept of proof, of "proving" something with 100 percent certainty, is a concept of mathematics and logic, and has no place in empirical science. The evidence that researchers have amassed over the years for the hypothesis that consciousness is independent of the body is very strong and very compelling (Kelly, Kelly, Crabtree, Gauld, Grosso, and Greyson, 2006). When debunkers argue that such accumulated evidence is not proof, they believe they have said something important, something that allows them to continue to believe rationally in their materialist ideology. But this is a totally trivial point that everyone grants from the outset. Science is not in the business of supplying "proofs"; it is in the business of supplying empirical evidence, and the evidence it has already supplied for the hypothesis that consciousness is independent of the brain is very strong indeed. The demand for "proof" in matters empirical is logically impossible; hence scientists ought not to succumb to the fundamaterialists demand that "proof" be forthcoming.

Our legal system recognizes two different standards of evidence: "beyond a reasonable doubt" for criminal cases, and a "preponderance of evidence" or "more likely than not" for civil cases. The proper standard for empirical science is closer to the civil standard than to the criminal standard. No empirical scientific hypothesis is ever established with 100 percent certainty, and it is always reasonable to doubt

any empirically established hypothesis or theory. Science deals with empirical truths, not logical truths. A standard trick of debunkers is to hold survival research to the criminal standard of evidence, but the rest of science to the civil standard. Often the researchers themselves fall for this trick: Janice Holden, in her excellent response to Augustine, felt obliged to write almost apologetically that "Belief in life after death must … remain to some degree a matter of inference" (2007, pp. 34–35). But all of science is a matter of inference, and an empirically based belief in survival is every bit as "scientific" as any other belief inferred from empirical evidence.

The fourth kind of logical fallacy, which I will go into in greater length, involves an equivocation between two very different meanings of the word "possible." I recently asked students in my graduate seminar to say what we mean when we call a theory or hypothesis possible. A philosophy graduate student answered that to say that a hypothesis is possible means that it is consistent, that it can be formulated without self-contradiction. This is the correct conception of logical possibility: a hypothesis is said to be logically possible if it is not self-contradictory. But a psychology graduate student offered a different conception of possibility. She suggested that a hypothesis is possible only if there is some empirical reason to believe that it might be true. Let us call this conception of possibility empirical possibility. The difference between these two meanings of the word "possible" is enormous, and I will argue that an equivocation between the two meanings allows debunkers to believe they actually have a rational perspective; it is also a main reason that the so-called "superpsi" hypothesis was ever taken seriously. But first I will give some examples to illustrate the two very different meanings of the word "possible."

Consider the following hypothesis: an advanced civilization exists on Mars and is living beneath the surface of that planet. Is this hypothesis possible? The hypothesis is not self-contradictory, so it is logically possible. But there is absolutely no evidence that suggests that the hypothesis might be true. So it is not possible in the sense that there are any reasons to believe it might possibly be true. The "hypothesis" is simply a sentence that is not self-contradictory. Is it possible that UFOs will land on the White House lawn tomorrow? Again, that proposition is not self-contradictory, so it is logically possible. But there is no evidence to believe that that hypothesis might be true; that is, it is not a real possibility.

Contrast this purely logical usage of the word "possible" with the following: the weatherman states that it is possible that it will rain tomorrow. In this context, the weatherman is not merely informing us that the sentence "it will rain tomorrow" is not self-contradictory. The weatherman is making an empirical statement about the real world. He is stating that present atmospheric conditions are such that, in X percent of past such situations, it rained the next day. Hence the possibility, or probability, of rain tomorrow is X percent. Notice that even if X is very small, say 5 or 10 percent, the hypothesis is still empirically grounded. So when the weatherman talks about the possibility of rain, he is talking about a possibility that is real, and not a mere logical possibility; that is, he is not talking about a possibility that is merely imagined, and for which there is no empirical evidence whatsoever.

So there is a big difference between a hypothesis that is merely logically possible (that is, a hypothesis that is not self-contradictory) and a hypothesis that is really possible (that is, a hypothesis for which there are empirical reasons to believe might be true). Of course, any real possibility must also be a logical possibility, but the converse is not true. The fact that a given hypothesis is logically possible, that is, is not self-contradictory, is not a reason to believe that it is a real possibility, that is, that it might be true.

Science is concerned with real possibilities only, not with mere logical possibilities, that is, not with hypotheses whose sole virtue is that they can be stated without self-contradiction. Philosophers, on the other hand, do consider what I have called mere logical possibilities, and such consideration is an indispensable and important aspect of a philosopher's training. One such logical possibility, which would be familiar to anyone who has taken an undergraduate philosophy course, is the "evil genius" argument of Descartes. Is it possible, asked Descartes, that a mischievous deity is causing us to have the sense perceptions that we do have, while at the same time there is no external world, and so our belief in an external world is false? Or equivalently, as students today pose the problem, is it possible that we are living in the "Matrix"? This is of course a logical possibility, but it is not a real possibility unless empirical reasons are forthcoming.

Hume's famous problem of induction invoked the logical possibility that the laws of nature would not continue to operate in the future. It is possible, wrote Hume, that the laws of nature as we know them will

cease to operate tomorrow. But this means nothing more than that the sentence "the laws of nature will cease to function tomorrow" is not self-contradictory. And the mere fact the sentence is not self-contradictory is not a reason to believe it might actually be true. This is how we get tricked into taking seriously the debunkers' various claims that "it could be this," or "it could be that." This is to treat a mere logical possibility as if it were a real possibility. It is as if we treated Descartes' "evil genius" argument as a real possibility, and felt we could not assert the reality of an external world until we had "proved" that we were not being systematically deceived. Philosophers love to worry over arguments like this, but they have nothing to do with science, which considers real, that is, empirical possibilities only. No one would ever think of applying for grant money to investigate whether or not we are living in the Matrix. No one would think of applying for funding to investigate the hypothesis that the laws of nature might stop working tomorrow.

I wish to mention briefly two historical examples, one famous and the other not, that involve this confusion between logical possibility and real possibility. As is well known, Creationists, when confronted with the data such as fossils that show that the Earth is much older than a literal reading of the Bible would indicate, claim that when God created the world 5700 years ago, he created it with the fossils as we find them. What are we going to believe, asks the Creationist: the testimony of our senses or holy scripture? They then challenge the Evolutionists to "prove" that God did not thus create the world. Is this a challenge that any scientist, or any rational person, ought to accept? The hypothesis "God created the world 5700 years ago with the fossils as we find them" is of course logically possible. But no one reading this seriously believes that evolutionary theory is on less solid ground simply because this logical possibility cannot be refuted. And likewise, no one reading this seriously believes that the independence of consciousness from the brain is on less solid empirical ground simply because the logical possibility of fraud can never be refuted. Neither the Creationists' hypothesis nor the debunkers' various hypotheses represent real empirical possibilities; they were proposed for the sole purpose of ignoring data that contradicted their *a priori* worldview.

Here is another example that is just as silly, but because its silliness was expressed in sophisticated philosophical jargon, it actually got published in the respectable journal *Philosophia*. Philosopher Robert Almeder (2001), after examining several of the stronger reincarnation-

type cases collected by Ian Stevenson, which include verified memories, skills and behaviors appropriate to the purported past-life personality, birth marks, and so on, concluded that it is irrational not to believe in reincarnation, given the data. But philosopher Steven Hales (2001) argued that it could be the case that these children with verified past-life memories were really abducted by aliens. These aliens, for their own amusement, planted false memories into the brains of the children, so that they would come to believe they had been somebody else. Presumably, the mothers of these children would also have been abducted while pregnant, so that the birthmarks could be planted on the fetus.

This, claimed Hale, would explain everything that needed to be explained, and had the virtue of being consistent with materialism. The aliens, after all, are physical beings, so that there is no need to posit the existence of disembodied consciousness, which very idea was repugnant to Hales, to account for cases of the reincarnation type. The burden of proof was cleverly shifted to the believers in reincarnation to prove that the children had not been abducted by aliens before they can rationally assert the truth of the reincarnation hypothesis.

But this is just sophisticated nonsense that should not be, and should never have been, taken seriously. The alien abduction hypothesis is of course logically possible, but calling it "logically possible" means merely that the sentence "aliens abducted the children and planted memories in their brains" is not self-contradictory. But that is not a reason for serious scientists trying to understand real-life phenomena to take it seriously. Scientists are obligated to investigate real possibilities, not imaginary ones. A logical possibility is imaginary only; that is, anything that a human being can consistently imagine is a logical possibility. The alien abduction hypothesis would move from the realm of the purely imaginary to the realm of the real only if there were some evidence to suggest it might be true. What might count as evidence? If the children were found to have implants in their skulls, or if the children were able to remember being abducted, then the abduction hypothesis would represent a real possibility. But no such data are forthcoming.

Notice, incidentally, that neither Hales nor any other fundamaterialist tries to deduce any observational consequences from their imaginary hypotheses, as I have just done. They are content to merely imagine that everything can be explained away in terms consistent with their materialist ideology; they have absolutely no interest in

investigating whether what they are imagining is true. That would take them out of their armchair imaginings and into the real world; and real-world data have refuted materialism over and over again. Hales's concern, like that of the religious fundamentalists, is ideological, not empirical. He wants real scientists, who are trying to account for real data, to take as a real possibility what he himself takes as only a logical possibility, or in other words, merely imagines. The debunker wants us to refute mere logical possibilities before we can legitimately make the inference from the data to survival.

And if the fundamaterialist says that the hypothesis of an afterlife is so extraordinary that we should prefer any other hypothesis, so long that it is consistent with materialism and not self-contradictory, my reply is as follows: There is absolutely nothing extraordinary about the hypothesis of an afterlife. The overwhelming majority of people in the world believe it, and have always believed it. I grant, however, that there exists a rather peculiar subgroup of human beings for whom the survival hypothesis is extraordinary. This subgroup consists of people who have been university-educated into accepting materialist dogma on faith. We have been brainwashed by our university education into accepting that the hypothesis of an afterlife is extraordinary. It is perhaps time to acknowledge this, and to acknowledge that we are all suffering from what Gary Schwartz has called "post-educational stress disorder" (Schwartz and Simon, 2002, p. 224). Part of this "disorder" is that we have internalized the academy's materialist worldview, and we call anything that falls outside that worldview "extraordinary." But it is the materialists' worldview that is truly extraordinary, especially when one considers the ridiculous hypotheses that that worldview advances in order to save itself, such as "superpsi," alien abduction of children who appear to remember past lives, and nonfunctioning brains still somehow producing conscious experience.

Survival researchers are under no obligation to refute every, or even any, logically possible alternative hypothesis. Such "hypotheses" are nothing more than the imaginings of the fundamaterialists; the burden is on them to provide non-ideological empirical support for their hypotheses before scientists should take them seriously. In the absence of empirical support, such hypotheses merely reflect the fantasy life of the debunkers, and science is not obliged to take unsupported imaginings and fantasies seriously. However, Augustine and the debunkers can rest comfortably, knowing that logic guarantees that they will always be able to believe in materialism, come what

may. But we should not pretend that the debunkers and fundamaterialists are concerned with empirical science, and hence journals such as this, should not allot so much space to mere ideology.

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