

## Commentary

**Bernard J. Baars**

*Affiliated Research Fellow, The Neurosciences Institute, San Diego*

# The mind-body problem is scientifically untestable and irrelevant

For 26 centuries brilliant discussions have taken place about the Mind-Body problem, often in this form: "How could the world of personal experience possibly be understood in terms of physical objects like the brain?" Hippocrates already made convincing arguments that the brain was the organ of human consciousness. Aristotle already raised the Mind-Body question. Almost identical questions were asked in Asia at the same time.

The Mind-Body debates we have today are almost identical to the ones enjoyed by Aristotle and the Vedic sages. Nothing has been resolved. A vast amount of brain power has been devoted to more and more minute examinations of questions that are not one step closer to solution today than in 600 BCE.

This is not the first time in the history of human thought that we see this pattern. It happened with Zeno's Paradox, which was finally resolved in the late 19th century with the mathematics of infinite series. It happened with the question of vitalism, which dominated philosophical debate about biology in the 19th century. Vitalism has simply faded away today, with the bioscience revolution that is now dramatically changing our lives.

Repetitive, unsolved debates are a danger sign in science. They mean one of two things. First, the question under debate may be wrongly posed, like the attack on the Copernican system, or Berkeley's critique of Newton's notion of gravitational "action at a distance." Asking the wrong question is a formula for failure in science.

Alternatively, unsolved debates may involve a genuine paradox that is conceptually unclear. Zeno's paradox was such a case. It had a solution, but it took until 1900 to find it.

I believe that the Mind-Brain problem mostly consists of the wrong questions, from a scientific point of view. It is not amenable to evidence. But evidence regarding consciousness has been accumulating remarkably well. Currently we have about 10,000 articles per year in psychology and brain science that cite consciousness. Going back to the 19th century, we have the pioneering work of Fechner, Helmholtz, French hypnosis researchers, Wundt, and many others. A reading of William James' great *Principles of Psychology* of 1890 shows that most of its 1300 pages are devoted to empirical, testable, and profoundly important aspects of consciousness.

It is always possible that Mind-Brain debates reflect an underlying paradox, like Zeno's paradox, that is simply unsolved.

In either case, the scientific answer is to seek questions that are testable. They will almost inevitably contribute to progress given time. That is the history of science in the last five centuries: Apparent paradoxes and conundrums simply fade away with the cumulation of relevant evidence?

What evidence is relevant for consciousness? I have suggested for the last 20 years that science must study consciousness as a variable – we must have comparison conditions. Thousands of other scientists have independently come to the same conclusion, because that is the only way we know how to study anything. We treat consciousness as a variable, simply by comparing "more conscious" to "less conscious" conditions – in sleep vs. waking, subliminal vs. supraliminal sensory processes, and scores of other methods. With this approach the last dozen years have seen very rapid progress. (See Baars, 1997, 2003; Baars et al, 2003 and in press)

Studying consciousness as a variable also reflects a reasonable approach to the Mind-Brain debate. It essentially suggests that there is one fundamental domain of discourse, of which conscious brain functions reflect one aspect, and unconscious brain functions reflect another. We can call it dual-aspect monism. But most of all, it allows us to study consciousness "as such" while evading the endless, unresolved debates that stand in the way of clear thought.

How do these comments reflect on Morten Overgaard's article? They obviously take issue with the very effort of trying, one more time after thousands of failures, to resolve the Mind-Brain problem by unaided armchair reasoning. That has not worked for 26 centuries. It is unlikely in the extreme to work today. We are no more intelligent than Aristotle, Descartes, or the Vedic thinkers. Repetitive, unresolved debating is a waste of time and intelligence.

But if we ignore the vast body of scientific evidence we have today, we are just as helpless in dealing with consciousness as our intellectual forerunners were.

Today, more than 5000 biomedical articles refer to "consciousness" per year. The most relevant ones all treat consciousness as a variable. In the web newsletter *Science and*

Consciousness Review, we aim to keep up with this great flow of information. (See [www.sci-con.org](http://www.sci-con.org))

Just recently, Francis Crick and Christof Koch published a fine summary of the science, called "A framework for consciousness." (Nature Neuroscience, Vol. 6 (2), Feb 2003). Mind-Brain philosophy is covered in a paragraph or two, but the major thrust is on the emerging scientific consensus on consciousness – still early, still very open to change – that is now beginning to take hold.

I believe that young people interested in consciousness should be encouraged to follow Crick and Koch's kind of work. Mind-Brain philosophy, like any other closed belief system, can serve as a kind of intellectual cul-de-sac. Once we are mentally fixed in its terms, it becomes difficult or impossible to think in any other way.

Fortunately some philosophers, notably John Searle, Daniel Dennett, Andrew Brook, Galen Strawson, Patricia and Paul Churchland and others, are increasingly returning the great philosophical tradition of Kant and Aristotle, which gave us many testable, empirical hypotheses about the human mind. Philosophers in the great tradition were not afraid of testable questions. It is only since the rise of analytic philosophy about 1900 that empirical questions became unwanted.

So my recommendation is to go to the facts. Profound intellectual work is good, but it needs to wrestle with evidence. Good theory cannot rise from armchairs alone."

Mind-Body philosophy is playing a role today that is not unlike vitalism in the history of biology. I find that very unfortunate, especially given the extraordinary importance of the great tradition of philosophical thought, from Plato and the Vedanta sages to Kant and Nietzsche.

I believe that today we can learn more about consciousness from Kierkegaard than Overgaard! Fortunately Morten Overgaard now has an historic opportunity to contribute to the scientific questions of consciousness. I sincerely look forward to that day.

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