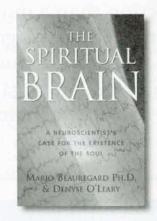
## Mind over Matter

THE SPIRITUAL BRAIN:
A NEUROSCIENTIST'S CASE FOR
THE EXISTENCE OF THE SOUL
by Mario Beauregard & Denyse O'Leary
HarperOne, 2007
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reviewed by Tom GILSON

ARIO BEAUREGARD wants to overturn the assumptions of his discipline. "Neuroscience today is materialist," he writes. "The mind is assumed to be a mere illusion generated by the workings of the brain. Some materialists even think you should not in fact *use* terminology that implies your mind exists."

You could hardly range farther from common human experience than that, but it's mainstream neuroscience. Last May, the Washington Post quoted a Harvard scientist's view that "multiple experiments suggest



that morality arises from basic brain activities. Morality... is not a brain function elevated above our baser impulses."

And in a June New York Times report, the prominent neuroscientist V. S. Ramachandran said that belief in the soul as "an immaterial spirit that occupies individual brains and that only evolved in humans... is complete nonsense... basically superstition."

This is philosophical materialism at work, and it can certainly be challenged on philosophical grounds. Beauregard, who teaches at

the University of Montreal, and his co-author, Denyse O'Leary, have chosen, however, to confront it on its own terms. Science, they say, supports belief in immaterial reality.

## THE SOUL'S DEBUNKERS

The Spiritual Brain is written for a general non-specialist audience, though frequent "View from Neuroscience" sidebars supply more technical information. Its first goal is to debunk the soul's debunkers: scientists who claim that religious, spiritual, and mystical experiences (RSMEs, in the authors' shorthand) can be fully explained through various materialist approaches.

Several such approaches have been proposed. Some scientists say that a "God Gene" predisposes certain people to RSMEs, others that RSMEs are manifestations of temporal lobe epilepsy.

Still others suggest that they can be triggered by a "God Helmet," which applies a low-level magnetic field to the temporal lobes and induces mystical states. Richard Dawkins tried the "God Helmet," hoping finally to get his own taste of the God experience. Not much happened. He was "very disappointed."

As it turns out, these theories are easy targets: They simply lack supporting evidence. The original "God Helmet" research, for example, was marred by expectations of spiritual experiences, which were planted in the subjects' minds by the researchers. Swedish scientists tried to reproduce the effect under more rigorously controlled conditions, and came up quite empty. Temporal lobe epilepsy and "God Gene" theories have fared no better under close scrutiny.

But the popular press has promoted these theories, so correcting the facts is vital. Nevertheless, Beauregard and O'Leary's more original contribution is their presentation of positive research that hints at a reality beyond the material world.

They do not suggest that neuroscience can prove spirituality. They believe, rather, that it can give strong *hints* that the mind is real and transcends the physical brain, and that there is more to spiritual experience than materialism can account for.

The relationship between mind and brain has bedeviled thinkers at least as far back as Descartes. Immaterial Mind has its greatest example in God himself. Free will, consciousness, the sense of self, and even reasoning itself seem difficult to explain on materialist theories of the mind.

Yet no one denies the physical brain's central importance. God created us in bodies, to live in a world that is both physical and spiritual. Human minds quite certainly depend on human brains, even if only for their expression in the physical world.

## MATERIALISM'S LIMITS

The authors provide a brief catalog of competing mind-brain theories, but do not try to resolve that issue. They only seek to show empirical evidence that there is more to us than materialism can explain.

They tell us, for example, about obsessive-compulsive disorder, which is characterized by defects in brain circuitry that can be identified through PET scanning. Jeffrey Schwartz, who discovered these neural irregularities, also found an effective treatment—and it was not surgically re-wiring patients' brains.

He trained his patients to *think* differently about their obsessions and compulsions. The patients not only tended to improve clinically, but their post-treatment brain scans were more normal-looking. *Thinking* changed their brains. This is not easily explained under materialism.

There is also the medical effectiveness of placebos, which *New Scientist* placed at the top of its 2005 list of "things that don't make sense." Placebos are physically inert, yet they work: Patients on placebos often get better. Apparently it is patients' belief in the medicine that heals. Placebos (read: *beliefs*) have even been demonstrated to alter physical brain structures. Again, thinking changes brains.

The book also enters more controversial fields, including near-death experiences, which the authors interpret as a soul temporarily departing from the body, and parapsychological (Psi) phenomena.

This seemed to me the weakest part of the book. The truth about near-death experiences is vigorously disputed, and the book's treatment seemed insufficient to settle the issue. And though the authors sprinkled in a few tantalizing references to positive, peer-reviewed parapsychological research, they leaned more heavily on Psi research done by Dean Radin of the Petaluma, California Institute of Noetic Sciences.

Given parapsychology's questionable history, more information on Radin's scientific legitimacy would have been helpful. He is a "consciousness researcher," they tell us. So was Edgar Cayce. We need more information.

## IRREDUCIBLE MYSTICISM

The chapters on mystical experiences are much stronger, for they involve Beauregard's own research. He led a study, published in *Neuroscience Letters* in 2006 (and mentioned favorably in *Scientific American*), on "Neural Correlates of a Mystical Experience in

Carmelite Nuns." He won the cooperation of fourteen nuns experienced in RSMEs, who underwent brain imaging and brain wave measurement while recalling past mystical experiences. Many of them actually entered into fresh RSMEs during these experiments.

Beauregard found that RSMEs cannot be written off as simple physical phenomena. "There is no single 'God spot' in the brain," he noted. "RSMEs are complex and multidimensional and mediated by a number of brain regions normally implicated in perception, cognition, emotion, body representation, and self-consciousness."

Of course he didn't "find God" in the nuns' brains. He wasn't looking for him there. His goals were appropriately modest: to show the neural complexity of RSMEs, and thereby undercut reductionistic explanations for them. Neuroscientists may still resort to materialistic theories, but they can no longer do so as simplistically as they have.

For my money, philosophical approaches are sufficient to put materialism away for keeps. But that doesn't make it any less satisfying to learn that heavily hyped "empirical evidence" for materialist neuroscience is distorted, weak, and contradicted by other research. Though *The Spiritual Brain* may not be fully convincing in every topic it addresses, still it is an enlightening and enjoyable read, and a genuine contribution to overturning materialist assumptions in science.

Tom Gilson is Director of Strategic Processes for Campus Crusade for Christ's Operational Advisory Services team. He hosts a weblog, Thinking Christian (www.thinkingchristian.net), where he engages with atheists and others on issues like those in the book he has reviewed here. He and his wife Sara have two children, and attend Seaford Baptist Church in York County, Virginia.

