

Endnotes



Chapter 1: The Power of Belief (Pages 3–15)

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4. R. J. Papac. 1998. Spontaneous regression of cancer: Possible mechanisms. *In Vivo* 12(6):571–578. See also J. Markowska and A. Markowska. 1998. Spontaneous tumor regression. *Ginekologia polska* 69(1):39–44. And see R. Schwarz and M. Heim. 2000. Psychosocial considerations about spontaneous remission of cancer. *Onkologie* 23(5):432–435.
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7. This passage by Chuang Tzu was translated for this volume by M. R. Waldman.
8. *Born to Believe* is the natural next step in a line of research and scholarship which began in 1975 when my late colleague Eugene d'Aquili and Charles Laughlin published "The biopsychological determinants of religious ritual behavior" in *Zygon, Journal of Religion and Science*. Their

thesis was that all religious phenomena were associated with various neuropsychological processes within the human organism. The first ten years of this scholarly movement were difficult, and the attempt to integrate neuropsychology and theology was extremely controversial. In 1979, Eugene d'Aquili (with Charles Laughlin and John McManus) published *The Spectrum of Ritual* (Columbia University Press, 1979). The following articles were published by Dr. d'Aquili in *Zygon*: "The neurobiological bases of myth and concepts of deity" (1978), "Senses of reality in science and religion" (1982), and "Myth, ritual and the archetypal hypothesis: Does the dance generate the word?" (1986). Other early explorations of the neuropsychological nature of religious experience were made by Nobel laureate Roger Sperry, Colwyn Trevarthen, Solomon Katz, Herbert Benson, Victor Turner, Laurence McKinney, and James Ashbrook. Ashbrook first used the term "neurotheology" in an article published in *Zygon* in 1984 entitled "Neurotheology: The working brain and the work of theology." Ashbrook broadly defined neurotheology in terms of the split-brain physiology being researched at that time, a speculative vision that was yet to be substantiated by research (a Medline search found forty-one academic articles published between 1973 and 1996 relating to meditation and the brain).

In 1991, I began working with Dr. d'Aquili and others, creating a series of theoretical articles that led to a number of brain imaging studies that we first presented in 1993 (for example: "Religious and mystical states: A neuropsychological model," published in *Zygon* in 1993, "The near death experience as archetype: A model for 'prepared' neurocognitive processes," published in *The Anthropology of Consciousness* in 1994, "The neuropsychological basis of religion: Or why God won't go away," published in *Zygon* in 1998, "The neurophysiological correlates of meditation: Implications for neuroimaging," published in the *Journal of the Indian Academy of Clinical Medicine* in 1998, and "The neural basis of the complex mental task of meditation: Neurotransmitter and neurochemical correlates," published in *Medical Hypotheses* in 2003. Over the past ten years, my colleagues and I continued our brain-imaging studies of various religious and spiritual practices, including the more recent ones that you will read about in this book. During this time, many new research articles, books, and conferences began to address the relationship between spirituality and the

brain. In 1996, a consensus conference on spirituality and health, convened by the National Institute of Healthcare Research, laid out numerous ideas concerning future research in this area.

Many other researchers and authors have made significant contributions to the field. These include Herbert Benson (*Timeless Healing: The Power and Biology of Belief*, Scribner, 1996), James Austin (*Zen and the Brain*, MIT Press, 1998), Matthew Alper (*The “God” Part of the Brain*, Rogue Press, 1998), Michael Shermer (*How We Believe: Science, Skepticism, and the Search for God*, W. H. Freeman, 1999), Elio Frattaroli (*Healing the Soul in the Age of the Brain*, Viking, 2001), Pascal Boyer (*Religion Explained: The Evolutionary Origins of Religious Thought*, Basic Books, 2001), John Horgan (*Rational Mysticism: Dispatches from the Border Between Science and Spirituality*, Houghton Mifflin, 2003), Joseph Giovannoli (*The Biology of Belief*, Rosetta Press, 2001), Dean Hamer (*The God Gene: How Faith Is Hardwired into Our Genes*, Doubleday, 2004), and Bruce Lipton (*The Biology of Belief: Unleashing the Power of Consciousness, Matter and Miracles*, Mountain of Love, 2005). These individuals, along with many others, have helped to stimulate important dialogues and research in many interdisciplinary fields.

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Chapter 2: A Mountain of Misperceptions (Pages 16–44)

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[6.](#) D. Schacter and E. Scarry. 2000. *Memory, Brain, and Belief*. Cambridge, MA: Harvard University Press.

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Press.

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[10.](#) O. Sacks. 1985. *The Man Who Mistook His Wife for a Hat*. New York: Summit.

[11.](#) S. Feferman et al. (eds.). 1986. *Kurt Gödel: Collected Works, Vol. I: Publications 1929-1936*. Oxford: Oxford University Press.

[12.](#) D. Hofstadter. 1979. *Gödel, Escher, Bach: An Eternal Golden Braid*. New York: Basic Books. In his 1951 Gibbs lecture, “Some basic theorems on the foundations of mathematics and their philosophical implications,” Gödel also believed that his theorem could be applied to human intelligence, arguing that the human mind cannot formally prove its own consistency. Similar controversial arguments have been taken up by the philosopher Hilary Putnam and the mathematician Roger Penrose.

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[14.](#) Dozens of books have been written debating Spinoza’s concept of substance. For a comprehensive analysis of these arguments, see R. S. Woolhouse. 1993. *Descartes, Spinoza, Leibniz: The Concept of Substance in Seventeenth-Century Metaphysics*. Oxford: Routledge. See also E. Harris. 1995. *The Substance of Spinoza*. Atlantic Highlands, NJ: Humanities.

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Chapter 3: Reality, Illusions, and the Aunt Who Cried Wolf (Pages 45–69)

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Chapter 4: Santa Claus, Lucky Numbers, and the Magician in Our Brain (Pages 70–99)

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Chapter 5: Parents, Peas, and “Putty Tats” (Pages 103–131)

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Chapter 6: Ordinary Criminals Like You and Me (Pages 132–164)

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Chapter 7: Nuns, Buddhists, and the Reality of Spiritual Beliefs (Pages 167–190)

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Chapter 8: Speaking in Tongues (Pages 191–214)

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Chapter 9: The Atheist Who Prayed to God (Pages 215–245)

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and <http://religiousfreedom.lib.virginia.edu/court/>.

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Chapter 10: Becoming a Better Believer (Pages 246–271)

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has a master's degree in parapsychology and a law degree. Wirth has since been sentenced to federal prison for fraud and conspiracy. Columbia University investigated the authors and the study and acknowledged noncompliance with its policies and protocols. Flamm writes, "Specifically, Dr. Lobo never presented the above research to the Institutional Review Board of Columbia-Presbyterian Medical Center."

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