

STUDY GUIDE: IS THE HUMAN MIND PREDISPOSED TO RELIGIOUS THOUGHT? & FRONTIERS OF NEUROSCIENCE: CHARTING THE COMPLEXITY OF OUR BRAINS

By Dr. Joshua M. Moritz

VIDEO SUMMARY: What is the foundation of our individuality? What does it mean to be a “person”? Where does my “identity” lie? What is the “essence” of being “me”? Many scientists would answer that the foundation of our individual identity and personhood is in our brains. Our personalities, thoughts, and memories are contained within our brains, and beyond this, our adult brains have a large degree of physical continuity with the brains we had when we were children. Lasting a lifetime, our neurons provide the physical underpinnings of who we are as individual persons. But what happens when something goes wrong with our brains—do we lose ourselves and our identities?

How do human minds work? Are they blank slates or are some ideas more natural than others? Is religious thought natural or not? Research in Cognitive Science of Religion (CSR) has found that religion is so common within and across cultures because of its “cognitive naturalness,” its relative ease, and automaticity owing to strong undergirding in normally developing cognitive systems. CSR has found that from early childhood people easily acquire ideas about God or gods, a non-physical aspect of humans, and some kind of afterlife. From a cognitive perspective, the brain’s predisposition to pick up certain religious concepts is like its ability to pick up a native language. But what are the implications of this scientific research for the truth claims of religion?

CONTRIBUTORS

Dr. Justin Barrett is director of the Thrive Center for Human Development, Thrive Professor of Developmental Science, and professor of psychology at Fuller Theological Seminary. He is the author of *Born Believers: The Science of Childhood Religion* (Free Press, 2012) and *Why Would Anyone Believe in God?* (AltaMira, 2004).

Dr. William Newsome is an investigator at the Howard Hughes Medical Institute and professor of neurobiology at the Stanford University School of Medicine. Dr. Newsome was appointed to lead the Obama administration’s *BRAIN* initiative to map the brain’s 100 billion neurons and trillions of connections.

Dr. Huda Zoghbi is a professor in the departments of pediatrics, molecular and human genetics, and neurology and neuroscience at Baylor College of Medicine and director of the Jan and Dan Duncan Neurological Research Institute at Texas Children’s Hospital.

DISCUSSION QUESTIONS

1. What does it mean to be the same ‘person’ over time?
2. Are ‘you’ synonymous with your face, your body, your brain, or some other characteristic?
3. Are you the same person that you were when you were one year old? 16 years old? Why or why not?
4. What do you think constitutes personal “identity” over time? What does it mean to be the same person through change and time (e.g. having the same body, same DNA, same brain, same memories, same soul)?

In his interview for this video, “A Closer Look: Synthetic Brains and the Location of Identity,” Dr. William Newsome says, “If I get a new heart, I’m still me. If I get new lungs or if I get a new prosthetic leg, I’m still me. If I get a new brain inside this head, and this brain goes off someplace else, what is me? I think I go where my brain is. Brains are unique. They do interact with the rest of the body, but there’s something about the brain that makes us uniquely ourselves.”

5. Would you agree with Newsome’s statement? Why or why not?
6. If your brain was transplanted into a *radically different body*, do you think that the new combination would really be the same “you” (i.e. with a different sex, a different ethnicity, a different height, a different weight, and so on)?
7. Consider how the Jewish, Christian, and Islamic belief in physical resurrection relates to the question of personal identity after a brain transplant into a different body. How are these scenarios similar and how

are they different (i.e. how is your soul being placed into a new body similar and/or different to your brain being placed into a new body?)

Consider Newsome's example where someone's brain is replaced one neuron at a time with artificial neurons over a long period of time.

8. At the end of this process of replacement, do you think this individual could still be considered the same person as before the process? Why or why not?
9. If you answered that it would not be the same person, at what point do you think the person became someone else (i.e. after one neuron was replaced, after half of them were replaced, after all of them were replaced)?

In "Frontiers of Neuroscience," Dr. Huda Zoghbi discusses brain injury and regenerative plasticity.

10. When a person suffers a brain injury or a neurodegenerative disease, do you think that the person loses something of their essential self or their fundamental identity? Why or why not?

In "Is the Human Mind Predisposed to Religious Thought?" Barrett explains, "It's *not* the case that children's minds, human minds are just sponges...that they just absorb whatever is in their environment, and sort of passively soak it in." They are not a "blank slate." Rather, human minds are "more like a landscape, or an ecosystem, where certain things are going to grow in certain places, but not others. Certain ideas are going to be easier for human minds to process than others." One of the things that human minds are "naturally disposed toward," says Barrett, is "certain kinds of thought that we would call religious" and "these natural propensities that undergird religious thought are just part of the ordinary equipment that humans have, regardless of culture."

11. Consider how CSR researchers have found that some types of religious beliefs are cognitively natural or intuitive. Do you think the "naturalness" of a belief or concept is a good indicator of its truth? Why or why not?
12. Various traditions within the theistic religions affirm that humans have a natural or inborn sense of God. How would you relate this theistic affirmation to the research from CSR that Barrett describes?
13. From a theistic perspective, can you think of any reasons why God would not hard-wire into the human brain a *fully formed theological concept* of God (rather than a *general natural propensity* towards certain types of religious belief—such as a vague belief in gods, creation, purpose, and the afterlife)?

FURTHER RESOURCES & SUGGESTED READINGS

On Neuroscience, Religion, and the Human Person:

- Video: Warren Brown, "Reconciling Neuropsychology and Theology"
<http://downloads.sms.cam.ac.uk/1294638/1294642.m4v>
- Video: Warren Brown, "Did My Neurons Make Me Do It? The Brain, Mind and Non-reductive Physicalism"
<http://downloads.sms.cam.ac.uk/650381/650385.m4v>
- Video: Joel B. Green, "Sacred & Neural"
<https://www.youtube.com/watch?v=4vFrZnsRR20>
- Video: William Newsome, "Theology and the Neurosciences"
<http://downloads.sms.cam.ac.uk/1230255/1230259.m4v>
- Video: William Newsome, "Brain, Mind and Free-Will: Did my neurons make me do it?"
<http://downloads.sms.cam.ac.uk/1282617/1282621.m4v>
- Video: Alan Torrance, "Developments in Neuroscience and Human Freedom: Some Theological and Philosophical Perspectives"
<http://downloads.sms.cam.ac.uk/1211445/1211449.m4v>
- Warren S. Brown, Nancey Murphy and H. Newton, eds., *Whatever Happened to the Soul?: Scientific and Theological Portraits of Human Nature* (Fortress, 1998).
- Kelly Bulkeley, ed., *Soul, Psyche, Brain: New Directions in the Study of Religion and Brain-Mind Science* (Macmillan, 2005).
- Philip Clayton, "Neuroscience, the person, and God: An emergentist account," *Zygon* 35:3 (Sept. 2000): 613–52.

- Georg Gasser, ed., *Personal Identity and Resurrection: How Do We Survive Our Death?* (Ashgate, 2010).
- Joel B. Green, ed. *What About the Soul? Neuroscience and Christian Anthropology* (Abingdon, 2004).
- Joel B. Green, *Body, Soul and Human Life: The Nature of Humanity in the Bible* (Baker Academic, 2008).
- Joel B. Green, *In Search of the Soul: Four Views of the Mind-Body Problem*, rev. ed. (InterVarsity, 2005).
- Andrew Newberg and Eugene D'Aquili, *The Mystical Mind: Probing the Biology of Religious Experience* (Fortress, 1999).
- Malcolm Jeeves, ed., *From Cells to Souls – And Beyond: Changing Portraits of Human Nature* (Eerdmans, 2004).
- Malcolm Jeeves, *Minds, Brains, Souls and Gods: A Conversation on Faith, Psychology and Neuroscience* (InterVarsity, 2013).
- Joan D. Koss-Chioino and Philip Hefner, *Spiritual Transformation and Healing: Anthropological, Theological, Neuroscientific, and Clinical Perspectives* (Rowman Altamira, 2006).
- Nancey Murphy, *Bodies and Souls or Spirited Bodies?* (Cambridge, 2006).
- Nancey Murphy and W.S. Brown, *Did My Neurons Make Me Do It? Philosophical and Neurobiological Perspectives on Moral Responsibility and Free Will* (Oxford University Press, 2007).
- Nancey Murphy, George Ellis, and Timothy O'Connor, *Downward Causation and the Neurobiology of Free Will* (Springer, 2009).
- Robert John Russell, Nancey Murphy, Theo C. Meyering, and Michael Arbib, eds., *Neuroscience and the Person: Scientific Perspectives on Divine Action* (Vatican Observatory and CTNS, 1999).
- Kevin S. Seybold, *Explorations in Neuroscience, Psychology and Religion* (Ashgate, 2007).
- Ted Peters, Robert J. Russell and Michael Welker, eds., *Resurrection: Theological and Scientific Assessments* (Eerdmans, 2002).

On Cognitive Science of Religion:

- Video: Justin Barrett, "Cognitive Science, Religion, and Theology"
<https://www.youtube.com/watch?v=KfUbRn9H2ac>
- Video: Justin Barrett, "Are People Born to Believe in God?"
<https://www.youtube.com/watch?v=ltB0WOVE444>
- Video: Justin Barrett, "Born Believers: The Naturalness of Childhood Theism"
<http://media.st-edmunds.cam.ac.uk/WebMedia/FAR245%20Barrett.mov>
- Video: Justin Barrett, "The Evolution of Religious Brains"
<http://downloads.sms.cam.ac.uk/651435/651439.m4v>
- Video: Justin Barrett, "The Nature of Childhood Theism"
<http://downloads.sms.cam.ac.uk/653021/653025.m4v>
- Video: Justin Barrett, "Psychology and Religious belief"
<http://downloads.sms.cam.ac.uk/1800457/1800462.m4v>
- Video: Justin Barrett, "Are People Born to Believe?"
<http://downloads.sms.cam.ac.uk/1827118/1827123.m4v>
- Justin Barrett, "Toward a Cognitive Science of Christianity," in *Blackwell Companion to Science and Christianity*, J. Stump and A. Padgett, eds. (Blackwell, 2012): 319-334.
- Justin Barrett, *Born Believers: The Science of Childhood Religion* (Free Press, 2012).
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- Justin Barrett, *Cognitive Science, Religion, and Theology: From Human Minds to Divine Minds* (Templeton Press, 2012).
- Helen de Cruz and Johan De Smedt, *A Natural History of Natural Theology: The Cognitive Science of Theology and Philosophy of Religion* (MIT Press, 2015).
- Dirk Evers, Michael Fuller, Antje Jackelen, and Taede Smedes, *Is Religion Natural?* (T & T Clark, 2012).
- Robert McCauley, *Why Religion is Natural and Science is Not* (Oxford University Press, 2011).
- Gregory Peterson, *Minding God: Theology and the Cognitive Sciences* (Fortress Press, 2002).
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