

The Great Brain Books, Revisited

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In 1999, *Cerebrum* [published a list](#) of books about the brain, guiding regular readers to “the great books, past and present, that capture the unfolding story of the brain and how brain research is changing our ideas about memory and emotion, life span and language, neurological disorders and psychiatric syndromes.”

Eleven years later, the need for such a list is even greater—more than 30,000 brain-related books in English are in print or will soon be published, according to Bowker’s Books in Print. What is a reader to do?

We decided to update our list, with help from our readers and our science experts. To draw out the best current and classic books from the crowded field, we selected 10 categories, based on our earlier list. Then we opened up a poll to Dana.org readers, asking them to nominate their favorites in as many of the categories as they wished.

More than 70 of you responded—thank you! Your choices were forwarded to Dana Alliance members, who were asked to send in their top choices. After we heard from more than 30 members, we made a final tally, which was reviewed by *Cerebrum*'s scientific advisors.

Here are the top three or four books in each category listed in order of the number of votes they received, along with some runners-up. Many books fit in multiple categories; if a book is listed in a category that doesn't interest you, don't let that stop you from taking a look at it—it may have been pigeonholed to fit the format. Of course, there are many other books in each category worth reading; this list is just a starting point. We hope it will lead you to enjoy some great science writing.

1. General Books About the Brain

[The Brain that Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science](#)

By Norman Doidge. Viking, 2007.

This book was far and away the most popular choice of Dana.org readers. Exploring the plasticity of the brain—something that was only recently proven to exist—Dr. Doidge uses case studies to discuss how people remember, recovery from injury, love, and learn.

[Rhythms of the Brain](#)

By Gyorgy Buzsaki. Oxford University Press, 2006.

How did our brains evolve, and what makes them work? Dr. Buzsaki looks into how coordinated neuronal firing developed and hypothesizes that it plays a large role in the brain's many functions, including information processing and retrieval.

[The Other Brain : From Dementia to Schizophrenia, How New Discoveries About the Brain Are Revolutionizing Medicine and Science](#)

By R. Douglas Fields. Simon & Schuster, 2010.

Until recently, neurons were the brain cell that got all the attention, but now it's clear that glial cells are more than just glue that holds the brain together. Dr. Fields looks at the many functions of glia that are being uncovered and the scientific breakthroughs that could come from a better understanding of these cells.

Also:

[Liars, Lovers, and Heroes: What the New Brain Science Reveals About How We Become Who We Are](#)

By Steven R. Quartz and Terrence J. Sejnowski. William Morrow, 2002.

[The Mind Machine](#)

By Colin Blakemore. BBC Books, 1994 (revised edition). NOTE: This book is out of print, but used copies are available.

[The Future of the Brain: The Promise and Perils of Tomorrow's Neuroscience](#)

By Steven Rose. Oxford University Press, 2006.

[The Body Has a Mind of Its Own](#)

By Sandra Blakeslee and Mathew Blakeslee. Random House, 2008.

2. Neuropharmacology and Brain Chemistry

[Essential Psychopharmacology: The Prescriber's Guide](#)

By Stephen M. Stahl. Cambridge University Press, 2009 (3rd edition).

Though this may not be a book for a layperson to read cover to cover, it is valuable as a reference guide, detailing the ways in which specific drugs are prescribed, how they work, generic options, and potential side effects.

[Listening to Prozac: A Psychiatrist Explores Antidepressant Drugs and the Remaking of the Self](#)

By Peter Kramer. Penguin, 1997.

This classic best seller was also a pick in our 1999 survey. Dr. Kramer explores how Prozac is used in America, looking critically at the ways in which the drug can alter personality and the ethical questions that such changes raise.

[Before Prozac: The Troubled History of Mood Disorders in Psychiatry](#)

By Edward Shorter. Oxford University Press, 2008.

Dr. Shorter argues that actions by the U.S. Food and Drug Administration as well as doctors' reliance on the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* have led to an overwhelming use of ineffective drug treatments and questionable diagnoses for mood disorders, thus hobbling modern psychiatry.

Also:

[Better Than Prozac: Creating the Next Generation of Psychiatric Drugs](#)

By Samuel H. Barondes. Oxford University Press, 2003, 2005.

3. Development and Life Span

[Descartes' Baby: How the Science of Child Development Explains What Makes Us Human](#)

By Paul Bloom. Basic Books, 2005.

Even as infants we are aware of a physical world and a world of mental states, argues Dr. Bloom. This dualistic view forms the ways in which we think, feel, and act, and encourages us to experience religion, moral reasoning, and an appreciation for art and literature.

[Brain Rules: 12 Principles for Surviving and Thriving at Work, Home, and School](#)

By John Medina. Pear Press, 2008.

Dr. Medina puts a practical spin on neuroscience, turning what scientists know about the brain into advice for how we live our daily lives, including how we pay attention, what we remember, and how we raise children.

[Aging with Grace: What the Nun Study Teaches Us About Leading Longer, Healthier, and More Meaningful Lives](#)

By David Snowden. Bantam, 2001.

Dr. Snowden began studying 678 Catholic nuns in 1986. In this book, he explores the results of his longitudinal study, examining how women living in a controlled environment age differently from one another. What might cause one nun, for example, to develop dementia while another remains lucid?

[The Science of Parenting](#)

By Margot Sunderland. DK Adult, 2008.

The way parents raise their children has a lasting impact. Dr. Sunderland turns to science to give parents and caregivers advice on how to react to specific behaviors and the ways in which a child's brain develops.

Also:

[What's Going on in There? How the Brain and Mind Develop in the First Five Years of Life](#)

By Lise Elliot. Bantam, 2000.

4. Cognition, Learning, and Memory

[The Man Who Mistook His Wife for a Hat and Other Clinical Tales](#)

By Oliver Sacks. Touchstone, 1985.

Here's another book from the 1999 list—this time around, it was endorsed by nearly one-third of the responding Dana Alliance members. Dr. Sacks uses a patient-centered approach to explore

neurological disorders including visual agnosia, aphasia, and Korsakoff's syndrome (an inability to form new memories).

[The Number Sense: How the Mind Creates Mathematics](#)

By Stanislas Dehaene. Oxford University Press, 1999.

Our brain is wired for mathematics from birth, writes Dr. Dehaene. Imaging technologies have allowed researchers to begin identifying the regions of the brain responsible for computation. The book also explores the invention of number systems and whether people have an innate number sense.

[The Seven Sins of Memory: How the Mind Forgets and Remembers](#)

By Daniel L. Schacter. Mariner Books, 2002.

Dr. Schacter lays out his “seven sins of memory” (transience, absentmindedness, blocking, misattribution, suggestibility, bias, and persistence) and explains why the brain evolved in such a way that memory lapses can be beneficial, if irritating. He also delves into the serious consequences that may result from faulty memories.

Also:

[Save Your Brain: The 5 Things You Must Do to Keep Your Mind Young and Sharp](#)

By Paul Nussbaum. McGraw-Hill, 2010.

[Smart Moves: Why Learning Is Not All in Your Head](#)

By Carla Hannaford. Great River Books, 2005.

[Reading in the Brain: The Science and Evolution of a Human Invention](#)

By Stanislas Dehaene. Viking, 2009.

5. Consciousness

[Synaptic Self: How Our Brains Become Who We Are](#)

By Joseph LeDoux. Viking, 2002.

Where does the self come from? According to Dr. LeDoux, synapses (the pathways between neurons through which messages are conveyed) are what allow people think, feel, and act—to be human. Synapses allow the brain to store information, leading to long-term memories and ultimately a sense of self.

[Train Your Mind, Change Your Brain: How a New Science Reveals Our Extraordinary Potential to Transform Ourselves](#)

By Sharon Begley. Ballantine Books, 2007.

Science writer Sharon Begley bridges neuroscience and Buddhism in a book that explores how neuroplasticity can affect mood and promote happiness. Studies of meditation and mindfulness,

writes Ms. Begley, indicate that people can be taught to be compassionate and to better focus their attention.

[Cognition, Brain, and Consciousness: Introduction to Cognitive Neuroscience](#)

Edited by Bernard J. Baars and Nicole M. Gage. Academic Press, 2010.

This is an introductory textbook for undergraduate and graduate students. Still, it offers a comprehensive look at issues in cognitive neuroscience, presenting the latest research in a thematic way.

Also:

[Wider Than the Sky: The Phenomenal Gift of Consciousness](#)

By Gerald Edelman. Yale University Press, 2004.

[The Neurology of Consciousness: Cognitive Neuroscience and Neuropathology](#)

Edited by Steven Laureys and Giulio Tononi. Academic Press, 2008.

Note: This is a textbook, and might be written at a higher level than the general lay reader is used to.

[The Mindful Brain: Reflection and Attunement in the Cultivation of Well-Being](#)

By Daniel J. Siegel. W. W. Norton, 2007.

6. The Senses

[A Natural History of the Senses](#)

By Diane Ackerman. Vintage, 1991.

Ms. Ackerman travels the world as she explores the senses, looking at the culture and science behind touch, smell, sight, sound, and taste in this national best seller.

[Eye, Brain, and Vision](#)

By David Hubel. Henry Holt, 1995.

A Nobel laureate for his work in the visual system, Dr. Hubel describes how the human eye works and how the brain processes visual information. Diagrams and illustrations combine well with his clear writing. This book was also a selection in 1999. Note that new copies may be difficult to track down.

Also:

[The Great Pheromone Myth](#)

By Richard L. Doty. Johns Hopkins University Press, 2010.

7. Emotion and Behavior

[The Emotional Brain: The Mysterious Underpinnings of Emotional Life](#)

By Joseph LeDoux. Simon & Schuster, 1998.

Another book that was also selected in 1999, Dr. LeDoux's exploration of the neurological workings of emotions still appeals to readers. Studying emotions from a biological—and not just a psychological—perspective leads to a better understanding of human experience. Dr. LeDoux pays special attention to his main area of research, the amygdala.

[How We Decide](#)

By Jonah Lehrer. Houghton Mifflin, 2010.

Why do we make the decisions we make? Mr. Lehrer uses real-life examples—from the crash landings of pilots to the bets of poker players—to make the neuroscience behind decision making accessible, useful, and appealing to readers.

[Descartes' Error: Emotion, Reason, and the Human Brain](#)

By Antonio R. Damasio. Penguin, 2005.

According to Descartes, “I think, therefore I am.” According to Dr. Damasio, you can't think without feelings and emotions. He uses case studies of people with frontal lobe injuries to show just how connected emotions, personality, and decision making are. The 1995 edition of this book was included on the 1999 list.

Also:

[Looking for Spinoza: Joy, Sorrow, and the Feeling Brain](#)

By Antonio R. Damasio. Mariner Books, 2003.

[The Temperamental Thread: How Genes, Culture, Time, and Luck Make Us Who We Are](#)

By Jerome Kagan. Dana Press, 2010.

[Emotional Intelligence: Why It Can Matter More Than IQ](#)

By Daniel Goleman. Bantam, 1995, revised edition 2005.

8. Diseases and Disorders

[The Dana Guide to Brain Health: A Practical Family Reference from Medical Experts](#)

Edited by Floyd Bloom, M. Flint Beal, and David J. Kupfer. Dana Press, 2006.

Dana's practical reference guide offers information on the brain through life, specific diseases and disorders, normal brain processes, learning and memory, and emotions and behavior.

[Phantoms in the Brain: Probing the Mysteries of the Human Mind](#)

By V. S. Ramachandran and Sandra Blakeslee. HarperPerennial, 1999.

Dr. Ramachandran and Ms. Blakeslee investigate neurological oddities, from hallucinations to phantom limbs. Such strange cases lead to more-general conclusions about the brain's circuitry and plasticity.

[Brave New Brain: Conquering Mental Illness in the Era of the Genome](#)

By Nancy Andreasen. Oxford University Press, 2001, 2004.

Dr. Andreasen discusses the causes and effects of schizophrenia, manic depression, anxiety disorders, and dementia in the context of the overlapping fields of genetics and neurobiology. The intersection of these fields could improve our understanding of the mechanisms behind the disorders and lead to new methods of treatment.

Also:

[My Stroke of Insight: A Brain Scientist's Personal Journey](#)

By Jill Bolte Taylor. Penguin, 2009.

9. Memoirs and Personal Experience

[In Search of Memory: The Emergence of a New Science of Mind](#)

By Eric R. Kandel. W. W. Norton, 2007.

In Search of Memory was the most popular selection of the responding Dana Alliance members. Dr. Kandel reflects on his five decades of research—including his Nobel Prize-winning work on the role of synapses in learning and memory function—and his family's escape from Nazi Germany.

[The Diving Bell and the Butterfly: A Memoir of Life in Death](#)

By Jean-Dominique Bauby. Vintage, 1998.

At the age of 44, Mr. Bauby, then editor in chief of *Elle* magazine, suffered a stroke that left him a victim of locked-in syndrome, able to move only one eyelid. In this astonishing book, painstakingly dictated one letter at a time, he looks back on his life and details the realities of being trapped inside his body.

[A Primate's Memoir: A Neuroscientist's Unconventional Life Among the Baboons](#)

By Robert M. Sapolsky. Scribner, 2002.

For more than two decades, Dr. Sapolsky studied the social behavior of baboons in Kenya. Here, he chronicles his field studies, looking not only at the lives of the baboons but also at the changing life in Africa and the challenges and personalities he encountered away from camp.

Also:

[An Unquiet Mind](#)

By Kay Redfield Jamison. Knopf, 1997.

[Recollections of My Life](#)

By Santiago Ramon y Cajal. MIT Press, 1989.

10. The Brain in Relation to Other Fields

[Spark: The Revolutionary New Science of Exercise and the Brain](#)

By John Ratey. Little, Brown, 2008.

Exercise not only tones the body, it also benefits the brain. In this guide, Dr. Ratey details the many ways in which physical activity is advantageous to brain processes—for example, it can stimulate the production of neurons, help ward off dementia, and improve mood. The book also gives tips on how to take charge of your exercise regime.

[This Is Your Brain on Music](#)

By Daniel J. Levitin. Dutton Adult, 2006.

In approaching music from the point of view of a cognitive neuroscientist, Dr. Levitin also draws on his earlier career as a rock musician and music producer. He provides a neurological explanation of the emotional response that music can elicit, using music as a window through which the brain can be understood.

[Proust Was a Neuroscientist](#)

By Jonah Lehrer. Houghton Mifflin Harcourt, 2007.

Scientists aren't the only ones to make brain-related discoveries. Mr. Lehrer chronicles how Walt Whitman, George Eliot, Auguste Escoffier, Marcel Proust, Paul Cézanne, Igor Stravinsky, Gertrude Stein, and Virginia Woolf made scientific observations that researchers required many more years to discover.

Also:

[The Black Swan: The Impact of the Highly Improbable](#)

By Nassim Nicholas Taleb. Random House, 2007.

Johanna Goldberg is the editor of *Cerebrum* and public information officer at the Dana Foundation. She served as associate editor of [Transforming Arts Teaching: The Role of Higher Education](#) and [Neuroeducation: Learning, Arts, and the Brain](#). Ms. Goldberg holds a B.A. in English from Goucher College and an M.S.L.I.S. from Pratt Institute's School of Information and Library Science.