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Minds behind the brain : a history of the pioneers and their discoveries /

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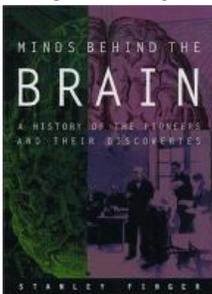
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SUMMARY

Attractively illustrated with over a hundred halftones and drawings, this volume presents a series of vibrant profiles that trace the evolution of our knowledge about the brain.

Beginning almost 5000 years ago, with the ancient Egyptian study of "the marrow of the skull," Stanley Finger takes us on a fascinating journey from the classical world of Hippocrates, to the time of Descartes and the era of Broca and Ramon y Cajal, to modern researchers such as Sperry. Here is a truly remarkable cast of characters. We meet Galen, a man of titanic ego and abrasive disposition, whose teachings dominated medicine for a thousand years; Vesalius, a contemporary of Copernicus, who pushed our understanding of human anatomy to new heights; Otto Loewi, pioneer in neurotransmitters, who gave the Nazis his Nobel prize money and fled Austria for England; and Rita Levi-Montalcini, discoverer of nerve growth factor, who in war-torn Italy was forced to do her research in her bedroom. For each individual, Finger examines the philosophy, the tools, the books, and the ideas that brought new insights. Finger also looks at broader topics—how dependent are researchers on the work of others? What makes the time ripe for discovery? And what role does chance or serendipity play? And he includes many fascinating background figures as well, from Leonardo da Vinci and Emanuel Swedenborg to Karl August Weinhold—who claimed to have reanimated a dead cat by filling its skull with silver and zinc—and Mary Shelley, whose Frankenstein was inspired by such experiments. Wide ranging in scope, imbued with an infectious spirit of adventure, here are vivid portraits of giants in the field of neuroscience—remarkable individuals who found new ways to think about the machinery of the mind.

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Review by Choice Review

Finger (Washington Univ.) has written an excellent follow-up to his 1994 book *Origins of Neuroscience: A History of Explorations into Brain Function* (CH, Sep'94). Although the first book was organized by functional systems, the book under review is organized around the Western thinkers who have contributed so much to current understandings in neuroscience. From the ancient Egyptian physicians to the modern-day neuroscientists, Finger traces the history of the discipline through biographies of 19 key individuals. By placing these pioneers within historical context, Finger is able to explain the origins and impact of their correct (and incorrect) ideas about the brain. His thoughtful musings in the closing chapter are an eloquent reminder of the role of scientific inquiry in an ordered understanding of the brain behind the mind. This well-written and interesting history is highly recommended for anyone with an interest in the neurosciences. All levels. C. R. Timmons; Drew University

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Review by Booklist Review

Unusually, title and subtitle actually state what this book is about. Finger, a professor of neural sciences and philosophy-neuroscience-psychology, brings to life representative major figures in the history of brain research, showing how each grew up, thought, worked, and fit into the context of his or her time. He enhances a readable, well-documented text with carefully chosen, informative illustrations. Although much scientific material is relayed, all of it understandably, Finger also brings in many pertinent literary extracts and comparisons. He portrays each discoverer not only as a person but also as a vital participant in group relationships; indeed, some of his accounts of pivotal scientific meetings prove dramatic. He welcome goes beyond the norm for similar historical works by demonstrating how the written and spoken words of scientists can be misinterpreted. Less uncustomarily, he points out areas of research in which future discoveries stand to be made. So doing, he adds to his fine book's motivational value; careers might be started by reading it. --William Beatty

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Review by Publisher's Weekly Review

Cognitive science is now all the rage; contradictory, up-to-date hypotheses on how the mind works or doesn't work crowd bookstore shelves. It wasn't always thus. Finger (*Origins of Neuroscience*) complements the current vogue for brain books with a wide-ranging and detailed set of profiles reaching back to the distant past. Each chapter describes a figure or pair of figures whose ideas and treatments of the brain "dramatically changed the scientific or medical landscape." Finger points first to the Egyptian grand vizier Imhotep (c. 2600 B.C.), probable author of the ancient field medicine manual now called the "Edwin Smith Surgical Papyrus"; he moves swiftly to Hippocrates, who proposed the brain as the seat of consciousness. Finger's last chapter covers the neurobiologists Roger Sperry and Rita Levi-Montalcini, who both studied nerve growth in the 1940s and '50s; Sperry later studied patients who had lost their corpus callosum, the bridge connecting the brain's two hemispheres. Changing religious beliefs, animal dissections, advancing research technologies and pure chance, Finger demonstrates, have all played roles in the advance of our knowledge about minds and brains. Although the level of explanation and detail positions this study uncomfortably between academic and popular science writing; it will, however, please readers already interested in the history of science and curious about what generations of scientists past believed, guessed or found out about the brain. (Feb.) (c) Copyright PWxyz, LLC. All rights reserved

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Review by Library Journal Review

Throughout this 4600-year voyage through the history of neuroscience, Finger (neural sciences, Washington Univ.; *Origins of Neuroscience*) introduces us to 19 Western thinkers who have made significant discoveries about the physiology and anatomy of the human brain. Beginning with Imhotep, a high priest from Egypt's Third Dynasty, who described head injuries among workers at the pyramids, he traces the progress of neurological discoveries from a basic understanding of brain anatomy to the identification of neurotransmitters. Finger describes the Zeitgeist that made the discoveries possible, alongside the story of each pioneer's life and work. Most of his subjects, he suggests, had an intense drive to learn, a skepticism for the dogma of the times, a sometimes unwarranted optimism, the ability to communicate their findings, devotion for their families, and a love of the humanities. Skillfully written and well researched, this book is appropriate for collections in both academic and public libraries.--Laurie Bartolini, Illinois State Lib., Springfield (c) Copyright 2010. Library Journals LLC, a wholly owned subsidiary of Media Source, Inc. No redistribution permitted.

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AUTHOR NOTES

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