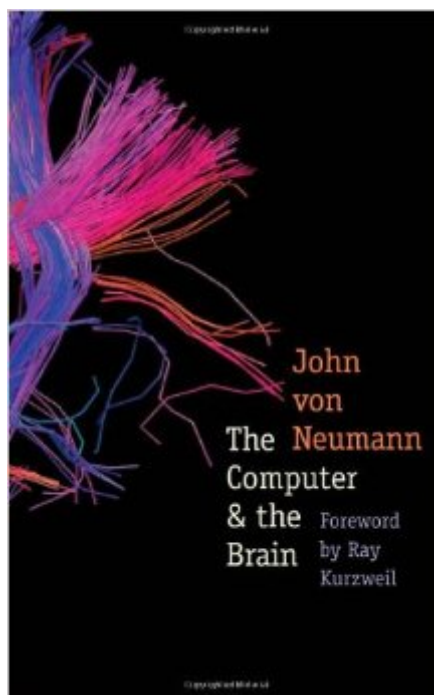


The book was found

# The Computer And The Brain (The Silliman Memorial Lectures Series)



## Synopsis

In this classic work, one of the greatest mathematicians of the twentieth century explores the analogies between computing machines and the living human brain. John von Neumann, whose many contributions to science, mathematics, and engineering include the basic organizational framework at the heart of today's computers, concludes that the brain operates both digitally and analogically, but also has its own peculiar statistical language. In his foreword to this new edition, Ray Kurzweil, a futurist famous in part for his own reflections on the relationship between technology and intelligence, places von Neumann's work in a historical context and shows how it remains relevant today.

## Book Information

Series: The Silliman Memorial Lectures Series

Paperback: 136 pages

Publisher: Yale University Press; 3 edition (August 28, 2012)

Language: English

ISBN-10: 0300181116

ISBN-13: 978-0300181111

Product Dimensions: 5 x 0.3 x 7.8 inches

Shipping Weight: 12 ounces (View shipping rates and policies)

Average Customer Review: 3.6 out of 5 stars [See all reviews](#) (5 customer reviews)

Best Sellers Rank: #279,137 in Books (See Top 100 in Books) #30 in [Books > Computers & Technology > Computer Science > Cybernetics](#) #44 in [Books > Computers & Technology > Computer Science > AI & Machine Learning > Machine Theory](#) #84 in [Books > Textbooks > Computer Science > Artificial Intelligence](#)

## Customer Reviews

John von Neumann was the principal architect (in 1945) of the design from which all subsequent electronic computers trace their lineage. As he was dying of bone cancer, this giant of 20th Century mathematics and physics wrote the last of his 150 research papers, "The Computer and the Brain". In 80 pages, von Neumann describes the key components and processes of computers and of brains and then analyzes their similarities and differences. Developments in both computer science and neuroscience during the intervening six decades have corroborated his overall analysis. Von Neumann had a better grasp in 1956 than proponents of AI have today of what differentiates artificial intelligence (computers) from biological intelligence (brains). In the last section

of "The Computer and the Brain", von Neumann goes to considerable lengths to explain exactly how computers differ from brains: "It should also be noted that the message-system used in the nervous system, as described in the above, is of an essentially statistical character. In other words, what matters are not the precise positions of definite markers, digits, but the statistical characteristics of their occurrence, i.e., frequencies of periodic or nearly periodic pulse-trains, etc." Thus the nervous system appears to be using a radically different system of notation from the ones we are familiar with in ordinary arithmetic and mathematics. Instead of the precise systems of markers where the position--and presence or absence--of every marker counts decisively in determining the meaning of the message, we have here a system of notations in which the meaning is conveyed by the statistical properties of the message.

[Download to continue reading...](#)

The Computer and the Brain (The Silliman Memorial Lectures Series) The Computer and the Brain: Abused City (The Silliman Memorial Lectures Series) 9/11 Memorial Visions: Innovative Concepts from the 2003 World Trade Center Site Memorial Competition Dynamic Allocation and Pricing: A Mechanism Design Approach (Arne Ryde Memorial Lectures) Deep Sleep: Brain Wave Subliminal (Brain Sync Series) (Brain Sync Audios) The Feynman Lectures on Physics, Vol. II: The New Millennium Edition: Mainly Electromagnetism and Matter (Feynman Lectures on Physics (Paperback)) (Volume 2) Lectures on Calvinism, The Stone Lectures of 1898 Python: Python Programming For Beginners - The Comprehensive Guide To Python Programming: Computer Programming, Computer Language, Computer Science Python: Python Programming For Beginners - The Comprehensive Guide To Python Programming: Computer Programming, Computer Language, Computer Science (Machine Language) Generalized Quantifiers and Computation: 9th European Summer School in Logic, Language, and Information, ESSLLI'97 Workshop, Aix-en-Provence, France, ... Lectures (Lecture Notes in Computer Science) Performance Evaluation of Complex Systems: Techniques and Tools: Performance 2002. Tutorial Lectures (Lecture Notes in Computer Science) Transactional Memory, 2nd Edition (Synthesis Lectures on Computer Architecture) Five Days at Memorial: Life and Death in a Storm-Ravaged Hospital The Maya's Own Words: An Anthology Comprising Abridgements of the Popol-Vuh, Warrior of Rabinal, and Selections from the Memorial of Solola the Book Five Days at Memorial: Life and Death in a Storm-Ravaged Hospital (Ala Notable Books for Adults) StreetSmart NYC Map by VanDam - City Street Map of Manhattan, New York, in 9/11 National Memorial Edition - Laminated folding pocket size city travel and subway map, 2016 Edition Creating the Vietnam Veterans Memorial the Inside Story Six Million Paper Clips: The Making Of A Children's Holocaust Memorial

The Preaching Life (Dan Josselyn Memorial Publication (Paperback)) Past Poisons: An Ellis Peters Memorial Anthology of Historical Crime

[Dmca](#)