

1. Record Nr.	UNINA9910828906803321
Autore	Aleksander Igor
Titolo	Aristotle's laptop : the discovery of our informational mind // Igor Aleksander, Helen Morton
Pubbl/distr/stampa	Singapore, : World Scientific, c2012
ISBN	1-283-73935-6 981-4343-50-1
Edizione	[1st ed.]
Descrizione fisica	1 online resource (241 p.)
Collana	Series on machine consciousness ; ; vol. 1
Altri autori (Persone)	MortonHelen
Disciplina	128.2
Soggetti	Artificial intelligence - Philosophy Information theory Knowledge, Theory of
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes indexes.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Foreword; Chapter 1. Overview: From Aristotle to the Bits of an Informational Mind; All Things Informational; What is Information?; Shannon and Crackly Telephone Lines and Minds; (Chapter 2. Shannon: The Reluctant Hero of the Information Age); Why Billions of Cells?; (Chapter 3. Billions of Brain Cells: Guesses and Models); The Circles of the Mind; (Chapter 4. Imagination in the Circles of a Network); Phenomenal States; (Chapter 5. Phenomenal Information:TheWorld and Neural States); Information Integration; (Chapter 6. Information Integration:The Key to Consciousness?) The Joy of Seeing(Chapter 7. The Joy of Seeing: Gathering Visual Information); Some Don't Like This; (Chapter 8:The Informational Mind: Oxymoron or New Science?); The Dark Submerged Layers of the Mind; (Chapter 9. The Unconscious Mind: Freud's Influential Vision); And Now For Aristotle; (Chapter 10. Aristotle's Living Soul); Chapter 2. Shannon: The Reluctant Hero of the Information Age; Brief prologue:The exemplary engineer; From Michigan to juggling machines; A quiet corner of Gaylord, Michigan; Impact at MIT; Dr Shannon - Mathematician?; The Bell Telephone Laboratories The need for an information theoryFun and games; The years that followed: life-like machines; Returning to academia and bowing out; Communication according to Shannon; The Bit; What is entropy and

why does it matter in communications?; Communication at a distance; How much information can a channel transmit?; Channel capacity and the digital age?; Shannon and the internet; Shannon and the informational mind; Chapter 3. Billions of Brain Cells: Guesses and Models; Not neural networks 101; Where is the mind?; The fine grain of the brain; Cajal (1852-1934); The electrochemical neuron A Logical Calculus of nervous activity Warren McCulloch; Walter Pitts (1923-1969); The logical calculus; The Consequences; Learning and adaptation; Bernard Widrow; Frank Rosenblatt (1928-1971) and his detractors; Closed paths and other escapes from objections; Spiking neurons; Weightless neurons; Example; Looking back in this chapter: Mind and the science of the day; Chapter 4. Imagination in the Circles of a Network; Neural thought: A target for this Chapter - State Structures, Not 'Cat' or 'Dog' Cells; Lashley, the Iconoclast of ancient connectionism; Donald Hebb: Nailing mind to brain Neural (Hebbian) learning Cell assemblies; The state of play after Hebb; Automata studies; Finite automata; More automata studies: The beginnings of major controversies; Neural automata theory simplified; Lessons from Moore's work; Finding inner states; Meanwhile . . . outside the US: Eduardo Caianiello; Meanwhile . . . Outside the US: Teuvo Kohonen; Back in the US . . . Stephen Grossberg; So how do neurons think?; Chapter 5. Phenomenal Information: The World and Neural States; The Inner Eye; Phenomenology; Franz Clemens Horatio Hermann Brentano (1838-1917) Edmund Gustav Albrecht Husserl (1859-1938)

---

## Sommario/riassunto

Aristotle's convincing philosophy is likely to have shaped (even indirectly) many of our current beliefs, prejudices and attitudes to life. This includes the way in which our mind (that is, our capacity to have private thoughts) appears to elude a scientific description. This book is about a scientific ingredient that was not available to Aristotle: the science of information. Would the course of the philosophy of the mind have been different had Aristotle pronounced that the matter of mind was information? This "mind is information" assertion is often heard in contemporary debates, and this b

---