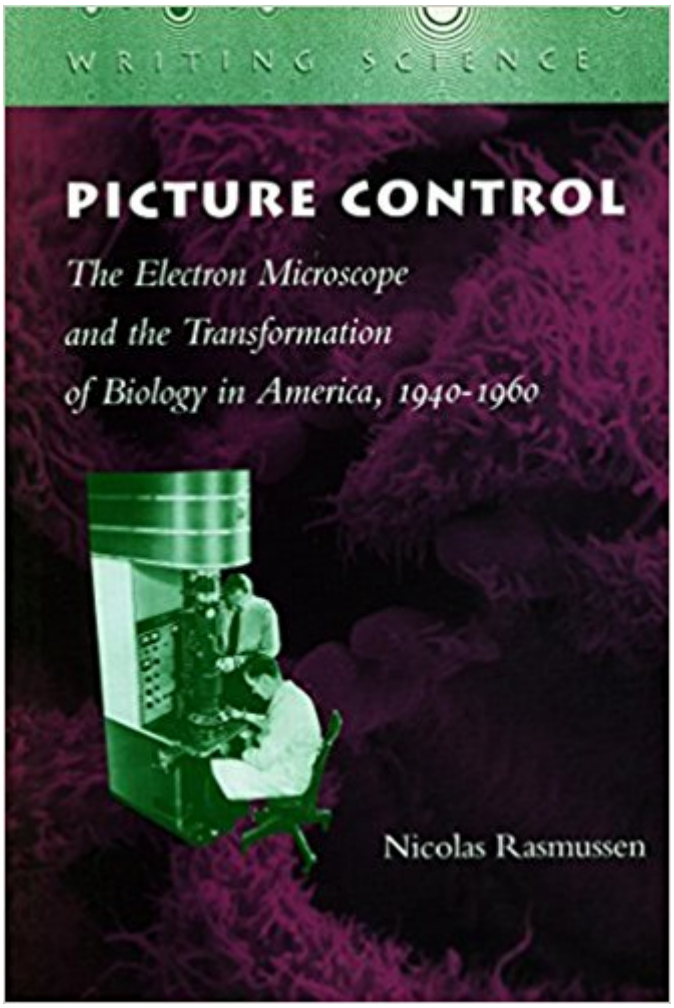
Picture Control: The Electron Microscope And The Transformation Of Biology In America, 1940-1960 (Writing Science (Hardcover))



Synopsis

Two major questions motivate this study: How do new devices get taken up as experimental systems by scientists? How does the adoption of new instruments affect scientific knowledge?

Book Information

Series: Writing Science (Hardcover)

Hardcover: 436 pages

Publisher: Stanford University Press; 1 edition (January 1, 1997)

Language: English

ISBN-10: 0804728372

ISBN-13: 978-0804728379

Product Dimensions: 6 x 1.1 x 9.1 inches

Shipping Weight: 1.7 pounds

Average Customer Review: 5.0 out of 5 stars 1 customer review

Best Sellers Rank: #1,177,610 in Books (See Top 100 in Books) #31 inÂ Books > Science & Math > Experiments, Instruments & Measurement > Electron Microscopes & Microscopy #92 inÂ Books > Science & Math > Experiments, Instruments & Measurement > Microscopes & Microsocopy #3833 inÂ Books > Textbooks > Science & Mathematics > Biology & Life Sciences > Biology

Customer Reviews

"All too often the history of sciences takes for granted the role of instruments in scientific progress. Picture Control is a welcome and notable exception. . . . The book is rich in historic anecdotes. . . . Rasmussen provides a cogent discussion of introducing a revolutionary instrument into science." (American Zoologist) --This text refers to the Paperback edition.

Two major questions motivate this study: How do new devices get taken up as experimental systems by scientists? How does the adoption of new instruments affect scientific knowledge? Many ramifications emerge from these two simple questions. Among these are historical questions about how, by whom, and why new instruments are introduced, or about how another, different set of instruments might be adopted given alternative social and cultural circumstances. Philosophical questions include the ways in which scientific understanding of the world depends on scientistsâ ™ instruments and techniques. Sociological questions concern such issues as how the organization of work within disciplines and laboratories and other scientific institutions may depend on the equipment employed.All these questions are addressed in this book, which draws upon a range of

archival sources as well as published scientific literature, through a detailed historical treatment of the electron microscopeâ ™s introduction and early impact on the life sciences. The author first describes the introduction of the electron microscope during the World War II years, and then traces its influence on the subsequent divergence of several life sciences research traditions, including what came to constitute cell biology. The historical evidence is discussed in the light of recent discussions on the origin and nature of molecular biology, the importance of new instruments in the postwar life sciences, and the nature of research traditions, among other issues.Building on the pragmatist tradition, the author also advances an original philosophical argument on the relation of experimental technology to scientific change, arguing that matters of scientific fact (and also matters of the social organization of science) are only settled through agreement on standardized â œmethods of inquiry.â • --This text refers to the Paperback edition.

This book combines the history and philosophy of science. If you are interested in electron microscopy it is a must. The book shows how science can have its own "political climate."

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