

was Nernst's "infallible sense for the essential and genuine passion for knowledge of the deep interrelations of nature." All these qualities are evident in Nernst's greatest scientific achievement—the formulation, theoretical clarification, and experimental justification of the third law of thermodynamics, a law that Nernst himself usually and legitimately referred to as "my heat theorem." Nernst arrived at this theorem as a result of his efforts to determine thermodynamically the equilibrium state of chemical reactions in gases at high temperatures. The theorem then led him into the rich and unexplored field of low-temperature physics, a field whose fundamental importance was actually established by Nernst's theorem. These studies in turn made it possible for Nernst to become the first successful advocate for the quantum theory and the architect of the Solvay Conference of 1911.

Mendelssohn shows how the success story of Nernst's career was closely coupled to the rapidly growing wealth and power of the new Prussian-dominated imperial Germany. He describes the important role played by Friedrich Althoff, Permanent Secretary of the Prussian Ministry of Education, in strengthening the scientific faculties of the Prussian universities. It was Althoff who saw to the creation of a chair of physical chemistry and a new electrochemical laboratory for Nernst at the University of Goettingen to keep him in Prussia. During his Goettingen years Nernst established close contacts with industry, as did many of his scientific colleagues. He showed his multifaceted genius here, too, by inventing a lamp that used the light emitted by a solid electrolyte carrying a current, and by selling the patent for it outright to the Allgemeine Elektrizitäts-Gesellschaft for a million marks. When Nernst was called to a chair in Berlin in 1905 he moved his family in the style he considered appropriate to a rich 20th-century professor—by automobile. (Nernst had been driving since 1898; his first assignment when he volunteered for duty after war broke out in 1914 was to drive with military documents from the General Staff to the German armies deep within France.)

Nernst felt at home in Berlin. His circle there was by no means limited to academic colleagues, but embraced prominent figures from the artistic, financial, industrial, military, and governmental elite of the imperial capital, including Kaiser Wilhelm the Second,

whom Nernst often advised on a variety of matters. After the personal and national tragedies of the war Nernst became a firm supporter of the new republic, serving it well in several capacities. When Hitler came to power Nernst soon found that life in Berlin was impossible for a man with anti-Nazi views, Jewish friends, and two Jewish sons-in-law. He retired to his country estate, where he died early in 1941.

I must point out that Mendelssohn's work is not the sound, scholarly history one should expect in a book written by an internationally respected scientist and published by a university press. The writing is completely undocumented; there are no references, no bibliography, no notes whatsoever. What Mendelssohn says about the history of science is inaccurate and sometimes seriously misleading. The Nernst he presents is the Nernst he knew and admired, the Nernst known by other people. But there is no letter, no quotation from Nernst himself, that would take us behind the persona which, as Mendelssohn himself remarks, Nernst used to conceal himself from the world. Mendelssohn's book is lively and interesting reading, but it must be taken for what it is—a personal memoir presented in the form of a biography and social history.

MARTIN J. KLEIN

*Department of History of Science and Medicine, Yale University,  
New Haven, Connecticut*

## Books Received

**Abdominal Angiography.** W. Wenz in collaboration with G. van Kaick, D. Beduhn and F.-J. Roth. Springer-Verlag, New York, 1974. x, 218 pp., illus. \$27.80.

**Abkhazians.** The Long-Living People of the Caucasus. Sula Benet. Holt, Rinehart and Winston, New York, 1974. xvi, 112 pp., illus. Paper, \$3.

**Abstracts and Indexes in Science and Technology.** A Descriptive Guide. Dolores B. Owen and Marguerite M. Hanchey. Scarecrow Press, Metuchen, N.J., 1974. xiv, 154 pp. \$6.

**Adolescence.** Psychology, Psychopathology, and Psychotherapy. Derek Miller. Aronson, New York, 1974. xviii, 544 pp. \$15.

**Advances in Chemical Physics.** Vol. 26. I. Prigogine and Stuart A. Rice, Eds. Wiley-Interscience, New York, 1974. xii, 318 pp., illus. \$24.95.

**Advances in Environmental Science and Technology.** Vol. 3. James N. Pitts, Jr., Robert L. Metcalf, and Alan C. Lloyd, Eds. Wiley-Interscience, New York, 1974. x, 386 pp., illus. \$19.95.

**The Aging Lung. Normal Function.** MSS Information Corp., New York, 1974. 292 pp., illus. \$15.

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**Arigo.** Surgeon of the Rusty Knife. John G. Fuller. Crowell, New York, 1974. xii, 274 pp., illus. \$7.95.

**The Book Hunger.** Ronald Barker and Robert Escarpit, Eds. United Nations Educational, Scientific and Cultural Organization, Paris, 1974 (U.S. distributor, Unipub, New York). 156 pp. Paper, \$6.

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**Cilia and Flagella.** M. A. Sleight, Ed. Academic Press, New York, 1974. xii, 500 pp., illus. \$26.

**Clinical Chemistry.** Richard J. Henry, Donald C. Cannon, and James W. Winkelman, Eds. Harper and Row, New York, ed. 2, 1974. xii, 1630 pp., illus. \$37.50.

**Différenciation des Cellules Eucaryotes en Culture.** Michel Prunieras, Ladislav Robert, and Claude Rosenfield, Eds. Institut National de la Santé et de la Recherche Médicale, Paris, 1973. x, 310 pp., illus. Paper, 50 F. INSERM Colloques et Séminaires 1973, vol. 19.

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**Economic Entomology in the Tropics.** K. P. Lamb. Academic Press, New York, 1974. viii, 196 pp., illus. \$10.25.

**Eighteenth Century Inventions.** K. T. Rowland. David and Charles, Newton Abbot, England, and Barnes and Noble, New York, 1974. 160 pp., illus. \$10.

(Continued on page 370)

30 January. Organic electrochemistry (A. Bard, discussion leader): F. Beck, "Cell design and engineering aspects in organic electrosynthesis"; P. Zuman, "The role of hydration in electroreduction and electrooxidation of some carbonyl compounds." (R. deLevie, discussion leader): (speaker and subject to be announced).

31 January. Nerve conduction (R. deLevie, discussion leader): C. P. Bean, "Electrical microstimulation of nerves"; A. Pilla, "Electrochemical information transfer at living cell membranes."

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(Continued from page 343)

**Fish Immunology.** Douglas P. Anderson, Stanislas F. Snieszko and Herbert R. Axelrod, Eds. T.F.H. Publications, Neptune City, N.J., 1974. 240 pp., illus. \$9.95. Diseases of the Fishes, No. 4.

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**Igneous Petrology.** Ian S. E. Carmichael, Francis J. Turner, and John Verhoogen. McGraw-Hill, New York, 1974. xvi, 740 pp., illus. \$22.50. McGraw-Hill International Series in the Earth and Planetary Sciences.

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**Initial Reports of the Deep Sea Drilling Project.** Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES). Vol. 25. June-Aug. 1972. Prepared for the National Science Foundation by the Scripps Institution of Oceanography, La Jolla, Calif., 1974 (available from the Superintendent of Documents, Washington, D.C.). xx, 884 pp., illus. \$14.15.

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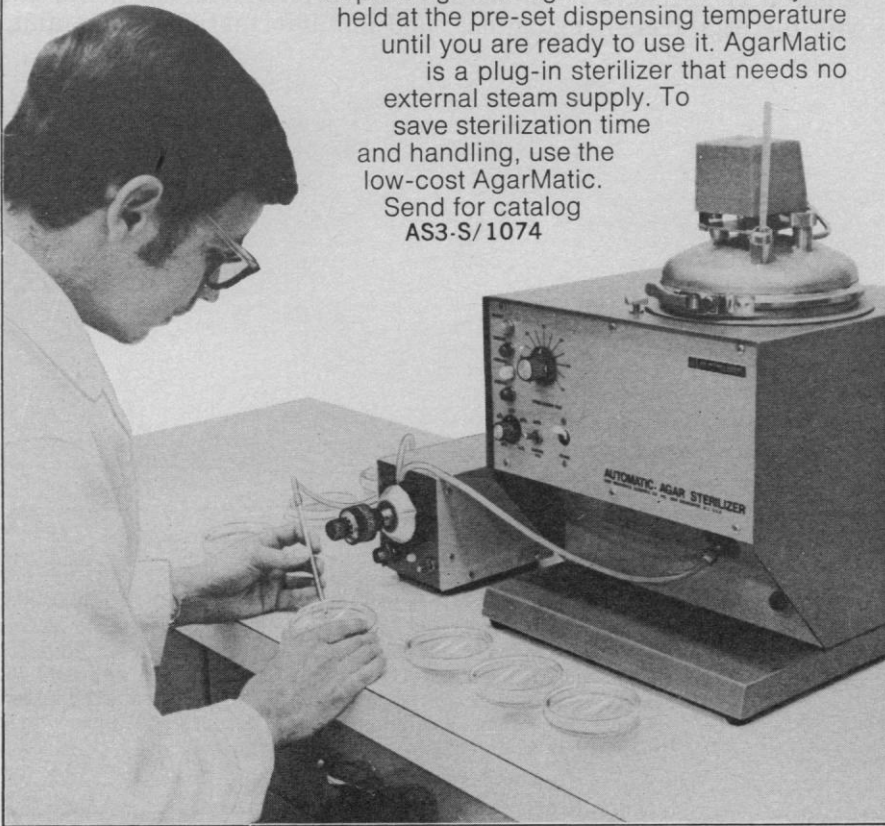
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**Logical Abilities in Children.** Daniel N. Osherson. Lawrence Erlbaum Associates, Potomac, Md., 1974 (distributor,

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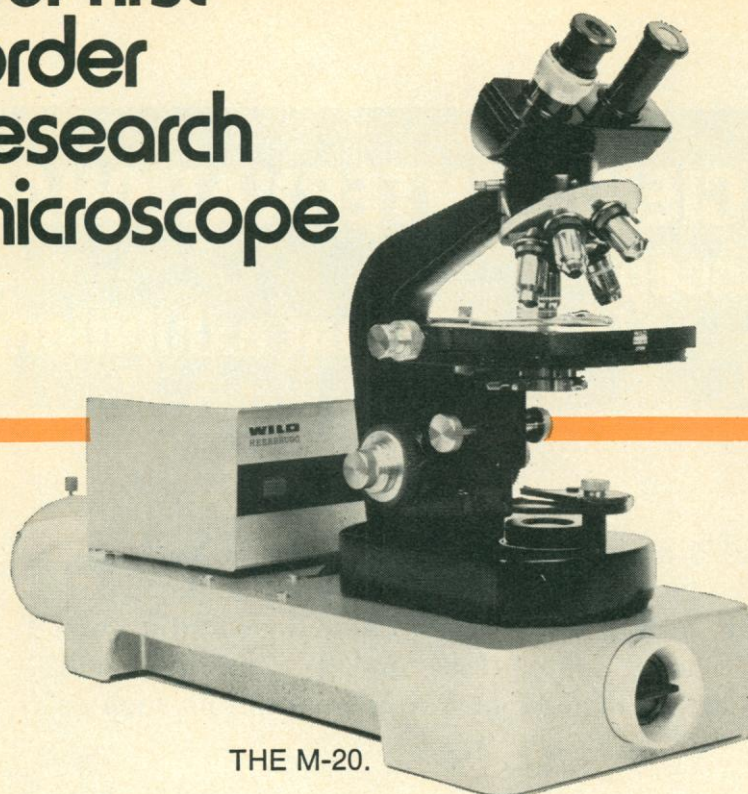


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Halsted [Wiley], New York). Two volumes, illus. Vol. 1, *Organization of Length and Class Concepts. Empirical Consequences of a Piagetian Formalism.* x, 162 pp. Vol. 2, *Logical Inference, Underlying Operations.* xii, 178 pp. Each volume, \$10. Child Psychology series.

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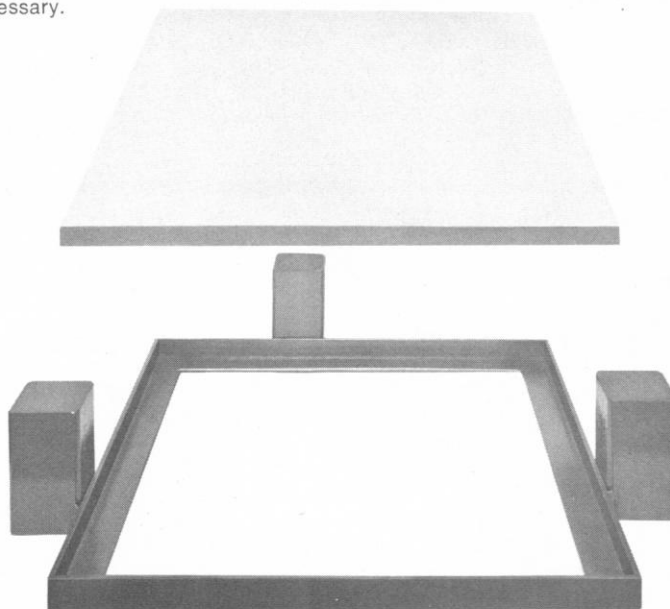
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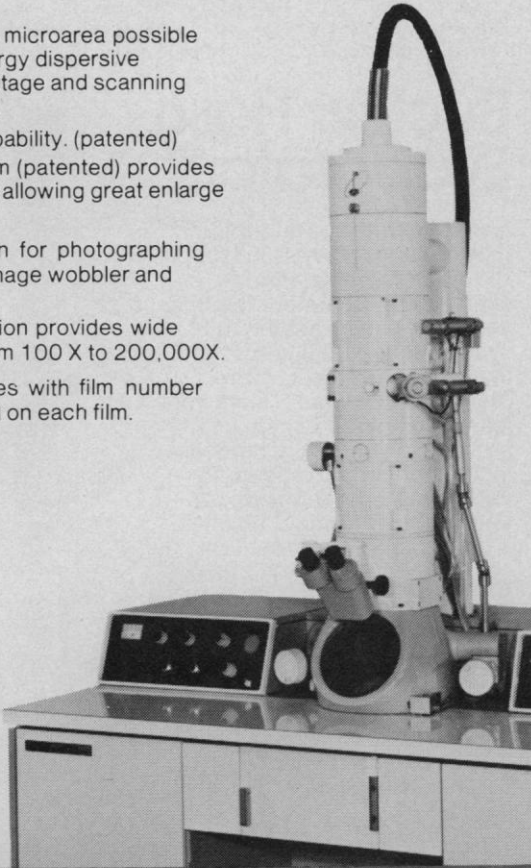
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