



Vignettes: Popular Lecturing

I feel so strongly about the wrongness of reading a lecture that my language may seem immoderate. . . . The spoken word and the written word are quite different arts. . . . I feel that to collect an audience and then read one's material is like inviting a friend to go for a walk and asking him not to mind if you go alongside him in your car.

—Lawrence Bragg

The most prominent requisite to a lecturer, though perhaps not really the most important, is a good delivery; for though to all true philosophers science and nature will have charms innumerable in every dress, yet I am sorry to say that the generality of mankind cannot accompany us one short hour unless the path is strewn with flowers.

. . . With respect to the action of the lecturer, it is requisite that he have some, . . . for though I know of no other species of delivery that requires less motion, yet I would by no means have a lecturer glued to the table or screwed to the floor. He must by all means appear as a body distinct and separate from the things around him, and must have some motion apart from that which they possess.

—Michael Faraday

Quoted in David Crystal's *The Cambridge Encyclopedia of the English Language* (Cambridge University Press)

The book's argument is admirably clear and is never lost in the wealth of detail that flows from the author's obvious immersion in the sources. Mazumdar is attentive to the philosophical resonances of her themes of unity-simplicity and pluralism-specificity. She cites Kant and explores the vogue for Ernst Mach's philosophy in turn-of-the-century Vienna. But she never reduces the controversies to the philosophical predispositions of her protagonists. In each episode, in each generation, the dispute is embodied in the problems, issues, and scientific language of the day. The volume is generously illustrated, and the illustrations are well placed in relation to the text.

Mazumdar's thesis is an important and persuasive one that deserves serious attention from anyone interested in 19th- and 20th-century biology. This is not to say that questions will not arise for some readers. Mazumdar's emphasis on the role of teacher-pupil transmission in the continuation of the general



Karl Landsteiner at the age of about five (around 1873), "posing in a Hussar riding costume on the photographer's papier-mâché rocks." [From *Species and Specificity*; George Mackenzie's collection, American Philosophical Society]

form of controversy she identifies is credible, especially given the academic culture of the predominantly German-speaking scientists she examines. Whether it is sufficient is another matter, and discussion of other possible reasons for the persistence of the pattern seems called for. By positing two such distinct species of scientists, unifiers and pluralists, Mazumdar seems to betray her own

inclinations as a pluralist. Fair enough, but the reader may wonder whether the separation is always so sharp, and whether individual scientists may not often incorporate both continuity and discontinuity, unifying and differentiating tendencies, into their work, as Landsteiner did in his thinking on the specificity of proteins and cellular antigens in the 1920s. Finally, we must ask to what extent the history of blood group immunology can represent the history of immunology in general. This is a question that Mazumdar does not explicitly address but that is evoked by the book's subtitle. Whatever the answers to these queries may

be, there is no doubt that readers will come away from this book with a livelier sense of the controversies that have helped shape modern biology, and of their connections across the generations.

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Reprints of Books Previously Reviewed

Charles Darwin. *Voyaging*. Janet Browne. Princeton University Press, Princeton, NJ, 1996. Paper, \$18.95 or £12.95. ISBN 0-691-02606-8. *Reviewed* 268, 1196 (1995).

Hilbert. Constance Reid. Copernicus (Springer), New York, 1996. Paper, \$15. ISBN 0-387-94674-8. *Reviewed* 170, 965 (1970).

Learning to Heal. The Development of American Medical Education. Kenneth M. Ludmerer. Johns Hopkins University Press, Baltimore, 1996. Paper, \$16.95. ISBN 0-8018-5258-7. *Reviewed* 231, 873 (1986).

Marie Curie. A Life. Susan Quinn. Addison-Wesley, Reading, MA, 1996. Paper, \$16. ISBN 0-201-88794-0. *Reviewed* 267, 1842 (1995).

No Ordinary Genius. The Illustrated Richard Feynman. Christopher Sykes, Ed. Norton, New York, 1996. Paper, \$19.95. ISBN 0-393-31393-x. *Reviewed* 264, 1617 (1994).

Physical Chemistry from Ostwald to Pauling. The Making of a Science in America. John W. Servos. Princeton University Press, Princeton, NJ, 1996. Paper, \$19.95 or £16.50. ISBN 0-691-02614-9. *Reviewed* 252, 863 (1991).

Revolutions in Mathematics. Donald Gillies, Ed. Clarendon (Oxford University Press), New York, 1995. Paper, \$55. ISBN 0-19-851486-7. *Reviewed* 259, 995 (1993).

Scientific Elite. Nobel Laureates in the United States. Harriet Zuckerman. Transaction, New Brunswick, NJ, 1996. Paper, \$24.95. ISBN 1-56000-855-5. *Reviewed* 196, 754 (1977).

Stalin and the Bomb. The Soviet Union and Atomic Energy, 1939-1956. David Holloway. Yale University Press, New Haven, CT, 1996. Paper, \$18. ISBN 0-300-06664-3. *Reviewed* 266, 466 (1994).

Zipper. An Exploration in Novelty. Robert Friedel. Norton, New York, 1996. Paper, \$13 or C\$16.99. ISBN 0-393-31365-4. *Reviewed* 264, 994 (1994).

Books Received

Anoxygenic Photosynthetic Bacteria. Robert E. Blankenship, Michael T. Madigan, and Carl E. Bauer, Eds. Kluwer, Norwell, MA, 1995. xxiv, 1331 pp., illus. \$492 or £303 or Dfl. 675. *Advances in Photosynthesis*, vol. 2.

Biogéographie des Milieux Aquatiques. Gabriel Rougerie. Colin, Paris, 1994. 252 pp., illus. Paper, 190 F. U Géographie.

Corona- and Related Viruses. Current Concepts in Molecular Biology and Pathogenesis. Pierre J. Talbot and Gary A. Levy, Ed. Plenum, New York, 1995. xx, 615 pp., illus. \$139.50. *Advances in Experimental Medicine and Biology*, vol. 380. From a symposium, Québec City, Québec, Canada, Aug.-Sept. 1994.

Human Identification. The Use of DNA Markers. Bruce S. Weir, Eds. Kluwer, Norwell, MA, 1995. vi, 213 pp., illus. \$122 or £76 or Dfl. 165. *Contemporary Issues in Genetics and Evolution*, vol. 4. Mostly reprinted from *Genetica*, vol. 96, no. 1-2 (1995).