

Pierre Perrault, Edmé Mariotte, and Edmond Halley used quantitative and experimental methods to prove that the water we see flowing at the earth's surface arrived there as rain, that the earth's water moves in a closed loop between earth, ocean, and atmosphere. The second, beginning with this application of what we like to call the scientific method, is one of increasing quantification. Here Biswas's narrative dissolves into a series of isolated developments, many of them formulas whose motivation is never clearly delineated, but the reader perceives that the science of hydrology has been largely empirical, developing formulas from data gathered in the field or laboratory rather than mathematical solutions to theoretical problems.

To write about a branch of science that grew up from a number of disparate inquiries begun at different times is exceptionally difficult. At the very least one risks anachronism: the term "hydrology" dates only from the end of the 18th century, at which point we are four-fifths of the way through the book. Furthermore, like most practitioners who write historical accounts of their disciplines, Biswas uses positive accomplishments, in other words what we believe today, as the touchstone for his judgments of the past. Thus he has written that old-fashioned kind of history (known as Whig history) which is rapidly becoming out of date in the history of science as it has long been in general history. What one seeks in a historical account is a narrative in which events unfold in their own context. Though he knows how the story comes out, the historian must write as if the people whose lives or work he presents had real choices to make. The recent works of W. E. K. Middleton in the related field of meteorology show how such a genuinely historical work might look.

Biswas has not provided such a history. There is almost no discussion of the social or intellectual environments within which hydrology developed. The notes to the text are insufficient to lead the reader to the original passages; those to the pictures do not make clear what is original and what is reconstruction. Yet Biswas has provided a copiously illustrated guide to the literature of hydrology, and he has furnished it with a set of references which shows a command of the sources and secondary works in many languages. He has done for hydrology nearly what Rouse and Ince have done for the re-

lated subject of hydraulics, and geologists and engineers will find this book useful for background. Historians of science and technology will hope that Biswas's foundations in the history of hydrology can be built upon.

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New Journals Received

Electrical Engineering Review. Vol. 1, No. 2, 1970. Semiannually. Editorial board chairman: K. A. Ahmad (Lahore). Published by the Department of Electrical Engineering, West Pakistan University of Engineering and Technology, Lahore. Rs. 11.

Human Biology in Oceania. Vol. 1, No. 1, February 1971. Twice yearly. Editor: R. J. Walsh (University of New South Wales). Published by the University of Sydney, New South Wales, Australia. \$8.50.

Medical Socioeconomic Research Sources. Vol. 1, No. 1, January 1971. Monthly, with annual cumulation. American Medical Association, 535 North Dearborn St., Chicago, Ill. 60610. \$20.

Physiological Plant Pathology. An International Journal of Experimental Plant Pathology. Vol. 1, No. 1, January 1971. Quarterly. Editors: T. F. Preece (The University, Leeds, U.K.) and B. J. Deverall (Wye College, Ashford, Kent, U.K.). Academic Press, 111 Fifth Ave., New York. \$19.50.

Russian Ultrasonics. Vol. 1, No. 1, January-March 1971. Quarterly. Editors: B. R. V. Hughes and J. M. D. G. Parry. Multi-Science Publishing Co., 33 South Drive, Brentwood, Essex, England. \$50.

Surface Wave Abstracts. Vol. 1, No. 1, January-March 1971. Quarterly. Editors: B. R. V. Hughes and J. M. D. G. Parry. Multi-Science Publishing Co., 33 South Drive, Brentwood, Essex, England. \$56.

Theory and Decision. An International Journal for Philosophy and Methodology of the Social Sciences. Vol. 1, No. 1, October 1970. Five or six issues a year. Editors: W. Leinfellner (University of Nebraska, Lincoln), A. C. Michalos (University of Guelph, Guelph, Ontario), and others. D. Reidel Publishing Company, P.O. Box 17, Dordrecht, Netherlands. \$19.55 for a volume of four issues; to individuals, \$11.15.

Books Received

Absolute Configuration of Metal Complexes. Clifford J. Hawkins. Wiley-Interscience, New York, 1971. xii, 350 pp., illus. \$19.50.

Abstracting Scientific and Technical Literature. An Introductory Guide and Text for Scientists, Abstractors, and Man-

agement. Robert E. Maizell, Julian F. Smith, and T. E. R. Singer. Wiley-Interscience, New York, 1971. xviii, 298 pp. \$14.50.

Addendum 1971 to the British Pharmacopoeia 1968. Published on the recommendation of the Medicines Commission pursuant to the Medicines Act 1968. Pharmaceutical Press, London, 1971. xviii, 142 pp., illus. \$11.

Advances in Morphogenesis. Vol. 9. M. Abercrombie, Jean Brachet, and Thomas J. King, Eds. Academic Press, New York, 1971. xii, 328 pp., illus. \$18.50.

Advances in Organometallic Chemistry. Vol. 9. F. G. A. Stone and Robert West, Eds. Academic Press, New York, 1970. x, 478 pp., illus. \$24.

Advances in Solid-Liquid Flow in Pipes and Its Application. Iraj Zandi, Ed. Pergamon, New York, 1971. viii, 298 pp. + plates. \$21.50.

Advances in the Study of Behavior. Vol. 3. Daniel S. Lehrman, Robert A. Hinde, and Evelyn Shaw, Eds. Academic Press, New York, 1970. xiv, 264 pp., illus. \$12.

Adventures in Medical Writing. Robert H. Moser and Erwin Di Cyan, Eds. Thomas, Springfield, Ill., 1971. xii, 68 pp. \$6. American Lecture Series, No. 794.

The Agricultural Potential of the Middle East. Marion Clawson, Hans H. Landsberg, and Lyle T. Alexander. Elsevier, New York, 1971. xx, 316 pp., illus. + loose maps. \$19.50. The Middle East, Economic and Political Problems and Prospects, vol. 1.

American Medicine in Crisis. Edward P. Luongo. Philosophical Library, New York, 1971. 194 pp., illus. \$9.95.

Anatomy and Physiology of Speech. Harold M. Kaplan. McGraw-Hill, New York, ed. 2, 1971. xii, 528 pp., illus. \$12.95.

The Animals Next Door. A Guide to Zoos and Aquariums of the Americas. Harry Gersh. Fleet Academic Editions, New York, 1971. xii, 176 pp., illus. Cloth, \$6.95; paper \$3.50.

Annual Review of Pharmacology. Vol. 11. Henry W. Elliott, Ronald Okun, and Robert H. Dreisbach, Eds. Annual Reviews, Palo Alto, Calif., 1971. x, 560 pp., illus. \$10.

Appareillages et Techniques de Caractérisation des Composés Minéraux Solides. J. P. Suchet, Ed. Masson, Paris, 1971. viii, 212 pp., illus. Paper, 70 F. Séminaires de Chimie de l'État Solide, No. 4.

Applied Solid State Science. Vol. 2, Advances in Materials and Device Research. Raymond Wolfe and C. J. Kriessman, Eds. Academic Press, New York, 1971. xiv, 320 pp., illus. \$16.

Asang. Adaptations to Culture Contact in a Miskito Community. Mary W. Helms. University of Florida Press, Gainesville, 1971. viii, 268 pp., illus. \$10.

The Astrological History of Masha'allah. E. S. Kennedy and David Pingree. Harvard University Press, Cambridge, Mass., 1971. xvi, 206 pp., illus. \$10.

An Atlas of Mammalian Chromosomes. T. C. Hsu and Kurt Benirschke. Springer-Verlag, New York. Vol. 3, 1969, 50 folios, \$9.40; vol. 4, 1970, 50 folios, \$14.80; vol.

(Continued on page 360)