cellent, but one is continually irritated by the lack of references from text to picture. It is difficult to escape the conclusion that the scholarly text was produced without regard to the figures and that the latter were then assembled by a picture editor and inserted in what he considered to be useful places. Even on the few occasions when anatomy is being discussed, there is no means of finding out whether there is a relevant illustration without referring to the index, and then only if one can guess the form selected. This is particularly marked, for example, in the discussion of the Cephalochordata, in which the text provides an admirable description of the habits and nature of Branchiostoma and describes in some detail those features of its anatomy that are commonly observed in a whole mount; the only illustration, however, is a reproduction of a transverse section. What the text properly refers to as the notochord is in the picture caption called "the spinal cord." This sort of thing, of which this is not a unique example, will be as bewildering to the layman as it is irritating to the professional.

None of this should be allowed to detract from the fact that this is unquestionably the best single-volume encyclopedia of zoology currently available and that, as such, it will fulfill a valuable function in making it possible for the layman, or the student, to find out something about the varied forms and relationships occurring in the animal kingdom. None of the individual sections is as complete, or as richly illustrated, as the comparable volume in Doubleday's series "Living [so and so's] of the World," but here at least they are to be found assembled in a single volume at a reasonable price. There is a considerable glossary, an excellent bibliography of popular works for further reading, and a really admirable index.

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A Great Man from Close Up

Niels Bohr. His Life and Work as Seen by His Friends and Colleagues. S. ROZENTAL, Ed. North-Holland, Amsterdam; Interscience (Wiley), New York, 1967. 355 pp., illus. $9.

Originally published in Danish in the fall of 1964, two years after Bohr's death, this posthumous tribute is now available in English. The book contains 22 illuminating essays on Bohr's scientific, administrative, and social activities, and describes his intellectual background and scientific achievements both in physics and in the philosophy of science.

The authors of these essays either are prominent physicists who are or were at least briefly members of Bohr's famous Institute of Theoretical Physics in Copenhagen—P. A. M. Dirac, W. Heisenberg, L. Rosenfeld, O. Klein, H. B. G. Casimir, O. R. Frisch, A. Pais, Ch. Møller, and V. F. Weisskopf—or they were personal friends or relatives of Bohr or had close social relations with him—Viggo Kampmann, the former Prime Minister of Denmark; E. Rüdinger, Bohr's long-time assistant; J. Pedersen and R. Courant, intimate friends of the Bohr family; and Niels's son Hans, whose contribution "My father" concludes the series of articles. In addition, the book contains a reprint of Bohr's "Open Letter to the United Nations" (1950), which urges a realistic approach toward solving the grave and pressing problems that confronted humanity in the aftermath of the Second World War—and that do so today.

The volume offers an intimate glimpse into the personal background of various periods of Bohr's life, starting from his early childhood (described by his relative David Jens Adler), and it treats in detail his patriotism and public-spirited activities in Denmark (Mogens Pihl), as well as his involvement in international affairs (Weisskopf, Hans Henrik Koch, Kampmann). Valuable—and in part not generally known—information on Bohr's important role during the war years and immediately thereafter is contained in Stefan Rozental's and Aage Bohr's contributions, and his interests in philosophy, psychology, and the problems of everyday life are vividly brought into relief by others (Jørgen Kalckar, Dirac, William Scharff, Mogens Andersen). Bohr emerges as a figure of outstanding ingenuity and highest nobility of character. The book describes the rich and harmonious life of Denmark's "first citizen": a leader in science who laid the foundations of modern atomic theory, Bohr also took keen interest in the political questions of his time (without, however, being associated with any political party)—both these activities being the result of his uncompromising search for perfection.

As far as Bohr's work is concerned, the presentation is less satisfactory, a fact for which, however, the contributors are not to be blamed. They were assigned to write not only for the specialist but also for the lay reader, and the sections relating to Bohr's scientific contributions had to be written in a nontechnical language, losing thereby much of the necessary accuracy of formulation and desired succinctness of style. The second and perhaps decisive reason for this drawback lies in the fact that Bohr was as much a philosopher as he was a physicist; the intricate interplay of these two strands in Bohr's creative work is a subject of great subtlety and hardly amenable to penetrating analysis within the limits of such short essays. Léon Rosenfeld's article on the consolidation and extension of Bohr's conception of complementarity is superb; but a study of the genesis and early phases of this most far-reaching conception of Bohr's is unfortunately lacking.

Furthermore, all authors of the articles dealing with Bohr's scientific work are declared adherents of the so-called "Copenhagen interpretation," a fact which finds its reflection in the total absence of any expression of a critical attitude. As a study of the Archive for the History of Quantum Physics clearly reveals, not all of Bohr's eminent pupils—and even "friends"—espoused the master's epistemological interpretation. In view of the actuality of these problems, it seems that the value of the book would have been greatly enhanced had one of these "friends-opponents" been included among its contributors. The example of Bohr's own contribution to a well-known Einstein volume (edited by P. A. Schilpp) supports this contention—and the fact that criticism and praise are not necessarily incompatible.

This last remark refers also to this reviewer's evaluation of the book. His criticisms should not be interpreted as dispraise of the volume under discussion, which he regards as a highly informative, illuminating, and important publication.

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