growth of man's control and understanding of his environment. The volume as a whole proves that the knowledge and insight of specialists can be made available to the general reader with dignity and without loss of critical standards.

I. BERNARD COHEN

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The Scientific Revolution, 1500–1800. The formation of the modern scientific attitude. A. R. Hall. Longmans, Green, London–New York, 1954. xvii + 390 pp. Illus. $3.50.

The period 1500–1800 saw the formation of the intellectual movement known as modern natural science. A. R. Hall, lecturer in the history of science at Cambridge, regards the thought of the previous age not as "unscientific" but simply as different, and that of the last century and a half not as different but rather as "more scientific," in the sense that the approaches of more recent scientists differ from those of 1800 chiefly in the refinement of detail. Thus he sees this period neither as an "awakening," as it used to be called, nor as a "phase," as some now would have it, but as the crucial period in the genesis of a development in the course of human events the importance of which few of the present generation are likely to minimize.

The book begins with a judicious and well-informed summary of medieval science, which exhibits, as does the entire book, an impressive familiarity with the literature on the subject. The treatment of astronomy and mechanics, in which the author has already published distinguished work, is excellent. Chemistry and biology are treated less originally but are not neglected. As befits a book described by its author as a "character study" of the scientific revolution, approximately one-third of the space is devoted to consideration of philosophy and methods. Well-selected bibliographies and appendixes are included and there is an index. I know of no more sound introduction to the history of modern science.

ROBERT MULTHAUF

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American Men of Science. vol. I, *The Physical Sciences.* Jaques Cattell, Ed. Science Press, Lancaster, Pa.; R. R. Bowker, New York, ed. 9, 1955. 2180 pp. $20.

A new edition of *American Men of Science* is always an important event and a welcome addition to a scientist's bookshelf. As the scientific population grows, the necessity for this biographic reference work increases; since the eighth edition appeared in 1949, the number of names included has increased from 50,000 to 90,000. This increase convinced the publishers that a single volume was no longer practicable. In splitting 90,000 names into separate volumes, the publishers had to choose between making the division alphabetically and making it along subject-matter lines. They chose the latter course.

Volume 1 includes physical scientists; volume 2 (fall 1955) will include biological scientists; and volume 3 (spring 1956) will include social scientists. Users whose interests are largely confined to getting information about persons in a particular field, such as geology or mathematics, will find this arrangement convenient and will save money by buying only one volume.

There are, however, major disadvantages to the volume separation. The question of where to include biochemists and biophysicists illustrates the fact that not all scientists can be classified neatly into one of three pigeonholes. Each member of these groups was given his choice of a listing in volume 1 or volume 2. Some chose one way; some, the other. This made it necessary to list practically all names in both volumes, with a biography in one and a cross reference in the other. The cross-reference feature is also used in the inclusion of some names in the new edition with a reference to the eighth edition for detailed information. The book is therefore less handy than an alphabetic division would have been for users who are interested in all fields of science or in those fields that do not fit neatly into the current arrangement.—D.W.

Composition of Scientific Words. A manual for the methods and a lexicon of materials for the practice of logotechnics. Roland Wilbur Brown. Published by the author, U.S. National Museum, Washington 25, D.C., 1954. 882 pp. $8.

The legion of dictionaries gains recruits almost daily, but most such recruits are the stuff that privates are made of, following in well-defined paths. This "manual and lexicon" has the stuff of leadership in it, for it is not designed to be consulted passively but to enable its users to make new words. Since most of these new words will be the names of plants and animals, the book is especially rich in examples of how such names have been made. While the bulk of the book consists of the lexicon, the 54-page introduction is the essential guide to the lexicon. This introduction is not only an essay on the origins of the language and the nature of Greek and Latin but it is a readable essay on the nature of words. In it the author does not suppress his own opinions, which are often entertaining, but there are many practitioners of nomenclature who will part company with him on his recommendations about correcting the deficiencies of previous namesmiths. But this is the old controversy between those who want a name to make sense and those who regard it as simply an arbitrary convention.

The lexicon itself is a fantastic compilation. It does not attempt to be a simple dictionary, listing as many words as possible in order, but is rather a sort of thesaurus, grouping words by concept or general meaning. Under "bad" for example, are two pages of words, some synonyms, others simply uncomplimentary or unfavorable adjectives of various degrees; "bog" is followed by a similarly long list of all sorts