Scientific Books

MOST original scientific research today is reported in the scientific journals. These journals, numerous as they are, are flooded with papers, and journal editors often require authors to save space by paring their reports to the barest essentials. Caught between the surge of postwar scientific research and alarming increases in the cost of technical printing, the journals, carrying the lifeblood of current research, have their problems, editorial or financial, or both.

If journals are the chief vehicles of current research, what is the importance of books? The very existence of this special book issue of the news organ of the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE is ample testimony to their importance. But what is the relation of books to scientific progress?

The answer to this question is immediately seen by imagining a world without scientific books—no popularization of science, no textbooks, no advanced treatises, no reference books. Skillful and accurate popularizations are necessary to keep the public informed about the state of science, an increasingly important function in an era when so much research depends on public support. Popularizations often spark the interest of the younger students who will be tomorrow's scientists. Textbooks, too, are necessary. Imagine trying to teach a course in beginning biology without a textbook; in order to teach the course the teacher would have to write one. Reference books and advanced treatises, at a professional level, also fulfill their function. Only in the broad perspective that a book affords is it possible to stand back and view an area of science as an entity. Only in books is the unity of science fully revealed.

But while extolling the virtues of books, we must not think that books constitute the tangible body of science. Science is what scientists think and do; books, like cyclotrons, are merely their tools. In building a cyclotron, one may find a new fact about particles in motion; in the organization and reflection that goes into writing a book, one may discern new facts and relations not previously discovered. And when a book is written and published, it becomes a tool. It may be valued for the facts it contains, for the interpretations it presents, for the clarity of its exposition for beginners, or for the vitality and enthusiasm with which it presents the results of science to the public.

The reviews in this issue show that, although some scientists have vowed never to stray from the frontier of current research in the journals, others have suffered the birth pangs of book publication—for the benefit of science. The publishers, too, those toolmakers, have suffered pangs—especially growing pains. Since 1940 a large part of the mantle of responsibility for scientific publication, formerly carried magnificently by Germany, has fallen on American publishers. This, with the tremendous burst of American scientific activity, plus the ever-increasing cost of book production, has created new problems and has intensified old ones for American publishers. Fortunately, in this case, virtue turns out to be its own reward. Publishers who have held to a high level of quality in selecting their publications have been able to meet the challenge. The following pages show that in America good scientific books are being published in large numbers; and, like reservoirs, they store the growing volume of scientific knowledge until it is tapped for the further advancement of science.

HERBERT S. BAILEY, JR.

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