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Review

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the previous volume, while all but two of the eight authors were from England, one article was published in French. Despite *T&C*'s cover claim to be "The International Quarterly" of SHOT, the overwhelming dominance of American contributors has never been challenged. To be sure, from time to time European authors surface (particularly ones that have delivered papers in the United States), and there seems to be a conscientious effort to report on overseas conferences that might be of interest to *T&C*'s readers, but there is little to distinguish the journal's "international" efforts from the parochialism so customary in American academia.

A third organ, *History and Technology*, is even bolder in its self-description as "An International Journal." Edited since its start in 1983 by Pietro Redondi out of Paris, the journal's mix of articles in English and French (with the former always predominant) and its range of contributors from throughout Western Europe and North America give it a far better claim to this title than the others. Even more than by its internationalism, however, *History and Technology* has tried to distinguish itself by its program. Redondi led off the first issue by declaring that "*History and Technology* wishes to assume the pursuit of a confrontation and collaboration between external or social history, and the internal history of technology" ("Editorial," 1983, 1:4). If this sounds suspiciously like the "contextualist" approach that *T&C* has promoted for years, it is because the contrast between the two journals' stated aims is less important than the more deep-seated differences in emphasis and terminology that exist between American and Continental historical scholarship. *History and Technology* allows us to appreciate these contrasts by the frequent juxtaposition of American and European contributions, and it performs a special service to the community of historians of technology by doing more than any other journal to foster a transatlantic interchange. Its high cost and the unevenness with which this "quarterly" makes its appearances (so-called double and even triple issues have been used to fill in gaps in delivery) are sources for worry about *History and Technology*'s long-term prospects, but it plays an important role in the discipline that would be missed if unfilled.

ROBERT FRIEDEL

■ Specific Disciplines

Archive for History of Exact Sciences. Editor: Clifford Truesdell, Department of Mechanics, Johns Hopkins University, Baltimore, Maryland 21218. (New York/Berlin: Springer-Verlag.) Quarterly. Subscription: DM 348.

The *Archive for History of Exact Sciences* was established in 1960 under the chief editorship of Clifford Truesdell, a mathematical scientist and historian of eighteenth-century mechanics at Johns Hopkins University. It publishes only articles (no reviews, notices, or abstracts) in the history of "exact" sciences, a designation that is meant to include mathematics, statistics, astronomy, physics, and mathematical chemistry. The articles vary in length from short studies to book-size essays and typically emphasize the technical, "internal" aspects of the subject. Truesdell states that his goal is to cast "light upon the conceptual groundwork of the sciences by discovering their growth: the course of mathematical thought and precise theory of nature. While devoted mainly to mathematics and natural philosophy [the *Archive*] also embraces experiment in the physical sciences." The languages of the *Archive* are English, German, French, Italian, Latin, and Spanish.

To publish in the *Archive* one submits a manuscript to a member of the editorial board, who has final authority on questions of acceptance and revision and whose name appears as "communicator" on the title page of the article. The editors may also communicate their own work. Appointed by Truesdell and reflective of his personal judgment and taste, they are professional historians of science and senior distinguished scientists with historical interests, occupying positions in Europe and the United States. The current board consists of about twenty individuals and includes experts in ancient, medieval, and modern physical and mathematical science.

The *Archive*'s system of publication has resulted in considerable variation in the quality, scope, and direction of its articles and has fostered greater independence of authorship than would be typical in a more conventional journal. It is not subject to any fixed annual volume of pages and may expand to incorporate all work that is submitted. The average time between final ac-

ceptance and publication of an article is about one year. In recent years there has been a substantial increase in the quantity of material published, reflecting the increased activity in the history of science.

One of the important functions of the *Archive* has been to publish doctoral dissertations. Theses by D. T. Whiteside, Alan Shapiro, H. J. M. Bos, and Lenore Feigenbaum, to name only a few, have appeared there. Topics in ancient and medieval science are represented, and the conflicting theories of István Szabó and Wilbur Knorr on the origins of Euclidean geometry have been argued in its pages. Occasional articles on Babylonian, Arabic, and non-Western science have appeared, although the overall emphasis is heavily on European subjects. The *Archive* has published many highly technical studies of the development of modern science. A striking if isolated example here is Philip Lervig's very original article on Sadi Carnot's theory of heat, a study that has undermined Truesdell's own strongly presented conclusions about the history of thermodynamics.

The *Archive's* promotion of internal history, its emphasis on mathematics, and its European orientation recall an older tradition in the history of science. At a time when historical studies have failed to become an established specialty in university science departments, it has filled an important need in providing a forum for scientists who wish to explore their subject's past. Its pages will continue to be of interest to anyone concerned with the actual content of past science and its historical development.

CRAIG G. FRASER

Historia Mathematica. Editor: Eberhard Knobloch, Technische Universität Berlin, Fachbereich 1 und 3, Wissenschaftsgeschichte-Mathematik, Strasse des 17. juni 135, D-1000 Berlin 12, Germany. (International Commission on the History of Mathematics, IUHPS.) Quarterly. Subscription: \$70 (U.S. institutions), \$80 (foreign institutions); special rates to individuals and organizations.

The imprint of its founder, Kenneth O. May, is still to be seen on *Historia Mathematica* (*HM*). In 1971 May launched a free newsletter, *Notae de Historia Mathematica*, of which five issues eventually appeared. By 1974 the *Notae* had been transformed into a full-fledged journal under his

editorship. The first issue proclaimed May's intention that *HM* serve as an international vehicle for the latest research in the history of mathematics and collateral fields; it would also continue to carry news of the meetings and projects of an expanding set of professionally trained historians of mathematics and others who shared their interest in the development of mathematical sciences. May, soon assisted by Joseph Dauben as managing editor, steered the journal through Volume 3. Dauben took over as editor after May's death in 1977, with Esther Phillips as managing editor. After two four-year terms they turned the journal, by then twelve volumes old, over to Eberhard Knobloch and Helena Pycior. *HM* is a publication of the International Commission on History of Mathematics of the IUHPS, Division of History of Science. Sponsors include societies for history of science, history of mathematics, mathematics, statistics, and mathematics education.

Issues appear quarterly and typically contain two to four articles, a note or two, notices of meetings upcoming and reports of meetings past, a handful of book reviews, and several dozen abstracts of other books and articles of likely interest. Abstracts are indexed periodically by author and subject. The editors make a determined effort to connect both abstracts and *HM* articles to other bibliographies and compilations of abstracts, notably *Mathematical Reviews* and the *Isis Current* (formerly *Critical Bibliography*).

Articles well seasoned with technical detail are complemented by institutional histories and biographical studies. Most by far are in English, although a limited number of articles appear in other languages. In the last decade (i.e., Vols. 7–16) *HM* has carried articles or notes by more than 185 authors. The ratio is not 1:1; some articles have as many as seven authors, and some 20 percent of the authors have published more than one article in *HM*. The authors, mainly historians of science or mathematics and mathematicians, represent institutions in more than a dozen countries.

Topics are diverse—from Chinese arithmetic to Nazi attitudes toward Jewish mathematicians, Euclidean geometry to Lie algebras, mathematics education to philosophical foundations. The temporal range covers antiquity through the mid-twentieth century, but the distribution is far from uniform. Mathematics since 1800 accounts for