century skulduggery that masqueraded for a time as science. It begins with the finding, around 1873–80, of three inscribed stone tablets and two carved "elephant" pipes in Indian mounds in eastern Iowa. Directly involved were a Swiss-born clergyman with an irresistible urge to open mounds, several members of his family, and his sponsor, the Davenport Academy of Natural Sciences, one of the better and more productive of the many groups of locally organized amateurs who were experimenting in natural science in the decades following the Civil War.

The tablets were widely accepted at first as bearing on the origin and early history of the pre-Indian mound-builders; and translations were made of the inscriptions. The pipes were regarded as evidence of contemporaneity of man and mastodon, still a revolutionary idea at that time. Shipped to the Smithsonian, the tablets were exhibited informally to members of the National Academy of Sciences, where they reportedly aroused some interest but produced no recorded expressions of professional acceptance. Their authenticity was almost immediately challenged by an assistant in ethnology at the Smithsonian, whose unpublished report to the Davenport Academy was promptly repudiated by the Institution's Secretary. Upon the appearance of the elephant pipes, such well-known figures as John Wesley Powell, Cyrus Thomas, and Henry Henshaw of the Bureau of Ethnology, then deeply involved in studying the relationships of the mounds to the historic Indian tribes, came out strongly against their authenticity. Henshaw, most outspoken of the three, was vigorously attacked by American and some European protagonists of the finds.

Some Davenport Academy members early expressed suspicions, and made charges that spurious artifacts were being produced in the basement of the Academy building, allegedly as a hoax directed against the energetic preacher who was turning them up in the mounds. The president and principal benefactor of the Academy, innocent of the scheme, devoted his personal means and legal talent to the expulsion of disbelievers from the body and explored the possibility of lawsuits for libel against certain outsiders. By the late 1880's, the objects had been pretty generally rejected by nearly all except the faithful few in the declining Academy membership.

To archeologists, the main outlines of the Davenport episode have been known for many years. The present volume adds to the record much previously unpublished documentary material regarding the making and planting of the bogus artifacts, together with technical details on these and other specimens in the existing museum collections in Davenport. It all adds up to a sordid business and an unfortunate chapter in American archeology. Withal it is an interesting story, here well told.

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Scientists' Correspondence

Partners in Science. Letters of James Watt and Joseph Black. ERIC ROBINSON and DOUGLAS MCKIE, Eds. Harvard University Press, Cambridge, Mass., 1969. xvi, 504 pp. + plates. $12.50.

Shortly after the death of Joseph Black in 1799, the letters written to him by James Watt over a period of some 30 years were returned to Watt, who preserved them, with Black's answers, among his personal papers. This is the correspondence (approximately 160 letters) which forms the bulk of the collection published here. To it has been added every other Watt-Black letter the editors could find, all of the letters found exchanged by Watt and John Robison (over 40), a few related letters to or from other persons, and a transcription of an 83-page laboratory notebook kept by James Watt and referring primarily to experiments on the latent heat of condensation of steam. Many of the letters (we are not told the number) have never previously been published or have appeared only in extract.

As a set of primary documents these letters should prove useful to any student of the period or of the personalities involved. No doubt Robinson will use them in his subsequent studies of James Watt, but this is the last of the publications of the second editor, the late Douglas McKie, and it is particularly to be regretted that we are not, after all, to have the benefit of his years of study of Joseph Black, for the volume has been left bare of commentary and, except for the confusion of the laboratory notebook, annotations have essentially been restricted to the identification of persons or books mentioned in the correspondence.

The text of the correspondence seems meticulously edited. As far as they go, the annotations are moderately helpful, though Wedgwood's experiments, referred to in letter 98, are not those on his pyrometer but another set explicitly testing the Lavoisier-Laplace crushed-ice calorimeter, and it is surely more pertinent to know George Gleig as an editor of *Encyclopaedia Britannica* than as Bishop of Brechin.

Unfortunately, the annotations are not enough; the letters do not stand independently as a record of a partnership in science. The correspondence does not commence until 1768, at least a decade after Black had made the last of his major contributions to science—the discovery of latent and specific heats—and several years after Watt had completed his invention of the separate condensor. The references to these events are, therefore, historical recapitulations, and what remains is an uncharted account of comparatively minor year-to-year activities with, in later years, detailed accounts of the ailments of the correspondents. Yet there are items here which a commentary might have made significant to the ordinary reader. Letters to Black and J. H. Magellan in 1780, for example, not only reveal Watt's persistent effort to obtain for Black credit for his crucial work on heat, but also reveal two little-known published accounts of that work—both prior to 1772. Watt's comments to Black on Priestley's and his chemical experiments provide some interesting and useful sidelights on the discovery of the composition of water and on the theory of phlogiston, while the correspondence between Robison and Watt respecting the posthumous publication of Black's chemical lectures (much of which has previously been published and discussed by McKie in *Annals of Science*) casts renewed doubt on the integrity of that edition as a reflection of Black's ideas.

What might, by a detailed commentary, have been made an extensive review of the working relationship of two significant men must, instead, be supplemented by reading into the extant biographies of Watt, Black, and Robison. This volume is, therefore, essentially raw material of biographical revision. But for that we should be grateful. Rarely is there made available such a near-complete record of the friendship of two such important figures of science and technology.

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