others, will be given; all "products of his mind" will be presented, those on routine matters at least by bibliographical references. The introduction includes a genealogy and genealogical charts, beginning with great-great-grandfather Thomas Franklyne (fl. 1563–73) and great-grandfather John Foulgier (Folger, born about 1593) and including a great-grandson born in 1821.

Benjamin Franklin began as an author at the early age of 16, with the 14 letters he wrote and printed in the *New England Courant* under the guise of the elderly widow, Silence Dogood. The editors tell us in their headnote that he followed a certain tradition in selecting such a pseudonym. The letters are often very amusing; although they are exercises on old themes, they are made fresh and new by his writing. He may even have been as autobiographical as most young authors when he wrote "I have from my Youth been indefatigably studious to gain and treasure up in my Mind all useful and desirable Knowledge, especially such as tends to improve the Mind, and enlarge the Understanding . . ." (No. 3, of 30 Apr. 1722; reproduced on page 13). When his brother James fought against censorship Benjamin stood up for James and, in his absence, kept the *Courant* going.

Having reached the ripe age of 19, Franklin published (in London) "A Dissertation on Liberty and Necessity, Pleasure and Pain" in which he gives "my present Thoughts of the general State of Things in the Universe." The models on which he fashioned this work are described by the editors. The "Journal" of his return voyage from London (in 1726), which took almost 3 months, is full of lively incidents and observations. In England he did not meet Newton, but the influence of his religious thoughts found expression in a "Plan of Conduct" and in the "Articles of Belief" Franklin wrote shortly after his return.

Using the name Busy Body, he signed articles in the *American Weekly Mercury* (1728–9) and, as the Casuist, in the *Pennsylvania Gazette* (1729–32). And then followed Poor Richard (1733), again along a traditional line, with inserted pearls of wisdom that he reshaped from his source.

In between there were business activities and efforts to form new organizations for various literary and moral pursuits. All these, too, are documented here, with introductions and footnotes by the editors, which give all the information related to men and events mentioned in the *Papers*.

Some of these papers are delightful to read; taken together they show the way in which this active mind grew and reached out toward public communication and improvement. But why should a scientist be interested in them? The answer to this question was given, just a few years ago, by I. B. Cohen in his great study, *Franklin and Newton* (1956). The man whom Balzac so wrongly summed up as "the inventor of the lightning rod, the hoax, and the republic," but whom Priestley and Davy extolled, remained widely unknown for his scientific achievements. As Cohen wrote (page 29, of *Franklin and Newton*), "In point of fact, most American scientists do not even appreciate Franklin's major stature in the development of physical thought and would be hard pressed to explain how Franklin could ever have been considered a 'Newton,' save in jest." With the revived appreciation of Benjamin Franklin, the new, comprehensive publication of his papers will be as highly welcomed by scientists as by general historians. They will all be eagerly awaiting the subsequent volumes that are scheduled to appear at short intervals within the next 15 years.

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Kepler. Max Caspar. Translated and edited by C. Doris Hellman. Abelard-Schuman, New York, 1960. 401 pp. $7.50.

All persons interested in the history of the mathematical sciences will welcome this excellent English translation of Max Caspar's great biography of Johannes Kepler (1571–1630). Ever since it appeared in German in 1948 (reprinted in 1950 and 1958), it has been recognized as definitive. The reason is not hard to find. No other individual has spent so many painstaking years studying and editing the astronomical and mathematical works of Kepler as did the late Max Caspar. His biography has enjoyed immense popularity among German readers; hence, Doris Hellman's translation has been eagerly awaited, and her labor should be well rewarded.

In addition to chronicling the personal events in Kepler's sometimes tragic life (including more than one disappointment which would surely have ended the productive work of a lesser genius), Caspar relates in simple yet accurate fashion the internal development of Kepler's cosmological and astronomical ideas. This is no mean feat, for, as anyone who has read Kepler's works will agree, these ideas are as involved as they are brilliant. For this very reason, I can think of no better advice to give anyone who intends to read Kepler's astronomical works than to advise him first to read this lucid "popular" account in order to gain an accurate over-all picture.

The translation reads smoothly (though one might, for example, quibble that the term *planet laws*, which occurs repeatedly, is usually rendered in English as *planetary laws*), and the book has been very carefully proofread. In addition, and at least as important and welcome, are the excellent footnotes which Doris Hellman has added. These give the reader invaluable historical and bibliographical help.

My only objection to this otherwise laudable book is its physical makeup. The over-all format is stingy, to put it mildly. The type in the text proper is too small, the lines are too closely spaced for comfortable reading; and the excellent footnotes are set in impossibly small type. It must be a disappointment to the translator, who labored so long on this worthy book, to have the publisher (we must assume) decide to cut corners in its physical production. Even after admitting that in its present format the book runs a hefty 400 pages, and not suggesting that it should have been produced in an expensive collectors format, it still seems a shame that some more eye-pleasing compromise was not found.

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The Edge of Objectivity. An essay in the history of scientific ideas. Charles Coulston Gillispie. Princeton University Press, Princeton, N.J., 1960. x + 562 pp. $7.50.

This is an extraordinarily good book; it is quite impossible to do justice to it within the limits of a 300-word review. The book is based on lectures given to undergraduates at Princeton University in the years 1956, 1957, and