

with God. His Italian dialogues had already showed true English "Acreans" this path to the true Diana as well.

The editors and translators of *Four* and of the entire Italian dialogues are to be congratulated on the quality of their critical editions, as well as for their readings of the texts themselves. We can look forward to the continuing critical editions of the Latin works of Giordano Bruno.

EDWARD A. GOSSELIN

**William T. Lynch.** *Solomon's Child: Method in the Early Royal Society of London*. xi + 292 pp., bibl., index. Stanford, Calif.: Stanford University Press, 2001. \$60 (cloth).

By "Solomon," William T. Lynch means Francis Bacon; by his "child" (more properly "children"), Baconian methods, programs, and institutions; and by "early," the first quintennium of the official existence of the Royal Society. Through useful, insightful, and richly documented essays of John Evelyn's *Soliver*, or *A Discourse of Forest Trees* (1664), Robert Hooke's *Miraegraphia Phila* (1665), Thomas Sprat's *History of the Royal Society* (1667), John Wilkin's *Essay toward a Real Character, and a Philosophical Language* (1668), and John Graunt's *Natural and Political Observations . . . upon the Bills of Mortality* (1662), Lynch demonstrates connections between the first books licensed by the society and its Baconian heritage. So? The society itself claimed the connection: the *Encyclopédie* trumpeted it to the world; and the Baconianism of English gentlemen of the Restoration is a frequent theme in the recent historiography of science. Much of Lynch's effort goes to pushing against an open door.

He pushes further than others, however, in offering to correct historians who believe that the Royal Society began to do real science only when it distanced itself from Baconian methods. No doubt the early Royal Society did "science"—that is, enriched and discussed what it called "natural knowledge"—under Bacon's flag of fact-finding before theory-making; and Lynch properly calls attention to the wide range of productive inquiries that thus fell within the society's purview. But to make good his case that the investigations he reports followed Baconian methods or mandates closely, he interprets Solomon so loosely that all natural philosophers become his children.

Hooke's discussion of the cause of capillary action may serve as an *experimentum criticum* for Lynch's principles of esegesis. Hooke regarded the mechanical philosophy—the house philos-

ophy of the Royal Society and once Bacon himself had employed—as unproblematic. But in accounting for capillary rise, Hooke had recourse to the concepts of congruity and incongruity. What causes congruity? The mechanical philosophy required the answer: the sizes, shapes, and motions of the particles of air, water, glass, and, perhaps, a subtle ether. Lynch argues that here Hooke merely built out the mechanical philosophy in a way consonant with Bacon's allowance of hypothesis. But were not congruence and its opposite occult qualities, throwbacks to the scholastic nonsense against which Bacon had directed his loudest artillery? And were they not therefore unallowable in sound philosophy? Lynch: On the contrary, Hooke promised to explain how they worked mechanically; we should regard them not as violations of, but as extensions to, the mechanical philosophy. This escape is not available. The unknown cause, mechanical or not, of a manifest effect was precisely what the schoolmen meant by an occult quality. Hooke fell off the edge of the Baconian world with his congruities. Indeed, Lynch grants as much in arguing that they prefigured Newton's sociabilities and universal gravitational attraction.

The first issues of the *Philosophical Transactions* may be taken as one indicator of the interests of the early Royal Society. Probably the best-represented science in these issues was astronomy. Lynch does not concern himself with it. He does not discuss the methods of fellows interested in mathematical topics and secures his main thesis by interpreting Bacon's directives with what strict constructionists ought to regard as undue laxity. It appears that Lynch's method is insufficiently Baconian. His fine case studies are too few in number and too narrow in variety to capture the methods at work in the early Royal Society.

J. L. HEILBRON

#### ■ Early Modern (Seventeenth and Eighteenth Centuries)

**Michael Oberhausen; Ricardo Pozzo** (Editors). *Vorlesungsverzeichnisse der Universität Königsberg (1720–1804)*. (Forschungen und Materialien zur Universitätsgeschichte, 1.) 2 volumes. lxviii + 778 pp., illus., indexes. Stuttgart: Frommann-Holzboog, 1999.

These volumes reprint the semester *Catalogue praedilectianum* (in Latin) or "catalogue of lectures" at the Academy of Königsberg, which came to be known as the University of Königs-

berg. The period covers the lifetime of Immanuel Kant (1724–1804), who attended the university from 1740 to 1748, then became a *Privatdozent* in 1755 and Professor of Logic and Metaphysics in March 1770. The first volume includes the lecture lists prior to the latter date, the second those of the winter semester 1803/1804, when Kant died (having ceased lecturing some eight years earlier). Coincidentally, the format of the catalogues changed with the winter semester 1770/1771. Previously, the lectures were listed under the name of each professor, starting with the semester's rector and followed by the regular professors (so not including the exclusively private lecturers, or *Privatdozenten*) ordered hierarchically by faculty—theology, law, medicine, and philosophy—with the topics of their public and private lectures. Subsequently, the lectures were listed by topic, now including those by *Privatdozenten*, and were marked (and later listed separately) as public and private. (Many of Kant's lectures were private, even after he became a professor.) The philosophy lectures were now listed under four subheadings: philological (rhetoric, literature, and classical languages, including Greek, Latin, Hebrew, and Arabic), historical, mathematical, and philosophical. Instruction in modern European languages was listed separately and included French most often but also English, Italian, and Polish. "Bodily" disciplines came last (horse riding, use of arms, dancing, painting, music). From 1771 to 1794 there was nearly always a brief prefatory note, presumably by the rector, though the apparatus does not attest to the authorship.

The fifty-page introduction (in German) describes the significance of the lists, characterizes changes and developments in the philosophical faculty and philosophical instruction, gives an overview of the required curriculum at Königsberg from 1770 (for all four faculties), describes the use of Latin and its decline at century's end, notes that the main source for the printed catalogues was the collection assembled by the Kant scholar Rudolf Reicke (1825–1906), and annotates the indexes, which cover (a) Bible citations, (b) instructors, and (c) other named persons, authors, works, and handbooks. Beyond its interest for Kant studies, the editors offer the collection as providing insight into German university instruction in the Enlightenment, subject to the disclaimer that not all the lectures listed were actually given and not all the works used as a basis for lecturing were treated favorably. Of special note is the growth of the philosophy faculty, which marked the development of the "arts and sciences" from being merely preparatory to the

higher faculties of law, medicine, and theology into a higher faculty in its own right. The list of authors and works offers a bibliographical overview for the areas of instruction. For the historian of science, the lecture lists permit tracking of the teaching of physics, mathematics, and mathematical sciences, chemistry, natural history, psychology, anthropology, and statistics. "Statistics" (*statistica*) was a long-standing work by Gottfried Achenwall (1719–1772) that offered descriptions of "noteworthy" facts about the various states of Europe (including political and legal systems, political geography, and various economic and military facts) to permit comparisons among states and the tracking of changes in individual states over time. Readers generally might have wanted more information about the structure of the catalogues and their production. A comprehensive list of lecture topics would have been useful, for they are not all covered by the detailed overview of the curriculum. The volumes are nicely produced in large format and should be welcomed as useful tools for studying university education in eighteenth-century Germany.

GARY HAVTHIELD

**Douglas M. Jessep.** *Squaring the Circle: The War between Hobbes and Wallis*. (Science and Its Conceptual Foundations) xiv + 419 pp., figs., app., bibl., index. Chicago/London: University of Chicago Press, 1999. \$80.456 (cloth); \$28.420 (paper).

The main subject of Douglas Jessep's book is Thomas Hobbes's philosophy of mathematics, analyzed lucidly and comprehensively in his three central chapters. These focus, respectively, on the material in *De corpore* related to mathematics; on Hobbes's exchanges with John Wallis about such notions as magnitudes, ratios, the angle of contact, and the infinite; and on Hobbes's criticism of analytic geometry. Another chapter analyzes in some detail Hobbes's mathematical treatise of his last years, including the disputes around his alleged duplication of the cube. Two more chapters deal with the political and religious differences pitting Hobbes against Wallis from the 1650s through the end of Hobbes's life. They are informative and summarize comprehensively the vast literature on the subject. Perhaps the only criticism that can be addressed to this otherwise excellent book is that there is no real symmetry between the actors in it. In the final analysis, Jessep's Hobbes is an idiosyncratic old man, driven by arrogance and too much faith in his peculiar philosophy of mathematics, while