tion on those architectural projects that were realized as well as on those that were proposed but never commissioned, the author correctly underscores the complexity of the choices that the ruling groups made. The Venice that existed at the beginning of the seventeenth century had assumed the form of only one of many possible cities.

Yet the book is not without its disappointments. The editing is careless; the prose is often excessively abstract and convoluted. The translator did not have an easy task; but she, like the author, appears to have been rushed. To be sure, part of the book's difficulty stems from Tafuri's use of certain (largely structuralist) academic codes that are not easily deciphered by those not fully initiated into their various meanings. But it is always disconcerting when an otherwise imaginatively interdisciplinary and methodologically innovative study risks putting off much of its intended audience. Nonetheless, patient readers will find many insights. Tafuri's own deciphering of Venetian architecture makes it possible to see Renaissance Venice in new, unexpected ways.

JOHN MARTIN

■ Early Modern Period

J. M. López Piñero; V. Navarro; E. Portela. *La revolución científica.* (Biblioteca Historia, 16.) 219 pp., index. Madrid: Historia 16, [n.d.]. Pts 750.

The explicit intent of *La revolución científica* is to offer a twofold approach, anticipated in the chapters on the transcultural perspective and on theoretical assumptions and methods, to the problems of the history of science.

The transcultural perspective proposes that we reconsider the role of "dominated" forms of knowledge in the constitution of what has been termed "normal" science. Thus, for example, the authors examine the effect that pre-Hispanic botanical knowledge had on the "normal" botanical sciences in Spain in the sixteenth century.

The chapter on assumptions and methodology brings forth the now-classic notions advanced by the so-called French epistemology. Following these, the authors, for example, make reference to those disciplines that, in classical antiquity, "already rode along the certain road of science" and contrast them to those that had to overcome "epistemological obstacles." This shows the influence of Gaston Bachelard and Georges Canguilhem. Furthermore, following Alexandre Koyré, they conclude: "Science explains reality from abstraction and idealization, that is, from the impossible" (p. 21).

They also base their analysis on the now-classic periodization of Michel Foucault; a brief history—maybe too brief—of mathematics, physics, chemistry, biology, medicine, and the earth sciences is carried out along these lines.

At this point the authors adopt a different way of looking at the problem of the Scientific Revolution: the standpoint of institutions. Here they miss the opportunity, opened by Foucault, of establishing a coherent link between the purely epistemological and the institutional points of view.

The third part of the book expands on the brief history noted above, but no longer from the "transcultural perspective." It offers little—at least nothing very original—in terms of "epistemological" or "institutional" issues. But perhaps this volume has a different purpose: to provide a very readable and amusing (despite some technical details here and there) account of the sciences it treats. So, while a professional historian will feel frustrated, from another point of view this is an excellent introduction, a popular and comprehensible statement of the essential facts and problems that constitute the prime matter for any historian-to-be of the sciences.

How then to judge this volume? Though not original, it is a very successful synthesis of French thought. As historians and philosophers of science, we must look at this book as an example of something we should do more frequently: think, in what I call the Comtean spirit, about readers who are not specialists.

The final part ratifies my point: it is a very useful selection and translation of classical and well-known texts. In such realms as the schools of science, it will prove to be extremely valuable.

SANTIAGO RAMIREZ-CASTAÑEDA

Jean-Pierre Schobinger (Editor). *Die Philosophie des 17. Jahrhunderts.* Volume 3: *England.* 2 half-volumes. xxxiv + 874 pp.,

bibls., index. Basel: Schwabe, 1988. SFr 160, DM 195.

These two half-volumes are a significant contribution to the reference literature of the history of philosophy and the history of science. They are the second installment of a massive project to produce a new *Grundriss der Geschichte der Philosophie*. This title (which appears facing the title page of the present volume) derives from Friedrich Ueberweg's (1826–1871) three-volume *Grundriss,* first published in 1863–1866; the present work names Ueberweg as its "founder." In a preprint of the foreword to the as-yet-unpublished first volume of *Die Philosophie des 17. Jahrhunderts,* editor Jean-Pierre Schobinger projects a total of four volumes for this portion of the new *Grundriss* and about thirty volumes in the complete series. (For further information on the project, consult the foreword to the complete work, written by W. J. Tinner on behalf of the publisher, in Vol. 3 of *Die Philosophie der Antike,* the only volume from the ancient sequence to appear as yet.)

Ueberweg's original work divided modern philosophy into three periods: the epoch of transition (Renaissance), the period of competing systems (Bacon to Hume), and the period of criticism and speculation (Kant and subsequent philosophers through F. E. Beneke and into the 1860s). Later editions introduced further divisions into the "modern" period; the eleventh edition (1914) distinguished the nineteenth century from the modern period ending with Kant. The current *Grundriss,* which is to be newly written from the ground up, breaks the history into smaller pieces yet, with separate works planned for the Renaissance and humanism, the seventeenth century, and the eighteenth century. Within the seventeenth century, there is to be a further taxonomy by region: Italy and Spain; France and the Netherlands; Germany, Scandinavia, and Eastern Europe; and the present volume on England. These new divisions elide the narrative structure expressed in the old periodization, and indeed Schobinger expresses skepticism about sweeping narratives connecting various periods into a story of the "progress" of philosophy (preprint, pp. xiv, xvii–xix). This lack of a general narrative structure is consistent with the aim of the new editors to follow an "objective orientation," emphasizing facts over interpretation (*ibid.,* p. v). The regional approach is justified as a means to give due weight to local influences on the philosophical interests of the players (p. xii). At the same time, it allows the reception of general philosophical movements, such as Cartesianism, to be analyzed from several regional perspectives.

The volume on England contains much to interest the historian of science. The first chapter describes university instruction in the arts, with brief reports on all eight seventeenth-century British universities: Oxford, Cambridge, St. Andrews, Glasgow, Aberdeen, Edinburgh, Dublin, and Harvard. The second chapter surveys currents of religious thought. Subsequent chapters are organized around divisions of philosophy or individual philosophers and their reception: Hobbes and his circle; Platonism; Cartesianism (in England); theories of language; natural philosophy, the rise of science, and Newton; political philosophy; and Locke and the controversies over his work. The chapter on natural philosophy constitutes a fifth of the total number of pages and is divided into separate sections on Thomas Browne, Aristotelianism and the new science, the reception of atomism, the organization of the Royal Society, individual descriptions of the work of seven of the Society's most important members, Joseph Glanvill as its apologist, opponents of the Society, and Isaac Newton. Each section begins with a list of the relevant primary literature, including details on seventeenth-century editions, and each chapter ends with a selected bibliography of secondary literature, including discussions by seventeenth- and eighteenth-century authors. Each section on a major figure contains a brief biography, an extensive description of major works (amounting in the case of Locke's *Essay* to a fourteen-page outline, double-columned, small print), a "Doxographie," and a "Wirkungsgeschichte." The volume is a truly collective effort: the editor has orchestrated the efforts of thirty-four authors (each taking one or two sections or subsections).

Ueberweg's *Grundriss* long served as a standard reference, especially for students and newcomers to the history of philosophy, and the present work should serve the same function. It supplants the twelfth edition of Ueberweg (1923–1928; rpt. as the thirteenth, 1951–1956). Its "objective orientation" marks its aim to be a standard reference work, a strategy laid out by Paul

Wilpert (1906–1967) in his announcement of plans for the new edition (*Archiv für Geschichte der Philosophie,* 1961, *43*:85–99). Schobinger takes this "objective orientation" with a grain of salt, giving it unrestricted application only to the attempt to be factually correct in the extensive bibliographical listings of primary and secondary sources, in biographical details, and in citations. Otherwise, Schobinger emphasizes the extent to which accounts of the history of philosophy are bound to reflect the interests of those who write them, not only in the choice of topics but also in perceptions of historical and philosophical significance. He reports that he and his thirty-four authors have aimed not to produce new scholarship, but to reflect the state of current scholarship, which means their work must inevitably reflect recent interests. At the same time, he has tried to shape the entire work through attention to the "philosophical self-understanding" of the seventeenth century. Thus the overall structure does not divide philosophy according to present-day taxonomies, but works outward from seventeenth-century categories such as logic, physics, metaphysics, ethics, politics, the "new philosophy," and the philosophies associated with various individuals. The discussion of cultural context, outside the chapters on religion and politics, comes mainly in the individual biographies. The volume provides extended discussion of only two institutions: the Royal Society and the universities. Indeed, if any part of seventeenth-century philosophy is slighted, it is school philosophy, a fact that reflects the understandable penchant of previous scholars to focus on what was new in the seventeenth century. Even so, the brief treatment of the curriculum at individual universities and the three-page bibliography of textbooks, which emphasizes British editions, may prove handy to those who wish to study philosophy in the schools.

Historians of seventeenth-century science should find the entire volume useful as a reference guide to philosophy in seventeenth-century Britain. The parts on individual natural philosophers or adherents of the new science supplement or supersede the articles in the *Dictionary of Scientific Biography*. Of the first four articles in the chapter, one, on the early English critic of Aristotelian philosophy Nathanael Carpenter, who wrote on optics, geography, theology, politics, and philosophy in general, has no counterpart in the *DSB;* the other three, on Thomas Browne, Kenelm Digby, and Thomas White, contain a fuller listing of both primary and secondary literature than does the *DSB*. Biographical treatments tend to be abbreviated by comparison with the *DSB,* but the descriptions of works are more encompassing. Thus the *DSB* article on Digby praises the first of his *Two Treatises* (Paris, 1644)—on the nature of bodies—for its clarity but condemns it for its superficiality. By contrast, the article on Digby in the present work (by John Henry) places the treatise on body in a broader intellectual context by observing that Digby treated it as an introduction to his second treatise, on the soul; the article nonetheless summarizes the main doctrines of the first treatise, including its "mechanistic" discussions and its use of Aristotelian terminology.

The present portion of the new *Grundriss* focuses on ideas (both "philosophical" and "scientific," in our senses of those terms), but it does not take a pure history-of-ideas approach; rather, it places ideas in their intellectual and cultural context. The organization of the work around subject matter and individuals, and the relative lack of attention to institutional power structures, may repel some prospective users. Others may bemoan the lack of attention to magic, alchemy, and related endeavors, still others the slighting of mathematics. The project is, however, to produce a new reference work in the history of philosophy, one that seeks its definition of the "philosophical" in the philosophical self-understanding of a period and region. Consequently, some aspects of the wider cultural and intellectual context outside that self-understanding receive only passing mention in this volume. (There is to be a general introduction to the seventeenth century in the first volume of the series, focusing on lexical and "cultural-historical" topics: preprint, p. xiv.) The present work will benefit the historian of science who wishes a starting point for studying that portion of the intellectual context of English science resulting from the embedding of much of what we call science in a web of connections among what they called natural philosophy, metaphysics, and logic.

GARY HATFIELD

Galileo Galilei. *Sidereus nuncius, or the Sidereal Messenger.* Translated and edited by **Albert Van Helden.** xii + 127 pp., illus.,