book is to supply the chemist with information that he can use directly in his laboratory. As a result, the treatment is mainly from a practical viewpoint, with little emphasis on theory or basic principles.

Approximately one-half of the section on materials of construction is devoted to the corrosion of metals, while the remaining part gives a brief treatment of physical properties for metals and nonmetals. A number of different methods for measuring pressures and gas flow rates are discussed in the section on operations with gases. This section also presents an excellent, although brief, treatment of valves for use on gas lines.

Although the sections on heating and cooling, mixing, and grinding, screening, and classifying do include a small amount of elementary theory, they are devoted primarily to a discussion of equipment for carrying out these operations. The chemist who has no engineering background will find that these sections clearly explain the use of the various types of laboratory engineering equipment.

The book is well written, and, in general, the material requires little technical background for a complete understanding. The approach is almost completely qualitative, and most of the book is devoted to description of equipment. The engineer will find that very little information is presented that is not already well covered in the various textbooks and handbooks on chemical engineering. However, the chemist, and in particular the organic chemist, will find that the book fulfills its purpose of supplying a useful, concise, and fairly complete coverage of engineering methods and equipment for laboratory applications.

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The Leibniz-Clarke Correspondence. Together with extracts from Newton's *Principia* and *Opticks,* edited with introduction and notes by H. G. Alexander. Philosophical Library, New York, 1956. 200 pp. $4.75.

In the years 1715–16 Leibniz, the greatest philosopher on the Continent, engaged in a critical correspondence with Samuel Clarke, a scientific-minded theologian, a friend and disciple of Isaac Newton. It was through the efforts of Caroline, Princess of Wales, to whom Leibniz had first written a criticism of the theological implications of Newtonian philosophy, that this exchange of letters took place. Clarke had Newton's help in composing his replies and attacks. Thus, in effect, these letters reveal the coming to grips of the thought of the two greatest philosophic and scientific minds of that great age.

Behind this correspondence lay the long-standing controversy between Leibniz and Newton concerning the invention of the calculus. Fundamental differences in outlook, both scientific and philosophic, were factors in this quarrel. But these were obscured as the course of the debate took an increasingly bitter and shameful turn. The Leibniz-Clarke exchange is a far more temperate and significant reexamination of these differences.

Although the correspondence begins with certain theological considerations, the argument soon goes on to cover the range of basic philosophic-scientific ideas —the central topics of that branch of learning then known as "natural philosophy." So we find Leibniz criticizing the Newtonian account of gravity and the existence of a vacuum. He advances his own theory of space and time, in which these are taken to be relational and mathematically "ideal" orders, as against Newton's treatment of them as absolute and, in some sense, independently existing "substances." It remained for later readers to point out the critical difficulties to be found in both positions. But the letters draw the differences sharply and clarify the problems. Hence, they were to serve as valuable guides to all subsequent understanding of the thought of Leibniz and Newton and to provide a fertile source for future work on the problems they raise.

It is surprising, in view of the interest and historical significance of the correspondence, that the present book is the first complete English edition to be published since 1738. The original text is here, in modernized spelling and type. In appendixes the editor has wisely included pertinent selections from Newton's *Principia* and *Opticks* and from letters by Leibniz (and one by Newton) all bearing on issues that relate to the correspondence. These valuable additions to the original work are supplemented by H. G. Alexander's informative footnotes in the text. Furthermore, he has written a clear and thoughtful 50-page introduction, which surveys and discusses the problems raised in the letters and briefly traces some of the major phases of the subsequent history of the space-time controversy, from Berkeley and Euler, through Kant, to Mach and Einstein.

A few of the things Alexander has to say in this generally able discussion will cause some disagreement. The critical comments on Leibniz, for example, are not altogether clear. This may be partly due to the fact that not only is Leibniz difficult but we do not as yet have full access to his thought and to those of his writings that are still preserved for us. [There exists no complete edition of Leibniz. The first ample edition of his papers to appear in English has just been published by the University of Chicago Press (1957)]. It is not an easy matter to disengage "metaphysical" from "scientific" ideas and interests in Leibniz. It is very easy to be misled by his language into viewing the controversy as theology-metaphysics (Leibniz) versus mathematical science (Newton). Actually, all of these interests are shared by both sides to the controversy.

These are, however, relatively minor considerations and Alexander is to be congratulated for making this classic available and presenting it to us in a competent and attractive form. No secondary account can reproduce the vitality and contagious interest with which the Leibniz-Clarke debate was conducted. This book will prove valuable reading for all those with an interest in the background of modern science and philosophy.

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Hormones, Brain Function, and Behavior. Proceedings of a conference on neuroendocrinology held at Arden House, Harriman, N.Y., 1956. Hudson Hoagland, Ed. Academic Press, New York, 1957. 257 pp. Illus. $7.

Neuroendocrinologists have provided us with numerous clues to endocrine physiology since the studies and treatise of William Buchan of Edinburgh, who in 1779 stated that "the passions have great influence both in cause and cure of diseases. How mind acts upon matter will, in all probability, ever remain a secret. It is sufficient for us to know that there is established a reciprocal influence betwixt the mental and corporeal parts, and that whatever disorders the one, likewise affects the other." In this regard, Buchan's treatise remained as a challenge to future investigators, and the progress made in neuroendocrinology gives witness to the wide acceptance of the carefully documented challenge.

Hormones, Brain Function, and Behavior highlights the thinking of certain investigators concerned with (i) steroids in neuropsychiatry (R. A. Cleghorn); (ii) effects of adrenocortical steroids on the brain (D. M. Woodbury, P. S. Timiras, and A. Vernadakis); (iii) steroid anesthetic and brain metabolism (H. W. Elliott, B. F. Krueckel, and V. C. Sutherland); (iv) determinants of sexual behavior patterns (W. C. Young); (v) control of sex behavior in animals (Allan C. Goldstein); (vi) serotonin in mental disorders (D. W. Woolley); (vii) biochemical studies on, and physiological