it covers a wide variety of topics, ranging from photophysics and light sources to photodynamic action and radiation chemistry. Most of these topics are treated rather briefly, and the main emphasis of the book is on the interpretation of the survival or mutation rate of irradiated organisms in terms of the damage and subsequent repair of their DNA. Enzymatic repair systems specific for DNA are a subject of active research in modern biology, and they are treated here in considerable detail. The photochemistry of proteins and that of nucleic acids are each discussed in separate chapters. Certain themes recur throughout the book, such as the use of photons as probes for studying biochemical mechanisms and the influence of environment on photochemical sensitivity. Whenever possible the authors point out potential new areas of research.

Although there are numerous review articles on photobiology, the number of books available on the subject is small, and most of these are written with the research worker in mind. Hence there is a need for a book such as this one written especially for use in the classroom. There are several problems which may arise upon use of this book as a text, however. One of these is that the presentation of many of the photobiological data is not simplified enough for the student who is unfamiliar with the jargon of molecular biology. In many cases the language is too technical and the discussion too concise, in this reviewer's opinion, to allow the average student to grasp the main point of an argument without constant rereading. (The authors, sensing that there might be a problem with terminology in a book that attempts to bridge biology and physics, have included a glossary.) Another weakness is the absence of reference citations for experimental results that are mentioned or discussed. Although the authors make a point in the preface of their attempt to minimize the use of references, they have in fact quoted the results of a large number of workers. The fact that the reader has no way of knowing where or when these results were published greatly diminishes the value of the book not only for the active worker in the field but also for the student or instructor who wishes to read the original papers for additional information. A short list of general references (mostly books and review articles) is included at the end of each chapter; but aside from the figure acknowledgments, there are no other references.

This book, because of the wide range of topics covered, is recommended for use as a text provided the instructor has a sufficient background in molecular photobiology to organize and simplify some of the more subtle and complex aspects of the topics discussed. The instructor without this background will probably find that it does not completely suit his purpose and that he will have to refer his students to other sources for supplementary reading.

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Renaissance Physics

Mechanics in Sixteenth-Century Italy. Selections from Tartaglia, Benedetti, Guido Ubaldo, and Galileo. Translated and annotated by STILLMAN DRAKE and I. E. DRABKIN. University of Wisconsin Press, Madison, 1969. xii + 432 pp., illus. $12.50. University of Wisconsin Publications in Medieval Science.

The rise of modern physics is closely connected with the story of mechanics in Italy during the 16th century. Notions about the primacy of Parisian theologians and Leonardo da Vinci have largely preempted the center of the stage. Only a careful examination of the relevant scientific texts can open the way to the truth about what really happened, however.

In 1960 the team of Drake and Drabkin gave us such an analysis of some of Galileo's writings *On Motion and on Mechanics.* In the present work they make available a dialogue on motion left unfinished by Galileo as well as some related memoranda by him. This material was written in Latin and is translated into English by Drabkin, who does the same for the three excerpts from Giovanni Battista Benedetti and the preface of Guido Ubaldo del Monte's *Mechanics.* From the Italian version of Guido Ubaldo's Latin *Mechanics* Drake selects the most significant sections for translation into English. He also presents the key passages in Niccolò Tartaglia's *New Science* and *Various Questions and Inventions.*

Drake's illuminating introduction sees Italian 16th-century mechanics developed by two separate regional groups working along different lines. The northern group, connected with Venice and Milan, included Tartaglia and Benedetti, among others. They were interested chiefly in the practical applications of the results of their investigations, and indulged in original but unsystematic speculation. The group linked to Urbino in central Italy, on the other hand, emphasized the necessity of mathematical rigor in the treatment of theoretical mechanical problems, the outstanding example being Guido Ubaldo. Toward the end of the century these two divergent trends were brought together by Galileo, whose mechanical aptitude and mathematical insight successfully synthesized the piecemeal achievements of his predecessors.

Drake makes a meticulous effort to keep the record straight with regard to the history of mechanics, but he is apparently willing to settle for a less exacting standard in other areas. Thus, the historian mentioned on page 251 is really Dio Cassius, not Dionysus, who was merely a god and flourished far longer than the year 180 assigned to him on page 423. Similarly, Numerius Magius of Cremona was the chief engineer of the general Pompey, not of the town Pompeii before it was buried during an eruption of Mount Vesuvius.

I. E. Drabkin died while this book was in press. His widow, Miriam Drabkin, who is a scholar in her own right, provides the extensive and useful bibliography.

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Books Received

About Epilepsy. Donald Scott. International Universities Press, New York, 1969. viii + 184 pp., illus. $5.

Administration Reform. Gerald E. Caiden. Aldine, Chicago, 1969. xvi + 240 pp. $6.50.

Die Alticinae des indischen Subkontinentes (Coleoptera-Chrysomelidae). Gerhard Scherer. Entomology Department, Bernice P. Bishop Museum, Honolulu, 1969. 252 pp., illus. Cloth, $7; paper, $6. Pacific Insects Monograph 22.

American Architecture and Urbanism. Vincent Scully. Praeger, New York, 1969. 280 pp., illus. $18.50.

Annual Reports in Medicinal Chemistry, 1968. Cornelius K. Cain, Ed. Academic Press, New York, 1969. x + 358 pp., illus. Paper, $8.75.

Automatic Data Processing. System/360 Edition. Frederick P. Brooks, Jr., and Kenneth E. Iverson. Wiley, New York, 1969. xxx + 466 pp., illus. $14.50.

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