small ones as cells, viruses, and molecules, to the ultrasmall atomic level. An accompanying text explains the size range involved and describes the instruments used to see within this range. The text then builds up, in logical order, the nature of matter from particles to atoms, to molecules and macromolecules, to bacteria and crystals and corpuscles, to diatoms and protozoa, and, finally, to snowflakes. The text is simple and requires no scientific sophistication to be understood.

Scientist or layman, adult or juvenile will enjoy the photographs. The author selected them from many sources, and chose each in terms of three criteria, "intrinsic beauty, technical perfection, and the power to stir the imagination." They cover a wide variety of subjects, including (in approximate order of increasing magnification) snowflakes, sections of a flower, the structure of wood, diatoms, human bone affected by radium, particles of latex, melting iron oxide powder, the lashes of spirochaetae of recurrent fever, new and used engine grease, polypeptide fibers, the skin of a microbe, striated muscle, diffraction fringes in an electron microscope, several examples of molecular structure, and the spiraling track of an electron caught in a magnetic field.

The device of starting with objects of familiar size and proceeding by successive steps to the very much larger or very much smaller has been used before, but never, in my memory, with such a magnificent collection of photographs. One of them is reproduced on the cover of this issue of *Science*.

The book would make a fine present for a youngster beginning to be interested in science, if he can get it away from his elders long enough to see it.

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The Science of Mechanics in the Middle Ages. Marshall Clagett. University of Wisconsin Press, Madison; Oxford University Press, London, 1959, xxix + 711 pp. Illus. $8.

In the good old order of the history of science, the physicist teaching the elements of mechanics could point to a laughably incorrect "Aristotelian" view of motion. He could then dismiss the Middle Ages, bring Galileo on the scene with a cry of triumph for the experimental method and offer, as evidence for this triumph, the famous Tower of Pisa experiment. Thanks to the efforts of 20th century historians of science, concerned in a more professional manner with the publication and analysis of the rich medieval sources, vast change has been wrought in this crucial area. This work is second only to that in the neighboring field of mathematical astronomy in shedding light on the true antecedents of the more familiar Renaissance activity and in revealing the Middle Ages as being more than a period of simple transmission and stagnation. It is a period, rather, in which many of the basic issues of later mathematical physics were discussed and brought to fruition and which lead in a reasonably continuous way, to the work of Galileo—work that we now realize could not possibly be truly estimated without this knowledge.

For many years, Marshall Clagett has inspired a whole school of collaborators and students to work on medieval mechanical texts and to bring to fruition the labor started by Pierre Duhem, Annaliese Maier, and Alexandre Koyré. This volume represents a definitive and culminating achievement in that study. It collects all the chief medieval texts on statics and dynamics, supplies English translations, and extends, for completeness, from the Hellenistic sources at one end of the time scale to Galileo and Copernicus at the other. Needless to say (for those who know the author) the job is carried out with exemplary and meticulous scholarship, and this volume will clearly stand as the definitive achievement in this field for many years. Now that students have so readily available the texts and good critical commentaries on each, we are happily out of that stage in the historiography of medieval science when it sufficed to know only the names of the authors and the titles of their works.

It is particularly important that we now have an established rationale of the content of medieval mechanical texts, for this volume includes the work of the peculiarly active and unexpectedly original school of theoreticians who worked at Merton College in Oxford during the 14th century. In mechanics, they developed the rich concept of instantaneous velocity and used it in discussions of motion under uniform acceleration. Later, when this grew (probably due to Nicole Oresme in Paris) to include the use of a two-dimensional graphing method as a model for the variation of instantaneous velocity, an important and new part of the mathematical analysis of nature had been achieved. Thus, one must not look upon this book as merely an antiquarian treatment of the medieval origin of one small piece of modern, elementary mechanics. Rather, it is one of the first (and most exemplary) treatments to discuss a vital process in the hard fight that men had to make during the Middle Ages to extend the realm of validity of mathematical treatment from celestial to terrestrial phenomena.

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New Books

The Performance of Lubricating Oils. H. H. Zuidema. Reinhold, New York; Chapman and Hall, London, ed. 2, 1959. 216 pp. $7.

The Politics of Mass Society. William Kornhauser. Free Press, Glencoe, Ill., 1959. 256 pp. $5.

Reading German for Scientists. Hans Eichner and Hans Hein. Wiley, New York, 1959. 218 pp. $5.25.

Sechzig Jahre Medizinische Radiologie. Probleme und empirie. Hans R. Schinz. Thieme, Stuttgart, Germany, 1959 (order from Intercontinental Medical Book Corp., New York 16). 275 pp. $4.65.

Science and Technology in Contemporary War. G. I. Pokrovsky. Translated by Raymond L. Garthoff. Praeger, New York, 1959. 191 pp. $4.

Sociology. The study of social systems. G. Duncan Mitchell. University Tutorial Press, London, 1959. 183 pp. 11s. 6d.

Spectrum. The world of science. Ray Ginger, Ed. Holt, New York, 1959. 115 pp. $3.95. This volume is intended to present many of the basic ideas of modern science to nonscientific readers—readers who have little knowledge of science and who are aware only of its complexities. Contributors include Glenn T. Seaborg, Herbert Robbins, Melvin Calvin, Bobb Schaeffer, Philip Siekevitz, and D. B. Steinman. Consulting editors are Harold C. Urey, Chauncey D. Leake, Otto Struve, George G. Simpson, William Feller, David Krech, Carl D. Anderson, and Richard S. Crutchfield. Among the more than 100 photographs and drawings are illustrations of the Gulf of California from 140 miles above the earth, the appearance and evaporation of atoms in a piece of platinum, and a crystal of pyrite magnified 2.2 million times.

Systems of Units. National and international aspects. A symposium. Publ. No. 57. Carl F. Kayan, Ed. American Assoc. for the Advancement of Science, Washington 5, 1959. 303 pp. Prepaid to members, $5.75; others, $6.75.

Too Many Asians. John Robbins. Doubleday, New York, 1959. 215 pp. $3.95.