the chromosomes to heredity. The last chapter asks the question whether formed cytoplasmic bodies such as mitochondria are bearers of hereditary characters, and, after considering the evidence almost entirely from the animal side, leaves the answer an open one.

References are made to the author's own experimental work on mitosis. Considerable space is taken up with a summary of recent developments in the genetics of *Drosophila*, and an account is also given of Wettstein's work on the production of polyploid mosses. The book will prove useful to those who wish to keep abreast with recent developments in this field.

Les méthodes nouvelles en analyse quantique (mécanique quantique, mécanique ondulatoire). Par Dr. Julien Pacotte. Pp. viii + 139. (Paris: Albert Blanchard, 1929.) 22 francs.

THE object of this book is to give an account, from as many different aspects as possible, of the new methods in quantum mechanics. The first part, based on papers published before July 1926, contains six chapters. These deal with general quantum principles, Heisenberg's matrix mechanics and Dirac's numbers, de Broglie's waves, Schrödinger's wave mechanics, perturbations, and applications. The second part contains two chapters, which link up the new quantum mechanics with relativity and statistical mechanics.

The author's style makes the book easy and pleasant reading. He takes great care to point out that the different conceptions are not so much different theories as different aspects of the same theory. It is shown that Heisenberg's matrices suggest Schrödinger's work, and conversely. Perhaps some readers will consider that the space devoted to applications is too small. This section deals only with the harmonic oscillator and the hydrogen atom. At present the most successful parts of the new theory seem to be its applications, whereas the theoretical foundations are not as yet very secure, and have even been described as "a dodge, but a very good dodge".

H. T. H. P.

Fitness for Work. By Prof. T. H. Pear. Pp. 187. (London: University of London Press, Ltd., 1928.) 5*s*. net.

PROF. PEAR has in this little book made an interesting study of fitness for work. He rightly remarks that far more books are written about unfitness. He analyses the aspects of successful achievement which force us to attribute to a worker capacities, abilities, or skills, and then the motives that lead a person to select, continue in, or change a particular work, and finally discusses some current conceptions of the function of work. Stupidity and laziness would almost seem to be out of place in a study of fitness, but the author presents some novel and provocative remarks on the two and shows their relation to such a theme. The final chapter on the question of the value of industrial skill opens up some very vital problems of modern industry. Two apparently opposite tendencies are clearly visible in the modern State: on one hand, there is an undoubted increase in the application of mechanism, with a corresponding diminution in the need for personal skill, but on the other, the very mechanism itself demands more people to adapt and adjust it, that is, to deal intelligently with mechanism, and modern organisations demand still greater skill on the part of those in authority.

Prof. Pear's book should appeal to a wide range of readers: his style is easy and not technical, so while the psychologist will find much to interest him, the general reader will find no terminological difficulty.

Kurzes Lehrbuch der Chemie in Natur und Wirtschaft. Von Prof. Carl Oppenheimer und Prof. Johann Matula. Zweite neubearbeitete Auflage. Band 1: *Allgemeine Chemie*, von Prof. Johann Matula; *Anorganische Chemie*, von Prof. Carl Oppenheimer. Pp. xiv + 566. 23 gold marks. Band 2: *Organische Chemie*, von Prof. Carl Oppenheimer. Pp. xiv + 471. 19 gold marks. (Leipzig: Georg Thieme, 1928.)

THE authors have accomplished the considerable feat of giving a comprehensive delineation of present-day chemistry within the limits of little more than a thousand pages. The account is well proportioned and up-to-date. Particular emphasis has been laid upon the underlying principles of the science, and upon its relationships to biology and technology. The introductory section of 258 pages by Prof. Matula forms an admirable preparation for the succeeding systematic treatment of inorganic (pp. 294) and organic (pp. 453) chemistry by Prof. Oppenheimer. The work offers at a reasonable price a useful German text for advanced students, teachers, biological chemists, and all who are interested in the industrial applications of chemistry.

Matter, Electricity, Energy: the Principles of Modern Atomistics and Experimental Results of Atomic Investigation. By Prof. Walter Gerlach. Translated from the second German edition by Dr. Francis J. Fuchs. Pp. xii + 427. (London: Chapman and Hall, Ltd., 1928.) 30*s*. net.

THIS volume covers a wider field than is usual in a short treatise on atomic physics, and touches upon most of the important work done between about 1910 and 1926. It includes sections on atomic rays, superconductivity, conduction in crystals, spectrophotometry, and electrically and optically controlled chemical reactions, in addition to the more usual topics, and if it were well translated, would be invaluable both as an advanced text-book for honours classes in physics, and as a survey of the subject for research workers in other branches of experimental science. Dr. Fuchs has, however, failed to do justice to the original, and his translation can only be recommended as it stands with the warning that the reader must be prepared to be irritated by the many unusual expressions that he employs.