Le Message Héréditaire. By Jean de Grouchy. (Pp. xi + 196; 56 figures + 4 tables. 26 F.) Paris: Gauthier-Villars. 1965.

For anybody with a modicum of French, this concise and well-produced book provides a good introduction to molecular genetics. The author has made a virtue out of the necessity to summarize in a different language the predominantly Anglo-American original literature, and his lucid French appears purged of much of the turgid jargon which unfortunately occurs even in otherwise excellent papers and books.

The first part of the book deals with the fine structure of the genes, RNA messengers and their role in protein synthesis, ribosomes and polysomes, as well as with the principles of the genetical code. It does not contain anything that one could not find in other textbooks, but the material seems well selected.

The second part, which is concerned with gene regulation, is more critical, and as it deals with controversial subjects, such as the induction and depression of enzymes, regulator genes, and operons, it is of greater interest to people with some genetical knowledge. The reviewer, who has in previous theoretical papers posed the question of, 'Who or what reads the genetical code, and when?', was particularly attracted by Dr. Grouchy's discussion of a hypothesis of a cytoplasmic system, which is supposed to be superimposed on the chromosomal system of genes. The last, and perhaps least successful, chapter on human genetical systems deals almost entirely with the haemoglobins. There is a bibliography of 356 papers, mostly quite recent, but no index.

H. KALMUS

Methodology in Human Genetics. Edited by J. Walter Burdette. (Pp. xii + 436. \$4.00. 1962); **Methodology in Basic Genetics.** Edited by J. Walter Burdette. (Pp. xii + 484. \$5.00. 1963); **Methodology in Mammalian Genetics.** Edited by J. Walter Burdette. (Pp. xiv + 646. \$6.00 1963.) San Francisco: Holden-Day.

In a remarkably concise and informative preface to the first of these three volumes, Walter J. Burdette, Professor of Surgery at the University of Utah and Chairman of the Genetics Study Section of the United States National Institutes of Health, explains that the discussions they contain were planned to supplement traditional methods of instruction in genetics, the

broad and rapid advances of which now offer 'investigative opportunities exceeding the supply of available trained intellect to utilize them effectively'. The emphasis in these volumes is, therefore, not on the conclusions reached by research workers but on the methods they are evolving in their studies.

The discussions on Methodology in Human Genetics centred on five different fields. Analysis of human heredity attracted amongst others contributions on sampling techniques (A. M. Lilienfeld), population records (H. B. Newcombe), and computer programming (E. Novitski). Problems in the genetics of disease were dealt with by J. A. Fraser Roberts, who discussed the methods used on hospital populations, illustrated mainly by the work carried out at Great Ormond Street; C. Nash Herndon contributed a lucid account on the evaluation of empiric risks, while R. P. Cox and C. MacLeod dealt with the methods employed in studies on the relation of genetic abnormalities in man and susceptibility to infectious disease. The difficulties in studies on mutations were discussed admirably by J. V. Neel, while cytogenetics and biochemical genetics brought contributions from C. E. Ford and several outstanding American workers.

The second volume, devoted to methods used in basic genetics of simple forms of life, is an exceptionally broad survey of methods used in the study of mutations, gene-protein relationships, and cytoplasmic inheritance in bacteriophages, bacteria, fungi, and drosophila. The concluding volume is devoted to mammalian genetics, and here, too, the scope is wide. There are sections on breeding methods, radiation genetics, physiological genetics (which includes an excellent report on the methodology of experimental teratology by F. Clarke Fraser), and biochemical genetics. In addition, the newer fields of immuno-genetics, host-parasite relationships, and the genetics of somatic cells are dealt with.

Each of the three volumes carries useful appendices on purely technical problems. The editing and printing of this publication are worthy of the excellence of the discussion sponsored by the Universities of Utah and of Texas, the Roscoe B. Jackson Memorial Laboratory, and the Genetics Study Section of the National Institutes of Health. No geneticist is likely to follow the whole of the material presented, but equally there is no geneticist who would not benefit from even a cursory perusal of some of the sections bordering on his own speciality.

A.S.