
Genetics is a Mathematical Science

The early work of Hardy, Weinberg and Jennings laid the groundwork for clarifying the statistical implications of the theory of the gene. On this basis has been built a formidable superstructure of mathematical analysis of many types of genetical problems. Among the important problems analyzed in this way are those associated with systems of mating, particularly in agriculture, with evolution, and with human genetics. Dr. Hogben, a noted elucidator of mathematical theory, attempts in this book to make clear the statistical and mathematical ideology underlying modern genetics. It appears to this reviewer that Hogben has been less successful in this attempt than in some of his previous books on other phases of arithmetic. The book is not easy reading, in spite of the essential simplicity of the material covered. Frequently the reader is more muddled at the end of a chapter than he was at the start. Nevertheless there is much of value to be gleaned from the book by careful winnowing. Of particular importance are the chapters on mutation and selection pressures, and on non-assortative and assortative mating. Here the direct connection with genetics and evolution is more evident, and the reader's interest is more steadily maintained. The book is recommended as a reference work for those who are statistically minded. Exercises are provided at the ends of the various sections, and the answers to the exercises are also made available. Two appendices discuss significance tests for Mendelian ratios, and maximum likelihood methods of analyzing various genetic experiments. An excellent index completes the volume.—*L. H. Snyder.*

An Introduction to Mathematical Genetics, by Lancelot Hogben. xii+260 pp. New York, W. W. Norton and Co., Inc. 1946.