

The Concept of the Gene in Development and Evolution

Paperback Re-issue

Advances in molecular biological research in the latter half of the twentieth century have made the story of the gene extremely complex. The gene has become a curiously intangible object, defying any straightforward definition. Relating the gene as a molecular biological unit to the gene as a Mendelian factor produces internal inconsistencies; but genes have been deeply elusive entities even within the traditional Mendelian framework. Philosophers, historians, and working scientists approach the issue from a variety of perspectives. This volume provides evidence of the diversity of scientific disciplines that have a stake in the quest for the gene.

The essays collected here offer challenging perspectives on some of the most fundamental concepts of twentieth-century biology. Conceptual perspectives about the gene as it is known provide the substance of three contributions. The examination of pre-Darwinian heredity concepts, Goldschmidt's demission of the gene, and Seymour Benzer's work on the fine structure of the gene are also explored. A critique of the "genetic program" is presented as well as modern findings about the functioning of "master genes" during embryogenesis. In the final essay, Raphael Falk reviews the material laid out in this volume and lucidly summarizes the primary themes.

The Concept of the Gene in Development and Evolution is an interdisciplinary volume solely devoted to the quest for the gene. It will be of interest to professionals and students of philosophy and the history of science, genetics, and molecular biology.

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