

# Gene

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## Abstract

The historian Raphael Falk has described the gene as a 'concept in tension' (Falk 2000) – an idea pulled this way and that by the differing demands of different kinds of biological work. Several authors have suggested that in the light of contemporary molecular biology 'gene' is no more than a handy term which acquires a specific meaning only in a specific scientific context in which it occurs. Hence the best way to answer the question 'what is a gene', and the only way to provide a truly philosophical answer to that question is to outline the diversity of conceptions of the gene and the reasons for this diversity. In this essay we draw on the extensive literature in the history of biology to explain how the concept has changed over time in response to the changing demands of the biosciences. Finally, we outline some of the conceptions of the gene current today. The seeds of change are implicit in many of those current conceptions and the future of the gene concept looks set to be as turbulent as the past.

**Keywords:** gene concept, postgenomic molecular gene, nominal gene, instrumental gene, traditional gene, genetics, genomics, conceptual change

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