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# Against Theory-Biased Classical Genetics

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## Abstract

Classical genetics is traditionally characterised in terms of theories. Theories constitute the "hard core" of classical genetics. According to this view, classical genetics is centred on a theory of gene transmission, and all its research is organised around the efforts to improve this theory's explanations of heredity and to expand the range of inheritance phenomena that it could explain.

This paper aims to argue against the theory-centred account of classical genetics and to show that theories are not essential disciplinary components of classical genetics. First, I introduce a naive argument against the theory-centred classical genetics under the assumption that if both the rediscovery of Mendel's work in 1900-1903 and Morgan's school in 1926 are the research of classical genetics, there must be some essential disciplinary components that are invariably shared by geneticists in two periods. By comparing the fundamental concepts/theories in 1900-1903 with those in 1926, I show that concepts/theories cannot be such essential disciplinary components.

Second, I propose a possible response to the naive argument, inspired by Kitcher's account of classical genetics. That is, despite the change of concepts/theories from 1900 to 1926, these seemingly different theories are in fact different versions of one theory at different times. There are certain links between these theories. The links are "pedigree problems" (that is, identifying and explaining patterns of inheritance); the seemingly different theories of classical genetics aimed to solve these problems.

Third, I dismiss this response by arguing that Kitcher's account of classical genetics seems more problem-centred than theory-centred.

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