
The French Concept of the Gene, from Microbe to Transposon?

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Abstract

The aim of this talk is to present a new hypothesis able to explain most of the specific features of the history of genetics in France. This hypothesis could be summed up as follow: **in France, the concept of the Mendelian gene was understood – first explicitly and afterwards implicitly – as a new working-out of the Pasteurian concept of microbe** (this hypothesis will now be called MGH, for Microbe-Gene-Hypothesis). Taking into account the results of the work performed by Richard Burian and Jean Gayon since 1988, I will first provide a description of the eight main characteristics of the history of French genetics. I will then present direct evidence supporting MGH, by examining into detail some research programs and theoretical thoughts developed in a Pasteurian atmosphere from the 1880s to the 1930s. I will also recount the historical narrative from the MGH point of view, especially for period 1930-1960, when French genetics started to emerge internationally as a physiological discipline. To conclude, I will focus on the explanatory power of MGH (is it able to explain the eight main characteristics of French genetics?), and I will suggest that this hypothesis could bring into light new facts concerning the specificity of French genetics, even nowadays.

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