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# ”Genetic load”, How the architects of the Synthesis got trapped in a scientific ideology

Alexandra Soulier\*<sup>1,2</sup>

<sup>1</sup>École Doctorale Biologie Santé Biotechnologies de Toulouse – Université Paul Sabatier - Toulouse III – France

<sup>2</sup>Génomique, biothérapies et santé publique – Inserm : U1027 – France

## Abstract

The term ”genetic load” emerged for the first time in a 1950 paper written by the world renowned geneticist, H. Muller – ”Our load of mutation”. In its first version, the genetic load is used more specifically in relation to genetic mutations and refers to an accumulation of disadvantageous mutations in populations. While the idea had already been elaborated in the 1930’s, this wording did not only describe a phenomenon but expressed dramatically the sorrows of many scientists concerning the future of human populations. According to them, the combined actions of medical and social progress prevented natural selection from operating and genes of inferior quality were likely to spread across populations – loading their progress.

This concept reflects the so-called ”typological view” of evolution, which claims that selection should lead to a uniform population composed of identical high-fitness individuals. Such a perspective was, however, invalidated by Robert Wright and Theodosius Dobzhansky, who showed that polymorphism was the rule in natural populations ... in 1946. As the theoretical model of the genetic load had already expired, how can we explain its success among the circle of evolutionists and geneticists, who elaborated the Synthesis?

An explanation for the paradoxical success of the ”genetic load” would be that the concept, at least in its early and strong usage represented in the papers of Julian Sorell Huxley, Ernst Mayr and Theodosius Dobzhansky, would respond less to a scientific inquiry than to a social concern.

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\*Speaker