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Evolution and Evolutionism Beyond Darwinism

What future for Darwinism? My paper proposes criteria for exploring this in the domains of both evolutionary biology and the human sciences (including philosophy).

I begin with a brief overview of the present state of "Darwinism" in the field of knowledge. Two opposite tendencies are visible: challenges and criticisms, but also various sorts of radicalization. Then I propose to evaluate the possible future of Darwinism as a tradition of thought in light of S.J. Gould's distinction between "replacement", "extension", and "expansion" of the Darwinian theoretical framework (The Structure of Evolutionary Theory, 2002). Replacement means substituting a totally new framework for the former one; extension is taken in the sense of extending the scope or domain of application of a given theoretical framework; expansion means revising partially the foundations of a preexisting framework. After explaining Gould's intention, I propose to freely adapt it and extend it to a wider set of issues related to Darwinism as a style of scientific thought.

First I try to evaluate the possible future of the traditional Darwinian framework to evolutionary biology, with respect to both the general pattern of evolution (Darwin's mere "descent with modification") and the main theories about processes (Darwin's "variation and natural selection"). I defend that expansion, rather than replacement or extension, is the most plausible scenario, if we extrapolate from present tendencies.

Secondly, I examine the case of Darwinian anthropology (human sciences, philosophy, and possibly theology). In that case, the situation is more complex and controversial. There are major examples of extension and, perhaps, radicalization, of Darwinism, in domains such as cultural evolution, evolutionary economics, origins of religion, evolutionary ethics, evolutionary epistemology, among other things). But in all these domains, Darwinism is fiercely discussed, both as a unique paradigm, and even as a relevant research program. I provide an overview of these debates. Since Darwinism is not a dominant working paradigm in the the disciplines involved, "expansion" and "replacement" do not provide an appropriate criterion as in the case of evolutionary biology.

I conclude with a historical comparison between the respective ambitions of "mechanical philosophy" in the 17th and 18th Cy, when mechanics was advocated by many scientists and philosophers as an all-encompassing framework, and of the "universal Darwinism" of our time.