

Even in Darwin's time, John W.F. Herschel, astronomer and highly influential philosopher of science, disdainfully called natural selection the 'law of higgledy-piggledy'. We here discuss the formulation of natural selection as "Survival of the fittest" and discuss in how far these formulations are tautological or, if not, whether they are empirically adequate. It will be shown that tautological interpretations of 'survival of the fittest', based on defining the explanandum by the explanans, are surprisingly stable against several modifications of the meaning of the term 'fitness'. However, several non-tautological definitions will be proposed as well. Some of these definitions, however, may show natural selection not only to be refutable and but false. Alternatively one may want to advocate natural selection to be a tautological metaphysical framework. And by standards of productivity Darwinism would clearly be a very prolific framework. To many, however, this would be a decision between the Scylla of tautological formulation and the Charybdis of rendering natural selection plainly or probably false. We consider some further definitions that may yield a testable formulation of natural selection by integrating other aspects of Darwinism into the theory. In any case, it is argued that an implicit shifting between a testable and an untestable interpretation can be an illicit tactic to immunize natural selection while conveying the impression that one is concerned with testable hypotheses.