

mann has gone one better still. One must pass through these stages and appreciate their strength before one sees their weakness, and becomes, at each transition, a sceptic of a higher order. It is difficult to abbreviate the intellectual ontogeny, except in the course of generations. Thus, Weismannism seems vanity and vexation to those who have never found the limits of Lamarckianism, nor strained at the Darwinian tether. Undoubtedly the various stages will seem larval enough some day.

But to all who have tried to sound the depths—not altogether pellucid—of modern ætiology, one result at least should be clear—that we need to get back to facts. We fully recognize the value of speculative interpretation, of logical dialectics, even of controversy—with what Spencer calls “its terrible fertility, and unmanageable population of issues, old and new, which end in being a nuisance to everybody”; but periodically there must be a re-examination of the basis of fact. Perhaps Weismann’s *greatest* service after all, and in part because of the masterliness of the theory, will be in forcing biologists back to experiment.

It seems needless to suggest that there should be a pause in speculation. For we need all the suggestions we can get, and the intellectual speculator will not be discouraged whatever one may say. At the same time, it becomes tiresome to wade through the flood of ætiological literature when one observes how much of it might have been spared us, if the writers had only read the *Origin of Species* more carefully, or taken the trouble to understand Weismann.

It is also fair to recognize that there has already been a fair amount of experimenting. But relatively little of it has had any direct reference to the factors of evolution. It is recognized on all sides that what we now require is a period of experimental evolution.

Among the lines of observational and experimental work which are open or have been opened, the following may be noted:—

(1) Experiment and observation on the nature of variations (*e.g.* Bateson’s work).