

ing individuals to preserve themselves (the instinct of obtaining food), and the instinct leading them to preserve the species (instinct of propagation). It is these two fundamental instincts of organic self-preservation of which Schiller, the idealist (not Goethe, the realist !), says—

“ Meanwhile, until philosophy
Sustains the structure of the world,
Her workings will be carried on
By hunger and by love.” *

It is these two powerful fundamental instincts which, by their varying activity, produce such extraordinary differences in species through the struggle for life. They are the foundations of the phenomena of Inheritance and Adaptation. We might, in fact, trace all phenomena of Inheritance to propagation, all phenomena of Adaptation to nutrition, as the material, fundamental cause.

The struggle for life in natural selection acts with as much selective power as does the will of man in artificial selection. The latter, however, acts according to a plan and consciously, the former without a plan and unconsciously. This important difference between artificial and natural selection deserves especial consideration. For we learn by it to understand how *arrangements serving a purpose can be produced by mechanical causes acting without an object, as well as by causes acting for an object*. The products of natural selection are arranged even more for a purpose than the artificial products of man, and yet they owe their existence not to a creative power acting for a

* “ Einstweilen bis den Bau der Welt
Philosophie zusammenhält,
Erhält sich ihr Getriebe
Durch Hunger und durch Liebe.”