

of the creation of cholera, or syphilis, of the creation of a conflagration, or of a railway accident, as of the creation of man " ("Jenaische Zeitschrift," bd. v. p. 272).

In the face, then, of these hypotheses of creation, which are scientifically insufficient, we are forced to seek refuge in the *counter-theory of development* of organisms, if we wish to come to a rational conception of the origin of organisms. We are forced and obliged to do so, even if the theory of development only throws a glimmer of probability upon a mechanical, natural origin of the animal and vegetable species; but all the more if, as we shall see, this theory explains all facts simply and clearly, as well as completely and comprehensively. The theories of development are by no means, as they often falsely are represented to be, arbitrary fancies, or wilful products of the imagination, which only attempt approximately to explain the origin of this or that individual organism; but they are theories founded strictly on science, which explain in the simplest manner, from a fixed and clear point of view, the whole of organic natural phenomena, and more especially the origin of organic species, and demonstrate them to be the necessary consequences of mechanical processes in nature.

As I have already shown in the second chapter, all these theories of development coincide naturally with that general theory of the universe which is usually designated as the uniform or *monistic*, often also as the *mechanical* or *causal*, because it only assumes mechanical causes, or *causes working by necessity* (*causæ efficientes*), for the explanation of natural phenomena. In like manner, on the other hand, the supernatural hypotheses of creation which we have already discussed coincide completely with the opposite