

adapt itself to the surrounding influences and conditions of existence of the outer world. In fact, the form and size of every crystal is dependent upon its whole surroundings; for example, upon the vessel in which the crystallization takes place, upon the temperature and the pressure of the air under which the crystal is formed, upon the presence or absence of heterogeneous bodies, etc. Consequently, the form of every single crystal, like the form of every single organism, is the result of the interaction of two opposing factors—the *inner* formative tendency, which is determined by the chemical constitution of the *matter itself*, and of the *external* formative tendency, which is dependent upon the influence of *surrounding* matter. Both these constructive forces interact similarly also in the organism, and, just as in the crystal, are of a purely mechanical nature and directly inherent in the substance of the body. If we designate the growth and the formation of organisms as a process of life, we may with equal reason apply the same term to the developing crystal. The teleological conception of nature, which looks upon organisms as machines of creation arranged for a definite purpose, must logically acknowledge the same also in regard to the forms of crystals. The differences which exist between the simplest organic individuals and inorganic crystals are determined by the *solid* state of aggregation of the latter, and by the *semi-fluid* state of the former. Beyond that the causes producing form are exactly the same in both. This conviction forces itself upon us most clearly, if we compare the exceedingly remarkable phenomena of growth, adaptation, and the “correlation of parts” of developing crystals with the corresponding phenomena of the origin of the simplest organic individuals