

The two lines of speculation, originated by Leibniz and Kant as to the genesis of things on this earth and in the universe, mark two distinct ways of approaching the genetic problem. They were both isolated, and it was not till well on in the course of our century that they were again taken up and independently developed—the one by geologists, the other by physical astronomers. They remained for a long time without mutual influence; till, within the last generation, they were brought together, their different results deduced, and a reconciliation attempted. To this I shall revert later on. Forty years after Kant, Laplace put forward his so-called nebular hypothesis at the end of the popular exposition which he gave of his mechanical theory of the heavens. He apparently knew nothing of Kant's attempt, and his views differ materially from those of Kant, in so much as he assumes in the rotating nebular mass an attracting nucleus from which, in the course of condensation through attraction, the planetary rings and bodies were thrown off as the centrifugal velocity balanced the attracting forces. For a long time this sketch of a possible genesis of the planetary system was paraded in popular

6.
Laplace.

work. The merits of Kant have only been tardily recognised; they were unknown to Laplace, and only imperfectly known to more recent authorities, such as Helmholtz and Lord Kelvin, who were fully prepared to do him justice. Lord Kelvin, in his Rede Lecture of 1866, refers to Kant as the first to publish "any definite estimate of the possible amount of the diminution of rotatory velocity experienced by the earth through tidal friction" ('Pop. Lects. and Addr.,' vol. ii. p. 65), and in the

controversy which took place between him and Huxley on "Geological time" the theories of Kant were frequently referred to. See his lecture on "Geological Time," 1868 (*loc. cit.*, p. 10, &c.); Huxley on "Geological Reform," 1869 (reprinted in 'Lay Sermons,' No. XI.) The best account in the English language of Kant's contributions to cosmogony will be found in an article by G. F. Becker in the 5th vol., 4th series, of the 'American Journal of Science,' 1898.