

THE RIDDLE OF THE UNIVERSE

ematician, Pierre Laplace, had arrived independently at similar views to those of Kant, and he gave them a mathematical foundation in his *Exposition du Système du Monde* (1796). His chief work, the *Mécanique Céleste*, appeared a hundred years ago. The analogous features of the cosmogony of Kant and Laplace consist, as is well known, in a mechanical explanation of the movements of the planets, and the conclusion which is drawn therefrom, that all the cosmic bodies were formed originally by a condensation of rotating nebulous spheres. This "nebular hypothesis" has been much improved and supplemented since, but it is still the best of all the attempts to explain the origin of the world on monistic and mechanical lines. It has recently been strongly confirmed and enlarged by the theory that this cosmogonic process did not simply take place once, but is periodically repeated. While new cosmic bodies arise and develop out of rotating masses of nebula in some parts of the universe, in other parts old, extinct, frigid suns come into collision, and are once more reduced by the heat generated to the condition of nebulae.

Nearly all the older and the more recent cosmogonies, including most of those which were inspired by Kant and Laplace, started from the popular idea that the world had had a beginning. Hence, according to a widespread version of the nebular hypothesis, "in the beginning" was made a vast nebula of infinitely attenuated and light material, and at a certain moment ("countless ages ago") a movement of rotation was imparted to this mass. Given this "first beginning" of the cosmogonic movement, it is easy, on mechanical principles, to deduce and mathematically establish the further phenomena of the formation of the cosmic