

hensive spirit the idea that the whole course of nature would appear to a mind vastly more knowing than the human mind, but not essentially different from it, in the form of an intricate mathematical formula, in which only the necessary values of the co-ordinates of time and space would have to be introduced in order to afford a positive knowledge of the largest as well as the minutest phenomena.

Neither the nebular hypothesis nor that which has subsequently been termed the Laplacian world-formula seem to have attracted much attention at the time. Both the astronomical theory of the Universe and the doctrine of Probabilities offered to students of science such an enormous number of definite mathematical problems leading to so many fruitful theories that the scientific mind hardly grasped the ultimate philosophical conclusions which were indicated rather than fully explained.

But in the further course of the century, when the desire arose to supplant in the popular mind the fanciful systems of the "Philosophy of Nature" by a sober and practical mechanical theory, the suggestions of Laplace were variously taken up, elaborated, and criticised.<sup>1</sup>

<sup>1</sup> The nebular hypothesis owes its introduction into philosophical literature in this country to Herbert Spencer, who, in one of his earliest Essays ('Westminster Review,' July 1858), made it do service in the interest of the development hypothesis, or what he had already, in the year 1852 ('Leader,' Jan. 1852 and May 1854), termed the "theory of Evolution." In Germany the larger cosmical view, which the nebular hypothesis afforded, received

additional support when Helmholtz brought forward his theory of the generation and maintenance of the heat of the sun through the continued action of gravitational forces (see his Lecture, 'Ueber die Wechselwirkung der Naturkraefte,' 1854). Before that time it is remarkable how little attention it received on the part of scientific authorities of the first order. Thus neither Whewell in his 'History of the Inductive Sciences' nor Humboldt