

one of those convenient resting-places, those preliminary or provisional bases of thought, from which definite problems could be attacked and solved. His immediate influence lay, therefore, rather in discountenancing the attempts towards a kinetic view of nature, which belonged to the school of Descartes, and found an eminent exponent in Huygens as well as in others of his contemporaries and rivals;<sup>1</sup> in fact, he launched into existence what I have termed the astronomical view of nature, under the sway of which the promising beginnings of the kinetic view were for a long period almost forgotten, but which has the merit of having built up the most perfect of all physical sciences, namely, physical astronomy.

3.  
Huygens  
and Newton.

The sporadic beginnings of a genuine kinetic view of natural phenomena, after having been cultivated with more or less success by Huygens and Euler,<sup>2</sup> and early

4.  
Revival of  
the kinetic  
view in the  
nineteenth  
century.

<sup>1</sup> Among these, of whom Lasswitz gives an exhaustive account, must be mentioned specially Robert Hooke (1635-1703). "In the history of the corpuscular theory Hooke represents quite an original idea, which would have been of the most far-reaching importance if Hooke himself had got beyond a mere sketch to an exhaustive theory, or if his conceptions had, through Huygens' principles of dynamics, been domiciled in science. The deviation from kinetic theories caused by Newton's discoveries brushed away, with much useless hypothetical rubbish, likewise Hooke's more valuable and legitimate suggestions. The doctrine owing to which we place Hooke between Borelli and Huygens is his vibratory theory of matter. It is given in various writings, but most clearly in his Lectures 'De Potentia Restitutiva, or of Spring explaining

the Power of Springing Bodies,' London, 1678" (*op. cit.*, vol. ii. p. 329 sq.)

<sup>2</sup> Leonhard Euler (1707-83), one of the greatest analytical talents of all times, whose writings contain the beginnings of a very large portion of subsequent mathematical work in pure and applied science, was in physics a great opponent of Newton's philosophy as it was then generally expounded on the continent of Europe. There it was identified in mechanics with the theory of action at a distance, and, in optics, with the corpuscular theory of light. To both Euler opposed his ether theory, of which he gave a popular account in his celebrated 'Lettres à une princesse d'Allemagne [Princess of Anhalt-Dessau] sur quelques sujets de physique et de philosophie' (Petersburg, 1768-72, 3 parts). He had given a scientific exposi-