There is not, indeed, to be found in Fresnel's work any central and simple formula—like the gravitation formula of Newton—out of which everything else flows with mathematical necessity. His work lay rather in combining a number of fruitful suggestions thrown out by contemporary or earlier writers into a consistent whole, correcting and enlarging them as was found necessary, and following them out into their logical consequences. Thus he was able to reveal in a special branch of physical science new phenomena which had remained unobserved or unexplained till that time. In order to understand how the kinetic view of nature has become firmly established in the minds of physicists it will be useful to enum-

In a certain sense Euler carried further the work of Huygens, . . . but as he neglected the useful idea of a wave-surface and anxiously avoided Huygens' principle, he made the theory which he wished to defend unfruitful. . . . We think that Euler did more harm than good to the progress of that theory. . . Euler's theory of light had no great number of followers." In England Euler's theory was known and generally condemned. Priestley, in his 'History of Optics' (1772), refers to it at some length. In the well-known attacks in which Lord Brougham treated so unfairly and superficially the discoveries of Dr Young, it is suggested that the latter borrowed his ideas from Euler, whose natural philosophy is held in little esteem. The fact is that Young really went back to Huygens and Newton, and that he well knew that his own opinion, as stated in the first Bakerian Lecture (1802), "was precisely the theory of Hooke and Huygens, with the adoption of some suggestions made by Newton himself as not in themselves improbable" (Young's 'Miscellaneous Works,' ed.. Peacock, vol. i. p. 200). In spite of the great admiration which Young had for Euler as a mathematician, he admits that Euler "added no argumentative evidence whatever to the [undulatory] theory, but has done a real injury to the cause which he endeavoured to support" ('Lectures on Natural Philosophy,' ed. Kelland, vol. i. p. 380). A more recent and well-informed writer on this subject, M. Verdet, says of Euler : "Bien qu'il a donné de la plupart des phénomènes connus de son temps les explications les plus inexactes, il ne mérite pas moins de conserver dans l'histoire de l'optique une place éminente pour avoir dit d'une manière expresse que les ondulations lumineuses sont périodiques comme les vibrations sonores, et que la cause des différences de eoloration est au fond la même, que la cause des différences de tonalité " ('Œuvres de Fresnel,' vol. i. p. xix).