for the purpose of serving as the carrier of a definite kind of wave-motion—to be endowed with most mysterious, seemingly contradictory properties.[1] Nevertheless the development of this conception, the desire to define more minutely the properties of this fictitious substance of which we have no direct perception, came in the course of the century to guide more and more the work of experimentalists as well as theorists. We meet with objections in the beginning, when the conception was first introduced, such as were urged by many chemical philosophers when Dalton reintroduced and formulated

(Tait, 'Light,' p. 192). Sir G. G. Stokes tells us "that in a course of conversation with Sir David Brewster, who had just returned from France, where he witnessed the celebrated experiment by which Foucault had just proved experimentally that light travels faster in air than in water, he asked him what his objection was to the theory of undulations, and he found he was staggered by the idea *in limine* of filling space with some substance merely in order that 'that little twinkling star,' as he expressed himself, should be able to send his light to us" ('Burnett Lectures on Light,' p. 15).

[1] It is known that the two philosophers who in the middle of the century did more than any others to introduce the positive or exact spirit into general thinking and into philosophical literature, Auguste Comte and John Stuart Mill, were both opposed to the theory of an ether. Huxley, in speaking of Comte, exclaims: "What is to be thought of the contemporary of Young and of Fresnel who never misses an opportunity of casting scorn upon the hypothesis of an ether—the fundamental basis not only of the undulatory theory of light, but of so much else in modern physics, and whose contempt for the intellects of some of the strongest men of his generation was such that he puts forward the mere existence of night as a refutation of the undulatory theory?" (See 'Philosophie Positive,' vol. ii. p. 440, and Huxley, 'Lay Sermons,' p. 134.) The fourteenth chapter of Mill's 'System of Logic,' written originally in the beginning of the 'forties, but subsequently annotated with reference to some of Whewell's criticisms, contains a lengthy discussion of the hypothesis of an ether. Mill says (vol. ii. p. 21, seventh edition): "What has most contributed to accredit the hypothesis of a physical medium for the conveyance of light is the certain fact that light travels, that its communication is not instantaneous but requires time, and that it is intercepted by intervening objects. There are analogies between its phenomena and those of the mechanical motion of a solid or fluid substance. But we are not entitled to assume that mechanical motion is the only power in nature capable of exhibiting these attributes."