which they presented when approaching ponderable or attracting substances. Nothing of this kind seemed imaginable on the undulatory theory, which, reasoning from the analogy of sound, considered light to consist in a rapid to-and-fro motion of the ether in the direction of the rays of light. Sidedness or "laterality" seemed inconceivable. Rays of light possessing this property would (as Fresnel and Arago showed in 1816) eventually even lose their capability of interference, that main property discovered by Young, the principal argument for the vibratory theory. "Every day in that remarkable period—when so many great observers were endeavouring to outstrip each other in the career of discovery—was making known modifications and phenomena of polarised light which no existing theory was yet competent to explain. It was polarisation which still continued to cast a dark cloud over the hopes and fortunes of the undulating theory."[1] Thus it was natural that the representatives of the astronomical view of nature, who, headed by Laplace, had given so many real and some apparent explanations of complicated phenomena, and to whom the conceptions of the projectile theory of light seemed more promising, should think it time to attack the very stronghold of the vibratory theory, namely, the phenomena of interference, exhibited mainly in diffraction, and, by a minute experimental and mathematical analysis, show whether these phenomena could not be brought within the pale of their fundamental conceptions. For the discoveries of Young and Fresnel had not shaken them. Accordingly the Paris Academy of

[1] Peacock in 'Life of Young,' p. 383.