

example. And here we may pause for a moment to observe that at this point we already find ourselves introduced to an assemblage of relations between light and material objects, which divide the whole universe of such objects, infinite as they are in variety, into *classes*, characterized by their habitudes with respect to light in its reflexion from and passage through them. The importance of this remark will grow upon us as we advance further into the subject, and come to perceive that the classification of bodies according to their "optical properties" stands in direct connexion with their most intimate peculiarities of mechanical structure and chemical constitution ; and brings us, so to speak, into contact with all those more recondite properties and reactions of the ultimate particles of bodies which constitute the domain of molecular physics.

(24.) Confining ourselves now to the case where the refraction is single, the rule which determines the course of the refracted ray is as follows. Suppose at the "point of incidence" (*i.e.*, where the ray first enters the medium) a line be drawn perpendicular to the surface. Then, first, the refracted ray will lie in the same plane which contains both the incident ray and this perpendicular ; and, secondly, the ray will be so bent at that point that the exterior and interior portions shall make with the perpendicular, not equal angles as would be the case were there no flexure, but angles so related that their *sines* (not the angles) shall bear to each other a certain invariable proportion, whatever be the angles themselves, or whatever be the obliquity of the incident ray.