i.e., at right angles to the surface. Its velocity estimated in this direction will therefore be greater within the medium than without—while that parallel to the surface remains unchanged: the force in that direction being *nil*. The direction of the motion therefore will be more highly inclined to the surface within the medium than without, in the same manner and for the very same reason, that the path of a projectile shot obliquely downwards from the top of a hill makes a greater angle with the horizon when it reaches the ground than it did in the commencement of its descent. And the conclusion, on strict dynamical principles, is the same in both cases. Supposing the initial velocity of projection the same, the sines of the angles made by the direction of the motion *with the* vertical or perpendicular to the surface, at the beginning, and at the end of the descent (*i.e.*, in the case of light, those of the angles of incidence and refraction), will be to each other in an invariable proportion, the total *height* of the descent being the same. Thus we see that the law of refraction is satisfactorily accounted for, on the corpuscular hypothesis; and that, on that theory, the velocity is greater in the interior of a refracting medium than in empty space; and the more so, the greater the refractive power.

(57.) Let us now see in what sort of conclusion we are landed as to the intensity of the forces we have pressed into our service. To consider only the reflective force, we have this to guide us—that, supposing the incidence perpendicular, and the light therefore reflected back by the path of its arrival, that force must have been suffici-