

tympanum of the ear which receives the impulse of the aerial medium, would appear to vibrate like the parchment of a drum, by the direct impact of its waves perpendicular to its surface. It is, therefore, sensible to such of the movements of the vibrating medium *only* as are in the direction of the sound-ray, and not at all to transverse vibrations. But if we conceive the nervous filaments of the retina as minute elastic fibres, standing forth at right angles to its plane, like the bristles of a brush (the reader will pardon the apparent coarseness of the illustration, which is only intended *as* an illustration of what may be, and no doubt is, a process of transcendent delicacy), immersed in the ether; it is evident that movements of the latter parallel to their direction *would not*, but that those transverse to it *would* tend to throw them into vibration, just as ears of corn would be little or not at all agitated by a straight and slender rod moved up and down between the stalks, or to and fro in the direction of its own length, but violently by a transverse horizontal motion of the rod.

(140.) Whatever be, at any instant, the motion of an ethereal molecule, it may always be resolved into two, one in the direction of the ray in the act of propagation, and the other in a direction transverse to it, in the plane of the wave surface. If the sensation of light be supposed to be produced by the former resolved portion, no account can be given of the phænomenon of polarization; such movement being equally related to surrounding space in all directions outward from the ray as an axis. The contrary is obviously the case with