

the same subjective affections, Sir David Brewster has committed the glaring impropriety of assuming that an object in the axis of vision is seen in the direction of the axis. For how does he argue? "Each ray gives vision in the same direction, the visible point retaining its position." Let this sentence pass, dubious as it is; and what next? "It follows, that, on the part of the retina in the axis of vision, all rays, however obliquely incident, give the same visible direction, *perpendicular to the surface of the membrane.*" Indeed! How does this follow? Grant that the rays in question all give the same visible direction (though the only thing proved, is, that they give rise to the same subjective affection); *how does the idea of a direction perpendicular to the surface of the membrane creep in?* The cone of light through which vision is produced, contains a line of rays, no doubt, which fall perpendicularly upon the eye, and pass to the retina without refraction; and it may be fancied that these at least "give visible direction" in the axis of vision. But how can such a thing be proved? How does it appear, that, when rays come to the eye along the axis of vision, the mind determinately refers the subjective affections occasioned by such rays to a remote stimulus, situated somewhere in the axis? Let E represent the eye, and O an object towards which the axis of the eye is turned. It may perhaps be said, that, if you ask the observer, he will tell you that he refers, and cannot help referring, his sensation to a stimulus in the line E O. But he means nothing more by this, than that he is unable, while his eye is turned towards O, to alter the character of the perception realized. That nothing more than this can be intended, and that there is not, in truth, any intuitive or instinctive reference to the direction E O, is rendered certain by a consideration which shall afterwards be more fully brought out, viz: that the object O is not an object of intuitive knowledge at all. Distant objects can only be known mediately or inferentially. And if the object O be not immediately known even as existing, it follows, *a fortiori*, that the direction E O is not immediately known; so that an instinctive, intuitive or immediate reference of a visual impression to the direction E O, is an absurdity.

This may suffice, as regards *direct* demonstration. *Ex uno disce omnes.* No direct demonstration can possibly indicate any thing else than the similarity or dis-similarity (as the case may be) of the subjective affections produced by rays impinging upon particular parts of the retina. Let us proceed to consider next whether Sir David receives any more effectual support for his doctrine from the *indirect*