

This ligament exerts traction all around the front surface of the lens, and renders it less convex than it would otherwise be, and its relaxation plays an important part in the adaptation of the eye for sight at different distances.

The remaining refracting medium, to be next spoken of, is the vitreous humour, which lies in the concavity of the retina, and occupies about four-fifths of the posterior portion of the eye. The vitreous humour contains about 98 per cent. of water, and a small portion of albumen and salts, its refracting index being therefore almost the same as that of water.

With this knowledge then of the anatomical structure of the eye, it will be readily understood how this organ is really an optical instrument, and projects images of external objects on a screen, the retina.

The different refracting media, which go to form the organ of sight,—the cornea, the aqueous humour, the crystalline lens, and the vitreous humour,—may be considered as together forming a compound lens, through which the rays of light pass when the sensation of vision is had. The rays passing from a luminous body, fall upon the sclerotic and the cornea. Those falling on the former are reflected, and take no part in vision. The more central ones impinge upon the cornea, and, of these, some are reflected, giving to the surface of the eye its beautiful glistening appearance. Others, however, pass through the cornea, are converged in so doing, and enter the aqueous humour, which probably exerts no perceptible effect on their direction. Here again, those rays which pass through the outer, or more circumferential part of the cornea, are stopped, and are either reflected or absorbed by the iris. Those that fall upon the more central part of the cornea, pass through the pupil, and impinge on the crystalline lens, which by the convexity of its surface, and by its greater density towards the centre, very much increases the convergence of the rays passing through it. They then traverse the vitreous humour,—whose principal use appears to be to afford support to the expanded retina,—and are brought to a focus on that tunic, forming there an exact, but inverted, image of the object.

The two causes that tend to mar the sharpness and