

of near objects, and frequently even of distant ones. This state occurs congenitally, or at a very early age, often in several children of the same family, where one of the parents has presented it.¹⁶ Secondly, myopia, or short-sight, in which the eye is egg-shaped and too long from front to back; the retina in this case lies behind the focus, and is therefore fitted to see distinctly only very near objects. This condition is not commonly congenital, but comes on in youth, the liability to it being well known to be transmissible from parent to child. The change from the spherical to the ovoidal shape seems the immediate consequence of something like inflammation of the coats, under which they yield, and there is ground for believing that it may often originate in causes acting on the individual affected,¹⁷ and may thenceforward become transmissible. When both parents are myopic Mr. Bowman has observed the hereditary tendency in this direction to be heightened, and some of the children to be myopic at an earlier age or in a higher degree than their parents. Thirdly, squinting is a familiar example of hereditary transmission: it is frequently a result of such optical defects as have been above mentioned; but the more primary and uncomplicated forms of it are also sometimes in a marked degree transmitted in a family. Fourthly, *Cataract*, or opacity of the crystalline lens, is commonly observed in persons whose parents have been similarly affected, and often at an earlier age in the children than in the parents. Occasionally more than one child in a family is thus afflicted, one of whose parents or other relations, presents the senile form of the complaint. When cataract affects several members of a family in the same generation, it is often seen to commence at about the same age in each: *e.g.*, in one family several infants or young persons may suffer from it; in another, several persons of middle age. Mr. Bowman also informs me that he has occasionally seen, in several members of the same family, various defects in either the right or left eye; and Mr. White Cooper has often seen peculiarities of vision confined to one eye reappearing in the same eye in the offspring.¹⁸

The following cases are taken from an able paper by Mr. W. Sedgwick, and from Dr. Prosper Lucas.¹⁹ Amaurosis, either congenital or coming on late in life, and causing total blindness, is often inherited; it has been observed in three successive generations. Congenital absence of the iris has likewise been transmitted for

¹⁶ This affection, as I hear from Mr. Bowman, has been ably described and spoken of as hereditary by Dr. Donders of Utrecht, whose work was published in English by the Sydenham Society in 1864.

¹⁷ M. Giraud-Teulon has recently collected abundant statistical evidence, 'Revue des Cours Scientifiques,' Sept., 1870, p. 625, showing that short

sight is due to the habit of viewing objects from a short distance, *c'est le travail assidu, de près.*

¹⁸ Quoted by Mr. Herbert Spencer, 'Principles of Biology,' vol. i. p. 244.

¹⁹ 'British and Foreign Medico-Chirurg. Review,' April, 1861, pp. 482-6; 'L'Héréd. Nat.,' tom. i. pp. 391-408.