

EYE AND BRAIN

The activity of the brain in seeing is most interesting. The lens causes a picture of what is in front of each of the two eyes to appear on the retina, reversed and inverted, so that, for example, what is above and to the right appears in the lower left portion of each retina. This excites the nerve endings of the retina, and the nerves from the right side of each eye carry the impulses to an area on the right side of the brain, those from the left side of each eye to an area on the left side of the brain. Thus certain cells in the right side of the brain are affected by what is visible at a person's left, while certain cells on the left side of the brain are affected by what is visible at his right. Other nerves connect these two areas, and the two pictures are so combined that one has an impression of a single picture in front of him appearing in three dimensions.

A frequent admonition for a ball player, as he comes up to bat, is: "Be sure to keep your eye on the ball." Why should this be important? If you were to tell him that the ball would come, say, exactly two feet and eight and three-quarters inches in front of him, at a height of exactly three feet and two inches, this would not enable him to cause a certain exact spot on the bat to hit an exact spot on the ball. It would only confuse him. Yet the brain receives impressions from the eye, also from the sense of equilibrium given by the three canals in each ear; also from the various muscles giving information as to the exact way he stands and the exact way in which the bat will move forward as he moves his arms in a certain way. All of this is worked out by the brain at lightning speed, so that a well-practiced player will hit the ball exactly as he desires, provided he keeps his eye on the ball. In this and many other situations one can observe the remarkable efficiency and intricacy of the human brain.