SCIENTIFIC PROCEEDINGS.

ABSTRACTS OF REPORTS.[1]

Eighth meeting.[2]

Physiological Laboratory of Columbia University, at the College of Physicians and Surgeons. October 19, 1904. President Meltzer in the chair.

1 (47).[3] "**The accommodation of the eye,**" with demonstrations: **THEODOR BEER,** of the University of Vienna. (By invitation.)

Two principles are realized in the accommodation of an eye that is constructed as a "camera obscura": (1) Change of curvature of refracting surfaces, principally the lens; (2) change of distance between refracting mediums and image screen, principally distance between lens and retina.

1. There is only *increase* of curvature, principally of the anterior surface of the lens, during active accommodation. We observe it in mammals, birds, and reptiles (lizards, crocodiles, turtles, a few snakes). Experiments were made before the society to show the increase of curvature of the lens in the eye of the water-turtle — proof of Helmholtz's theory of accommodation.

2. Accommodation by change of the distance between lens and retina is possible in two directions: (*a*) In cephalopods and fishes, which are normally shortsighted, accommodation for objects at a distance is effected by a movement of the lens toward the retina. In the eye of the fish there is a muscle *Musculus retractor lentis* (Beer) which draws the lens toward the retina; (*b*) in amphibia and most of the snakes, the lens is moved toward the cornea, away from the retina, by changes of the intraocular pressure.

[1] The authors of the reports have written the abstracts. The editor has made a few abbreviations and minor alterations in some of them.

[2] Reprinted from *Science*, 1904, xx, p. 677; *American Medicine*, 1904, viii, p. 931; *Medical News*, 1904, lxxxv, p. 1143.

[3] See Preface.