It appeared incomplete but formed a considerable segment of a circle.

The above description applies chiefly to the left iris. The departure from the normal was less marked in the right eye. The writer believes this to be a case of congenital miosis of varying degree in the two eyes, and due probably, having regard to the findings of Holth and Berner, to developmental faults in the dilator muscle.

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THE EYE AND PHOTOGRAPHIC LENSES.

BY

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The comparison of the eye to a camera obscura is an old one, and as the inventor of the camera obscura is unknown, so also is it uncertain who first made the comparison. It may well have been either Giambaptista della Porta, Leonardo da Vinci, or even an earlier observer, the Benedictine Friar, Dom Ponrince(1). The comparison can only have been superficial and did not deal with the refractive media or optical system of the eye.

As in the theory and practice of optical instruments no special form of lens has been more minutely dealt with than those used in photography I have thought it worth while to see how far such lenses may be represented in the dioptric system of the eye.

With the omission of certain intermediate types all photographic lenses may be divided into four principal groups(2,3).

1. Portrait lenses.—These give maximum light transmission and have apertures f/2.5, f/3, f/4.5. In this form of lens the number of refractive surfaces in contact with air is either 8 or 6.

2. Universal lenses.—The maximum light transmission through this type of lens approaches that of the first group, the minimum amount that of the following one. They have apertures of f/4.5, f/7, f/9, f/12. The number of refracting surfaces is either 6 or 4.

3. Wide-angled lenses.—These have apertures of f/12, f/18, f/30. The number of refractive surfaces is not more than 4.

4. Simple landscape lenses.—These have a relative aperture of f/12 and lower, and 2 refracting surfaces.

The corrected schematic eye of Gullstrand(4), which I consider one of the best schematic eyes hitherto suggested, has 6 refractive surfaces and a relative aperture in the "working pupil" (4 mm.) of f/5.7. In the dilated pupil (6 mm.) the aperture is f/3.8, and in the contracted pupil (2 mm.), f/11.4.
In my reduced eye with pupils 4 mm., 6 mm. and 2 mm. in diameter the relative apertures are f/5.95, f/3.97, and f/11.9 respectively. Thus taking round figures for the two schematic eyes the relative apertures are f/6, f/4, f/12. From this we may deduce that the optical system of the eye resembles that of the universal type of lens. The accompanying plate illustrates the comparison. Fig. 1 is a diagram of a photographic camera with a lens of this type (Rodenstock's Imagonal with a relative aperture f/6), while Fig. 2 represents Gullstrand's schematic eye. The
anterior single lens of the photographic lens corresponds with the refractive system of the cornea while the posterior compound lens is represented by the crystalline lens enclosing a denser nucleus.

I desire to express my gratitude to Professor Filatow for the suggestion of this comparison.

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COUNCIL OF BRITISH OPHTHALMOLOGISTS

Annual Report

The Council of British Ophthalmologists presents its report for 1923-1924.

The Council deeply regrets the loss it has sustained through the deaths of two of its members—Sir John Tweedy and Mr. Sydney Stephenson.

At the first meeting of the Session the following officers were elected:—President: Mr. Treacher Collins; Vice-Presidents: Sir George Berry, M.P., and Mr. J. Herbert Fisher; Hon. Treasurer: Mr. J. Herbert Fisher; Hon. Secretary: Mr. M. S. Mayou.

The following members were elected to serve on the Executive Committee.—Messrs. Fisher, Lawford, McMullen, Sir John H. Parsons, with the President and Secretary, *ex officis*.

The Committee which is engaged on the Standardization of Test Types has not yet issued its report.

The Committee which was appointed to deal with the Standards of Vision of Scholars and Teachers in Council Schools has presented its report, which has been published.

The Imperial College of Science and Technology invited the Council to nominate representatives to serve on its Technical Optics
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Br J Ophthalmol 1924 8: 280-282
doi: 10.1136/bjo.8.6.280

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