The author exhorts ophthalmologists to overcome their antipathy to statisticians. A man, on engagement, should be ocularly fit for the top job in his particular department. Though the best and quickest work is obtained from those whose sight is normal at the required working distance, a certain latitude is permissible in gross work. Further, good vision means a lower accident rate. The visual requirements are given for clerical and administrative staff, vehicle operators, close machine workers, machine operators, mechanical and skilled workers, and labourers with a covering note that there are jobs so highly specialized that they do not come into any of the above groups. Careful assessment of the tasks to be performed is necessary before glasses are prescribed.

There is a very full discussion of industrial eye diseases and injuries and their treatment. It is stated that 20/15 and not 20/20 should be considered normal vision and that a monocular cataract should be operated on and a correcting glass given even though the vision of the other eye is normal without correction.

Finally, several formulae are given whereby the binocular visual acuity or amount of disability following accident can be calculated in percentages. Some of these formulae were considered by the now extinct Prevention of Blindness Committee in Great Britain which sat in 1930, but were found to be too inaccurate to ensure that justice was done to the worker's eyes whether healthy or injured.


Clinicians often complain that their medical journals contain too much technical detail about work which is intelligible to only a minority of readers. Methods of investigation tend to grow more complicated until they require a team of special workers, and such people are often constrained to set out results with the aid of mathematical formulae, so that their papers teem with charts, tables, and graphs. The ordinary reader is discouraged by such austere productions, although he may admit that practical methods of diagnosis and therapy can seldom be devised without long preliminary experimentation. Most laboratory research workers have little or no direct familiarity with clinical details, and only a smattering of physics and biochemistry lingers in the mind of the average clinician. What right therefore have we to expect a satisfactory account of modern developments in our subject from two busy practising ophthalmologists?

Sir Stewart Duke-Elder and Mr. Goldsmith have brilliantly supplied the answer. Mere assiduous compilation from the literature could easily have produced something like "the Sahara in salt-spoonsful", but this book presents facts and theories which have not only been studied but also cleverly arranged and submitted to critical assessment. These good qualities owe much to Sir Stewart's early training in physics, biochemistry, and experimental physiology, and to Mr. Goldsmith's intensive knowledge of ocular pathology. Both authors have the gift of describing clinical phenomena, and they correlate the signs observed in glaucoma with facts gleaned from the laboratory. New work on corneal permeability is helpfully reviewed, special attention being drawn to its bearing upon the choice of therapeutic excipients, and upon the question of prognosis after injury by different chemical substances. Similarly, the pathology of the lens is considered in close relation to modern discoveries regarding metabolism.
Messrs. Churchill deserve to be congratulated upon the technical production: paper and printing are excellent, the illustrations are skilfully disposed, and the proof-readers have conscientiously fulfilled their task. The authors have evidently decided—and rightly, as most readers will agree—that detailed consideration of corneal grafting should be omitted, in view of the immense number of monographs and symposia published on this subject within the last three years. Ophthalmologists who wish to obtain up-to-date information about chemotherapy and antibiotics, toxoplasmosis, virus diseases, endocrine ophthalmos, kerato-conjunctivitis sicca, and gonioscopy will here find all these subjects efficiently treated. Intending readers are strongly advised, however, not to be content with looking up a few stray points, for this fourth edition of Recent Advances should be read from cover to cover.


This is the first of three volumes on the physiology of the eye, the subsequent ones are to deal with the physiology of vision and the biochemistry of the eye. The author states in his preface that "the real title of the book should be 'An introduction to Duke-Elder's Textbook. Volume I'," which he regards as "the greatest textbook ever written by an ophthalmologist". "Optics" is a transcript of lectures given during 1947-49, and for this reason is written in a more conversational style than most textbooks. For example, one finds the reader advised to follow the text step-by-step and not to skip pages with the idea that he wants to learn only the important formulae for examination purposes. Should he do this "he had better skip the whole chapter. He has bought the wrong book and won't get his money's worth".

"Optics" is divided into three main sections, the first dealing with the Physics of Light and the second with Geometrical Optics, while the third describes the eye as an "Image-Forming Mechanism".

In these, nothing is left unexplained, and analogy is freely used with a pleasantly philosophical background. In discussing the wave theory of light, the author tells us how, when a stone is thrown into a pond, the individual particles of water merely move up and down and yet produce a wave spreading in wider and wider circles, so that in certain aspects motion may become independent of matter; again in describing how light is both a quantum and a wave (in other words both matter and energy) the author remarks that this shows the validity of Hegel's great concept that a thesis and its antithesis resolve in a synthesis when taken to a higher level. A wide philosophical outlook such as this cannot fail to have an effect on the author's style of writing and even in the section on geometrical optics the text is kept alive. Among other things Dr. Linksz is always careful to explain the assumptions made in arriving at the conventional formulae and in drawing the conventional diagrams. In dealing with concave mirrors, for example, he points out that it is only a parabolic surface which will bring parallel rays to a point focus and gives an excellent diagram of the caustic produced by a spherical mirror. He goes on to justify current practice by saying that "the introduction of computations of purposefully limited accuracy is one of the greatest achievements of the human mind", and that accuracy beyond a certain limit is a waste of time and energy. He quotes Newton and Liebnitz, the fathers of the infinitesimal calculus, as the originators of this discovery. A particularly good illustration of its value is given in the description of the schematic eye, wherein, by making approximations, the complicated optical system of the human eye can be reduced to

---