minating Engineering Society's *Code* (1949), is presented in the appendix.

The summary of the British researches on illumination and output will be welcomed by many who do not have easy access to the original work. As a whole, the volume will be valuable to all concerned with matters of vision and lighting in factory and mine, office and school.

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Text-book of Ophthalmology: The Neurology of Vision, Motor and Optical Anomalies, Vol. IV. W. Stewart Duke-Elder. St. Louis, Mo.: C. V. Mosby, 1949. 3473–4627 pp. $20.00.

This great work should command a prominent place on the desk of every ophthalmologist, for it is a masterly compilation of an enormous amount of important information, written in the superb and unexcelled style for which its author is famous. As stated in Vol. I, the aims are to present a survey of authoritative opinion and to provide a reference textbook of ophthalmology.

The printed work—with its connotation of authority and final truth—easily molds and fixes the impressionable mind. Since ophthalmic thought is profoundly affected by the powerful influence of the literature, it is essential that this major publication receive careful scrutiny by the profession. The value of any book should be enhanced by an appreciation of its weaknesses.

The 1154 pages of text are divided approximately equally into three sections, dealing with neurological, motor, and refractive disorders of the eye.

Section XIV, on "Neurology of Vision," discusses the visual pathways, disorders of the higher visual centers, and anomalies of the pupils. In the visual field charts the solid black area outside the peripheral isopter implies absolute blindness which usually does not exist; visual function would be elicited if this area were tested with a stronger stimulus. This practice of blacking an area is detrimental to the valuable concept of quantitative perimetry. Many x-rays, shown as positives, would be more instructive if printed as negatives as they are usually viewed.

The chapter on the pupils is based largely upon Lowenstein's elaborate studies with which the informed ophthalmologist should be familiar. These data are well tempered with a description of the pupillary reactions revealed by ordinary clinical methods, which must serve us until pupillography is established as a routine procedure.

Section XV, on the "Motor Anomalies of the Eyes," presents chapters on the anomalies of the ocular movements and binocular fixation, concomitant and noncomitant squint, ocular deviations, and pathological nystagmus. This section is a most welcome contribution to both the beginning resident and the advanced surgeon. It cleverly and tactfully interweaves with diplomatic acceptance and rejection the conflicting views of many authors. A tangled skein of contradictory concepts is unravelled into a continuous thread, which carries one logically through a sound consideration of the physiology, pathology, diagnosis, and treatment of all types of motor disorders. A serious study of this material will improve the confidence of any ophthalmologist in his approach and treatment of these cases encountered in daily practice. I believe this is the most valuable section in the volume.

Section XVI, on "Optical Anomalies of the Eye," considers errors of refraction, anomalies of accommodation, aniseikonia, eyestrain and visual hygiene, and clinical optical appliances. Especially excellent is the discussion on the nature of emmetropia and ametropia as regards the relative roles of refractive power and axial length in the determination of the total refractive state. Duke-Elder deserves great credit for bringing this long overdue information to our attention. His attitude toward cycloplegic drugs and his broad principles employed in the treatment of ametropia are packed with sound logic and common sense.

With sincere respect for this work, however, the reviewer disagrees with the scattered comments criticizing the subjective determination of refractive errors. On page 4397 it is stated that the aim of refraction is "to provide the patient with the optical correction nearest to the optical ideal with which he sees best and is most comfortable," and that few patients possess the attributes of intelligence, cooperation, and observational ability to any great degree and therefore accurate results cannot be attained often. In my experience most patients do possess these qualities, if the subjective methods employed are correct. The descriptions of subjective methods are inadequate and one could not learn from them how to proceed with a subjective determination. The short paragraph on the cross cylinder, page 4405, is ambiguous and reveals a lack of familiarity with this valuable instrument in its use for measuring cylindrical power.

Resident ophthalmologists should be aware that subjective refraction, properly performed, is a necessary procedure and is highly respected in the United States. A number of leading American ophthalmologists employ subjective refraction almost exclusively.

The factual value of the book is largely dependent upon that of the original articles listed in the bibliographies. Careful study of these articles reveals conclusions that frequently appear unwarranted upon the basis of the accompanying experimental and clinical data. Fortunately, Duke-Elder usually evaluates his abstracts, but some statements are recopied that have failed the test of time; so one must read always with skepticism and accept or refuse the statements as justified by his personal experiences.

The inferior quality of many articles is frequently hidden in the cloak of Duke-Elder's masterful command of English. Considering the great amount of unworthy literature in our libraries, however, one realizes that he has done an admirable job of extracting the excellent and excluding the inferior.

The best writing is in the longer passages, notable for the absence of frequent parenthesized references which trip the reader's continuity. They apparently voice the author's opinions, based upon his own experiences, and they move like flowing oil, so beautifully are they expressed.

The all too brief index, characteristic of British publications, decreases the reference value of the book; many desired and essential entries are missing. The bibliographies would be more valuable if they included the initials of the authors and the titles of the articles.

One who undertakes the difficult task of reading, evaluating, selecting, organizing, and discussing the ophthalmic literature of the world deserves the highest praise. Commendations due to the innumerable excellent features of this volume would fill many pages, whereas all of the criticisms can be completed in a brief review. The book is a treasure and we should all be forever grateful to Sir Stewart Duke-Elder for its creation.

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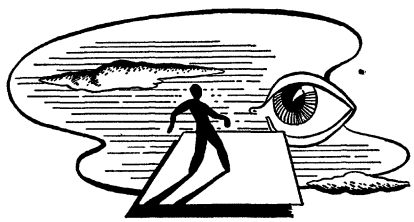

Frustration: The Study of Behavior without a Goal. Norman R. F. Maier. New York: McGraw-Hill, 1949. 264 pp. $3.50.

Prof. Maier has written a significant and exciting book. This is not to say that his book has "all the answers" or that this reviewer necessarily agrees with such putative answers as are given. But it raises the right problems, and the attempted solutions—whether right or wrong—are original and challenging.

Quite aside from its special content, this book is noteworthy for the fact that it is written by a man who, though primarily an experimental psychologist, is here concerned with clinical issues. The approach to these issues is sympathetic and by no means unsophisticated. The book is, indeed, a kind of model, both in terms of its objectives and its methods, for indicating how experimental and clinical psychology can interact, to the benefit and enrichment of both.

The author has picked out for major consideration what the reviewer regards as the absolutely central and most critical issue in clinical theory no less than in practice: It is the question as to why so-called neurotic behavior is at one and the same time *self-defeating and yet self-perpetuating,* instead of self-eliminating. This is the dilemma that prompted some of Freud's most brilliant speculations; and it is an issue which every serious student in the field must face. Maier attempts to deal with it as follows.

In ordinary trial-and-error learning, says the author, new responses are acquired or old ones eliminated on the basis of their consequences. But in other instances, responses persist despite continuously unfavorable consequences. Such an instance Maier and his students have been able to produce experimentally in rats by exposing them to discrimination problems, on a Lashley jumping stand, which are "insoluble." If the problem is soluble, the rats learn to jump to the right or the left on any given trial, according to the nature of the cue stimuli presented on that trial. But if the problem is insoluble, the rats tend to fall into rigidly fixed patterns, such as always jumping to the same side.

Maier uses this finding as a basis for postulating that under conditions of frustration there is often a breakdown of normal learning and the development of abnormal fixation. He thus evolves what might be called the *frustration-fixation hypothesis.* He rejects the Freudian hypothesis that fixated, or "symptomatic," behavior "may serve as a relief for the patient," in favor of the view that once the frustration-fixation mechanism has taken over, the usual principles governing adaptive behavior cease to operate and one sees the occurrence of "behavior without a goal."

The reviewer does not believe that this analysis is satisfactory (cf. Freud's equally *ad hoc* and circular concept, the "repetition compulsion"), but the author does a skillful job of illustrating and defending his thesis, which he states boldly and lucidly.

To many readers the most illuminating part of the book will be chapter 8, in which the author brings his earlier experimental work on reasoning to bear upon contemporary problems in the field of counseling and psychotherapy. Although he largely follows Rogers' analysis of the treatment process, clinical workers of other persuasions will find Maier's discussion of "reasoning as the combination of elements in experience that have not previously been combined" highly suggestive. This part of the book leads to a consideration of some of the most basic issues in the entire field of personality and behavior theory.

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Studies in Population: Proceedings of the Annual Meeting of the Population Association of America at Princeton, New Jersey, May 1949. George F. Mair, Ed. Princeton, N. J.: Princeton Univ. Press, 1949. 169 pp. $2.50.

This publication is described as "an experiment" in that it for the first time presents the collected proceedings of an annual meeting of the Population Association of America. It includes so much useful material that it is almost certain to be given a wide welcome and, it is to be hoped, continuation.

There are five sections: Application of Demographic Data to Current Problems; Tools for Demographic Research; Resources for the World's People; Value Systems and Human Fertility; and Future Course of Research in Fertility. A wide gamut of problems is considered, and sections III and IV, which had been presented more or less as organized symposia, are the subjects of penetrating evaluations by Warren S. Thompson and Kingsley Davis. Space permits only the briefest comment on a few papers.

Many will find most interest and significance in one contribution that, in a sense, does not belong here at all: "The Catholic Value System in Relation to Human Fertility," by the Rev. William J. Gibbons, S.J. Its