for the synthesis, release, and uptake of dopa in the retina. In lower vertebrates dopaminergic neurons are light adaptive modulators of melatonin biosynthesis and retinomotor functions; in higher vertebrates dopamine deficiency – as in monkeys treated with 1-methyl 4-phenyl 1,2,3,6-tetrahydropyridine (MPTP) – reduces horizontal cell activity. Retinal dopamine turnover increases with light stimulation. These topics are covered in considerable detail.

Perhaps inevitably in a multiauthored work there is considerable overlap between contributions, especially from the basic scientists, most of whom cover much the same ground in their introductions before describing their experiments. The question of the exact functions of the dopaminergic neurons remains open. There is speculation that they modify the receptive field properties of ganglion cells and are concerned with the tuning and amplification of foveal vision. Clinicians among the contributors describe abnormalities of contrast sensitivity, visually evoked potentials, and the pattern electroretinogram in Parkinson's disease which improve with treatment, but it is not clear that these have any functional significance for the patients.

For the practising clinical ophthalmologist this book is a reminder of the enormous complexity of retinal neuronal function and an interesting insight into the methods used to decode it. It would be an appropriate purchase for any library of visual science.

JOHN ELSTON

Walsh and Hoyt's Clinical Neuro-Ophthalmology. 4th Edn. Vol 3. By Neil R Miller. Pp 734. £65.25. Williams and Wilkins: London. 1988.

The third edition of this famous textbook comprised three volumes and contained for most readers all currently available knowledge. The third volume of the 4th edition has now appeared, and we are promised two further volumes to contain vascular disease, trauma, and infectious diseases. Thus our first consideration must be to congratulate the author and admire his ability to gather and display so much knowledge.

The third volume considers tumours of the eye, the orbit, and the brain and related conditions. The first chapter describes the symptomatology of tumours in different sites, and though 90 pages in length there is a bibliography of 15 pages! This is followed by tumours of neuroectodermal origin with a full discussion of the recent state of the art regarding chiasmal and optic nerve gliomas. This is followed by another excellent chapter on meningiomas, with particular emphasis on lesions affecting the anterior visual system. It is sad in some ways that the author has decided to omit to a great extent the use of CT scanning and magnetic resonance imaging in the illustrations, as these tests now play such a vital role in diagnosis and management. Pituitary tumours and craniopharyngiomas are covered in great depth in an ensuing chapter. Some of the best illustrated chapters follow, with clinical and numerous pathological illustrations of tumours and vascular anomalies involving the orbit. An interesting chapter well worth perusal when the reader is confronted with a problem case discusses the paraneoplastic syndromes. Finally a favourite with all interested in the medical and paediatric aspects of ophthalmology is a chapter on the phakoma-

tos. Many will see for the first time a photograph of the leaf of the mountain ash which provides such a characteristic diagnostic sign for tuberous sclerosis.

One could make minor comments about this being an encyclopaedia, with numerous facts and an extensive review of the literature, rather than a critical and advisory clinical textbook. However, this would be to belittle our great gratitude to the author for providing such an outstanding volume for the reader to savour. A worthy successor has therefore been found to maintain and enhance the reputation established by Walsh, and then Walsh and Hoyt. This volume deserves a place on every library bookshelf and I am sure many individual libraries.

MICHAEL SANDERS

Ophthalmology. By N R Galloway and S A Vernon. Pp 110. £7.95. Springer-Verlag: London. 1988.

This small book contains 200 multiple choice questions in ophthalmology arranged in five sections to cover introductory anatomy and physiology, medical and surgical ophthalmology, and blindness. Each question has a stem and five options, so that altogether there are 1000 individual questions and answers. The book is arranged so that questions appear on one page and answers on the following page. In many instances only an indication of whether the statement was true or false is given, but for about half of the questions a brief explanatory note is included to indicate why the answer should be true or false.

The book is intended for undergraduate use, but the standard is probably a little high for the average undergraduate, and the book might be of use to the postgraduate starting ophthalmology. For the undergraduate to read through the questions and answers would certainly be educative, and I am sure would prove helpful in preparation for an MCQ examination in ophthalmology.

The authors have successfully avoided ambiguity in the questions, though here and there, for example in the first question, the common mistake of having options which are not completely independent of each other occurs. This is, however, a minor criticism of a useful booklet which is good value at the price.

WALLACE S FOULDS

World Blindness and its Prevention. Vol 3. Edited by International Agency for the Prevention of Blindness under the direction of Carl Kupfer. Pp 183. £22.50. Oxford University Press: Oxford, 1988.

This book gives a summary of the Third General Assembly of the International Agency for Prevention of Blindness held in New Delhi 1986. It looks back to what has been achieved over the previous decade in the prevention of blindness while stressing the challenge of the future, with an estimated 30 million people in the world suffering from blindness, of which 80% is avoidable.

The main blinding diseases, cataract, trachoma, onchocerciasis, and xerophthalmia, are discussed and further attention is paid to the particular issue of cataract blindness and the need to mobilise manpower and resources to deal with this problem. There is a useful section on the activities of the IAPB in different parts of the world, as well as a chapter summarising the work of the World Health

Organisation and non-governmental organisations.

This book draws attention to the problem of world blindness in brief and easily readable form. It will be useful reading for all ophthalmologists concerned with blindness throughout the world, as well as being valuable to health policy makers, public health specialists, and managers involved in community health.

A FOSTER

Retinal Detachment Surgery. 2nd Edn. By AH Chignell. Pp 162. £39.50. Springer-Verlag: London, 1988.

In the second edition of his excellent book on the surgery of retinal detachment Mr Chignell expands on the original theme of the first edition in presenting a personal account of an approach to retinal detachment surgery. His target is the general ophthalmologist who is engaged in anterior segment and other ophthalmic practice and who is called upon to do retinal detachment surgery from time to time. Since this represents the vast majority of those who carry out this kind of surgery on a worldwide basis the book fulfils its purpose admirably.

The chapters are logically arranged. Chapter 1 covers pathogenesis, presentation, and methods of examination. Succeeding chapters cover preoperative examination, management, and planning, then surgical detail, and finally postoperative management, complications, and failure.

By far the largest are the chapters on preoperative examination and preparation. There is reference to more complex problems, but quite rightly there is no description of vitrectomy technique, implying that this area is for the vitreoretinal specialist. For the same reason Mr Chignell may be forgiven for giving two lines only to a mention of silicone oil. The interesting flow chart for the treatment of proliferative vitreoretinopathy emphasises the role of vitrectomy in the treatment of all stages of this complication under certain conditions but does not recognise the use of silicone in the treatment of late stage disease in the hands of very many vitreoretinal surgeons throughout the world.

The text reveals that Mr Chignell has spent many years working with retinal detachment, and all that is written is based on sound working practices. The general ophthalmologist will find much that is of practical value on every page of this book, and this should help greatly in avoiding the problems which, as the preface to the second edition points out, may lead to simple cases being turned into difficult ones as a result of faulty primary technique.

This book is not intended to be a comprehensive treatise on the many ways in which retinal detachment might be treated. The enthusiastic retinal specialist might wish to see mention of such things as Lincoff balloons or of pneumatic retinopexy. However, these methods have little place in the context of retinal detachment treated by general ophthalmic surgeons, and the text concentrates on basic sound technique which should avoid complication and failure and improve results.

The book is extensively illustrated by line drawings, photographs and by the legendary fundus paintings of Terry Tarrant. The references are mostly ones which go back some years, a fact that indicates how little has been written of any practical value on the subject of retinal detachment in more recent times. Mr Chignell's new edition of his book fills a very

large gap in our literature and should be found on the operating table as well as the pre-operative consulting room of all general ophthalmic surgeons who set out to treat a case of retinal detachment no matter how simple it may at first appear.

JOHN SCOTT

Physiological Aspects of Clinical Neuro-Ophthalmology. Eds C Kennard, F Clifford Rose. Pp 482. £35. Chapman and Hall: London, 1988.

Regular symposium attenders will be familiar with the two major problems (apart from speakers failing to turn up) inherent in the format. The first is the variability in content, interest, and presentation between speakers, and the second is the tendency to repetition, especially when the subject is relatively small print to start with. Neither of these problems has been wholly avoided in the book resulting from the meeting in July 1986 on physiological aspects of clinical neuro-ophthalmology. There are 42 contributors, about ¾ from Europe and the remainder from the USA. The idea was to allow a discussion of areas of common interest between neuroscientists, responsible for an ever expanding volume of research into the visual system, and neurologists and ophthalmologists trying to assimilate this information into clinical practice.

The book is divided into two major sections on the visual pathways and ocular motor system, with smaller sections on the pupil, fundus, and optic nerve. Over half the chapters are from basic scientists, and among the clinicians there are only a handful of ophthalmologists. The two major sections are the most successful, though both suffer from repetition. There are excellent chapters on psychophysical testing of visual function, the optic chiasm, and the fascinating phenomenon of 'blind sight' or residual vision following lesions of the retro-geniculate pathways. Both the scientists and clinicians come out well in the section on the oculomotor system. As an abstractor on this subject for *Ophthalmic Literature* I am sometimes driven to distraction by the literary incompetence of the oculomotor physiologists, and it is a relief to read a clear, concise and

jargon-free paper such as Dr Keller's on cerebellar involvement in smooth pursuit eye movements. Guntrum Kommerell provides a stimulating chapter on oculomotor phenomona in infantile strabismus, proper recognition that this mysterious condition is of neuro-ophthalmic concern.

The sections on the pupil and fundus and the optic nerve I found less satisfying. There is, however, an admirably clear and succinct chapter on the pathogenesis of optic disc oedema from Professor Hayreh and a stimulating contribution from Iain McDonald.

The authors assembled a formidable cast for their symposium and on the whole they have been well served in the resulting book. I would recommend it as an excellent update on the subject, and a valuable source of reference for further reading.

JOHN S ELSTON

Statistics with Confidence: Confidence Intervals and Statistical Guidelines. By Martin J Gardner and Douglas G Altman. Pp 140. £7.95. British Medical Journal: London. 1989.

A number of medical journals and in particular the *BMJ* are laying increasing emphasis on the expression of confidence intervals as a means of indicating the importance to be attached to the numerical values of results, rather than the simple expression of a significance test based on the null hypothesis. This book arises from a collection of articles in the *BMJ* outlining the methods of calculating confidence intervals in a large number of situations, including some non-parametric statistics. A certain basic knowledge of statistics is necessary, but the calculations are set out as simply as possible and, used with care, should be accessible to most research workers. The orientation is primarily towards clinical research. A later chapter gives succinct guide lines on the correct use of statistics, making it clear that an understanding of statistical principles is essential. Consultation with a statistician is essential in planning a stage of any complicated project, to ensure that data collection has been valid when the stage of statistical analysis is reached.

The book suffers from certain defects inherent in any text derived from a series of self contained articles. In spite of some connecting paragraphs there is an uncomfortable feeling of discontinuity. That said, it can be widely recommended to all but the most accomplished statisticians, as it contains many methods of handling data with the aim of obtaining confidence intervals, which are not found in the short and more readable texts in common use. It will prove invaluable to all currently engaged in clinical investigation and treatment trials.

D W HILL

Ocular Pathology: A Colour Atlas. By Myron Yanoff and Ben S Fine. Pp 248. £50. Gower: London, 1988.

This book is a well illustrated synopsis of ocular pathology which serves as an introductory text and as an atlas to accompany a more detailed textbook. It should be of value to candidates studying for the diploma in ophthalmology or the College of Ophthalmology examinations and it is competitively priced. The book is open to criticism in that there is no attempt to differentiate between the common and rare entities, and the bibliography is in parts dated. Otherwise it is a pleasure to recommend this colourful and attractive book.

WILLIAM R LEE

Ophthalmic Surgical Procedures. By Peter S Hersh. Pp 416. £45. Churchill Livingstone: Edinburgh, 1989.

This book is intended as a speedy reference covering common ophthalmic procedures and giving step by step instructions. It reflects accurately techniques as practised in the United States, and its references are limited almost entirely to United States sources. Very wide spacing round text and illustrations is intended to allow annotation and updating by the reader. It is a useful summary and tabulated guide for the ophthalmic surgeon, but does not encompass orbital surgery.

M ROPER-HALL