French (4 with short English summaries), and 6 are in German (2 with short English summaries). The scope of the papers is wide, with an agreeable mixture of clinical and scientific contributions; there are in addition several case reports and an article on ophthalmic history.

In a composite volume such as this it is difficult to single out any particular contribution for special mention, but the high quality of the illustrations throughout should be stressed. Professor Streiff's long association with Lausanne has stimulated a number of articles from Swiss authors, and English readers might be put off by this apparent parochialism, but the uniform standards of this popular series are maintained. T. J. FFYTCHE

Insights from the Blind. By SELMA FRAIBERG. 1977. Pp. 297, figs., tables, refs. Souvenir Press, London (£5)

This book is the detailed investigation of a number of children who were born blind and who had no other disability. The development of grasping, standing, mobility, prehension, and speaking is recorded. It is apparent that it is important to organise an educational programme which is based on the principles of developing the blind child as an individual and making him recognise this individuality. The book will be of the greatest interest to those who have to work with blind children. A. G. CROSS

Der Augenarzt. Vol. 5. Edited by KARL VELHAGEN. 1978. Pp. 893, figs., tables, refs. George Thieme, Leipzig (DDR248)

Volume 5 of 'Der Augenarzt' edited by Karl Velhagen takes the form of previous volumes in this series, with 6 contributions on a variety of topics. Each chapter is virtually a short textbook, examining the subject in depth and providing a comprehensive bibliography, so that the book is both a teaching manual and a source of reference.

The opening chapter discusses ocular trauma and its management and prevention. This is followed by a short illustrated lecture on the biomicroscopy of the peripheral retina. Professor Vodovozov discusses the technique and findings of ophthalmochromoscopy, a method of examination that has never received much interest in Britain. It is unfortunate that the fundus appearances in this type of investigation are displayed by diagrammatic paintings rather than photographs. There is a comprehensive treatise on radiotherapy of the eye and orbit, followed by a short section on ocular physiotherapy, which includes some unusual and exotic forms of treatment not readily available under the NHS. The final chapter is the longest and deals with disorders of ocular motility. It discusses the physiology of binocular vision together with disturbances of ocular position and motility and abnormalities of lid function.

Like its predecessors, this book will appeal to postgraduate and practising ophthalmologists, and if it were available in English translation the sections on trauma, radiotherapy, and ocular motility would be essential reading for those studying for diploma and fellowship examinations. T. J. FFYTCHE

International Guide to Aids and Appliances for Blind and Visually Impaired Persons. 1977. American Foundation for the Blind Inc., 15 West 16th Street, New York, New York 10011 ($3·00)

This is the second edition of a standard reference book on the management of severe visual defects. The first edition was called the *International Catalogue of Aids and Appliances for Blind and Visually Impaired Persons*. It is comprehensive but not complete and provides a general picture of the devices available. The guide has information about all Braille equipment, sound equipment like talking-book machines and tape recorders, clocks and watches for the visually handicapped, mobility aids, and calculators. There are also details about educational and occupational aids and about low-vision aids. Devices are described to help in cooking, measurement, music, handwriting, typewriting, and telephoning. Help with games, sports, and puzzles is also available. It is a most useful volume for the visually handicapped and those who work with them. A. G. CROSS

Dialogues in Ophthalmology. Vol. 1. Diagnosis and Management of Open Angle Glaucoma. Edited by PAUL HENKIND. 1977. Pp. 58, 3 cassette tapes. Harper & Row, Hagerstown, Maryland ($42·50)

Dialogues in Ophthalmology is a collection of 3 cassette tapes and an accompanying booklet. Both carry a discussion between the moderator, Paul Henkind, and 3 experts, on the diagnosis and management of open-angle glaucoma. The discussion is ably led by Dr Henkind, passing in a clear and logical manner from definition to diagnostic signs and then to the timing and type of treatment to consider in the management of the disease. This discussion, containing many practical points and pearls of wisdom, would be useful both for residents preparing for the Fellowship and for general ophthalmologists wanting to update their knowledge. I found it more convenient to listen to the discussion than to read the exact transcription. It might have been more useful to condense the information on the tapes for presentation in the booklet. If the points made could have been given references, many of them would have been lifted above the level of anecdote. This work deserves a wide public, though it is not necessarily an item to purchase for constant reference. R. HITCHINGS

Discussions on Glaucoma. Proceedings of the 1975–76 Symposia on Open and Closed Angle Glaucoma sponsored by the National Society for the Prevention of Blindness. Edited by PAUL R. LICHTER and DOUGLAS R. ANDERSON. 1977. Pp. 156, figs., tables. Grune and Stratton, London (£11·35)

This book is a report of two symposia sponsored by the National Society for the Prevention of Blindness in the USA in 1975 and 1976. Each symposium takes the form of case presentations by one of the coauthors to a panel of specialists before an invited audience. Paul Lichter introduces the 12 cases of open angle, congenital, and secondary glaucoma, which constitute the subject of the

first meeting, and Douglas Anderson is the moderator of the second meeting, consisting of 7 cases of angle closure glaucoma. The panels consist of eminent researchers into glaucoma and are different in each symposium (except for Robert Shaffer, who was present in both, and whose comments are always to the point, profound yet essentially practical). The case presentations are halted at certain points for discussions and generalisations, and much ground is covered. The bias of the symposium is towards the solution of specific everyday problems, and, not unexpectedly, the level of discussion varies widely between traditional views and controversial and stimulating statements.

It is clearly impossible to discuss the 19 chapters individually, but perhaps a few statements and opinions may be singled out for their interest. Assessment of the diurnal variations in pressure is best carried out by sporadic checks at the clinic at different hours, or by home tonometry; inpatient hospital phasing is not so reliable, as it involves a profound change in the patient's routine. Almost all the panelists commonly used the water drinking test, but tonography is no longer a routine investigation, being reserved for special cases. A recent spate of litigation cases in the US concerning juvenile glaucoma prompts several panelists to perform tonometry on every co-operative subject regardless of age. However, Shaffer would limit this to cases with suspicious-looking discs and to those persons in whom it can be carried out in a reasonably short time.

Epinephrine almost certainly improves outflow facility fairly rapidly and not, as was thought, after a long latent period. The peak of its dose-response curve appears to be at the 1% concentration of active drug in the short term, though it may be as high as 2% in the long term (Bernard Becker). Stability of adrenaline solution is greater with the bitartrate and the hydrochloride (Epifrin, Glaucon) than with the borate (Epinal, Eppy), but the borate compounds are more comfortable to use. Although little statistical evidence has been adduced, there is an impression that the disc cup changes more readily if it is already large (John Hetherington). In ocular hypertension the pressure responses to, and patient tolerance of, treatment are important factors in deciding when and how much to treat. In drainage operations vitreous aspiration is increasingly recommended to prevent sealing up of the drainage aperture by vitreous. Provocative tests in angle closure glaucoma remain essentially unreliable. The least unsatisfactory tests are the dark room test and the prone test. Mydriatic tests give many false positives. Neither the patient's advanced age nor a considerable degree of widening of the angle with pilocarpine should weaken our resolve to operate on every case of acute angle closure glaucoma (Pollack). However, tonography has a place in evaluating the chances of success of peripheral iridectomy after an acute attack: if $C \leqslant 0{\cdot}1$, we can expect over 75% of failures (Shaffer).

The volume is beautifully presented and contains several illustrations and clear tables. JOHN ROMANO

Mechanisms of Colour Vision. By W. S. STILES. 1978. Pp. 287, figs., tables, refs. Academic Press, London (£14)

This book contains some of the important papers published during the last half century by Dr W. S. Stiles, a doyen amongst visual physicists. The title is slightly misleading, because the author's wide erudition has enabled him to range not only over the mechanisms of colour vision but also over those of vision in general. The papers are reproduced photographically, and in an introductory chapter there is an indication of the extent to which the author may have wished to modify earlier views. Some of the papers may be hard to trace in the original, and for this reason newcomers to the field have every reason to be grateful for the appearance of the book. Its method of production, however, entails repetition, and this may cause a justifiable grumble on economic grounds. R. A. WEALE

Correspondence

On difficulties in deciding the aetiology of cataract

TO THE EDITOR, *British Journal of Ophthalmology*

SIR, Because the lens fibre system contains only 1 type of cell it has a fairly limited number of ways in which it can respond to injury and on interference with its nutrition. It is therefore extremely difficult from the appearance of the cataract, and the clinical examination of a few cases, to decide whether a history of exposure to a known cataractogenic agent is proof that this agent is important in the genesis of cataract in man, as has been implied, for instance, in the recent study by Zaret and Snyder (1977).

As an example of such a difficulty we may consider a patient employed in servicing radar equipment who had a history of intermittent exposure over a period of 20 years to 3-cm microwaves from high-intensity sources of up to 60 kW. He developed cataract at the age of 52 with reduced vision in each eye. Slit-lamp examination showed interesting features in both lenses. There was vacuolation of the anterior capsule and striate changes in the anterior cortex, while at the posterior pole there were vacuoles and a feathered appearance of lens fibres. No other changes in the eye were apparent, and the intraocular tensions were normal.

It was possible at a later date to examine these lenses by light and electron microscopy. There were large areas of fibre disruption at the anterior pole, and portions of the anterior epithelium appeared to have suffered some necrosis. In addition the superficial cataractous lens fibres were separated from the capsule by clefts filled with albuminous fluid. At the posterior pole the lens fibre membranes had produced myeloid whirls and numerous granular bodies. From these appearances, which can all be seen in senile cataract, it was not possible to state that the changes were character-