

## Book reviews

**The Effects of Blindness and Other Impairments on Early Development.** Edited by Z. S. JASTRZEMBSKA. 1976. Pp. 210, 15 tables, 37 figs, refs. American Foundation for the Blind, New York (\$4)

The reader will be wise to follow his own interests in approaching this compilation of papers from a conference held in 1972 at Ann Arbor, USA. The formal papers and also the comments, criticism, and discussion on each of the seven sessions are included; inevitably some of the subtleties of the issues discussed are lost in the compression of reported dialogue, but a number of the questions raised after the initial papers are pertinent and stimulating, sometimes even challenging the purpose of comparative developmental studies by questioning the point of attaining developmental milestones on schedule in the case of visually handicapped children who may in any case follow a different course from the non-handicapped in their development.

The extent to which this is so, the cause of the differences, the purpose and effectiveness of intervention are the preoccupation of the contributors, a galaxy of serious researchers many of whom have established reputations of international standing in the psychological, social, and educational aspects of blindness.

The heterogeneous nature of blindness is constantly referred to, and if there is a final impression that few conclusions are reached, then this is partly the aim and partly the result of the approach adopted. The infinite variety rather than the facile similarity of the problems is stressed, with the result that the emphasis is on an individual approach to meeting the needs of these children, with intervention based on an objective description of behavioural style.

There must have been ample supportive evidence to this approach in the films and video-tape of particular responses in individual children unfortunately unwitnessed by the reader. But there is interesting reading with the advantage of rigorous scientific study in quite specific areas of the behaviour and development of young blind children. Earlier studies, although showing awareness of some of the distinct sequels to blindness in infancy, have tended towards the global and generalized in their observations; the approach in these papers is more specific, with attempts to trace more exactly the cause of differences in response patterns between children who are blind and those who are not. There is agreement that the degree of visual impairment bears no relationship with how well the child is able to function.

Other factors with a bearing on this conclusion are considered in depth including parental attitudes towards the child and his handicap. Temperamental characteristics are identified by Dr Chase and her co-workers as major factors in the ability to overcome the handicapping effect of impairments.

The particular response patterns of the congenitally blind child are considered by Adelson and Fraiberg in papers concerned with the implication of sensory defect in infants blind from birth; Spigelman considers the effects of early blindness on the development of auditory-spatial learning, both the role of length of blindness, and the emotional reactivity of the child were shown to have a bearing on performance.

Somatosensory deprivation is the theme of Preston's

substantial contribution; social deprivation as in institutional settings is an important factor for concern. The sensory basis of attachment, and the cerebellar mechanics of behaviour are also discussed.

Adelson and Fraiberg present a fascinating study of self-representation in young blind children. The observations of individual children have human interest; discussion following this paper even concentrated on some of the advantages and drawbacks of tactile vision substitute systems in the child's search for identity.

Attention is given to the problems of communication in the first three years of life for hearing-impaired children. The incidence of so many children with more than one sensory disability makes this section relevant.

Finally, some attention is given to the characteristics of particular groups of visually handicapped children. Chase and Fernandez concentrate on rubella children; signs of the difficult child are described and suggested teaching situations explored; the need for early educational intervention and for parent counselling is a recurrent theme.

These deliberations indicate how much there is to find out about the young blind child, but also add considerably to our knowledge in specific areas of inquiry.

ELIZABETH CHAPMAN

**The Scientific Work of René Descartes.** By J. F. SCOTT. 1976. Pp. 211, 82 figs, bibliog. Taylor and Francis, London (£8.50)

René Descartes was pre-eminently the most influential figure in the science of the 17th century; although his philosophical speculations were eventually largely discarded, he exerted a profound influence on scientific thought which in some respects still persists.

He published nothing until he was 40 years of age, but thereafter he published a series of works rarely equalled. In 1637 there appeared his *Discours de la Méthode* with its three accompanying essays, *La Dioptrique*, *Les Météores*, and *La Géométrie*. In the first of these, starting from the proposition 'I think, therefore I am', a statement he deemed incontrovertible, he deduced on a basis of reason a universe of three constituents—the mind, material things, and God. In *Dioptrics*, a very detailed work, he discussed his theory of light and colours, refraction and aberration, and elaborated on the optical properties of the eye and the design of lenses. In *Meteorology* he discussed the mechanism of the origin of vapours, winds and clouds and, particularly, of the rainbow. His *Geometry* was the most outstanding of the three essays and had the greatest influence on the progress of scientific thought; in it he introduced the science of co-ordinate geometry and married arithmetic, algebra, and geometry into one science as applied to straight lines, circles, curves, and solid bodies. In his final work, the *Principles of Philosophy*, he gave an elaborate and exhaustive description of his whole system of philosophy of the universe created on a mathematical model in which space is filled with matter endowed with motion which in course of time had fallen into a series of vortices in which the sun, the heavens, and the earth were carried.

Although much of this last was based on unsound mechanical principles, some of his work is extremely

valuable, particularly in optics and mathematics, and was an essential prelude to the subsequent advances made by such workers as Newton. This volume provides delightful reading and is both critical and fully sympathetic; it is indispensable for anyone interested in the evolution of scientific thought, representing the first great step since the time of Aristotle. STEWART DUKE-ELDER

**Symposium on Ocular Therapy, vol 8.** Edited by I. H. LEOPOLD and R. P. BURNS. 1976. Pp. 92, tables, figs, refs. Wiley, New York (\$12)

One's heart sinks when books with a promising title turn out to be just the collected papers from some transient congress or symposium, and not a carefully planned and balanced presentation by the distinguished names which appear on the cover. One knows in advance that the result will be a hotch-potch of papers of widely differing quality, covering isolated topics which may, nevertheless, conflict or overlap.

However, within these formidable limitations, the material here is generally excellent. The 10 'chapters' are concise and readable, with much useful information. We are told about the toxicity of drugs used for squinting children (Apt and Gaffney), with a limited message that mongols, brain-damaged children, and infants are at risk from the stronger mydriatics and miotics; that corticosteroid-resistant uveitis is helped (but rarely healed) by azathioprine and chlorambucil (Burns, Laird, and Pirofsky); about the virtues and toxicities of the local anaesthetics used in ophthalmology (Ellis); of the disadvantages of corticosteroids (Havener)—a very good account; about newer antiviral agents (Kauffman), adenine arabinoside being a good alternative for IDU-resistant or IDU-allergic cases, while trifluorothymidine, which likewise does not share allergenicity or cross-resistance with IDU, has the advantage of greater potency and water-solubility; of the factors affecting drug penetration into the eye (Lieberman); wise words about the doctor-patient relationship (Newell); about the management of bacterial corneal ulcers (Pettit); of adrenergic drugs in simple glaucoma (Sears)—concluding that the usefulness of epinephrine is proved, but that this is not yet so for the newer synthetic drugs; that, although platelet aggregation occurs in humans with diabetic retinopathy, it is not evident when this is induced by alloxan or by pancreatectomy in dogs (March, Engerman, and Shoch), an interesting finding,

slightly clouded by the wry picture of those 15 beagles lining up for the chopper. P. D. TREVOR-ROPER

**Xerophthalmia and Measles in Kenya.** By J. J. M. SAUTER. 1976. Pp. 235. Kliniek voor Oogheelkunde, Rijks - Universiteit Groningen, Netherlands (Dfl 25)

The Dutch school of nutritionists and ophthalmologists with a special interest in malnutrition and the eye has always been conspicuous in these fields. Dr Sauter's book is a particularly successful and comprehensive account of the subject. The illustrations including several pages of colour photographs are excellent. Particular attention has been paid to vital staining of the cornea and conjunctiva, the author concluding that lissamine green has advantages over other traditional stains.

The author's particular concern was to examine the thesis that in many African countries much of the blindness was caused by xerophthalmia precipitated by the 'catalyst' measles. His conclusions were that xerophthalmia occurred nearly everywhere in Kenya in 1974, which shows that xerophthalmia is prevalent in communities which do not have rice but where maize is eaten as the staple food; xerophthalmia appeared to be the main cause of blindness in Kenyan children; measles often played, by means of local and general 'catalysing' effects, an important role in the development of blindness caused by xerophthalmia; in well-nourished children measles was of no consequence as a cause of blindness; staining by 1 per cent rose bengal or 1 per cent lissamine green appeared to be an asset in the early diagnosis of xerophthalmia in health centres and in field surveys. Staining is therefore important in the prevention of severe blindness inducing vitamin A deficiency.

Later the author performed a short additional xerophthalmia investigation in Java, Indonesia, where he examined a small number of xerophthalmia patients and children with measles keratoconjunctivitis. The result of vital staining and the corneal biopsies of these two groups of patients were in accordance with the findings in the Kenyan counterparts.

This is a fine publication, in English with Dutch summaries, and with an excellent bibliography. It deserves to be, and probably will become, a classic in this most important field of nutritional ophthalmology.

D. P. CHOYCE

## Notes

### Cataract Surgical and IOL Congress

*Miami Beach, 5 to 9 February 1977*

The fifth biennial congress will be held at the Fontainebleau Hotel, Miami Beach, Florida. There will be 70 speakers and approximately 200 papers which will be discussed by a faculty panel. Anyone wishing to present

papers or films should write to the Programme Chairman, Robert C. Welsh, MD, 168 SE 1st Street, Miami, Florida 33131, USA.

### Postgraduate Course in Ophthalmic Plastic Surgery

*University of California, 3 to 4 March 1977*

This postgraduate course at the University of California, San Francisco, will cost \$150 (including lunches). Further information may be obtained from J. Earl

Rathbun, MD, Programme Chairman, School of Medicine, University of California, San Francisco, USA.



## The Scientific Work of Renée Descartes

Stewart Duke-Elder

*Br J Ophthalmol* 1976 60: 840-841  
doi: 10.1136/bjo.60.12.840-a

---

Updated information and services can be found at:  
<http://bjournal.bmj.com/content/60/12/840.2.citation>

---

### Email alerting service

*These include:*

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

---

### Notes

---

To request permissions go to:  
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:  
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:  
<http://group.bmj.com/subscribe/>