Brave New People

By D Gareth Jones. (Pp 221. £3.95.) Leicester: Inter-Varsity Press. 1984.

This book represents the well collected thoughts of Dr Gareth Jones, Professor of Anatomy in Otago, concerning the many complex issues surrounding recent developments in prenatal diagnosis, in vitro fertilisation, and genetic engineering. In making his points Professor Jones avoids sensationalism and over-dramatisation as he attempts to reconcile his deeply held religious convictions with compassion and scientific objectivity. In general, there is a refreshing absence of dogma although the text is sprinkled liberally with references from the Old and New Testaments.

This inexpensive book is easy to read and technically accurate. It combines philosophy and genetics without being too overwhelming on either score. Many will disagree with the author's views but few will question his sincerity and concern for the welfare of mankind. Professor Jones readily admits that he has not written as a practising doctor and one suspects that there is an element of the ivory tower in much of his thinking. While this is entirely appropriate in an intellectual treatise, it may not constitute ideal guidelines for those who are confronted on a daily basis by the practicalities of coping with a turbulent twentieth century.

I D YOUNG

Issues and Reviews in Teratology

Volume 2. Edited by Harold Kalter. (Pp 516; figures + tables. \$69.50.) New York: Plenum Press. 1984.

The second volume of this series is of a high standard. It consists of twelve comprehensive chapters on diverse aspects of teratology, many of which are in the form of review articles. The book is intended for readers actively working in the field of birth defects rather than for a general scientific audience, but its breadth of coverage will make it attractive to all teratologists.

The first chapter deals with the construction of various birth defects monitoring systems and describes the problems involved in devising effective malformation registers. The work of the International Clearinghouse is described. There follows a chapter on epidemiological criteria for assessing teratogenic risk. The conflicting forces of prudence in the interests of public safety and the scientific establishment of causality are pointed out here. A review chapter on congenital hydrocephalus in mice and its counterpart in man is next; besides describ-

ing the genetic background this thoroughly covers the pathogenesis of the condition. A chapter dealing with congenital malformations in domestic and feral animals introduces the importance of animal teratology in its own right rather than as a model for mimicking human pathology. This chapter has a particularly extensive bibliography. There follows a review article on transplacental exposure to diethylstilboestrol.

Robert Pratt reviews hormones, growth factors, and their receptors in normal and abnormal development. Although he deals largely with cleft palate it soon becomes clear that this is a growing point in experimental embryology and teratology and this contribution is, perhaps, the most stimulating one in the book for the laboratory experimentalist. A competent review of limb morphogenesis reminds the reader of how much is now known about limb formation and how, tantalisingly, this still contributes all too little to our understanding of limb defects. Another highlight is the comprehensive chapter on the teratogenic risks of exposure to industrial chemicals. There is much public misconception in this area and the well balanced treatment afforded the subject here is timely. There follows a critical assessment of the genetic effects of ionising radiation which exhaustively describes the pitfalls and difficulties involved in such studies. Finally, an ambitious review of selected therapeutic drugs attempts to delineate their risk to the conceptus from extant human and animal data. The evaluations made are sound and this contribution should provide a good reference source for some time in the future.

The book is well presented and can be recommended for the libraries of institutions with an interest in abnormal development.

FELIX BECK

Plasmid Technology

Methods in Microbiology. Volume 17. Edited by P M Bennett and J Grinstead. (Pp 331; figures + tables. £25.00.) Florida: Academic Press. 1984.

This book is volume 17 in a long-running series, 'Methods of Microbiology'. It contains 13 chapters on various aspects of plasmid biochemistry, ranging from their in vitro biological characteristics, through the analysis of their structure, to their uses in genetic manipulation experiments. Different types of naturally occurring plasmids are described, together with the characteristics they confer on their host bacteria and the ways in which they can be transferred between strains. Plasmids from organisms other

than bacteria are not covered. There is also a large amount of practical information on the purification, electron microscopy, and restriction mapping of plasmid DNA, and on the use of plasmids in gene cloning and sequencing. Transposable elements are covered also.

This book does not appear to be aimed specifically at one group of scientists. From the point of view of readers of the *Journal of Medical Genetics*, the lack of a chapter on the medical significance of plasmids—for example, their role in the spread of antibiotic resistance—is disappointing. Readers who are interested in the genetic engineering applications will find much of interest, but would probably do better with one of the more specialised texts on this subject. Therefore, the book seems to fall between two or three stools.

The presentation and style of the book are both good, with plenty of figures, tables, and references. The practical procedures are generally described in enough detail to be useful. Overall, although all of the individual articles are worthwhile, the book as a whole does not have an obvious appeal.

DUNCAN SHAW

The Biology of Idiotypes

Edited by M I Greene and A Nisonoff. (Pp 507; figures + tables. \$59.50.) New York: Plenum Press. 1984.

In the first chapter of the book *The Biology of Idiotypes* E A Kabat describes an experiment: "... immunisation with an anti-idiotypic antibody (antibody 2) induces the formation of immunoglobulins bearing idiotypes (antibody 3) some of which may have combining sites specific for the antigen which produced the original idiotypic antibody (antibody 1) used to induce the anti-idiotypic (antibody 2)".

Byzantine complexity is frequently a characteristic of idiotypic research and can induce in the non-specialist a state of mind analogous to low zone tolerance. This is unfortunate because research on idiotypes leads to the central immunological dogma of Network and has contributed to many diverse areas of research, such as treatment of cancer and hormone binding to receptors. The importance of idiotypic responses in clinical medicine will also increase with the use of monoclonal antibodies for in vivo diagnosis and treatment of disease. The editors, M I Greene and A Nisonoff, can be congratulated for producing a comprehensive volume which will be the standard reference for several years. However,

be warned, no effort has been made to make this volume accessible to the non-specialist.

Idiotypes were originally described as antigenic determinants present on the variable region of immunoglobulin molecules. By analogy with B cells and immunoglobulin, T cells were investigated in a search for idiotypes which would define the T cell receptor for antigen. Unfortunately, the book predates the cloning of the T cell receptor genes and the direct biochemical analysis of T cell receptor molecules. The last five chapters, which describe the indirect definition of the T cell receptor, and those chapters exploring T cell-B cell and T cell-T cell interaction will need to be reinterpreted using current molecular knowledge.

In summary, this is a source book for immunologists which is comprehensive but not designed for a general audience. Recent events have overtaken the chapters considering T cell idiotypes.

P N GOODFELLOW

Ectodermal dysplasias: a clinical and genetic study

By N Freire-Maia and M Pinheiro. (Pp 266; figures + tables. £44.00.) New York: Alan R Liss. 1984.

Syndrome recognition presents the clinical geneticist with a problem with which any assistance is welcome. A central difficulty is in dealing with the sheer numbers of diagnostic labels. Recent developments in expert microcomputer systems offer, perhaps, the best solution but for most clinicians, for the foreseeable future, the traditional reference book is essential. For this reason the invitation to review this book by Newton Freire-Maia and Marta Pinheiro was accepted with pleasure by this reviewer. At last, a classification according to abnormalities of skin, hair, teeth, and nails, perhaps the most accessible of syndrome 'handles'.

The book begins with over 30 pages on definitions and classifications and this reader was left somewhat bemused by the further attempt to refine syndrome nomenclature; cleft lip is a malformation, for example, whereas holoprosencephaly is a monogenic paradigm!

The lists of 'ectodermal dysplasia' syndromes together with references and subject index make up the bulk of the book's 266 pages. It is obvious that the authors have been meticulous in the search of a difficult body of publications. It is this attention to detail which gives the book its value. There are, however, several aspects which deserve criticism. It requires a careful search before an explanation is found on page 26 for the subgroup numbering; 1, 2,