seem logical enough but chapters dealing specifically with preconception and preimplantation diagnosis appear in both the first and fourth sections.

Chapter 1 ('History of and opportunities for preimplantation diagnosis') is particularly wide-ranging and reviews the early attempts at sex selection as well as many of the major achievements during the last eight years of research in preimplantation diagnosis. The possibility that cryopreservation may provide an alternative to the current practice of rapid diagnosis and transfer in the same menstrual cycle is mentioned here but not elaborated upon in subsequent chapters. Chapter 2 provides a good review of the biology and metabolism of preimplantation human embryos and chapter 3 considers the scope of preimplantation diagnosis. Our appetite for preimplantation diagnosis is whetted by chapters 1 and 3 but we do not encounter it again until much later in the book (chaps. 9–13). In the meantime, five chapters (4–8) provide useful background information on human genetic diseases, prenatal diagnosis and DNA technology.

The reader anxious to learn about the current research in the field would probably head straight for the section entitled 'Preconception and preimplantation diagnosis'. Even here, we are given a bit more background. The first chapter in this section deals with the possibility of sexing spermatozoa, in order to avoid the conception of males at risk for sex-linked diseases, a topic which was introduced in the first chapter of the book. In chapter 10 ('Preconception diagnosis of polar bodies'), we finally arrive at the nub of the matter but this chapter is disappointingly brief (6 pages) and avoids any discussion of the controversial idea that the presence of a *chromosomal* abnormality in the oocyte might be inferred from polar body analysis. The next two chapters ('Cleavage stage biopsy of human embryos and diagnosis of X chromosome-linked recessive disease' and 'Micromanipulations of blastocysts for the diagnosis of genetic disease') deal well with current technology and the final chapter of this section considers whether non-invasive or semi-invasive methods are ever likely to be useful. The last chapter of the book, dealing with ethnics and law, relates to the law in Britain and, in keeping with the more general prenatal diagnosis theme of the book, encompasses abortion as well as assisted conception.

Overall, the book is well presented and I only spotted a few typographical errors (a transposed column heading in Table 9.1 and a few mistakes in the references). In summary, most of the chapters review their topics well and together they provide a useful resource. However, as a whole, the book seems somewhat at odds with its specialized title. In an attempt to be comprehensive, we are given a lot of background on prenatal diagnosis but perhaps not enough about preconception and preimplantation diagnosis itself. Nevertheless the book can be recommended to those who can afford £60 and is most likely to be useful to researchers and advanced students who lack a thorough background in mainstream prenatal diagnosis.

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Molecular Genetics for the Clinician. By D. J. H. BROCK. Cambridge University Press. 1993. 289 pages. Price hardback £35.00. ISBN 0 521 41179 3. Price paperback £15.95. ISBN 0 87969 377 0.

Molecular genetics is now a well established part of the undergraduate syllabus. However, for many doctors who qualified before 1980 or even 1985 the 'grasp' of even a glimmer of molecular biology appears to be unobtainable. The specialist books appear too detailed and contain a vocabulary which is altogether unfamiliar. I have not seen a book on the market that makes this topic approachable that is, until now. Dr Brock's book is the best introduction to molecular genetics that I have read. It lays out the whole subject in a form that is easily understandable, and yet, not condescending to a clinician. The book is easy to read, nicely set out with clear diagrams and tables. It takes us through genetic diseases and the terminology, the patterns of Mendelian inheritance and onto the structure and function of genes. Basic techniques which are now common language in most scientific papers, are nicely set out and easily understandable. The book gradually introduces us to more complicated molecular genetics and discusses inherited cancers and oncogenes and on to molecular cytogenetics and genomic imprinting. Towards the end of the book Dr Brock discusses current and future developments and how genetic diseases can be avoided with pre-natal screening. Sadly, there is a paragraph on page 196 which makes nonsense† as well as one or two typographical errors. However, these did not spoil my enjoyment of the book.

† I understand that this occurred after the final proof had been returned to the Publishers (Editor).

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Whilst reviewing this book I got one or two of my medical students and also consultant colleagues to read it. The medical students found this book complemented their text books but in particular linked the basic science with the clinical syndromes very well. My colleagues, particularly those with no knowledge of genetics, found it extremely readable and, indeed, I found some difficulty in retrieving it from them.

I think this book is a must for all practising clinicians who have qualified before 1985. It makes molecular genetics extremely approachable and I would certainly recommend medical libraries to have a copy of it on their shelves.

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The New Genetics: Baillière's Clinical Paediatrics. Vol. 1, No. 2. Edited by I. D. YOUNG. Harcourt Brace Jovanovich. 1993. 322 pages. Price £27.50. ISBN 0 7020 1746 9.

Baillière's quarterly series on clinical paediatrics covers a broad range of topics of interest to the practising doctor. Forthcoming attractions include arthritis in children, coma, transplantation and epilepsy. Each volume thus needs to give a fairly comprehensive review of its subject matter, couched in language suitable for the non-expert. Writers must also remember that paediatricians have now replaced surgeons as the non-intellectuals of the medical class.

Ian Young, as befits a man taught his subject in Edinburgh, has put together a very balanced set of eleven chapters on clinical molecular genetics. There is the statutory opener on technology, and then broad coverage of molecular cytogenetics, molecular morphogenesis and cancer genetics. Detailed chapters follow on the more common and important Mendelian disorders, cystic fibrosis, muscular dystrophy, haemoglobinopathies and fragile X. These four are written by the top men in the field, and are excellent.

The final part of the volume moves on to the applications of molecular knowledge in presymptomatic detection, carrier detection and prenatal diagnosis and screening. To round it all off, and I groaned when I saw it, there is the obligatory account of ethical issues. It is not, I hope, that I am seriously unethical, but rather that doctors write with such staggering incomprehension of the real scope and range of ethics that they can only insult their readers.

That gripe apart, this is not a bad little book. I imagine that, even though paediatricians are not known to read much, some will dip into it. When they do, they will find it well written and, dare I say it, fun.

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Eleménts de génétique quantitative et application aux populations animales [*Elements of Quantitative Genetics and Applications to Animal Populations.*] Edited by B. BIBÉ, B. BONAITI, J.-M. ELSEN, G. GUÉRIN, J. MALLARD, E. MINVIELLE, L. DE MONDINI, P. MULSANT and H. DE ROCHAMBEAU. Versaille: Institut National de la Recherche Agronomique. 1992. 302 pages. Price 135ff. ISSN 0990 06323, ISBN 2 7830 0451 2.

In France there are very strong research groups of INRA, particularly at Jouy-en-Josas (near Paris) and in Toulouse, who have made significant contributions to developments in the theory of quantitative genetics and related statistical methods which form the basis of animal improvement. These and some other groups have also undertaken nice selection experiments in the domestic species. They and their colleagues have been and continue to be leaders in taking the theory and results to practical animal improvement. For example, they have been active recently in genetic analysis of reproduction in the pig, in developing mixed model methods for all-or-none characters, and in analysis of major gene effects. This multi-authored volume, with contributions by most of the top French workers, serves both as an overview of breeding practice in France and as a reference book on quantitative genetics.

The editorial group have identified almost 50 topics, arranged in six sections. These deal with, in order: genetic improvement in France; bases of quantitative genetics; selection objectives and criteria; evaluation of breeding stock; management of populations; current and future contributions of genetic markers in improvement of animal populations. The sections and some of the chapters are multi-authored; several individuals are authors of more than one chapter. In principle the set of chapters is sufficiently comprehensive that this could serve as a textbook. I doubt whether, strict though the editing is here, a work with dozens of authors could ever fill this need for inevitably there is unevenness of presentation, duplication and deficiencies. This book is therefore much better suited to the student or practitioner who has got some of the basics already, e.g. from books by Falconer or Ollivier (for the French reader) and wants to see a different, broader perspective. What I found most useful was that the whole was a comprehensive view from the perspective of the French group of the principles of quantitative genetics and their application to animal improvement: the problems and solutions they consider important. It would be invidious to pick out particular chapters for comment.

There is a lot of material here, 300 pages of two column A4 with quite small print (except for a lot of inter-chapter blanks). There are plenty of examples to quote from. Even those whose French is as weak as mine will get something from it, for there is a high density of difficult technical words such as 'heritabil-