is a deliberate delusion; it shows a scanning electron micrograph from a human HeLa cell, but the only photographic illustration of chromosomes *within* the volume shows the immunolocalization of topoisomerase II in metaphase chromosomes of an organism that is not even named!

Although the balance of papers is so distorted, a heavy weighting being given to the molecular biology of replication in prokaryotes, and including an outstanding review of this field by B. M. Alberts, there are at least glimpses of significant studies on a few eukaryotic systems. Amongst these latter, J. J. Blow *et al.* demonstrate the remarkable potentialities of *in vitro* work that shows how purified DNA and nuclei, including those of demembranated sperm, can be induced to replicate in *Xenopus* egg extracts. There are two papers on the initiation of DNA replication in yeast chromosomes, but nothing on the replication of telomeres, a problem that is specific to eukaryotes and where work on yeast has been signally informative. Neither of the last two papers, on the bending of DNA in nucleosomes by A. A. Travers and A. Klug, and the relation of chromosome structure and gene expression, by J. Mirkovitch *et al.*, though of intrinsic interest, bear directly on the topic of the symposium, and I find it extraordinary that this last offering discusses a loop mode of chromosome organization without a single reference to work on lampbrush chromosomes, where evidence for such an organization has been known for nigh-on 90 years!

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Textbook of Human Genetics, Third Edition. Max Levitan. Oxford University Press, Oxford. 1988. Pp. 497. Price £30.00. ISBN 0-19-504935-7.

There are many general textbooks covering the introduction of human genetics, so a new edition must aim to fulfil a particular need in order to find its niche in the market place.

This book has a total of 18 chapters covering a wide range of topics from Chapter 1 on simple Mendelian inhertance through to Chapter 18 where the whole of genetic counselling and prenatal diagnosis are covered in a single chapter. Perhaps it is this latter fact which indicates that the main interest in the book lies in promoting an understanding of the concepts of genetics rather than in describing their outcome. The explanations of the fundamentals of both basic and human genetics treat the subject very firmly as a science and not as a collection of symptoms. Thus the pages are liberally endowed with equations and formulae which serve to illustrate the underlying principles of genetics which many other more superficial texts merely take for granted, and the student whose concept of genetics is descriptive syndromology may find daunting. Much of the book is excellent, particularly the chapters on polygenic inheritance, immunogenetics and the mathematical concepts such as mating laws, consanguinity and gene frequencies. The latter are all given precise treatment with carefully thought-out examples to illustrate the more complicated areas and formulae.

Naturally with all this in a book of less than 500 pages something has to be left out and it is in the description of human conditions and the chromosome chapters where it is at its weakest. If you require a detailed text on syndromology or developmental genetics then this is not the book for you. Neither does it delineate screening procedures, counselling or prenatal diagnosis or even describe common inherted diseases in any detail. Chorionic villus sampling for example is dismissed in a single paragraph of 13 lines.

The book is well laid out, has some references (a detailed bibliography is not a requirement in a general textbook) and a very lively test-yourself-by-answering those questions section. There are a few, though not many, clinical photographs, illustration of points is mainly by diagrams which are clear and well set out.

The cytogenetics chapters, although well written, were disappointing. Surely by 1987, when this book was published, no text should be illustrated with non-banded karyotypes. Any routine cytogenetics laboratory would be able to provide high quality photographs to illustrate translocations, inversions, ring chromosomes, etc. Surely if the cri-du-chat syndrome is due to $5p^-$ then an unequivocal picture of a no. 5 chromosome is required to illustrate it, similarly with trisomies 18 and 13, and particularly anomalies of the sex chromosomes. Even an overview in a fundamental textbook should reflect modern technological standards when they are routine.

So, with its strong scientific background, this book would be extremely useful to students of biological science with an interest in human genetics, to science students specialising in genetics and to medical students with a liking for fundamental processes and mathematical derivations. After all, why should the average medical student not know how a lod score is calculated?

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