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Book Reviews

Human Genetics: Problems and Approaches. Second edition. By F. VOGEL and A. G. MOTULSKY. Berlin, Heidelberg, New York, Tokyo: Springer-Verlag 1986, 807 pages. Hard cover DM 148, £52.25. ISBN 3 540 16411 1.

The first edition of *Human Genetics* appeared in 1979 and has become a classic text. It is the book to which many professionals turn when planning a course of lectures and also the book they use for a better understanding of the historical development of particular topics in the practice of human genetics. The fact that there are few competitive texts has been a tribute to the excellence of the first edition; anyone petitioned by another publisher would be daunted by the scholarship that Professors Vogel and Motulsky bring to their writing.

The long-awaited second edition is no disappointment. The most spectacular advances in human genetics in the 1980s have come from the impact of molecular biological techniques on the understanding of gene and chromosomal structure. The basic format of the first edition is carried unchanged into the second, and molecular genetics is worked into the text where it is relevant and where its contributions have illuminated practice and understanding. It is possible that this approach may disappoint some of the new generation of molecular biologists for whom life began with the Southern blot, but for most geneticists the traditional approach has all the virtues of a complete story.

This is a point worth emphasizing. A majority of practising human geneticists are clinicians, concerned with the nosology and diagnosis of genetic disorders and with the prediction of occurrence and recurrence risks. Their preoccupations are in the counselling clinic and their focus is on anxious parents who want advice on the avoidance of a range of distressing conditions. Molecular biology has had considerable impact on clinical genetics, both in terms of disease classification and in terms of diagnosis. But it has also tended to concentrate the attentions of human geneticists on Mendelian disorders and to divert them from the more difficult multi-factorial conditions. In defence of this altered emphasis, it must be said that by attacking the multi-factorials through those families where Mendelian segregation is apparent, spectacular advances have been made in the diagnosis of disorders such as Alzheimer's disease, manic-depressive illness or coronary heart disease. But it has reinforced the old adage that geneticists can only count up to two.

This is where Vogel and Motulsky's book is such a fine corrective. Human genetics is about gene flow in populations, and about the extent, origins and consequences of human variation. The pathology of the Mendelian-segregating disease gene is a small part of the subject; of much more concern is how and why mutation occurs and what happens when it does. Two-thirds of *Human Genetics* is directed to these themes, chapter 5 on mutation, chapter 6 on population genetics, chapter 7 on human evolution and chapter 8 on genetics and human behaviour. Even the final chapter, on practical applicatons, devotes a section to the biological future of mankind. All these themes are magnificently dealt with; I know of no other book which has the sheer authority of Vogel and Motulsky.

DAVID J. H. BROCK
Human Genetics Unit
Western General Hospital
Crewe Road
Edinburgh

Natural History of the Major Histocompatability Complex. By JAN KLEIN. New York, Chichester: John Wiley & Sons. 1986. 775 pages. £90.75. ISBN 0 471 80953 5.

I found this book absolutely absorbing (it grips you like an antibody grips its antigen), and I most strongly recommend it to any biologist, laboratory or library with £90 to spend: they will certainly find it both unique and excellent value. The book is offered as a celebration of the 50 years of research, always growing