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BOOK REVIEW

Our Uncertain Heritage: *Genetics and Human Diversity*. By DANIEL L. HARTL. London: Harper and Row. 1985. 468 pages. £35.75. ISBN 0 06 042684 5.

The stated aim is to provide a textbook of human genetics for non-science and non-biology majors. The author claims that no prerequisite knowledge of biology is needed, and that where unfamiliar concepts are involved the necessary background is provided. He sees his readership as made up by undergraduates needing additional course credits and by people who are reading simply to satisfy their own curiosity.

These are two rather different types of readership. The former, with some type of qualifying examination confronting them, will be prepared to settle down with pen and paper and attempt to master the sequence of information which is the basis of any branch of science. It will not surprise them that understanding recombinant DNA technology is hard work, and requires many hours of study of basic biology, genetics and biochemistry. The curiosity-satisfiers, on the other hand, will want to browse and dip, perhaps with one eye on the television screen or in the last half-hour of a busy day. Subjects in human genetics which have attracted their attention, be it *in vitro* fertilization, gene therapy or DNA cloning, must be presented in a very immediate form or their interest will be lost.

Here is an example of a browser's requirements. A recent letter from a sixth former asked me if I could direct her to a comprehensible account of genetic engineering. Her class of non-science high-fliers was aware that it was an important subject and likely to impinge on their lives in the future. But what exactly was it and could I supply her with the material for a half-hour lecture? I turned hopefully to this book; this surely was a theme that would be central to a modern lay-directed account of human genetics. Genetic engineering is covered in four pages of dense summary, elegant and well described, providing you have read the preceding 220 pages of introductory material. Without that background it is gobbledygook.

Perhaps this is unfair. The point I am making is that it is virtually impossible to write an account of human genetics which is both scientifically sound and instantly accessible in all its parts to the novice. The writer must be prepared to risk the sneers of his professional colleagues, to simplify and approximate, perhaps even to distort, so that the essential message gets through. It is no good saying that without this or that set of fundamental materials you cannot properly understand. The lay person does not have time to take a basic course in biology and it is unreasonable to expect him to do so.

How then does *Our Uncertain Heritage* fare as a text for the committed student? It is first class; comprehensive, well written and attractively packaged. It starts with the cell, and leads through chromosomes and Mendelian principles to the fundamental genetic material. There are specialist chapters on viruses and cancer, immunogenetics and quantitative genetics. Each chapter ends with a summary, a list of key words and a set of problems (to which brief answers are given in the Appendix). My main quibble is that a very high proportion of the content (perhaps as much as half) has already appeared verbatim in Hartl's *Human Genetics*, a textbook designed for students specializing in the subject. It might be argued that this half is core material and therefore appropriate for duplication. But anyone buying both books would be entirely justified in complaining that the introductory statement, 'Some parts of *Uncertain Heritage* are an abbreviated version of corresponding material in *Human Genetics*', is less than adequately candid.

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