text does not read smoothly—quite apart from many errors of English and poor proof-reading. There is excessive direct quotation of formulae from specialised papers with inadequate indication of the physical assumptions involved. It is clearly difficult to decide in what detail to deal with this wide range of topics in a small book, but the authors have not found a happy solution. Many parts of the book, and its general arrangement, give the impression of very condensed notes for lecture courses. The lecture courses themselves were pro-

bably very good but they are not given here.

In view of the well established reputation of the authors and the significant contributions they have made to the theory of liquids it is to be regretted that they have not produced a book which does them justice.

This will be a useful reference work for experts and it is perhaps in anticipation of this that the price has been set very high.

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Remote sensing

Introduction to Environmental Remote Sensing. By E. C. Barrett and L. F. Curtis. Pp. ix + 336. (Chapman and Hall: London; Halsted/Wiley: New York, 1976.) £5.95.

THE authors' aim "has been to meet the needs of many students, administrators and scientists for an account of remote sensing which is essentially basic, explanatory and broad in its coverage", illustrating applications as well as techniques. There is certainly a need for such a book to be read, particularly by the administrators and scientists who control in various ways the support (or lack of support) and encouragement for the development of remote sensing and its applications. Does this book satisfy its declared aims?

A range of publications is now available on the subject of remote sensing, from popular accounts, through textbooks and books of collected papers to the *Manual of Remote Sensing* recently published (American Society of Photogrammetry: Falls Church, 1975) in two large volumes. The authors of the book now under review have re-written and edited some of these earlier accounts.

Just over half of the book is concerned with a "selective and illustrative" treatment of applications, covering a range from global climatology to urban studies, and this is perhaps the most useful half of the book for its stated purpose. The atmospheric aspects of the environment receive more attention in this book than in some others, which is not surprising in view of the authorship.

The first half of the book is concerned with the techniques rather than with the applications of remote sensing. The description of the physical basis of remote sensing and the radiation characteristics of natural phenomena reach about the intended level. The chapters on the techniques—that is, the sensors and data processing—are not so satisfactory. Too much previous knowledge is required for this to be included in a basic textbook, and an attempt has

been made to convey too much and too complex information in a small number of words. As one example, in nearly three pages on photographic processing the terms γ , MTF, film stability and granularity, chloride, chlorobromide and bromide papers, and sequential colour printing are introduced among many other topics.

Illustrations and references (including eight pages of colour figures), are both good and plentiful, except that quoted sources of illustrations are frequently not referenced.

It is unfortunate that the text contains enough misprints to be irritating. Occasionally these are factual: for example, the first introduction of ERTS 1 MSS imagery (Plate 3.3, p40) lists the spectral bands wrongly, although it must be said that they are frequently described correctly later in the book.

Overall, this reviewer gives a 'two cheers' reaction—good on applications and illustrations, and reasonably priced in these inflationary days, but barely suitable as a basic textbook on remote sensing techniques.

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Human hormones in health and disease

Hormones in Human Blood: Detection and Assay. Edited by H. N. Antoniades. Pp. xvii + 810. (Harvard University: Cambridge, Massachusetts and London, 1976.) £37.10.

THE editor of this multi-author book, Dr H. N. Antoniades, quotes with approval in his Introduction the 1960 statement of Dr G. W. Thorn in his foreword to *Hormones in Human Plasma* that it would be impossible "ever again, to contain within one single volume all information pertaining to this important subject". The dust cover states that *Hormones in Human Blood* "will be an indispensable companion to laboratory workers engaged in clinical and research efforts to measure and understand the role

of human hormones in health and disease". With the book priced at £37.10 this claim merits close examination.

This volume contains 46 chapters contributed by 69 authors covering some 800 pages. The three initial chapters are concerned with plasma proteins and plasma fractionation techniques. The next eight chapters deal with basic aspects of radioimmunoassay methodology. The subsequent and largest section of the book (30 chapters) covers polypeptide hormones and the last section (five chapters), non-polypeptide hormones. A fairly rapid poll of the references quoted suggests that most chapters are completely up-to-date, with 1973 references and 1974 publications of the chapter authors; some go into 1975 and the chapter on growth hormone notably contains 1976 (in press) references which is remarkable as this is the publication year of the book. Does one congratulate the latter authors or identify them as the tardiest contributors?

If it is impossible to be complete in this area how far short of completeness does the book fall? Inevitably it must be in the most rapidly moving new areas rather than in new aspects of existing hormones. For example, of the gastrointestinal hormones only gastrin and glucagon-like substances are considered. This omission is perhaps made more disappointing by the imbalance of the material included. Thus the coverage is considerably affected by the editor's particular interest in protein fractionation and insulin. There are five chapters on insulin immunoassay and five chapters on insulin bioassay. In addition some of this information is also covered in the general chapters on radioimmunoassay methods. One feels, therefore, that a more satisfactory endocrine cover could have been achieved without expanding the book by pruning some of this dated material.

Nevertheless the breadth of coverage provided means that it is impossible for a single reviewer to give an authoritative general opinion of the quality of the contents. Most of the authors are very well established and actively working in their subjects, and therefore their contributions must be very valuable. Inevitably, in looking in detail at the areas with which one is most familiar, one finds defects. For example, must laboratory workers accept the dogmatic statement that the pre-precipitation double antibody method "produces a less sensitive assay than post-precipitation methods", for which the only justification cited is a previous undocumented assertion of the same nature?

One cannot help feeling that the modern laboratory worker in this rapidly moving area will prefer to consult the original literature for most of the methods but will be glad if somebody not too far away has found the money to buy the book.

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