neither is *Mendel,* though a two-page boxed summary of his work is included.)

Whether or not a book for beginning students should emphasize so strongly (and exclusively) the human organism, nearly all instructors recognize that perhaps the biggest challenge in teaching such a course is deciding what to eliminate, not what to add. In any case, this book offers an attractive alternative to the conventional survey textbook.

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Superior

BIOLOGY AND MAN, by William D. McElroy, C. P. Swanson, and R. I. Macey. 1975. Prentice-Hall, Inc. (Englewood Cliffs, N.J. 07632). 672 p. $12.95.

It is unfortunate in this day of increasing sensitivity to the equality of the sexes that throughout this book human beings are almost always referred to as "man." Even the section describing the development of eggs in the ovary is indexed "Reproduction in Man." Prentice-Hall editors would be well advised to obtain a copy of the 11-page "Guidelines for Equal Treatment of the Sexes in McGraw-Hill Book Company Publications."

A second unfortunate decision was to rely too heavily upon simplifying and combining books from the 1969 edition of Prentice-Hall's paperback series *Foundations of Biology* without adequately editing out overlapping material or consistently up-dating. The "Foundations" series was not a textbook; instead, each paperback presented extensive narrative on selected subjects. Used in conjunction with a textbook or for special reading for advanced work, each book of the series was very good. Whether this or any series like it could ever be remodeled into an equally good textbook is not for me to say, but it is clearly evident that this conversion leaves a great deal to be desired.

In regard to subject matter presentation, the focus is so restricted to the human that the book cannot be considered for adoption in general biology courses. Even in the chapters on cellular biology only two pages are devoted to plant cells, ten pages to photosynthesis, and three to plant reproduction. The first 23 chapters form part one under the general title of "Modern Cell Biology" and deal with the cell, its chemistry and structure, reproduction, genetics, development, concluding with evolution and the origin of *Homo sapiens*. Part two presents the organ systems as found and functioning in the human animal in ten chapters along with two chapters that primarily present topics already discussed in part one. Part three, "An Ecological Epilogue," is a single chapter presenting some basic ecological concepts while showing that many present activities have put the human species on a collision course with ecological disaster.

Each chapter concludes with a summary, a list of very sophisticated questions for thought and discussion, and suggestions for further reading (most of which were published prior to 1968). There is a glossary of terms at the end of the book. Page composition is clean and uncluttered and type easy to read. Figures and diagrams are numerous, clear, and easy to understand. Construction of the book appears adequate for its anticipated use.

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WHERE DO I FIT? A module of the BSCS Human Sciences Program. Exp. ed., 1974. Biological Sciences Curriculum Study (P.O. Box 930, Boulder, Colo. 80302). 310 p. Price not given.

The physical, social, and physiological changes that accompany the shift from youth to adult status form the fabric of the activities offered in this module. Interdisciplinary throughout, the activities are intended for middle and junior high school students. There are 22 activities in the section "Where Do I Fit as a Person?"; 11 activities in "Where Do I Fit as an Organism?"; and 11 in "Where Do I Fit in the Future?"

The teachers guide consists of two parts: the teacher's part in the front, and the student activities in the back. In the teacher's part the activity objectives are clearly stated, and packing lists and evaluation facilitations complete this section. The activities, printed in black on heavy, multicolored construction paper, are poster-like in appearance. Cartoons, charts, diagrams, and sketches are used liberally.

This course is a departure from the usual BSCS style. It has no expository text, addressing itself to the student entirely through open-ended activities and evaluations. To a teacher accustomed to structure and a single discipline this course may seem to lack substance.

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Genetics

HUMAN GENETIC NOTES, by M. M. Green. 1975. Addison-Wesley Publishing Co. (Reading, Mass. 01867). 225 p. Price not given.

This syllabus is intended for students who have completed a first course in biology, an elementary course in statistics, and have some knowledge of biochemistry. It was developed to minimize the amount of note-taking and to maximize the amount of listening done by students. Most of the 22 chapters are similar to those in usual textbooks, although they are centered on man. Regrettably, there is no discussion of the interesting and exciting aspects of twinning in man, and the lack of an index is notable.

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Health

HANDBOOK OF MICROSCOPIC ANATOMY FOR THE HEALTH SCIENCES, by Annabelle Cohen. 1975. C. V. Mosby Co. (3301 Washington Blvd., St. Louis 63103). 143 p. $5.50 softback.

This book presents the general features of microscopic anatomy to those who are preparing to function or are functioning in a hospital atmosphere, in nursing or as technical or paramedical personnel. It stresses the structural organization of cells into tissues, tissues into organs, and organs into systems.

The book is very precise, emphasizing the most important aspects of the microscopic anatomy of the human body. It combines normal with abnormal histology and includes information on malignant and benign tumors of the body tissues.

The first three chapters are general; they introduce primary tissues, histological design of organs, and abnormal tissues. The remaining ten chapters deal with the organization of body systems.

I found this handbook to be good in that it is factual, concise, defines terms in use well, and includes many photomicrographs to illustrate the text. It is easy to read and includes an extensive index that enhances its use as a handbook. The information is practical enough to be useful to any person associated with health sciences.

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Microbiology

MICROBIOLOGY, by L. P. Gebhart and P. S. Nicholes. 5th ed., 1975. C. V. Mosby Co. (3301 Washington Blvd., St. Louis 63103). 367 p. $11.95. *Microbiology Laboratory Manual: A Sequence of Experiments,* 2nd ed., 1975. 98 p. $5.50.

According to the authors, the major reason for this fifth edition is to "keep the student up to date in the field of microbiology since an ever-increasing

amount of new knowledge is being produced." In order to achieve this major goal, the authors have organized their text into three major sections: "General Principles of Microbiology"; "Sanitary and Industrial Microbiology"; and "Disease-Producing Microorganisms—Pathogenic Microbiology," encompassing thirty short chapters.

Unfortunately, the authors have not achieved their objective of updating the text. The references are narrow and for the most part, outdated. The illustrations are definitely in need of improvement and updating; for example, the illustrations of the electron microscope, the modern binocular microscope, and so on are not reflective of the modern instrumentation available to microbiologists. The taxonomic treatment used in the text is from *Burgey's Manual* seventh edition, rather than the newer eighth edition. In summary, the book may be marginally acceptable for use in some microbiology courses, but its ability to contribute to a modern up-to-date microbiology course will be minimal.

The laboratory manual is organized into seven major sections: "Basic Principles of Microbiology"; "Methods and Techniques for Isolation, Pure Culture Studies, and Classification of Bacteria"; "Soil and Sanitary Microbiology"; "Microbial Genetics"; "Pathogenic Microbiology"; "Serological Procedures"; and "Viruses, Molds, Parasitic Animals, and Identification of Unknowns." Within these major sections are 26 laboratory exercises, all fairly easy to perform and requiring a minimum of equipment. Each laboratory consists of the typical cookbook list of materials required for each student, a step-by-step procedure, brief list of questions, and blank worksheets.

One can only judge the worth of a laboratory manual after having taught from it; but in my opinion, the manual will be only of value in the most basic microbiology laboratory and then the value will be marginal. The major disappointment in the manual is the lack of any attempt to provide an inquiry approach or indepth quantitative analysis of laboratory data.

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Related Fields

HUMAN PHYSIOLOGY: THE MECHANISMS OF BODY FUNCTION, by Arthur J. Vander, James H. Sherman, and Dorothy S. Luciano. 2nd ed., 1975. McGraw-Hill Book Co. (1221 Ave. of the Americas, New York 10020). 621 p. $14.95 hardback.

This college level textbook, now in its second edition, will quickly establish itself as one of the most popular introductory textbooks available today. The content is much the same as other basic physiology textbooks, but the framework and the presentation are strikingly different.

Using control theory as a background, the authors have organized the material into three sections to emphasize the fundamental features of cell functions. Section 1, "Basic Cell Functions," is an extensive treatment of cell physiology; section 2, "Biological Control Systems," analyzes the precise mechanisms specialized cells use to control cell functions; and the third section, "Coordinated Body Functions," integrates the material from the preceding sections.

The text is clearly written and the content follows a logical sequence. The authors are thorough in their discussions and skillful in clarifying problem areas (for example, kidney physiology and membrane potentials). A major attribute of the book are the supportive figures (more than 500) and the tables.

Readers familiar with the first edition will find that the text has been reset in a new type and several sections have been rewritten and expanded. The index has also been expanded. One major change is the condensation and rewriting of the chapters "Electrical Properties of Cells" and "Neural Control Mechanisms" into one chapter, logically placed in the second section of the book.

This book is highly recommended for anyone studying or reviewing introductory physiology.

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DYNAMIC ANATOMY AND PHYSIOLOGY, by Ben Pansky. 1975. Macmillan Publishing Co. (866 Third Ave., New York 10022). 694 p. $12.95.

With the current spate of new books and revised editions in the area of anatomy and physiology, one's first impression is that this contribution by Pansky must at the very least be redundant and at the most be rather foolhardy. The goodly number of excellent publications in this subject impels the reader to examine any new attempt with a hypercritical eye. Nevertheless, this new textbook stands close scrutiny very well; it is a well-conceived and attractively styled first edition. It follows a logical organization of cell and tissue considerations in the early chapters; then the organ-system sequence of chapters follows. Within each organ-system, structure is elucidated first, function is then explained, and, finally, in most chapters, the system is discussed with respect to select examples of well-known pathologies. There is an abundance of well-executed diagrams accompanying each topic. Up-to-date findings within most areas are included and the most modern terminology and quantitative units are employed. Special or unique features include chapters on aging, development, and defense