

SOCIAL IMPLICATIONS OF BIOLOGICAL EDUCATION

Edited by
Arnold B. Grobman

Teachers and students of life sciences are forced to consider the social implications of biology. The important issues can not be avoided and deserve a full and balanced discussion.

Recognizing this need, the National Association of Biology Teachers invited distinguished biologists to address themselves to a variety of social issues. The result has been a volume ideally suited as a resource for class discussion and as a reference for the teacher of either life sciences or humanities.

The volume includes chapters on the social implications of . . .

Medicine

by Michael and Lois DeBakey

Behavior

by James V. McConnell

Genetics

by Bruce Wallace

Population

by Garrett Hardin

Evolution

by Claude A. Welch

Additional statements are given by Vincent Dethier, Martin Schein, Haven Kolb, David Denker, Lawrence Mann and others. This book is available now from the National Association of Biology Teachers for only \$1.95.

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Aubrey Milunsky, a pediatrician actively involved in genetic counseling at Harvard Medical School, has written a thorough, yet easily understood book that outlines the tremendous impact of heredity on one's general well-being. In addition to the expected discussion of single gene, chromosomal, and multifactorial disorders, Milunsky introduces the reader to topics ranging from genetics and drugs (legal and illegal) to heredity and heart disease. Irrespective of the topic, however, the instructional message is always the same: you, the individual, have the right and the responsibility to know as much about your family history and your personal genetic makeup as you possibly can.

In many chapters, brief, uncomplicated case histories illustrate clinical applications of the didactic material, and here the message is repeated once again: This did not have to happen and it needn't happen to you if you are aware of your family history and are willing to seek proper medical attention. Milunsky's approach fits well with the current emphasis on personal responsibility for health maintenance.

The clinical aspects, personal interactions, and ethical implications of genetic screening, prenatal diagnosis, and the genetic counseling process all receive considerable attention. Milunsky offers some interesting comments concerning the personality and degree of directiveness of the counselor. One senses, however, that he has let his own feelings overshadow a consideration of the practical constraints of limited time and facilities, for he asserts that counselors should "spend more time with their patients, trying to help them discover their own priorities in life."

Milunsky's treatment of ethical issues is useful for human genetic education, for whether or not one agrees with his positions (it is obvious, for example, that he places concern for the quality of life above opposition to abortion), the ethical dilemmas described are real and immediate. While the popular press debates who will be in charge of one thousand clones of Mark Spitz, couples continue to face the agonizing decision of whether to abort a fetus found defective through prenatal diagnosis, and counselors continue to wrestle with the question of making the results of screening procedures known to family members and prospective spouses over the objection of their patients.

These and other difficult issues are of immediate concern to a culture struggling with the relationship between science and society. Readers of *Know Your Genes* will derive an understanding of the relationship between their genes

and their health that will enable them to participate more effectively in those debates.

Because of its broad scope and easy readability, *Know Your Genes* can be used effectively in courses ranging from introductory biology and genetics, to health, psychology, and the social sciences.

Joseph D. McInerney
Biological Sciences Curriculum Study
Boulder, Colorado

Physiology and Anatomy

TEXTBOOK OF PHYSIOLOGY

by Byron A. Schottelius and Dorothy D. Schottelius. 18th ed., 1978. C.V. Mosby (11830 Westline Industrial Drive, St. Louis, Missouri 63141). 624 p. \$14.95.

This newest edition of the well-known textbook has been substantially rewritten to improve clarity and update material. Other information has been condensed and new, or extensively rewritten material has been added on aging, muscle contraction, electrocardiograms, cardiac performance, temperature regulation, thermodynamics, metabolism, control theory, endocrinology, reproductive physiology, immunoglobins, sensory receptors, pain, cerebellar function and nutrition. Many new figures and tables have been added particularly involving control systems and emphasizing negative feedback. Additional readings at various levels are included at the end of each chapter. The extensive glossary includes a helpful section of prefixes, suffixes and combining forms that are commonly used in biology.

Textbook of Physiology would be a valuable addition to the classroom bookshelf not only to provide additional depth and background for the teacher, but also as a reference book for students.

W. Robert Stamper
Cheltenham High School
Wyncote, Pennsylvania

STUDY GUIDE AND REVIEW MANUAL OF BASIC HUMAN ANATOMY AND PHYSIOLOGY

by M.H. Lindsay Gibson. 1978. W.B. Saunders and Company (West Washington Square, Philadelphia 19105). 350 p. \$7.75.

A unique study guide and review manual for senior high school/university students of anatomy and physiology. Each chapter opens with a set of learning

objectives that focus on key points to be learned and are the basis for developing review questions within each chapter. The guide is keyed to current texts of basic human anatomy and physiology to enable the student to readily study appropriate chapters.

Diagrams and illustrations are outstanding, clear, and timely in the five-choice association questions. Concepts reviewed by five-choice questions varying from multiple choice, completion and association types are reinforced by answers, notes and explanations following each series. Included are examination questions to test the student's cumulative knowledge and provide practice writing multiple-choice examinations.

This outstanding manual is designed to supplement notes taken in anatomy and physiology lecture courses. Because of its well-written format, it is excellent for individualized, self-paced instruction and review for examinations.

Dorothy Chang-Van Horn
Los Angeles City Schools
California

HUMAN ANATOMY

by Doris Burda Wilson and Wilfred J. Wilson. 1978. Oxford University Press (200 Madison Avenue, New York 10016). 441 p. \$15.50.

Anatomists usually study dead specimens, but the science of anatomy is still alive and well. With the expanding and specializing medical technologies the demand has increased for teachers and students with a strong background in human anatomy.

This book has been written primarily for undergraduate students in the health sciences. It could, however, be successfully used as a textbook for an advanced biology course in high school or a graduate course in biological education.

The authors have divided the text into three parts. Part I covers anatomical terminology, the cell, cell division, tissues, and early embryology. Part II describes in detail the various systems of the body. Part III ties together material in previous chapters, using a holistic clinical approach. The anatomy of the head and neck, limbs, thorax, and abdomen is described.

The text is profusely illustrated, with 484 figures, many complemented by the use of color. Color photomicrographs of various tissues accompany black and white drawings of the same subject. The print is large, with key words italicized, making a pleasingly readable text. The authors have also broadened the scope

of the text by including clinical and embryological information. Illustrations and descriptions of the embryological development of organs help the student gain an evolutionary perspective on the origin of organ systems.

A convenient table is included that lists each muscle, its origin, insertion, action and innervation.

The word anatomy means "to cut up." After "anatomizing" the text, the faults appear to be rather minor, considering the excellent presentation. On page 201 the numbers on an illustration of the heart are barely discernible and the codes to different colors are not used on some figures. Part III is largely repetitive of previous chapters, but does emphasize to the student the close relationship of the body systems. Another criticism is the extravagant duplication of identical illustrations in different parts of the book. The fair amount of blank space increases the number of pages.

In summary, if you teach anatomy or want a good reference book, you should consider this book. Napoleon Bonaparte once stated, "Our body's a watch, intended to go for a given time." This textbook should provide future students the intellectual tools to add a few ticks to the life of the human watch.

Lewis H. Brown
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Mt. Joy, Pennsylvania

PHYSIOLOGY OF THE HUMAN BODY

by J. Robert McClintic, 2nd ed., 1978. John Wiley and Sons, Inc. (One Wiley Drive, Somerset, New Jersey 08873). 647 p. \$16.95.

This textbook covers the basic concepts of human anatomy and physiology covered in many other texts written for general or health-profession students. A new feature in the second edition is a set of student behavioral objectives at the beginning of each chapter. Each chapter also contains a summary, list of questions, and a list of current readings dating from 1974. A glossary and index are included to assist the reader in using the text more effectively.

The theme of the text in the author's own words is "...homeostasis, the mechanisms that operate to ensure its maintenance, and what the body must do to restore homeostasis in case of disease or disorder."

The discussion in the text is accurate, but in many cases, does not go into much detail. The illustrations are very well

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