Many helpful figures are included, although some—especially in the chapters on phase equilibria—are too crowded, too small, and somewhat crudely drawn. The usefulness of this book as a reference source would be considerably enhanced by including a list of monographs on specialized topics.

Despite the author's attempt to be comprehensive within the bounds of a single volume, there is an unfortunate lack of balance in the overall treatment. The extensive coverage (two chapters) of phase equilibria, including consideration of five- and six-component systems, hardly seems justified when only half as much space is allotted (one chapter at the end of the book) to quantum mechanics, atomic and molecular structure and spectra, and theories of chemical bonding. Many chemists will be disappointed by the author's decision to omit any meaningful discussion of the kinetic theory of gases, the structure of liquids and solids, vibrational and rotational spectra of molecules, electric and magnetic properties of matter, and nuclear reactions. As a consequence some sections—especially those on statistical thermodynamics, theories of reaction rates, and photochemistry—are developed without adequate foundation. Furthermore, in many sections the author uses a descriptive rather than an analytical approach to the principles underlying a particular discipline. The reader will all too often find himself asking the question: "Why is this statement true?" And he will be disappointed by the author's failure to furnish him sufficient explanation.

The book is carefully prepared technically and is largely free of typographical errors. Several unfortunate misstatements appear in the text. In the discussion of the Simon formulation of the Third Law, the observation that "the temperature coefficient of the melting pressure approaches zero at the seventh power (of temperature), so that from 1°K downwards it is practically temperature independent" is based on a mathematics with which I am not familiar.

The usefulness of this book as a general text or reference in physical chemistry will depend strongly on the reader's particular orientation and interests. Many will find that the extent and nature of the material omitted and the abbreviated, qualitative treatments of many theoretical topics will limit its claim to their attention. Within the areas of emphasis, however, the great variety of useful information and the inclusion of many subjects normally treated only in specialized monographs will make it attractive as an authoritative single-volume work.

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Surviving Our Technology

Preventing World War III. Some proposals. Quincy Wright, William M. Evans, and Morton Deutsch, Eds. Simon and Schuster, New York, 1962. 460 pp. $6.95.

The tensions of our times find reflection in the outpouring of recent literature concerned with the problems of peace. Much of this literature has dealt with control of the spiraling arms competition, and much of that has concentrated on the relationship between arms control measures and strategic considerations. However, dissatisfaction with the risks and the costs of mutual deterrence has generated a new freshet of works concerned with the broader problems of peace. These works deal primarily with what might be called the social context of peace, or the contributions that social scientists can make to peace.

This volume belongs in the latter category. Under three headings—Stopping the Arms Race; Reducing International Tensions; and Building a World Society—are grouped 26 specific proposals for reducing international tensions, contributed mainly by spokesmen for the social sciences and humanities. The three editors, Quincy Wright, William M. Evans, and Morton Deutsch, prepared general essays to be incorporated in an epilogue. As symposia go, this one has more than the usual consistency, although to achieve the fairly uniform standard, it was necessary to include five essays previously published elsewhere and a number of others that are repetitive of the well-known views of their authors. The theme is aptly stated by one contributor who wrote: "The problem is to so arrange our affairs that our species can survive its technology." And later he added: "Science appears to have got us into a fix from which science offers us no way out."

Part 1, edited by Morton Deutsch, deals with the arms race. It eschews the by now familiar analysis focusing on stable deterrence, limited arms reductions, and physical inspection techniques. On the assumption that physical inspection of arms agreements cannot be adequate, the essays by Lewis C. Bohn, Seymour Melman, and Ralph W. Gerard, either in whole or in part, treat "non-physical" techniques, including what is referred to as "psychological" or "knowledge" inspection. In addition, there are essays by Karl W. Deutsch, Robert Gomer, and Herbert C. Kelman on what might loosely be termed conditions for effective disarmament. T. C. Schelling's well-known essay, "A special surveillance force," is reprinted here. This section includes a striking essay by a Norwegian philosopher, Arne Naesse, "Non-military defense," which focuses on the values involved in defense from the standpoint of a national of a small country caught in a world of major force. Emile Benoit's essay on the economic implications of disarmament concludes this part.

The second part, edited by William M. Evans, is concerned with reducing international tension. It includes essays by Charles E. Osgood, Erich Fromm, and David Daiches advocating various unilateral measures to reduce international tensions. Jerome Frank gives a perceptive social psychologist's analysis of the problems that nonviolent resistance poses for human nature. Amitai Etzioni and Anatol Rapoport offer imaginative essays on handling international disputes. David Riesman's satire, "The nylon war," is reproduced. Bertrand Russell and C. West Churchman also contribute papers. The section ends with an interesting essay by G. I. Pokrovsky (Zhukovskii Engineering Academy, Moscow) advocating common international efforts to exploit advancing technology for the world's good. He cites as one example the possibility of cooperative international weather forecasting, a field in which work is going forward under the auspices of agencies in the United Nations family.

Part 3, edited by Quincy Wright, is concerned with the long-term construction of a world society. It begins with an essay by Ivan Supek (University of Zagreb) which may be of special interest to readers of *Science*, because it emphasizes universal science as a basis for international cooperation. Zellig S. Harris offers a modest appraisal of the potential contribution of an "international auxiliary lan-

guage." Talcott Parsons writes on the long-term implications of the polarization of the world for international order and suggests that present polarization may prove to be a platform for progress toward achieving the basic components of international order. Essays by three lawyers conclude the section: Arthur Larson in his familiar role as an advocate of the rule of law in building peace, Roger Fisher in a reprinted essay on how to construct rules that affect governments, and Louis B. Sohn on neutralism and the United Nations.

In all, this is a collection of essays, some of which are new, some old, some imaginative in advancing new proposals, others imaginative in applying the tools of social analysis to old problems. Despite the optimistic tenor of many of the essays, the important theme of the book is the difficulty of making major progress in controlling arms and constructing a new world order in the absence of mutual confidence among governments.

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New Books

Biological and Medical Sciences

Advances in Enzymology. And related subjects of biochemistry. vol. 24. F. F. Nord, Ed. Interscience (Wiley), New York, 1962. 577 pp. Illus. $16.

Atlas of Electroencephalography in the Developing Monkey Macaca mulatta. William F. Caveness. Addison-Wesley, Reading, Mass., 1962. 156 pp. Illus. $17.50.

Bats. Glover Morrill Allen. Dover, New York, 1962 (reprint, © 1939). 378 pp. Illus. Paper, $2.

Behavioral Aspects of Ecology. Peter H. Klopfer. Prentice-Hall, Englewood Cliffs, N.J., 1962. 188 pp. Illus. Trade ed., $5.25; text ed., $3.95.

Biology of Viruses of the Tick-Borne Encephalitis Complex. Proceedings of a symposium, Smolenice, Czechoslovakia, October 1960. Helena Libíková, Ed. Czechoslovak Acad. of Sciences, Prague; Academic Press, New York, 1962. 436 pp. Illus. $12.

Comparative Biochemistry. A comprehensive treatise. vol. 4, *Constituents of Life*, pt. B. Marcel Florkin and Howard S. Mason, Eds. Academic Press, New York, 1962. 864 pp. Illus. $26.

A Decade of Synthetic Chelating Agents in Inorganic Plant Nutrition. Arthur Wallace, Ed. The editor, Los Angeles, Calif., 1962. 206 pp. Illus. $5.

Die Physiologie der Nervenzelle. Johannes Haas. Borntraeger, Berlin, Germany, 1962. 327 pp. Illus. Paper, DM. 32.

Diseases of Sorghum, Sudan Grass, and Broom Corn. S. A. J. Tarr. Great Britain, Commonwealth Mycological Inst., Kew, Surrey, 1962. 392 pp. Illus. 60s.

Division of Labor in Cells. Geoffrey H. Bourne. Academic Press, New York, 1962. 256 pp. Illus. Paper, $2.95.

Effects of Ionizing Radiations on Immune Processes. A symposium held at the University of Kansas, September 1961. Charles A. Leone, Ed. Gordon and Breach, New York, 1962. 532 pp. Illus. $12.50.

Einführung in die Meftechnik der Kernstrahlung und die Anwendung der Radioisotope. Heinrich Fassbender. Thieme, Stuttgart, Germany, 1962 (order from Intercontinental Medical Book Corp., New York). 439 pp. Illus. DM. 49.50.

Elements of General and Biological Chemistry. An introduction to the molecular basis of life. John R. Holum. Wiley, New York, 1962. 479 pp. Illus. $5.95.

The Eye. vol. 4, *Visual Optics and the Optical Space Sense*. Hugh Davson, Ed. Academic Press, New York, 1962. 449 pp. Illus. $14.

Fish in Nutrition. Eirik Heen and Rudolf Kreuzer, Eds. Fishing News (Books), London, 1962. 470 pp. Illus. $18.

The Human Palate. R. M. S. Taylor. Karger, Basel, Switzerland, 1962 (order from Phiebig, White Plains, N.Y.). 116 pp. Plates. Paper, $7.

Insects and Their World. Harold Oldroyd. Univ. of Chicago Press, Chicago, 1962. 148 pp. Illus. Paper, $1.95.

Inside the Living Cell. Some secrets of life. J. A. V. Butler. Science Editions, New York, (reprint, © 1959). 174 pp. Illus. Paper, $1.65.

International Plant Index. vol. 1, *Family Names of the Plant Kingdom*. Sydney W. Gould. International Plant Index, New Haven, Conn., 1962. 122 pp. Paper, $2.50.

An Introduction to Comparative Pathology. A consideration of some reactions of human and animal tissues to injurious agents. G. A. Gresham and A. R. Jennings. Academic Press, New York, 1962. 423 pp. Illus. $13.

Ionization Constants. Of acids and bases. Adrien Albert and E. P. Serjeant. Methuen, London; Wiley, New York, 1962. 191 pp. Illus. $3.75.

Leitfossilien der Mikropaläontologie. Ein Abriss. Wilhelm Simon and Helmut Bartenstein, Eds. Borntraeger, Berlin, Germany, 1962. 2 vols., text, 440 pp; tables. Illus. DM. 180.

The Life of Vertebrates. J. Z. Young. Oxford Univ. Press, ed. 2, 1962. 835 pp. Illus. $10.

The Management of Impaired Fertility. Margaret Moore White and V. B. Green-Armytage. Oxford Univ. Press, New York, 1962. 332 pp. Illus. $14.

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Meeresprodukte. Ein handwörterbuch der marinen rohstoffe. Ferdinant Pax, Ed. Borntraeger, Berlin, Germany, 1962. 471 pp. Illus. DM. 78.

Mental Illness and the Ageing Brain. The distribution of pathological change in a mental hospital population. J. A. N. Corsellis. Oxford Univ. Press, New York, 1962. 76 pp. Illus. $6.50.

A Metascientific Study of Psychosomatic Theories and Their Application in Medicine. Carl Lesche. Humanities Press, New York, 1962. 64 pp. Illus. Paper, $1.75.

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The Nature of Biochemistry. Ernest Baldwin. Cambridge Univ. Press. New York, 1962. 124 pp. Illus. Paper, $1.45; cloth, $2.75.

A Physical Theory of the Living State: The Association-Induction Hypothesis. Gilbert Ning Ling. Blaisdell (Random House), New York, 1962. 717 pp. Illus.

Primates. Comparative anatomy and taxonomy. vol. 5, pt. B, *Cebidae*. W. C. Osman Hill. Interscience (Wiley), New York, 1962. 558 pp. Illus. $32.

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Recent Advances in Pharmacology. J. M. Robson and R. S. Stacey. Little, Brown, Boston, 1962. 416 pp. Illus.

Report of the United Nations Scientific Committee on the Effects of Atomic Radiation. United Nations, New York, 1962. 446 pp. Paper, $5; cloth, $7.50.

Science and the Safe Period. A compendium of human reproduction. Carl G. Hartman. Williams and Wilkins, Baltimore, Md., 1962. 306 pp. Illus. $12.

Staining. Practical and theoretical. Edward Gurr. Williams and Wilkins, Baltimore, Md., 1962. 643 pp. Illus. $16.

A Synopsis of the Birds of India and Pakistan. Together with those of Nepal, Sikkim, Bhutan, and Ceylon. Sidney Dillon Ripley II. Bombay Natural History Society, Madras, India, 1961. 738 pp. Illus. Rs. 25.

Ticks and Diseases. Don R. Arthur. Pergamon, London, 1961; Harper and Row, New York, 1962. 461 pp. Illus. $14.

Time, Cells, and Aging. Bernard L. Strehler. Academic Press, New York, 1962. 280 pp. Illus. Paper, $2.95; cloth, $5.

Transactions of the Linnaean Society of New York. vol. 8, *Development of Behavior in Precocial Birds*. Margaret Morse Nice. Linnaean Society, New York, 1962. 223 pp. Paper, $4.

Twenty-six Afternoons of Biology. An introductory laboratory manual. George Wald, Peter Albersheim, John Dowling, Johns Hopkins III, and Sanford Lacks. Addison-Wesley, Reading, Mass., 1962. 172 pp. Illus. Paper, $2.75.

The Use of Vital and Health Statistics for Genetic and Radiation Studies. Proceedings of the seminar held at Geneva, September 1960. United Nations, New York, 1962. 270 pp. Illus.

Wild Flowers of the Transvaal. Cythna Lindenberg Forssman. Text by R. A. Dyer, Inez C. Verdoorn, and L. E. Codd. Wild Flowers of the Transvaal Book Fund, Johannesburg, South Africa, 1962 (order from Central News Agency, Johannesburg). 376 pp. Illus. R. 8.

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