ing with the social consequences of science, the social responsibility of science, and the question of whether science can be planned.

The criticism of Norbert Wiener's position is not well founded, for the author approves Bridgman's barring Nazi scientists from his laboratory, implying that he would also approve the refusal of scientists to work for the Nazis. But such a stand is in essence no different from Wiener's refusal to publish data in peacetime that would immediately be applied to guided-missile research. If the principle is accepted that the scientist must draw the line at some point as to the exploitation of his knowledge by society, and if, as is also done in this book, the stand is taken that respect for individual conscience is a sociological factor favoring the development of science, then Wiener's stand must be accepted as a valid exercise of social responsibility, even if the author cannot agree with the point where the line is drawn. The studies of J. U. Nef summarized in his *War and Human Progress* show that Wiener's position was widely held in the early period of modern science.

One might wish that every scientist would ponder the implications of this study. It is not by any means a subject of purely academic interest, for the interaction of science and society is molding our future, and much can be done to guide the interaction wisely.

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Thermodynamics and Statistical Mechanics. William P. Allis and Melvin A. Herlin. New York–London: McGraw-Hill, 1952. 239 pp. $6.00.

This book has been designed as a text for a half-year course for college seniors majoring in physics. Within the confines of such a course, the authors have endeavored to present both the fundamental ideas of thermodynamics, and enough statistical mechanics to give the student some idea of the statistical basis of thermodynamic laws. This has made it necessary to limit the presentation of both fields rather stringently.

The treatment of heat and thermodynamics has been simplified by rigid restriction of the illustrative materials—only pure substances are considered, and the only force discussed is hydrostatic pressure. Later, in the section on statistical mechanics, magnetization is considered, and the student sees the formalism in terms of variables other than P, V, T.

Statistical mechanics is treated from the Boltzmann-Planck point of view. The microstates of systems are described in terms of cells in phase space; the existence of a natural cell size, h^3 in three-dimensional phase space, is deduced from the third law of thermodynamics and the Sackur tetrode equation. In this part of the book the illustrative material is abundant and varied. It includes discussion of gases, magnetism, specific heat theory, Brownian movement, thermal noise and radiation, He II, and electrons in metals. Here, space limitations are met by extreme simplifications of the discussion, occasionally to the point of misleading superficiality. College seniors are likely to find the range of illustrative material intriguing, but the reviewer is inclined to wish that the authors had followed the pattern established in their treatment of thermodynamics, with fewer illustrations more completely developed.

On the whole, this is an attractive text, with many illustrative problems and a good index.

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Scientific Book Register

Phosphorus Metabolism: A Symposium on the Role of Phosphorus in the Metabolism of Plants and Animals, Vol. II. Sponsored by the McCollum-Pratt Institute of The Johns Hopkins University. William D. McElroy and Bentley Glass, Eds. Baltimore: Johns Hopkins Press, 1952. 930 pp. Illus. $11.00.

Water: Miracle of Nature. Thomson King. New York: Macmillan, 1953. 238 pp. $3.50.

Races of Maize in Mexico: Their Origin, Characteristics and Distribution. English ed. of *Razas de Maiz en Mexico.* E. J. Wellhausen, L. M. Roberts and E. Hernandez X., with collab. of Paul C. Mangelsdorf. Cambridge, Mass.: Bussey Inst., Harvard University, 1952. 223 pp. Illus.

Léon Fredericq: Un Pionnier de la Physiologie. Volume publié à l'occasion du Centenaire de sa naissance. Z. M. Bacq and M. Florkin, Eds. Liège: Sciences et Lettres, 1953. 232 pp. Illus. 210 Belg. fr.

Kinetics and Mechanism: A Study of Homogeneous Chemical Reactions. Arthur A. Frost and Ralph G. Pearson. New York: Wiley; London: Chapman & Hall, 1953. 343 pp. Illus. $6.00.

Lillie's Development of the Chick: An Introduction to Embryology. 3rd ed. Revised by Howard L. Hamilton. New York: Holt, 1952. 624 pp. + plates. $8.50.

Possums. Carl G. Hartman. Austin: Univ. Texas Press, 1952. 174 pp. Illus. $6.00.

Principles of Organic Evolution. Arthur Ward Lindsey. St. Louis: Mosby, 1952. 375 pp. $5.75.

Applied Physiology. 9th ed. Samson Wright with collab. of Montague Maizels and John B. Jepson. London–New York: Oxford Univ. Press, 1952. 1190 pp. Illus. $9.00.

Third Inter-American Congress on Brucellosis. Held in Washington, D. C., November 6–10, 1950, under the joint auspices of the Inter-American Committee on Brucellosis, the U. S. Committee on Brucellosis of the National Research Council, and the Pan American Sanitary Bureau. (In English and Spanish.) Washington, D. C.: National Research Council, 1952. 302 pp. $5.00; $3.25 paper-bound.

The Statistics of Bioassay. Reprinted, with additions, from *Vitamin Methods,* Vol. II. C. I. Bliss. New York: Academic Press, 1952. 184 pp. Illus. $3.50.

Encyclopédie Biogéographique et Écologique. Vol. IX, *Le Tapis Végétal en Basse-Provence.* G. Kuhnholtz-Lordat. Paris: Paul Lechevalier, 1952. 208 pp. Illus. 3500 fr.

Thermionic Vacuum Tubes and Their Applications. 6th ed. W. H. Aldous and Edward Appleton. London: Methuen; New York: Wiley, 1952. 160 pp. Illus. $2.00.