is encouraging to see that, in spite of many difficulties, French science has traveled a long way on the road to full recovery.

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Experimental Psychology: An Introduction. Leo Postman and James P. Egan. New York: Harper, 1949. Pp. xiv + 520. (Illustrated.) $4.50.

Instructors who have tried Woodworth's *Experimental Psychology* for undergraduate courses and found the going tough will welcome this new book by Postman and Egan. It covers much the same subject matter areas as Woodworth but is more selective within these areas, briefer, and delivered at a level well within the undergraduate grasp.

Chapters are distributed as follows: psychophysical methods, 1 chapter; the senses and perception, 8; judgment, 1; reaction time and association, 1; learning and memory, 6; emotional behavior and social behavior, 1 each. In general, the discussion treats method and experimental results. The elaboration of theory is almost, but not entirely, lacking. At the close of each chapter is the outline of one or more laboratory experiments which illustrate and apply the methods and techniques discussed.

Readers will find the book organized so as to make it very teachable. Good use has been made of outlining legends and paragraph headings, illustrations appear in considerable number, and chapter bibliographies are broken down by research topic. Problems associated with the control of stimulus or subject variables are given particular attention in sections at the close of many of the chapters. Certain methodological sections should also be helpful—for example, the one which integrates the concepts of reaction time, judgment time, and latency, and another which describes the traditional psychophysical methods as models and models only, which individual experiments may follow to greater or less degree.

As the authors themselves point out in their introduction, the book does not treat all the areas or problems now embraced in experimental psychology, but proposes to offer a representative sample of the methods and results in experimental psychology. Perhaps the only serious question which potential users of the book may face is the question of whether the topics thus selected overlap too seriously those discussions of the senses, perception, and learning which the student may have read in a general text used in some prior introductory course.

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Scientific Book Register

CHAUCHARD, PAUL. *Le Système Nerveux Sympathique: La régulation nerveuse de l'activité viscérale.* Paris (VII^e): Librairie Gallimard, 1949. Pp. 364. (Illustrated.) 490 fr.

COPENHAVER, JOHN W., and BIGELOW, MAURICE H. *Acetylene and carbon monoxide chemistry.* New York: Reinhold Publ., 1949. Pp. xvi + 357. (Illustrated.) $10.00.

CROW, LEONARD R. *Learning electricity and electronics experimentally.* Vincennes, Ind.: Scientific Book Publ., 1949. Pp. xi + 525. (Illustrated.) $4.40 postpaid.

CROW, LEONARD R. *Saturating core devices: Operating principles and applications.* Vincennes, Ind.: Scientific Book Publ., 1949. Pp. xiv + 373. (Illustrated.) $4.20 postpaid.

CUSTER, R. PHILIP. *An atlas of the blood and bone marrow.* Philadelphia-London: W. B. Saunders, 1949. Pp. x + 321. (Illustrated.) $15.00.

DARLINGTON, C. D., and MATHER, K. *The elements of genetics.* New York: Macmillan, 1949. Pp. 446. (Illustrated.) $3.75.

DIXON, MALCOLM. *Multi-enzyme systems.* New York (10): Cambridge Univ. Press, 1949. Pp. 100. (Illustrated.) $1.75.

EDDY, WALTER H. *Vitaminology: The chemistry and function of the vitamins.* Baltimore: Williams & Wilkins, 1949. Pp. v + 365. (Illustrated.) $6.00.

ELMORE, WILLIAM C., and SANDS, MATTHEW. *Electronics: Experimental techniques.* New York: McGraw-Hill, 1949. Pp. xviii + 417. (Illustrated.) $3.75.

FINCH, VERNOR C., and TREWARTHA, GLENN T. *Elements of geography: Physical and cultural.* (3rd ed.) New York-London: McGraw-Hill, 1949. Pp. x + 711. (Illustrated.) $6.00.

FOSTER, JACKSON W. *Chemical activities of fungi.* New York: Academic Press, 1949. Pp. xviii + 648. (Illustrated.) $9.50.

FREEMAN, OTIS W., and RAUP, H. F. *Essentials of geography.* New York-London: McGraw-Hill, 1949. Pp. vii + 487. (Illustrated.) $5.00.

FRIEDBERG, CHARLES K. *Diseases of the heart.* Philadelphia-London: W. B. Saunders, 1949. Pp. xxxii + 1081. (Illustrated.) $11.50.

HEISENBERG, WERNER. *The physical principles of the quantum theory.* (English translation by Carl Eckart and Frank C. Hoyt.) New York: Dover Publs., 1949. Pp. xii + 184. (Illustrated.) $2.50.

HOGBEN, LANCELOT. *From cave painting to comic strip: A kaleidoscope of human communication.* New York (22): Chanticleer Press, 1949. Pp. 287. (Illustrated.) $5.00.

HOUWINK, R. *Fundamentals of synthetic polymer technology: In its chemical and physical aspects.* (2nd ed.) New York: Elsevier Publ., 1949. Pp. xii + 258. (Illustrated.) $4.75.

HUTT, F. B. *Genetics of the fowl.* New York: McGraw-Hill, 1949. Pp. xi + 590. (Illustrated.) $6.50.

HUXLEY, JULIAN. *Heredity East and West: Lysenko and world science.* New York (21): Henry Schuman, 1949. Pp. x + 246. $3.00.

JACOBS, MORRIS B. *The analytical chemistry of industrial poisons, hazards, and solvents.* (2nd ed.) (Chemical Analysis, Vol. I.) New York-London: Interscience, 1949. Pp. xviii + 788. (Illustrated.) $12.00.

JAMES, GLENN, and JAMES, ROBERT C. (Eds.) *Mathematics dictionary.* (Rev. ed.) New York: D. Van Nostrand, 1949. Pp. v + 432. (Illustrated.) $7.50.

PENROSE, LIONEL S. *The biology of mental defect.* New York: Grune & Stratton, 1949. Pp. xiv + 285. (Illustrated.) $4.75.

PERKINS, COURTLAND D., and HAGE, ROBERT E. *Airplane performance, stability, and control.* New York: John Wiley; London: Chapman & Hall, 1949. Pp. vii + 493. (Illustrated.) $7.00.

(Continued from page 171.)

detection of the S_f 10–20 molecules when present in low concentration depends upon the concentration effected in our preliminary ultracentrifugal purification and upon the sensitivity of the optical method of detection subsequently used. We can readily detect 5 mg% of S_f 10–20 molecules by our methods (representing approximately 1 mg% of cholesterol in this fraction). Thus a significant concentration of molecules of the S_f 10–20 class may be present in serum and still represent numerically, but not physiologically, an insignificant fraction of the total serum cholesterol. These facts help explain why it has not been possible for previous workers to reach any definite conclusions concerning atherosclerosis by studying analytical cholesterol values.

The patients with hypercholesteremia (over 300 mg%), drawn from the individuals without known disease, from the diabetics, and from the patients with myocardial infarctions, show no essential differences ultracentrifugally in the nature of the molecules transporting cholesterol, but instead show generally an increase in the quantity of cholesterol of serum bound in the form of the S_f 10–20 class of molecules. However, many normocholesteremic individuals may carry much more cholesterol in this fraction (S_f 10–20 molecules) than do the hypercholesteremics. Thus since normocholesteremic individuals and hypercholesteremic individuals may have appreciable concentrations of S_f 10–20 molecules, it is understandable that individuals of both these groups should develop atherosclerosis, assuming our thesis of the relation of S_f 10–20 molecules to atherosclerosis to be correct. This would provide, then, a missing link between these groups that had not been available from the study of analytical cholesterol levels.

In summary, the mechanism of cholesterol transport in the serum of rabbits and humans via giant lipid and lipoprotein molecules of low density has been characterized. In both species there exist classes of molecules of higher S_f rate and lower density than the major group of cholesterol-bearing lipoproteins. The evidence indicates that the lower density of the molecules of higher S_f values is at least partly due to a lower content of protein per molecule.

Evidence implicating the cholesterol-bearing molecules of the S_f 10–30 class in the production of cholesterol-induced atherosclerosis in the rabbit has been presented.

A study of 104 patients with proved myocardial infarctions reveals an almost universal occurrence of cholesterol-bearing molecules of the S_f 10–20 class (a class of molecules similar in many respects to the S_f 10–30 class in rabbits) at fairly high levels in the blood. All categories of normal humans studied show a lower frequency of occurrence of measurable concentrations of S_f 10–20 molecules than do the myocardial infarction patients (a group of patients almost all of whom have coronary artery atherosclerosis). The findings in the groups other than the myocardial infarction group are also consistent with the expected incidence of atherosclerosis in such groups.

Preliminary evidence indicates that exogenous cholesterol in the human as well as in the rabbit is a factor in influencing the blood level of molecules of the S_f 10–20 class.

Studies are now in progress with other categories of patients who develop atherosclerosis to a degree beyond that for supposed normal individuals of corresponding ages. These categories include hypertensive patients, patients with the anginal syndrome but without proved infarctions, nephrotic patients, and hypothyroid patients. In addition, long term studies of the effect of diet, with and without adjunctive drugs such as thyroid, lipotrophic factors, and possibly sex hormones, on the blood level of molecules of the S_f 10–20 class are continuing. All these groups should help to evaluate further the role of these giant molecules in the development of atherosclerosis.

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