

library service. In this manner it would be possible for many reference libraries to extend the scope of their usefulness far beyond their present limits. Lastly, the lessened cost of rebinding books due to wear and tear in transit through the mails, represents

a factor of great importance in estimating savings made by the wide use of the microfilm.

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QUOTATIONS

PROBLEMS CONFRONTING MEDICAL INVESTIGATORS

IN a recent address at the fiftieth anniversary celebration of Stanford University, Dr. Walter B. Cannon¹ presented some questions which deserve careful study. The shift in age grouping of the population, with increasing percentages of the elderly and the aged, now widely recognized as a fact, has presented the medical profession with a series of new problems. As one grows older, Cannon points out, the fires of life burn less vigorously and the adjustments of bodily organs to emergencies tend to be impaired—the breath is shorter, the heart beats less effectively, blood pressure gradually rises as the years pass and becomes ill adapted to critical requirements. Are these features essential attributes of the elderly or are they the consequences of comfortable and habitual indolence? In middle age some of these effects may result from inactivity alone and can be reversed by training; is this true in the later decades? If so, should attempts be made to alter them? What, Cannon says, would be the effects if they were altered? These questions offer possibilities for useful research. Almost none of the most prominent disorders of senescence are thoroughly understood. The prevailing ignorance, it may be assumed, is largely due to lack of systematic study. The challenge presented by realization of this fact will doubtless receive many answers. Severe demands on the nervous system, which may have arisen in part from the remarkable shift in the occupation of the citizens, often result in calls for medical attention. A disorder of the brain may fail to be revealed at necropsy or under the microscope. And yet emotional upsets which leave in the nervous pathways no visible trace have concrete and obvious effects and may be the occasion for profound misery and suffering. The gradual on-

set of disabilities, bodily and mental, in the later years of life demands, Cannon believes, long-range studies on the possible influence of inheritance, early injuries, severe infections in childhood and youth, frustrated plans, the demands of labor and probably many other conditioning experiences. Cannon also calls attention to the disastrous cooperation of disease, pain and early death when warring hosts or nations battle against nations for supremacy. International developments unquestionably have affected medical research in a warping of scientific activities away from untrammelled pursuits toward problems of military significance. Medical investigators, however, by learning the nature and cure of malnutrition, by devising appropriate treatment for shock and hemorrhage and in many other ways have served to mitigate the torments and ravages of warfare. One of the results of the present war already has been a more intimate association of a highly desirable nature with medical investigators in Latin American nations. Finally Cannon emphasizes as one of the biggest problems facing medical investigators the filling of their own ranks. This is indeed primary, and, unless well-equipped recruits can be attracted to the career of the investigator, progress will end. Cannon dwells at some length on the attractions and rewards of medical investigators, pointing out particularly one consideration eminently creditable to their efforts: "Because life and health are precious and medical research is deeply concerned with protecting life and health, the triumphs of that research are put to use without regard to any national or racial difference. . . . Even though the beneficiaries may despise their benefactors, they must receive the benefactions. . . . The conquest of a disease, it should be remembered, is a permanent conquest."—*The Journal of the American Medical Association*.

SCIENTIFIC BOOKS

THE LABORATORY MOUSE

Biology of the Laboratory Mouse. By the STAFF of the Roscoe B. Jackson Memorial Laboratory, with a chapter on Infectious Diseases of Mice by

J. H. DINGLE, Harvard Medical School. Philadelphia: Blakiston Company. 1941.

THIS book is the joint work of the staff of the Roscoe B. Jackson Laboratory, under the editorship of G. D. Snell. Some chapters are short monographs on subjects in the investigations of which the Jackson Laboratory has prominently participated, while other

¹ W. B. Cannon, "Problems Confronting Medical Investigators," *SCIENCE*, 94: 171-179, August 22, 1941.