the distribution of blood and the evaporation of water which constitute the "physical regulation of body temperature." Although Cannon has quoted generously from recent contemporaneous literature, the critic may perhaps be pardoned for asking why, of the older authorities, Claude Bernard alone should be the scientist freely cited. Perhaps, however, the charm of the book lies in the fact that it represents enticingly the view-point of a laboratory worker of rich experience speaking out of that fulness of personal knowledge, a method which compels interest in the subject and regard for the author.

In a final chapter Cannon discusses the possibility of the establishment of a "steady state" in the social and economic world. In this he follows the example of Aristotle in a celebrated passage which began, "The animal organism is to be conceived after the similitude of a well-governed commonwealth." Cannon suggests that the steady state of the fluid matrix of the animal organism indicates that the social organism should be provided with specially organized control over the processes of commerce. This would include the power to limit the production of goods so as to adjust the supply reasonably to the demand, the power to lay aside stores of goods and stores of wages and the power to arrange emergency employment. All these in a measure are represented as factors of safety in the human body. Perhaps one might suggest another analogy, which is, the fact that a human being, through undernutrition, may be brought to a level of maintenance of two thirds the quantity of food necessary for the normally nourished, even though at some loss of the sense of personal well-being. At a time when wheat is selling at the farm at 25 cents a bushel, in contrast with $2.20 during the war, it does not seem right that war-time wages should be practically guaranteed to railroad workers. Perhaps in times of economic distress the political leaders of Aristotle's "well-governed commonwealth" would have been so wise and so free from vote-getting ambition as to have decreed a reduction in railroad wages suggested by the 30 per cent. physiologically possible reduction in food calories, to the end that other wage-earners might be continuously employed. Into such seemingly fantastic analogies contemplation of the "Wisdom of the Body" leads us.

GRAHAM LUSK

The Universe Unfolding, By ROBERT H. BAKER, x + 140 pages. The Williams and Wilkins Company, Baltimore, 1932. $1.00.

THIS is an excellent book to be one of the volumes of the Century of Progress Series. The originality shown in the manner of presenting the astronomical facts will appeal alike to those who already know these facts, and to those who do not. It is a long way from the flat circular plane of the Greek's earth, over which bends the solid stationary dome of the sky, to the universe of galaxies and supergalaxies lying millions of light years beyond the solar system. However, the 140 pages of the book do cover this distance in a very satisfactory manner, and among these pages will be found the answers to many questions frequently asked by people in general about the modern methods of investigating the astronomical universe. This book can hardly fail to give any reader a better understanding and a greater interest in "the vast universe around us and the mysterious mind of man."

The first chapter tells of the universe as man in the past understood it, first according to the Ptolemaic system with the stationary earth at the center, and then according to the system of Copernicus with a central sun about which the earth and the other planets revolve. The second chapter takes up the story of the investigation of the sidereal system from the star gauges of Herschel to the statistical studies of Kapteyn, and then on to the work of the present day which has disclosed millions of vast stellar systems. The remaining chapters are devoted to the modern methods of investigating the structure of the universe. These describe the various methods of attack on this problem and tell the amount of success achieved by each method. The last chapter brings this interesting account up to the most recent discovery, which is that the exterior galaxies appear to have huge velocities of recession with respect to our own galactic system.

IDA BARNEY

YALE UNIVERSITY OBSERVATORY

SOCIETIES AND ACADEMIES

THE IOWA ACADEMY OF SCIENCE

THE forty-sixth annual meeting of the Iowa Academy of Science was held with Iowa State Teachers College at Cedar Falls on April 29 and 30, 1932, with 245 members and visitors in registered attendance.

The presidential address, "Our Underground Geology," was presented by Dr. James H. Lees, of the Iowa Geological Survey. Other papers of general interest were: "The Oxidation of Citric Acid," by Adrian S. Kuyper, of Iowa State University; "Some Observations on Spectral Color Discrimination," by Le Roy D. Weld, of Coe College; "The Effect of Preschool Attendance upon Intelligence Quotient," by Dr. Beth L. Wellman, of the Iowa Child Welfare Research Station; "The Iowa Conservation Plan," by