

Observatory did not accept Shapley's method of measuring great distances in the university. At Hale's suggestion, Shapley and Curtis presented papers and discussions at the meeting of the National Academy of Sciences in Washington on 26 April 1920. Curtis, soon after the "debate," accepted Shapley's ideas.

More important to him than this "debate" were the discussions in Washington that led to his appointment as the director of the Harvard College Observatory and Paine Professor of Astronomy in 1921.

Shapley then describes the scientific aspects of his work as director. The staff was increased and improved, research programs new to the observatory were started, and a program of instruction leading to the PhD degree was set up. A number of leading astronomers of the present received their training in this program. One of the major accomplishments of this period was the relocation of the southern-hemisphere station of the Harvard College Observatory from Peru to a site near Bloemfontein in South Africa.

In the remaining four chapters, the author briefly describes his extracurricular activities, international contacts, and his experience in mixing science and politics.

Shapley's brief comment on the changes that have taken place in astronomy should be noted: "Astronomy has changed so rapidly in recent years, on account of the invasion on

space science, that my astronomy of the 1920's has become old-fashioned, and I am at times embarrassed about it, even though I do know some things and can talk fast enough to get away with being ignorant."

This book will provide highly informative and entertaining reading for an evening or two; reading it is highly recommended.

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Essays in the History of Mechanics

By C. Truesdell
383 pp. Springer-Verlag,
New York, 1969. Cloth \$4.95
paper \$1.45

A recognized authority in his fields, C. Truesdell has here collected eight of his lectures, delivered between 1950 and 1967, and has equipped them with carefully chosen references and large number of relevant illustrations, from simple diagrams to stimulating halftone portraits and facsimiles from original papers.

Perhaps the most fascinating part of the book is its first quarter, devoted to a new assessment of Leonardo da Vinci's achievements. Here we find documented discussions of questions like "Did Leonardo experiment?" Also discussed is his work on early engineer-

ing, beams, force and motion, fluid mechanics, waves and vortices, plus his method of inquiry, his attitude to tradition and to science and art in general, with a concluding section on Leonardo's fame. About 30 of the book's best illustrations stem from Leonardo's diaries, which are critically examined by the author, often with quite uncompromising decisiveness.

This study is succeeded by a number of equally critical explorations, for instance the "Program Towards Rediscovering the Rational Mechanics of the Age of Reason;" the "Reactions of Late Baroque Mechanics to Success, Conjecture, Error, and Failure in Newton's Principia;" the "Creation and Unfolding of the Concept of Stress;" the problem "Whence the Law of Moment of Momentum?"; the early kinetic theories of gases; the reactions of the history of mechanics upon modern research, and, finally, on some recent advances in rational mechanics.

The hoped-for echo of the book can not be better indicated than by the author's own remark: "If these lectures find any favor with professional historians of science, I shall be humbly thankful for their toleration of a book not intended for them . . ." There are some historians, Truesdell says, who remind him "of those taxonomers, perhaps of only fabulous existence, who cannot recognize a particular plant unless they see a sprig of it dead, dried, and pasted to a sheet of paper. For me, mathematical science is alive today, alive not only in its freshest leaves but also in its branches that reach down to the past. I know young men who have read the words of Gibbs and Kelvin and Stokes and Cauchy, even of Euler and Newton . . . in search of understanding and method, revealed by the speech of giants untranslated by pygmies. For such men, such scientists of our own day, these lectures were composed and are here printed."

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HARLOW SHAPLEY at his famous rotating desk at the Harvard College Observatory during the mid 1940's (Photo courtesy of Niels Bohr Library.)

Cours De Physique Générale: Thermodynamique

By G. Bruhat
888 pp. Masson, Paris, 1968. 98F

Georges Bruhat's five-volume treatise of physics at university level has been a classic in France and French-speaking countries for years, so much that its