

your first move can decide the game your first job can decide your future

That important first job can start you off in the wrong direction—or it can lead you straight toward your goal. If your ambitions are high, Motorola has a place that will give you the *finest* chance possible for the advancement you want. You'll get security and good salary, but, more important, you'll be working on projects with a *future*, like missile guidance, radar, and microwave. The door is wide open at Motorola, and the opportunity to fulfill your ambitions is yours.

If you are an ELECTRICAL ENGINEER, MECHANICAL ENGINEER or PHYSICIST. contact Motorola today.

CHICAGO, ILL.: MR. L. B. WRENN, Dept. CO., 4501 Augusta Blvd. Challenging positions in Two-Way Communications, Microwave, Radar and Military equipment, Television (Color) and Radio Engineering.

PHOENIX, ARIZ .:

RESEARCH LAB., MR. R. COULTER, Dept. CO., 3102 N. 56th St. SEMI-CONDUCTOR DIV., V. SORENSON, Dept. CO., 5005 E. McDowell Rd. Outstanding opportunities in the development and production of Military equipment and Transistor products.

RIVERSIDE, CAL.: MR. C. KOZIOL, Dept. CO., Box 2072 This new modern research laboratory, located 65 miles from Los Angeles, needs men in Missile and Military equipment systems analysis and design.

Contact your Placement Officer for further information regarding interview date on your campus or write to one of the above addresses.



BOOKS

THE EVOLUTION OF HUMAN NATURE

by C. Judson Herrick University of Texas Press \$7.50

> Reviewed by R. W. Sperry Professor of Psychobiology

THIS LARGE volume is divided into two parts, the first dealing with the biological and the second with more specific neurological factors in psychobiology. The whole is a somewhat heterogeneous discussion of diverse issues, findings, and theories relating to the nervous system, behavior, and experience, and to their evolution.

The author, who is professor emeritus of neurology at the University of Chicago, has devoted some 60 years to intensive study of the microstructure of vertebrate brains and has published well over 100 outstanding papers and monographs on his original researches, plus seven books-including his Introduction to *Neurology*, which ran to five editions. and his Brain of the Tiger Salamander, an unquestioned classic in the field of comparative neurology. He is probably the world's most eminent living authority on the apparatus of mind and behavior.

In this latest volume of 34 chapters in 508 pages, Herrick, who is now in his late 80's, surveys some of the more important deductions regarding the biological bases of human nature and behavior which he has drawn in the course of his long, productive career. From the beginning, Herrick's investigations of the brain have been motivated by a deep interest in the nature of mind, and his scientific publications have been intermixed, since the turn of the century, with associated articles in philosophy. Accordingly, the present book, with its epilogue on "The Unknown God," is not another elderly scientist's late fling at philosophy. but represents the matured outcome of an active life-long concern with

> CONTINUED ON PAGE 10 ENGINEERING AND SCIENCE

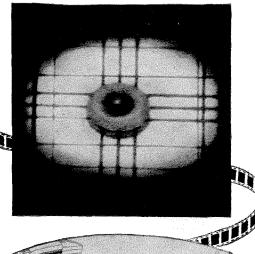
6

another example of exciting work at los alamos...

FAST PHOTOGRAPHY 15,000,000 PICTURES/SECOND

Here at Los Alamos, the development of high speed photography has produced framing cameras of unprece-dented framing rates and exposure times. These cam-eras are capable of taking as many as 90 frames at rates as high as 15 million frames a second. They employ the technique of sweeping the image, reflected from a rapidly rotating mirror, over a set of correcting lenses onto the recording film. This results in the effective stopping of image motion within the frame. In addition to the creation of new optical components, the construction of these cameras has involved the development of techniques for rotating mirrors of substantial size at speeds as high as 22,000 revolutions per second.

Used in a wide variety of research programs as well as in the Laboratory's weapon investigations, instruments such as these typify the excellent resources, in facilities and in the capability for creating wholly new experimental methods, enjoyed by the scientists of Los Alamos



The enlarged frame above shows the collision of a steel ball and an aluminum plate at an approximate velocity of 4 millimeters/microsecond, illustrative of studies of interaction of

metals at high impact velocity. The cutaway drawing shows some of the features of one of

the Laboratory's high speed framing cameras.

OF THE UNIVERSITY OF CALIFORNIA

nos

scientific laboratory

LOS ALAMOS, NEW MEXICO

psychophysical and correlated problems, approached from the vantage point of an intimate and perhaps unequaled working knowledge of brain organization.

The title is not strictly indicative of the content, but perhaps serves as well as any for binding together the collected theories of the author, which touch upon topics that range widely from emergent evolution, morals, and creativity, through psychomechanics and the indeterminacy principle, on down to details of cerebral structure.

Any critical reader is bound to find plenty with which to argue, especially in the first half of the book, where Herrick frequently risks judgment in fields rather remote from his specialty. In any case right, wrong, or incomplete—Herrick's concept of the human mind and its relation to brain mechanism deserves serious consideration by anyone concerned with this paramount enigma, whether it be from the standpoint of science, religion, or philosophy.

A SCIENTIFIC SAMPLER

Raymond Stevens, Howard F. Hamacher, Alan A. Smith

D. Van Nostrand Company, Inc. \$6

For something like 30 years the industrial research firm of Arthur D. Little, Inc., has been turning out a bright, readable, and informative monthly bulletin, which it sends out to clients and other interested parties.

The Industrial Bulletin is chiefly devoted to new scientific developments, but is just as likely to contain articles on anything from pumps to molasses.

This collection of almost 200 articles from the *Bulletin* provides a grab bag of miscellaneous scientific information for the edification of businessmen, laymen, scientists and engineers—and shows why the *Bulletin* has been such a well-read publication for all these years.

ENGINEERING AND SCIENCE