

Annals, Vol. 113, Art. 1, 510 p., illus. paper, \$7. Papers and interdisciplinary discussion by a group of international investigators of biochemical and immunological interactions between host and parasite.

SOUTH-EAST ASIA: A Social, Economic and Political Geography—Charles A. Fisher—Dutton, 831 p., 109 maps, \$15.95. Deals with the series of peninsulas and islands which lie to the east of the Indian sub-continent and to the south of China: Indonesia, Burma, Thailand, Indochina, Malaya and the Philippines.

SOUTHERN FORESTS AND SOUTHERN PEOPLE—Thomas Hansbrough, Ed.—La. State Univ. Press, 115 p., \$4. These papers of the 12th Annual Forestry Symposium focus on the problem of managing people who use forest land and buy forest products in the South.

STRETCHING THEIR MINDS—Benjamin Fine, introd. by Cyril W. Woolcock—Dutton, 255 p., photographs, \$4.95. About a new approach to the education of the gifted child pioneered by the Sands Point Country Day School where children have shown that the first six years of elementary education can be completed in three years.

STRUCTURAL LINGUISTICS AND HUMAN COMMUNICATION—Bertil Malmberg—Academic Press, 210 p., illus., \$9.75. An introduction into the mechanism of language and the methodology of linguistics for advanced students of linguistics, phonetics and communication engineering.

SUPPLEMENT NO. 2 TO PHOTOCOPYING FROM BOUND VOLUMES—William R. Hawken—Am. Lib. Assn., 12 p., illus., paper, \$2. Describes and analyzes the new Copase Duplex Book Copier, the SCM Corporation Wedgeite and the APECO Panel-Lite Exposing Unit.

TELEVISION SYSTEMS MAINTENANCE—Harold E. Ennes—Sams, 288 p., illus., paper, \$5.95.

Comprehensive coverage of TV broadcast maintenance and troubleshooting procedures.

TEMPORAL ORGANIZATION IN CELLS: A Dynamic Theory of Cellular Control Processes—B. C. Goodwin—Academic Press, 163 p., diagrams, \$6.50. Concerned with formulating in mathematical terms a new molecular foundation for a thermodynamic-like analysis of cellular properties.

TRANSISTOR SUBSTITUTION HANDBOOK—Howard W. Sams Engineering Staff—Sams, 5th ed., 128 p., paper, \$1.50. Lists both American and foreign transistors, computer-selected substitutes for all types, and diodes and substitutes for most used types.

THE TRUMAN COMMITTEE: A Study in Congressional Responsibility—Donald H. Riddle—Rutgers Univ. Press, 207 p., \$6. A case study of responsible investigation examining the work of the Senate Special Committee to Investigate the National Defense Program during World War II.

WHERE IS HOSPITAL USE HEADED: Proceedings of the Fifth Annual Symposium on Hospital Affairs—George Bugbee, Chmn.—Health Information Foundation, 97 p., paper, \$2. Examines the trend of increasing hospital costs and increasing ratio of use.

WHY DID THEY NAME IT . . . ?—Hannah Campbell—Fleet Pub. Co., 207 p., illus., \$4.50. Collection of stories about the origins of brand names that have become familiar household words in America.

YEARBOOK OF ASTRONOMY 1964—J. G. Porter and Patrick Moore, Eds.—Norton, 215 p., illus., paper, \$3.95. Contains star charts, monthly notes on planets, eclipses, occultations and comets, special articles and glossary.

• Science News Letter, 85:124 Feb. 22, 1964

PSYCHOLOGY

African Babies Alert

➤ **AFRICAN BABIES** are more vivacious and show more signs of achievement in the first several weeks after birth than European babies, a study has shown.

But this initial advantage is lost rapidly as the effects of traditional customs and imperfect nutrition begin to show, the investigators said.

The study was made by Reginald Dean, honorary professor of clinical investigation at the University of East Africa, and Dr. Marcelle Geber, director of the Child Guidance Clinics of Aisne, France.

Many children born in Kampala, the chief city in Uganda, were given the Gesell test.

This test, developed by the late Arnold Gesell of Yale University, New Haven, Conn., measures the stages of development in babies after the four-week period following birth.

The investigators found the African newborn is so advanced that the Gesell test can be used on them earlier.

The African child shortly after birth shows extraordinary signs of awareness, control and receptivity to his environment, the team reported in *Discovery*, 25:14, 1964.

While the European mother must constantly remind the child that it is feeding, the ability to suck in African children is well-developed.

This is apparent through the child's increase in weight over a measured period. The sucking ability is encouraged by the close and constant contact the child has with its mother.

Suffocation for African babies is not as prevalent as for European babies. Experiments show a child, only 48 hours old, is able to control his head when he is drawn into a sitting position.

Furthermore, an African child noticeably

takes a lively interest in his surroundings much earlier than European children.

Manual dexterity tests showed African children, totally unacquainted with European toys, responded to them with higher scores in the first 12 to 15 months than a European child of the same age.

• Science News Letter, 85:125 Feb. 22, 1964

PSYCHOLOGY

Never Underestimate The Mind of a Child

➤ **THE MIND** of a young child is quicker than you think it is, and can learn far more than we give it credit for.

During the early years, a child's intelligence can be greatly influenced by a responsive environment conducive to learning and exploring.

This contradicts the traditional idea that human intelligence is fixed in a child at birth, and that its development is predetermined by heredity.

Research in understanding the child's learning processes, and the need for revising the American educational system are set forth in the annual report of the Educational Testing Service, Princeton, N. J.

If a parent, teacher or mentor begins to work with a young child early enough, he can exert considerable influence over the

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child's intelligence, Henry Chauncey, president of the Service, stated in his report.

The mental processes of thinking, reasoning, and reacting become established very early in life, even before school, and become a permanent part of the individual throughout his life.

Under favorable environment, a child in the first four years of his life could increase his IQ by about 2.5 points each year. But after he is eight years old, his IQ can develop only about 0.4 points a year, according to an unpublished survey by Prof. Benjamin Bloom of the University of Chicago.

Many preschool children have been unfortunately ignored, Mr. Chauncey said. Latest experiments prove that three-year-old children, who already are performing the rather difficult mental operations of listening and talking, can learn to read and write, tell a story to a tape recorder and type it out as it is played back.

To tap the potentiality that lies in each child, whether he is "gifted," "average" or "retarded," major changes in education and testing should be made. Other forces making such changes mandatory include population increase, science advances, greater awareness of world affairs, and pressures of modern life.

• Science News Letter, 85:125 Feb. 22, 1964

TECHNOLOGY

Optical Device 'Reads' Letters of Alphabet

➤ **AN OPTICAL DEVICE** that can detect and recognize letters of the alphabet and numbers has been developed at the University of Michigan.

Improved devices of this kind could, in the future, feed information from printed documents directly into a computer system, eliminating the change to machine code that must now be done by hand.

The experimental model is based on the discovery that it is possible to build what is called a "complex spatial filter," which makes use both of the phase and amplitude information carried by light.

The device was developed by engineers in the University's Institute of Science and Technology under a joint contract with the Army Electronics Command and the Air Force Avionics Laboratory. The project was headed by Bud A. Vander Lugt.

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