

as it is cultivated by the academic economists and the "action" economics developed by those advisers close to the making of actual decisions. Economists disagree on many points, just as physicians do. The reasons are similar: the lack of firm knowledge in many fields, the infinite complexity of the phenomena studied, the lack of experience with new remedies, and the differing outlooks of those who engage in research and of those who are in practice.

The book covers less ground than its title suggests. Not included are such important policy areas as transportation, public utilities, the development of water resources, agriculture, and the social welfare programs. They too have problems related to the same broad issue—the improvement of decision making by greater reliance on established economic knowledge.

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**A Psychiatrist's World.** The selected papers of Karl Menninger. Bernard H. Hall, Ed. Viking, New York, 1959. xxvi + 931 pp. \$10.

This unique collection of writings is a multifaceted mirror of Karl Menninger's interests and activities through 40 years of his professional career. From the great wealth of his published papers, more than 80 have been selected by a committee of his medical colleagues and published in commemoration of his 65th birthday.

Bernard Hall, who served as the editor, presents vivid commentaries on each division of the book. These divisions mirror Menninger in his activities as a physician, as an investigator, as a psychiatrist, as a psychoanalyst, as a teacher, as a writer, as an administrator, and as a theorist. Both the editor and the committee that selected the papers for this volume have successfully achieved a presentation reminding the reader of a "This is your life" of this great leader in American psychiatry. Menninger has unusual literary talent for conveying his knowledge in a manner understandable to lay as well as professionally trained readers.

*A Psychiatrist's World* documents the development of dynamic psychiatry and the contributions of psychiatry to other disciplines. It is a convincing demonstration of the fact that psy-

chiatry, as a basic science, obliterates the barriers between disciplines involved in human relations. The significance of this is beginning to emerge and may eventually influence the professions to a more adequate understanding of mankind.

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#### **Adventures with the Missing Link.**

Raymond A. Dart (with Dennis Craig). Harper, New York, 1959. xxviii + 225 pp. Illus. \$5.

Rare indeed is the scientist who earns his living in one field but becomes famous in another. Yet anatomist Raymond Dart, who retired last year as dean of the faculty of medicine at the University of Witwatersrand in Johannesburg, achieved international fame in the field of anthropology. His *Adventures with the Missing Link* is the modestly told autobiography of a scientist with great originality and persistence who achieved local success as an anatomist and teacher and worldwide acclaim for his pioneering role in the discoveries of lower Pleistocene australopithecines ("Southern Apes") in South Africa.

Just 35 years ago this month, when he was little more than started in his career as an anatomist, Dart announced in *Nature* his discovery of a fossil intermediate between man and the apes. The international press seized this story of "the missing link" in the chain of human evolution; Dart stood briefly in the limelight, and then the public and professional reaction set in. The first part of Dart's autobiography details his 13-year struggle for scientific vindication, which only came in the late 1930's when more australopithecine fossils were discovered by the late and great paleontologist Robert Broom. But in 1925 Dart's interpretation of the face and brain cast of a juvenile primate as representing an evolutionary development toward man was viewed with caution and some skepticism by his colleagues. The general feeling was that this brash and unorthodox young man had gone well beyond the evidence at hand. One authoritative opinion was that "Dart's Baby," as the press called it, represented only the young of an anthropoid variety close to the modern chimpanzee. In any case, the discovery was considered an important one, al-

though Dart's interpretation of it was placed in the suspense account. Only Robert Broom's discoveries proved that Raymond Dart had been right all along.

Having won his struggle to prove that the australopithecines were anatomically on the road to man, Dart then set about to show they were culturally on the way as well. The second half of the book is concerned with Dart's new struggle to convince the world that he is right again. The australopithecine remains constitute only a fraction of the many thousands of animal fossils blasted from old limestone-filled caves in the Transvaal. The question is, who or what brought these hard parts into the caves? Dart's answer is that the nonrandom distribution of the animal remains demonstrates that the australopithecines brought them into the caves for use as natural tools. Certain bones, tooth sections, and horns could have been employed for a variety of uses—as bludgeons, knives, scrapers, and slitting tools. Since, thus far, none of them can be proved to have been altered by subhuman hand, their use as actual tools is still open to some question. But Dart is convinced the australopithecines were tool-users and coined the jawbreaking term "osteodontokeratic" (bone-teeth-horn) to describe this cultural level. His arguments defending this view are various and persuasive—one being the high proportion of fossil baboon skulls having localized vault fractures that could have resulted from well-placed blows with antelope femur bludgeons. Indirect support for Dart's tool-using claim are the crudely chipped pebble tools from the later portions of australopithecine-bearing strata. Perhaps the earliest man was first a tool-user, then a toolmaker.

Currently Raymond Dart and his co-workers lack sufficient evidence to prove their cultural claims for the australopithecines. Nor can the skeptics marshal convincing evidence for any counter claims. Because of this stand off, *Adventures with the Missing Link* appears to end rather lamely. This is only because the story is not finished. In retirement, Dart is continuing the mining, sorting, developing, and studying of fossils, under a vast research program. With more work he will have more to say, but as he knows full well, no story of prehistory is ever really finished.

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