

## Psychological Development

**Birth to Maturity.** A study in psychological development. Jerome Kagan and Howard A. Moss. Wiley, New York, 1962. xiii + 381 pp. Illus. \$8.50.

When first-class psychologists mine the lode of a systematic and diligently executed longitudinal study of human development, the yield is a valuable and unique contribution to our knowledge of psychological growth during the formative years.

This book reports an investigation whose subjects were 89 individuals born between 1929 and 1939 and enrolled at birth in the longitudinal assessment program initiated at the Fels Research Institute (Antioch College, Yellow Springs, Ohio) by its long-time director, Lester W. Sontag. Observational, psychometric, and interview data were collected regularly for each child and his family until the child reached adolescence. A thoroughgoing adult assessment of 71 of these subjects was conducted when they were between the ages of 19 and 29.

The division of labor between the authors was planned to assure the independence of the childhood data from the adult data. One author scored the longitudinal records, while the other conducted and evaluated the adult assessments in ignorance of the childhood material from his subjects.

The principal characteristics which were scrutinized are passivity and dependency, aggression, achievement, sexuality, and social interaction. Stability and change of these characteristics over time are examined, and their relations to the child-rearing practices of the mother and to social features of the individual's family are analyzed. Although motivation is the central topic, attention is given also to intellectual functioning and cognitive style.

Sex differences dominate the findings. And considerations of sex-typing, sex-role identification, and social definitions of sex appropriateness dominate the authors' interpretations. The data point to the importance of the social sex appropriateness of a given class of behaviors in determining the likelihood that it will remain stable in a person's repertoire.

The authors are of course aware that chance factors played a part in producing some of their "significant" cor-

relation coefficients—thousands were computed—and they buttress their conclusions from these coefficients by reporting some independent replications of their own with respect to some analyses and also by reporting consonant findings from the research of others. In any wide-ranging exploratory study of this sort, however, the need for cross-validation is paramount. The research holds such relevance for much current psychological thinking that we may hope it will find independent replication.

ALBERTA ENGVALL SIEGEL  
*Center for Advanced Study  
in the Behavioral Sciences,  
Stanford, California*

## Engineering Geology

**Reviews in Engineering Geology.** vol.

1. Thomas Fluhr and Robert F. Leggett, Eds. Geological Society of America, New York, 1962. vii + 286 pp. Illus. Plates. \$7.

This is the first volume of a review series planned by the Division on Engineering Geology of the Geological Society of America. The foreword invites criticism of the volume, and in fact the division should give careful consideration to the concept before publishing more of the volumes. A review volume on such a broad and diversified field as engineering geology is almost certain to lack continuity of approach and technique, but this effort suffers more from this than many review volumes. I suspect that the editors were faced with choosing from many articles, few of which were written specifically for the volume, and that a clear editorial policy was never established.

Eight articles are included: engineering seismology (Neumann), Portland-cement concrete petrology (Mielenz), sand and gravel (Lenhart), radioactive waste disposal (de Laguna), rock bolting (Thomas), photographic analysis in engineering geology (Mollard), Soviet publications in engineering soil science (Drashevskaya), and engineering aspects of sediment transport (Brunn). I counted 483 references cited, an impressive number. Unfortunately most of the articles appear to have been written about 1958, and they were not updated prior to publication.

But how many of these topics will interest the reader? The foreword claims the book is intended for use by members of the division, with the hope and expectation that its appeal will be somewhat broader.

Some of the articles are of general interest (I particularly enjoyed de Laguna's), but many others are either too limited or too technical for the general geologic reader. And none of the contributors is very critical about the literature in his special field. This is especially frustrating in the review of recent Russian publications—the titles are impressive, but are the articles any good?

Future volumes in this series would profit from the establishment of some guidelines with respect to purpose and approach. As an alternative to this type of broad spectrum review volume, I strongly suggest a series that considers topics one at a time—that is, a volume of this size devoted to sediment transport, or radioactive waste disposal, or concrete reactions. The Highway Research Board's volume on landslides (1958) is an example of how successful this approach can be.

BATES MCKEE  
*Department of Geology,  
University of Washington*

## History of Medicine

**The Growth of Medical Thought.** Lester S. King. University of Chicago Press, Chicago, Ill., 1963. xii + 254 pp. \$5.50.

Lester King wishes to examine the historical development of ideas concerned with the causes of disease and to relate these ideas to contemporary philosophical tendencies and scientific achievements. He has given attention mainly to selected episodes and to outstanding personalities, foremost among which are Hippocratic medicine, Galen, Paracelsus, Friedrich Hoffmann, and the founders of cellular pathology. There are, however, limitations to the episodic treatment of the history of science and medicine, and this book illustrates them fully.

Presumably the central theme or themes of any work should serve to unite the threads of an extended argument. The author's theme seems to be the changing and developing "patterns