

dozen scattered lines (sometimes only clauses) describing the Pech de l'Azé specimen. This does not mean that the new information is scanty, for later on 53 measurements and 26 indices are listed for the skull, and these are discussed at length in 26 pages of text!

Really, this is a very welcome addition to our knowledge, and my complaint is not about the amount of information provided but about the way in which it is presented. The reader will find it very difficult to piece together the descriptions of the two infants. Some of the space might better have been used for the illustrations. The eight plates are overly crowded, and this makes the individual pictures too small. Besides, the legends for the plates are too brief.

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The Testing of Negro Intelligence. Audrey M. Shuey. J. P. Bell, Lynchburg, Virginia, 1958. 351 pp. \$4.

Representing the most exhaustive literature survey of the intelligence-test performance of American Negroes yet attempted, this book covers over 300 references that appeared between 1913 and 1957. Of these, approximately 170 are published reports of original investigations, 71 are unpublished master's or doctoral dissertations, and the remainder include reviews, critiques, and other interpretative discussions. Except for one Canadian and one British West Indies study, all data were obtained on Negroes living in the United States. Research results are presented in the form of summary tables and text discussion, one chapter being devoted to each of the following: young children (primarily in nursery schools and kindergartens), school children, high-school and college students, the armed forces, deviates (including gifted and retarded), delinquents and criminals, racial hybrids, and selective migration. All varieties of intelligence tests are covered, including group, individual, verbal, nonverbal, performance, and "culture-fair." A few studies utilizing multiple-factor batteries, such as the tests of Primary Mental Abilities, and special aptitude tests, such as the Minnesota Paper Form Board, are likewise reported.

Despite the meticulous care with which minutiae were ferreted out, the treatment of certain studies may be such as to create misleading impressions. For example, in discussing D'Angelo's study (pp. 12, 16, 22), in which no significant Negro-white difference in Draw-a-Man IQ was found, Shuey concludes that the results are uninterpretable because the subjects were selected by nursery direc-

tors and did not comprise all cases meeting the age and language specifications. In actual fact, *all* children who met these two requirements were tested, the nursery directors merely providing the names of those who fulfilled these specifications. It is also difficult to understand why reference is made to D'Angelo's unpublished dissertation but not to the later article, by Anastasi and D'Angelo in the *Journal of Genetic Psychology* (1952), which covered more cases and provided more refined statistical analyses. Similarly, in discussing a study by Boger (pp. 68, 77, 110, 122-3), Shuey fails to mention that intelligence-test scores of Negro children improved more than those of whites as a result of perceptual training. Only the performance of both groups prior to training is reported.

On the whole, Shuey's survey serves only to document the old familiar finding that whites usually excel Negroes in mean intelligence-test scores, although overlapping is extensive and all levels of test performance can be found in both groups. With these purely descriptive facts few psychologists have ever taken issue. The major differences have centered around interpretation. Although Shuey concludes that the data "point to the presence of some native differences between Negroes and whites as determined by intelligence tests" (p. 318), few of the studies shed even a glimmer of light on causal factors, and their results are at least equally consistent with an environmental interpretation of group differences.

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Agricola on Metals. The age of technology waited for better and more abundant metals; it arrived so much sooner because Agricola published *De Re Metallica*, a mining and metallurgical classic. Bern Dibner. Burndy Library, Norwalk, Conn., 1958, 128 pp.

Bern Dibner celebrates the third International Geophysical Year by reducing to a 100-page summary the 600 pages of the Hoovers' translation of *De Re Metallica*. He has presented a straightforward statement of Agricola's observations and theories in their historical context, the Hoover footnotes being, in effect, incorporated in the text. His introductory chapters provide a neat defense of Agricola and his works.

There is much to be said for digesting a classic such as *Agricola* in order to make available a complete presentation of the text for those who otherwise find the Hoover volume inaccessible or too expensive, or who seek information about

the background of the well-known woodcuts; but it is hoped that *Agricola on Metals* will not entirely replace *De Re Metallica* on the reference shelves, since it would be a pity if the painstaking scholarship of the Hoovers were forgotten.

The plates reproduced are well chosen and representative, though they would have been improved if Dibner's useful explanatory notes had been added to the original captions.

I would question Dibner's explanatory subtitle and ask, How much sooner did the age of technology arrive because Agricola published *De Re Metallica*? Before the Hoovers revived the book in 1912, there had apparently been no edition of *Agricola* since 1687. The German translation prior to that of 1928 was, according to Hoover, "a wretched work by one who knew nothing of the science" and who was clearly unqualified to unravel the technical mysteries of the original text. *De Re Metallica* could hardly have been a vade mecum for the practical man, even in Germany. If it had been popular, one would expect to find a record of frequent republication and revision, just as Andrew Ure's *Dictionary of Arts, Manufactures and Mines* was kept more or less up to date in the early days of the 19th century. No evidence is presented by Dibner that this happened. One suspects that while *De Re Metallica* now provides us with a useful account of the state of the art at the end of the 16th century, the work had little or nothing to do with technological progress of the period. Though it may have helped to spread knowledge of the operating techniques described, the more aggressive miners and smelters probably went on with their job of improvising, modifying, and sometimes innovating, little affected by Agricola's report. There is room for more research in the history of 17th- and 18th-century mining and mineral processing before it can be confidently assumed that Agricola did, in fact, accelerate technological advance.

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Applied Differential Equations. Murray R. Spiegel. Prentice-Hall, Englewood Cliffs, N.J., 1958. xv + 381 pp. Illus. \$6.75.

This book would serve, and serve well, as a text for a beginning course in elementary ordinary differential equations. The usual special types of first and higher ordered equations are treated. Single and simultaneous equations with constant coefficients come next; then series solutions and a brief chapter on