

Behaviour and Physique. An introduction to practical and applied somatometry. R. W. Parnell. Arnold, London, 1958 (order from Williams and Wilkins, Baltimore, Md.). viii + 134 pp. \$7.

In line with the author's emphasis, expressed in the subtitle of his book, I shall limit this review to consideration of Parnell's technique for classifying body build. Parnell's master is W. H. Sheldon, author of an influential work on human taxonomy [*Varieties of Human Physique* (Harper, 1940)] based on considerations of body shape and aimed at describing physiques and the possible relationship of body type and behavior. Sheldon's "components" of physique (endomorphism, mesomorphy, ectomorphy), defining the somatotype, are complex concepts. Thus, *endomorphism*, a term usually used to describe roundness of physique and the capacity of the body to store fat, according to Sheldon's definition covers a good many other morphological characteristics (short limbs, small hands and feet, chest wide at the base, head almost spherical, genitalia tending to be hypoplastic). These morphological features are thought to be discernible even when exercise, nutrition, age, or disease change the "padding."

Parnell retains the main architecture of Sheldon's system but makes two important modifications. (i) Physical anthropometry is used systematically in conjunction with, or instead of, inspection of standard photographs. (ii) Although Parnell undertook to approach closely Sheldon's estimate of somatotypes, he labeled the components of physique *fat*, *muscularity*, and *linearity* in place of Sheldon's *endomorphism*, *mesomorphy*, and *ectomorphy*. A similar system of classification, differing only in that ratings of fat and muscularity were derived from photographs rather than from body measurements, was developed in the late 1940's by E. A. Hooton and his associates at Harvard University.

It is unfortunate that Parnell retains a definition of *linearity* (heir to Sheldon's *ectomorphy*) based on the height/ $\sqrt[3]{\text{weight}}$ index. This is a poor concept because weight includes both fat and muscle, and Parnell had already used these to define his first two components of physique.

In the interest of making the body-build classifications for adult individuals of different ages comparable, the author provides four separate age scales for evaluating "total fat" (the sum of three

skin folds); three age scales for correcting the contribution of subcutaneous fat to the appraisal of muscularity; and six scales for determining the ponderal index—a criterion of linearity. These age corrections, especially those for the fat component, are based on samples that are too small.

Strangely enough, the principle of equivalent percentiles, accepted for identifying physiques differing on account of age, is not applied to the differences associated with sex. Small wonder that an overwhelming majority of women students from the universities of Oxford and Birmingham turn out to be endomorphs—*F*'s (for *fat*) in Parnell's notation!

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Gmelins Handbuch der Anorganischen Chemie. System No. 5, supplement: *Fluorine*. xviii + 258 pp. 1959. \$36. System No. 15, part C: *Silicon*. xii + 501 pp. 1958. \$67.44. System No. 59, supplement 2, part D: *Iron. Magnetic Materials, Magnetic and Electrical Properties*. xxxviii + 580 pp. 1959. \$78.24. Verlag Chemie, Weinheim, Germany. Illus.

The supplementary volume on fluorine, three times the size of the main volume published in 1926, contains the information gained in this rapidly growing field during the subsequent quarter of a century. The material covers the occurrence of fluorine; its preparation, physical properties, electrochemical behavior, chemical reactions, toxicity, detection, and determination; and the compounds of fluorine with hydrogen, deuterium, oxygen, and nitrogen. The enlargement in the scope of the presentation indicates the increase in interest in fluorine that has occurred since 1926.

Part C of the volume on silicon is devoted to the chemistry of the non-mineral compounds of silicon, usually referred to as organosilicon compounds. The major part of the volume contains information on the preparation and properties of silicon-hydrocarbon compounds. These are grouped as follows: tetraalkylsilanes, alkylhydrogensilanes, alkylhalogensilanes, alkylalkoxysilanes, alkylsilanoles, alkylsilicic esters, alkylsiloxanes, alkylthiosilanes, alkylaminosilanes, and alkylsilazane. More than 3000 compounds are described, either separately

or through listing of their characteristics in tables.

In addition, the subject of silicones is treated in detail; the discussion includes the more significant applications of silicone oils, pastes, greases, and resins, as well as the uses of silicone rubbers.

The special volume on the magnetic and electrical properties of magnetic materials constitutes a supplement not only to the volume on iron but also to those on cobalt, nickel, manganese, and chromium. Since ferromagnetic materials were covered in earlier volumes [*Iron*, part A (1934); *Iron*, part D, with supplement No. 1 (1937); *Cobalt* (1931); *Platinum*, part A; *Gold*; *Aluminum*, part A; and *Magnesium*, part A], the supplementary volume contains only the data for the period subsequent to publication of the volumes cited. Twenty-six pages are devoted to iron, 121 to alloys of iron, 11 to cobalt, 13 to alloys of cobalt, 63 to nickel, 42 to alloys of nickel, 22 to alloys of manganese, two to alloys of chromium, and 121 to ferromagnetic semiconductors.

The volume on silicon contains a subject index to compounds, while that on the magnetic materials features a 66-page section on patents, in addition to an index of alloys. Each of the volumes that appeared in 1959 includes a bilingual table of contents, and all three volumes have marginal headings in English. This feature is of great help to non-German scientists and, in addition, supplies them with a valuable glossary.

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The North Alaskan Eskimo. A study in ecology and society. Bureau of American Ethnology Bulletin 171. Robert F. Spencer. Smithsonian Institution, Washington, D.C., 1959 (order from Government Printing Office, Washington, D.C.). 490 pp. Illus. Paper, \$2.50.

This study is based upon two summers of research at Point Barrow, Alaska (1952 and 1953). It is a thoroughly professional and detailed account of the customs, beliefs, and behavior of the largest single group of Eskimos in northern Alaska, as these were reconstructed through reminiscences of the elders in the village.

Point Barrow became a base for whalers after 1850, and thus there has