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Book Reviews

1. HUMAN BIOLOGY AND PATHOLOGY

Der Konstitutionstypus. By KLAUS CONRAD. Springer-Verlag. 1963. Pp. 242.

The author, one of the leading German psychiatrists, and since he was still very young, a psychiatrist of great promise, died suddenly last year. The present second edition of his book appears posthumously, though the author did complete it himself and gave it a new foreword. In it he complains that hardly anyone had taken notice of the first edition since its appearance in 1961. It had received neither praise nor criticism. The only author who had seriously discussed the book was—and still is as far as I know—Jaspers, in the last edition of his *General Psychopathology*. In fact the critical discussion it receives there by Jaspers leaves hardly anything to be added. Jaspers says that with this book . . . "the teachings on constitution have entered a new era". He believes that Conrad's theories, having grown out of Kretschmer's work, surpass and replace it.

The most important difference between Kretschmer and Conrad is that whereas Kretschmer describes, Conrad offers an explanation. The explanation is that the body types, the personality types and diseases are related to each other, because of genetically determined basic factors. These basic factors are thought to be growth tendencies. Since the language of genes has only a "yea or nay" vocabulary, any characteristic can only be present or absent. Kretschmer's three-cornered typology is incompatible with genetics, and therefore is replaced by a system of two dimensions, with bi-polar characteristics. The first dimension shows on the one pole the pyknic (pyknomorph) type and on the other the leptomorph, which differs somewhat from the leptosome of Kretschmer. The criterion of this dimension is the shifting proportion between longitudinal growth and growth in girth. The balanced shape which occupies the centre of the dimension is the metromorph. The athletic of Kretschmer does not lie on this dimension at all but on the second of Conrad's dimensions, of which the criterion is simple tissue growth or the lack of it, i.e. bulk. The two poles in this case are occupied by the hyperplastic (athletic) and by the hypoplastic (or asthenic) types. The leptosome of Kretschmer's three-cornered model is now seen to be a mixture of the hyperplastic leptomorph (the long-distance runner) and the hypoplastic leptomorph (the typical asthenic), together represented as a single type. In Conrad's model, the two dimensions are at right angles to each other and each individual can be placed in his appropriate position in the field determined by the abscissa of leptomorph-pyknomorph and the ordinate hyperplastic-hypoplastic. There is finally a tertiary set of variants, bringing about the dysplastic forms, which is dependent on endocrine and other similar factors and is clearly of a different order.

Conrad conceives these genetically determined tendencies to reflect the ontogenetic polarity of infancy and adulthood. The pyknomorph is not only morphologically but also physiologically closer to the child, the leptomorph to the adult. The pyknomorph is, therefore, an extreme expression of a conservative, the leptomorph of a propulsive growth tendency. As extremes, they are both aberrant developments, in the sense of having diminished their potentialities, having "specialized". It is the metromorph showing the balanced growth who retains the maximum potentialities, and is therefore phylogenetically the path to the future. A short review cannot do justice to the ramifications of this grand design, nor to the ingenious way in which the idea is argued in detail in its various aspects, be they the genetical, the morphological, the physiological or the characterological aspects, or the relationship to illness, whether physical (like diabetes, hypertension, arthritis) or mental (personality disorder and psychosis).

In the latter respect, although a good deal of research has gone into this field, it is probably fair to say that only the most tenuous results have emerged. This applies particularly to the relationship of body-build and personality, where for almost every worker the starting-point has been in the arts, with their intuitive perception of symbolic form. Kretschmer, himself, begins his book on *Body-build and Character* with the quotation from Shakespeare's *Julius Caesar*—"Yond Cassius has a lean and hungry look . . . such men are dangerous", and he goes on to say, "a conspirator is a hunch-back and coughs behind his hand; the old witch has a thin and bird-like face, etc.". We are immediately convinced by this bodily symbolism. In fact no painter, no novelist, no caster for films or plays could work without it.

And yet how disappointing are the results when objective proof is sought through the mundane task of measuring body-dimensions in patients with differing personalities or different illnesses. What is the reason for this discrepancy—for the power of immediate conviction on the one hand, which the figures of a Falstaff or a Cassius convey, and the tenuous, much less convincing contrasts which the anthropometrist finds on the other?

Workers like Kretschmer, Sheldon, and Conrad believe that the artist has an intuitive precognition of a real causal relationship. They believe that not only the Falstaffs of the stage but also those of this world must be pyknic, following a law of nature as yet incompletely understood. But can it be that body-build merely *suggests* a connection with character, the connection existing only in the mind of the beholder? Can it be that to look for *objective* relationships here is like examining the physical events that give rise to the rainbow in order to find out why it conveys those feelings of peace and reconciliation for which it has become a symbol, one which in the hands of the artist is always used with such telling effect?

One thing, however, is certain—the growing field of medical research which concerns itself with constitution cannot afford any longer to ignore Conrad's work. Future studies on constitution will have to take note of his re-classification of body types. It will be interesting to see how they relate to other constitutional typologies such as Eysenck's introversion-extraversion scale, and the vast amount of experimental work derived therefrom.

J. HOENIG.

Human Ageing: A Biological and Behavioral Study. Edited by JAMES E. BIRREN, ROBERT N. BUTLER, SAMUEL W. GREENHOUSE, LOUIS SOKOLOFF and MARIAN R. YARROW. U.S. Department of Health, Education and Welfare. Public Health Service Publication No. 986. 1963. Pp. 328. Price $3.00.

At the National Institute of Mental Health, Bethesda, Maryland, 22 investigators and their collaborators studied a small group of aged men, who had been selected from a large number of volunteers because they had appeared healthy on preliminary screening. The research group was composed of physicians and physiologists who were experts in the area of cerebral functioning, of general physiologists, psychiatrists, psychologists, sociologists, and statisticians. Their separate researches are reported in 13 chapters, and in two final chapters interrelations between various disciplines and an interpretive summary are given.

In the light of intensive examinations, the sample of 47 men over 65 (mean age 71) had to be subdivided into two groups. Group I contained 27 men in optimal health, but in Group II, which comprised the remaining 20 subjects, mild and as yet asymptomatic disorders were discovered. Subjects were studied for 14 days as residents of the Clinical Centre of the National Institute.

Confining this review to neuro-psychiatric matters, optimally healthy elderly subjects did not differ significantly on measures of cerebral blood flow and oxygen consumption from normal young subjects (mean age, 21). There was, however, a decline of both functions in elderly subjects with asymptomatic disease. This could be accounted for by the results obtained in those subjects within Group II who were classed as arteriosclerotic on account of some or all of the following: (1) evidence of arteriosclerotic heart disease (e.g. of bundle-branch block or of evidence of old myocardial infarction; (2) X-ray findings of calcifications in the thoracic aorta; (3) partial obliteration of peripheral circulation. Retinal arteriosclerosis (as the only fundal finding) and hypertension alone were not accepted as evidence of arteriosclerosis. It is, therefore, suggested that decreases in cerebral blood flow and oxygen consumption were not the consequences of chronological ageing *per se*, but rather of arteriosclerosis, which caused first a relative cerebral circulatory inefficiency and hypoxia, and then ultimately (perhaps after secondary tissue damage) the reduction of cerebral metabolic rate found in elderly hospital patients with "chronic brain syndrome" (dementia). By contrast, electrical activities of the brain underwent changes with age (mainly slowing of α-rhythm) which were unrelated to the presence or absence of as yet asymptomatic physical disorders. Focal EEG abnormalities were much more rarely discovered than in other studies of elderly subjects.

On the psychological side, verbal ability was if anything found to have increased with age, but slight deterioration appeared to have occurred in subjects with asymptomatic disease, and this decline correlated with values of cerebral metabolic rate of members of Group II. In comparison with younger controls, significant but equal slowing was observed in both healthy and somewhat less healthy elderly subjects. This slowing was widely spread, affecting perceptual, associative, and psychomotor functioning. For this reason, it was thought to be due to lowering of subliminal cortical excitation associated with advancing age rather than a result of widespread cerebral damage. It might originate from a lowering