

*The Psychology of Medicine.* By T. W. MITCHELL, M.D. London: Methuen & Co., Ltd., 1921. Crown 8vo. Pp. 187. Price 6s.

Dr. Mitchell is peculiarly well fitted for the task he has undertaken in this little volume, as he was first interested in psychotherapy at a time when the subject was scarcely recognised by the medical profession. Most of the pioneer work was done by the Psycho-Medical Society and the Society for Psychical Research in this country, and interest was then mainly directed to hypnotic states and hysterical dissociations along the lines of Janet's researches, first published in *Automatisme Psychologique*, and followed up by the studies of Morton Prince and Boris Sidis. Since these days much progress has been made, and Dr. Mitchell has followed closely the transformations in psychopathology during the last twenty years. The development of his own attitude enables him to give an excellent historical account of his subject, and he here traces the trend of thought from the time of Mesmer to the work of Braid, Charcot, Lieubault, Bernheim and Pierre Janet, up to the more modern conceptions of Freud and Jung. As the book is definitely didactic and elementary in its aims its contents do not call for special comment. It includes an even and well-balanced account of opposing schools of thought, and may be safely recommended as a useful introduction to psychopathology.

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### Part III.—Epitome of Current Literature.

#### 1. Psychology and Psycho-Pathology.

*On Testing the Intelligence of Normal Persons* [*Ueber Intelligenzprüfungen an Normalen*]. (Kraepelin's *Psychol. Arb.*, Bd. vii, Heft 1, 1920.) Lange, Johannes.

The main object of this investigation was to obtain a standard for use in testing the intelligence of defectives and hebephrenics at the Psychiatric Clinic at Munich. The performances of such patients to a test of their intelligence cannot be safely judged unless it is known what result a corresponding test will yield in a normal person of the same stock.

In 1905, at Kraepelin's instigation, a list of 170 questions in use at the Clinic was therefore set as an examination paper to 500 recruits in the Munich garrison. The questions were to be answered in writing, at two sittings with an interval of a week. The first part of the examination comprised 19 questions as to name, age, and simple matters of personal and family history, 28 as to orientation in time and as to simple time concepts, and 22 as to spatial orientation and spatial concepts. The second part comprised 27 very simple arithmetical questions, 64 elementary questions on natural history, religion, history, geography, military service, social life and purely practical matters, and 10 questions involving ethical concepts and judgments. The answers have come into the hands of Lange, who in this interesting paper of 153 pages gives an elaborate analysis of the results.

He found that 31 of the questions made their appeal chiefly to the examinee's judgment; the answers to these were subjected to special study. Other questions, involving more or less subsumption, were taken as affording some measure of the stock of ideas. Lange considers first the numbers of right and wrong answers to the questions taken severally, and on these he makes many observations too miscellaneous to be fairly sampled. Let us note, however, that the request to name towns in Upper Bavaria brought replies averaging only 2.5 towns, that 144 men were far out in their estimates of the length of the middle finger, and that 100 could not give the length of a kilometre. These three results, Lange says, show three kinds of wide-spread defect: a miserable narrowness of the geographical horizon, an inability to apply the simplest natural instrumental aids, and an absence of concepts that we might have supposed to be indispensable. Only 195 men could give approximately the date of the founding of the German Empire; 190 did not know who Bismarck was. As for questions on social life, though 327 men gave passable answers to the question what police are for, far below 50 *per cent.* could indicate the kinds and purposes of courts of law, or the purposes of taxation. For ethical concepts and judgments the results were somewhat better, but many men failed where a thing was not quite self-evident; thus, only 173 could give any ethical reason why it would be wrong for a man to set fire to his own house. But the questions that yielded the worst results were questions of difference, and questions appealing directly to the judgment; none of these, except the question why houses are built higher in towns than in the country, brought more than 40 *per cent.* of right answers. Only 48 men could give an appropriate answer to the only question involving definition of a concept—the question what faithfulness is.

The investigation showed that most of the men could be trusted only for such knowledge as touched their most immediate personal conditions of life and was indispensable for immediate practical purposes. Anything beyond this is in the possession of a percentage that is the smaller the less necessary such knowledge is for protecting the individual against daily risks. So we find lack of interest, laziness of thought, want of adaptation to the question, inability to enter into any question where daily need does not compel. The poorness of the results is due, not to sheer inability, but to absence of intellectual needs. We can now see what those questions are that we may expect to be answered correctly by a normal man. The questions that brought over 90 *per cent.* of correct answers numbered 71, of which over 20 may be ignored as relating merely to personal particulars of the simplest sort; of the other 40 odd, there is hardly one that was answered correctly by everybody. There is no single question where failure to answer indicates weak-mindedness. We must judge not by details but by the total performance.

Yet we must not judge solely by total marks. Identical totals may be produced in different ways. One man may score on the information he possesses, another on his judgment. Men equal in information may differ as regards judgment, and *vice versa*. Lange plots a curve, representing information results and judgment results by ordinates and

abscissæ respectively. For each value of total marks for information he plots the corresponding judgment average. Similarly for each value of total marks for judgment he plots the corresponding information average, and so obtains a second curve. The curves show that there is some amount of correspondence between the information results and the judgment results. But how much correspondence is there? This can be expressed as a coefficient of correlation, according to a mathematical formula that has been given by Spearman. The coefficient for the correlation of information with judgment is thus found to be 0.71. (If the correspondence were exact the coefficient would be 1.) In the same way Lange obtains coefficients for correlation of information with total performance, and of judgment with total performance. These work out at 0.94 and 0.83 respectively. The figure 0.94 has little importance, and is very much what we should expect, seeing that the information questions composed the great bulk of the paper. But the figure 0.83 is very noteworthy; it is remarkably high, if we consider how few judgment questions there were; it shows in a striking manner the great value of such questions as a test of intelligence. In any future investigation of this kind the questions that appeal to the judgment should form a greater proportion of the whole; and, as it is important that we should be able to disentangle the judgment results from the information results, the judgment questions should necessitate as little information as possible. If there are sufficient well-designed judgment questions, it is not necessary to put very many information questions. We gather that where we find a fair amount of judgment there we must expect to find also a sufficiency of information for that person's conditions of life.

Lange makes other criticisms of this list of questions, and he adds a proposed list of his own. This comprises 30 questions on school knowledge; 20 questions on practical matters (*e.g.*, price of bread), economics (*e.g.*, health insurance cards), politics (*e.g.*, the process of legislation, the aims of the Social Democrats), and the administration of justice; 7 questions on ethical ideas; 8 definitions of concepts (plough, uncle, courage, etc.); from a list of 21 words group together those of similar meaning; name as many forest trees (beasts of prey, metals) as you can; what, collectively, are hammer, anvil, saw, tongs and drill? (2 questions of this type); name all the red things, all the transparent, all the elastic things you know; name all the properties of sugar, and of water; name all the parts of a tree, and of the human body; arrange, in a rational order of time, "doctor, football match, cure, bandage, broken leg, convalescence, fall" (4 such puzzles); of 10 given proverbs, group together those of somewhat similar meaning; mention the differences between ox and horse, glass and wood, etc. (7 pairs); arrange the following jumbled words so as to form a sentence (2 examples); in the following passage mark the places where the words do not make sense; supply the missing words (nouns and verbs) in the following narrative; in the gaps in a second narrative insert appropriate connecting words (prepositions and conjunctions).

With the help of tables and curves, Lange considers the results of the present investigation in various other ways. Among other things he considers the results in relation to the different kinds of schooling

that the 500 men had enjoyed, the different kinds of previous employment in civil life, and the inevitable processes of selection that had been at work to produce this batch of 500 men—processes by which men more highly endowed had been reserved for higher walks of military life, and by which, on the other hand, obvious imbeciles had been excluded. He considers, in various lights, the possibility that some of these 500 should be regarded as weak-minded. He gives some brief critical remarks on some conclusions that would be reached by applying to this material certain supposed criteria of weak-mindedness.

SYDNEY J. COLE.

*On the Biological Basis of Sexual Repression and its Sociological Significance.* (*Brit. Journ. of Psychol., Med. Sec., July, 1921.*)  
Flugel, J. C.

Psycho-analysis has shown that repression is due to intraphysical conflict; the exact nature, however, of the forces which produce the repression and the circumstances under which they act have hitherto not been adequately studied. Freud speaks of the ego-trends as constituting a source of instinctive energy which frequently acts in opposition to the sexual trends, but light has not been thrown upon them to anything like the same extent as upon the libido. By the study of repression from the biological point of view a deeper insight into its nature can be determined.

The biological factor, which is the thesis of this paper, consists "in the existence of a necessary biological antagonism between the full development of the individual and the exercise of his procreative powers—between *individualism* and *genesis*, to use the terms employed by Herbert Spencer—an antagonism of such a kind that (other things being equal) the energies devoted to the life activities of the individual vary inversely with the energy devoted to the production of new individuals. The relative amount of energy devoted to the two ends is determined (within the limits imposed by individual modifiability and racial variability) by the action of *natural selection*, there being some influences which favour the devotion of energy principally to purposes of *individuation*, while other influences favour the devotion of energy principally to purposes of propagation; so that there is brought about (within the individual and within the race) a struggle between the two lines of development corresponding to the two conflicting influences of the environment, this struggle manifesting itself within the mind as a conflict between sexual tendencies on the one hand and the self-preserving and self-regarding tendencies on the other; a conflict as the result of which there takes place the general sexual inhibition with which we are here concerned." The true meaning of the antagonism between *individuation* and *genesis* only becomes manifest when we bear in mind the tremendous influence of the struggle for existence, as revealed by Malthus in its operation on the human race and by Darwin in its application to all forms of life. On the psychological side the sexual (and parental) instincts correspond to *genesis*, and the sublimation of these to *individuation*. At present the human reproductive tendencies and capacities are greater than is biologically advantageous.