

The Subjective Character of Cognition and the Presensational Development of Perception. By R. B. CATTELL, B.Sc., Ph.D. *Brit. Journ. of Psych. Monogr.*, Supplements XIV. Cambridge University Press, 1930. Royal 8vo. Pp. viii + 166. Price 12s. 6d.

This is a thesis presented to the University of London for the degree of Doctor of Philosophy. The author set himself the following three problems for investigation: (1) The problem of primary sentience: Is our first experience of sensory stimulation truly one of sensation, or is it merely and essentially a subjective mental state? (2) the problem of clearness variation of cognitive items; (3) the question of the objective and subjective experiencing of a stimulus. The term "subjective" is not used in the usual sense of a subjective experience in general, *i.e.*, in its totality, but applies to "the subjective experiencing of that class of processes or events which are normally objectively cognized—namely, percepts." However, although the author defines many of his terms, he appears often to forget his definitions, and uses terms like "sensation," "percept," "feeling," "affect," etc., with varying connotations, so that it is often difficult to follow his arguments. After discussing the work of Spearman, Phelan and Wohlgemuth, the author describes his method of investigation, which was mainly introspective. The observers were all highly trained introspectors, which may excuse the fact that the instructions given to them were not always entirely free from suggestion; in the circumstances suggestion would possibly not be effective. The protocols were taken down immediately, and the psychogalvanic reflex was also used. A number of stimuli were devised affecting the various senses and were presented during various attitudes on the part of the observers, and under varying conditions. In order to obtain quantitative results, the author, in the examination of the protocols, distinguishes besides a primary and a pseudo-primary subjectivity four degrees of secondary subjectivity, and also a variety of the second degree which he calls "background subjectivity." Numerous extracts from the protocols are quoted throughout the thesis to illustrate the conclusions arrived at.

In the third chapter the psychical correlate of the psychogalvanic reflex is shortly discussed, and the author adopts Aveling's view that it is more nearly proportional to the conative elements in any experience than to the affective or cognitive elements.

The fourth chapter is concerned with the study of the uncontrolled factors in the development of subjective experiences. The summary of the results is somewhat inadequate. It is stated that "it is interesting to notice how readily these results are explicable by Prof. Spearman's hypothesis of general mental energy."

The fifth chapter describes "the first specific inquiry: the nature of subjective or pathemic experience." The term "*pathemic*" (from Plato's *πάθημα*) is introduced here for subjectively experienced perception as distinguished from "*contemplated*"

for objectively experienced perception, without adding much to the clearness of the exposition. Various modes of producing subjective and objective experiences are then described, and the characteristics of these experiences are illustrated by quotations from the protocols.

We next come to "the second specific inquiry: the description of the primary subjective state," supported by copious quotations from the protocols. The author then indulges in some interesting speculation as to the various stages of consciousness from the moment preceding stimulation to perception, which he illustrates by diagrams. He distinguishes six of these stages, *viz.*, (1) the pre-stimulus dual consciousness with a subjective side (self) and an objective side; (2) the subjective discord in which there is subjective change and unrest; (3) the stage of the transitional subjective nucleus, in which the objective side disappears and withdraws itself upon the changing subjective background; (4) the flux and sub-subjective intrusion; (5) the sub-subjective intrusion absorbs the flux, forming a new centre of consciousness—the subjective nucleus; (6) the final result is the stimulus-perception dual consciousness. A pretty pictorial metaphysical speculation.

"An attempt to obtain objective evidence as to the existence and character of primary subjective experience" is the subject-matter of the seventh chapter. It was assumed that motor or muscular reactions were motivated by the subjective change in consciousness which is alleged to be the primary effect of sensory stimulation, whilst in sensory reactions the response is to a more or less clear sensory perception. From these premises it is quite logically argued: "Now if, in motor reactions, the subject responds to this first state, which is said to have no modality character, we should expect that he would respond equally well (by mistake) to stimuli of different modality from those to which he was set to react, if these 'false stimuli' were interspersed among them. Further, we should expect that the actual time of reaction for these 'false stimuli' would be that of the motor reaction for that particular modality for that subject, since, if it were longer, the subject would presumably have perceived its modality and, realizing its modality to be other than that to which he was supposed to react, he would not have reacted." The latter part of this inference, as the author admits, is presumptive. There were five observers, who took part in two series each of 600 experiments.

The eighth and last chapter contains a "Consideration of Relevant Researches, a Discussion of Nomenclature and a Statement of Final Conclusions." Investigations by Spearman, Bichowsky, Dickinson, Martin and G. Bose are discussed. As to the "suggestions for a clearer nomenclature," it is pleasant to see that the author has definitely accepted "affect" as the generic term and "feeling" as the specific term for the elements "pleasure" and "unpleasure." He is, however, mistaken when he says that the tendency to restrict the term "feeling" to pleasure—unpleasure was shown, *perhaps unconsciously*, by Wohlgemuth and Phelan.

Wohlgemuth is most emphatic and explicit upon this point and discussed it at length in several papers,* where he coined the term "unpleasure" to correspond to the German *Unlust* to take the place of the older English term *pain*, the use of which has caused the greatest confusion in English psychological literature. Phelan deliberately adopts this nomenclature. It is quite natural to find a tendency in an author to apply the results of his investigation in the elucidation of other phenomena, but our author is not very fortunate in his suggestions. The whistling incident described on p. 155 can easily be explained by a want of attention. Hypnosis and paramnesia † have found more acceptable interpretations.

In a final summary, over forty conclusions are given, of which only a few can be quoted :

"The normal perception of stimuli as objective is liable, under certain conditions, to undergo modification, whereby the stimulus sensations are no longer experienced as over against the self, localized, contemplated and meaningful, but come to fuse with the subjective side of consciousness and constitute the self, so that duality disappears and the whole of consciousness is filled by the 'sensation.'

"In moderate pathema other sensations (than those in process of subjectivation) may still be cognized perceptually in the field of consciousness."

"With the onset of complete pathema, sensation and affect fuse and become indistinguishable."

"If affect of any kind accompanies the experience in the percept stage it almost invariably undergoes a marked change of intensity on pathemization."

"There is difficulty in recalling and describing pathemic experience, which is greater the more complete the experience has been, and which renders profound pathemic experience almost unretrospectable."

"The most powerful factor in the causation of pathemic experience is passivity."

"Pleasant sensations are more readily pathemized than unpleasant ones."

"In the moment preceding the (objective) perception of any stimulus there occurs a purely subjective, pathemic experience, which varies somewhat in character and duration according to the nature and intensity of the stimulus and the mental condition of the subject in the moment before stimulation."

"Pre-sensation is more often unpleasant than pleasant."

"Pre-sensation is more frequently found in those cases in which there is a rapid or almost instantaneous development of affect."

This is a very carefully planned and executed investigation.

* A. Wohlgemuth: "On the Feelings and their Neural Correlate, with an Examination of the Nature of Pain," *Brit. Journ. of Psych.*, 1917, viii, p. 437. "Pleasure—Unpleasure," *Brit. Journ. of Psych.*, Monogr. Supplements, 1919, xiv.

† A. Wohlgemuth: "On Paramnesia," *Mind*, 1924, n.s., No. 131.

The results are as interesting as they are important, but, of course, all depends upon the observers (their task here has been one of unusual difficulty) and their complete freedom from any bias

A. WOHLGEMUTH.

The Science of Living. By ALFRED ADLER. George Allen & Unwin, Ltd., 1930. Large crown 8vo. Pp. 264. Price 8s. 6d. net.

In this book, as in many of his recent writings and speeches, Adler has placed special emphasis on the social aspects of psychology. He claims to have laid down the first principles of a formative and scientific psychology, which will eventually lead to the complete reformation of culture and society. Thus the study of psychopathology has been replaced by a much more ambitious and far-reaching quest.

Adler believes that every personal "movement of life" is an articulated part of the individual attitude to life; that "nothing moves with aimless feet"; but that the "early personality," or prototype, is developed by the age of four or five, and that the subsequent career of the individual is conditioned by it. Hence it is possible to predict what response will be made to the demands of society, and to such problems as marriage or occupation. An ill-begotten prototype is the cause of anti-social reactions. It is this that produces the egotistic instead of the communal character.

There seems to be no limit to the application of individual psychology. Adler holds that most mistakes in life can be remedied once the prototype traits have been illuminated. He even conceives of an advisory council "which would untangle the mistakes of matrimony by the methods of individual psychology." The task of the parent, educator or psychologist is to make social needs plain to the person with an asocial prototype.

A sense of inferiority is natural to the race, he believes, and where it is not exaggerated by early circumstances it may stimulate a man to useful and successful participation in the struggle of life; but where it is over-developed it leads to cowardice, a sense of false values and a retreat to the "useless side of life." This is at the root of all crime and mental enfeeblement.

The clue to character is to be found in early memories. Whether forgotten or merely inexplicable to their possessor (Adler lays no special stress on repressed memories and their significance to other psychologists), they are of primary importance.

It is legitimate to expect some reasoned advice on treatment in such a book as this, but we do not find it. The neurotic is, as everyone admits, asocial; but how can he be most usefully assisted? Adler says only that we must penetrate into the personality of the neurotic "in a manner which will disarm his preconceptions" by the aid of "a certain art and a certain tact."

What, again, is the process by which we can rebuild the courage