perhaps be more plausible were it not based to some extent on anatomo-physiological considerations which are open to obvious objections. The authors rely on the presence of vasomotor nerves on the vessels of the central nervous system as being "definitely proved," whereas the recent researches of Florey render their existence more problematical than ever, and Leonard Hill has shown that if they exist their power must be entirely insignificant. For the exteriorisation of the centrally produced movements anatomical paths are postulated the existence of which is unproven, and old experiments of Bechterew and others are relied on which are capable of other explanations than those accepted for their theory by the authors. But apart from these and analogous difficulties to which no reference can here be made, it will we think be admitted that the crux of the matter, or at any rate one of the cruxes, resides in the problem of whether the movements of epilepsy have any 'meaning' or not. The authors consider the epileptic 'cry' often one of fear, but many who have heard the peculiar inspiratory rush of air through the larynx as the diaphragm spasmodically descends will not accept this interpretation. They believe that the writhing convulsions of the epileptic express emotion, and that the rigidity of head and eyes expresses attention. This view of the 'meaning' of the contortions of the attack we cannot entertain, and consider that it is believed by any objective examination of what actually takes in a fit. It is a curious thing that while Hughlings Jackson is extensively quoted, and with approval here appears to be no citation of his opinion that in the convulsion the individuality of each movement is lost, that it is nothing else than "a single big useless movement," and that subsequent (clonic) movements "do nothing but mark time." That the phenomena of Jacksonian epilepsy are the expression of recalled memories of intense emotional states and of increase of attention seems to us just a little absurd. Of what emotion is clonic convulsion limited to the forefinger and thumb of one hand the expression? Nor can the clinical picture of many examples of petit mal be made to accord comfortably with these views. The authors have set out to prove too much and are consequently in difficulties when their theory is applied widely.

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Experimental Investigations into the Emotional Life of the Child, compared with that of the Adult. By H. ENG. Translated by GEORGE H. MORRISON, M.B. With 9 plates. Oxford Medical Publications. Humphrey Milford: Oxford University Press. 1926. Pp. 243. Price 21s. net.

LABORATORY experiments were undertaken by means of the plethysmograph to investigate the emotional life of the child between the ages of seven and fourteen. It was sought to determine whether psychical experiences of a definite character are accompanied by definite changes in the volume pulse curve and in the respiratory curve, and if the changes in these curves which

are found in adults are also found in children. Some 25 persons (11 children and 14 adults) were selected for the experiments.

The factors recorded were rise or fall of volume curve, increase or decrease of pulse height, and acceleration or retardation of pulse and respiration respectively.

It was found that attention and psychical work are not identical but give diametrically opposite records, but since they frequently occur together the results are obscured. Displeasure and pleasure, on the whole, show opposite types of reading, and intellectual and æsthetic emotions show certain special features. As to the difference between children and adults it is shown that spontaneous displeasure curves occur less frequently with children than with adults. Spontaneous displeasure curves are, in the case of children, mostly related to sensory impressions or concepts of sensory impressions. In the case of adults they are more often connected with more important events of greater personal psychical content.

Spontaneous displeasure emotion does not last very long, as a rule, in children, while in adults it is often of long duration. The phenomena of spontaneous displeasure emotion are never so strongly marked in children as they are occasionally in adults. This indicates that as a rule the spontaneous displeasure emotions of children are weaker.

Further, the spontaneous pleasure emotions of the child are bound up predominantly with sensory impressions, while those of the adult are more often connected with personal experience or with definite psychical processes. A relatively greater number of spontaneous pleasure curves are obtained from children than from adults. The pleasure emotion is apparently more easily aroused in children. Spontaneous pleasure emotions of children have longer duration than spontaneous displeasure emotions. On the whole, there is in the child a more marked spontaneous tendency to rising curves, and also a greater inclination to psychical activity of a pleasurable nature.

It is noticeable that all displeasure-producing stimuli do not produce the same results, nor do all pleasure-producing stimuli; therefore the author concludes that his experiments disprove the pleasure-displeasure theory of emotion. Nor does she find Wundt's three-dimensional theory more acceptable. From her experiments she concludes that the following six affective reactions exist, all giving different results with the plethysmograph: Attention emotion, Activity emotion, Displeasure, Pleasure, Depression and Excitement. She also states that her experiments disprove the James-Lange theory and show that matter depends upon mind and not mind upon matter.

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