a variety of feeling. Since language appears at a very early age in man, and since a speaking imbecile is a very short step in intelligence above a mute idiot, while there are abundant evidences that comprehension of language precedes speech, the latter is not so important a sign of intellectual standing as it is sometimes taken for. Thought independent from language at different intellectual stages is shown in three strong clinical pictures; one of an imbecile using only a dozen words; another of an aphasic; and a third of an imbecile possessing a considerable vocabulary, but who evidently 'thought more than he said.' The conclusion does not do justice to other abnormal types which share with normal children the impulsive tendency to say more than they think, but it marks one more step beyond the 'faculty psychology' of thought, feeling and action, and it rests on a new and important method which must be taken account of in the future.

WARNER BROWN.

COMPARATIVE PSYCHOLOGY.

The Daily Life of Amœba Proteus. DAVID GIBBS. Amer. Journal of Psychol., 1908, XVI., 232-241.

A rather detailed account of the activities of several amœbæ, during six days and five nights. A curve shows the differences in the degrees of activity of an amœba, during the entire time it was observed. Other curves show that the amœba is less active in a field of abundant food supply, than in a field where the food supply is limited. There are still other curves, which show the exact amount, and the direction of movement of several different amœbæ during several days. Drawings show an amœba in pursuit of paramœcium. It was found that amœbæ exhibit choice in food, e. g. some of them would leave algæ to pursue ciliates. Special care was required to keep the amœbæ under normal conditions, and still allow of their being observed under the microscope.

The observations show that, even in a form as low as the amœba, we find distinct periods of rest, which correspond to sleep in the higher forms. It seems that the skill which the amœba shows in its pursuit of a paramœcium, is acquired by the 'method of trial and error.' Amœbæ were often found in contact, but no trace of conjugation was observed. On the other hand, they were frequently observed to avoid each other.

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