

held the preponderance (64 to 48 *per cent.*), and next the paranoid (43 to 29 *per cent.*).

8. In 59 *per cent.* of cases heredity was traced in a marked degree, both psychopathic and neuropathic, but almost entirely the former. Syphilis, tubercle, alcohol, and apoplexy entered very little into the family history.

9. Morbid heredity was found equally in both sexes, and in the hebephrenic and catatonic varieties, less marked in the paranoid form.

10. In 90 *per cent.* of the cases there was normal development of the psychological state. Catatonia seemed to attack by preference those of lesser intelligence. In 10 *per cent.* the mental state before death was that of moderate mentalisation; in 24 *per cent.* it was poor; in 10 *per cent.* very much impaired, and in 6 *per cent.* good.

11. The hebephrenic form of primary dementia occupied in both sexes the first place among the clinical varieties of this mental disorder.

12. The fundamental clinical forms of primary dementia were only two in number: the hebephrenic and the paranoid. A. I. EADES.

*A Case of Phenomenal Talent for Counting in an Imbecile [Ein Fall von Phänomenalem Rechen-talent bei einem Imbecillen]. (Arch. f. Psychiat., B. xxxviii, H. 1.) Witzel, A.*

The subject of this study, Sabina W—, was a woman *æt.* 22 years, who had been for four years an inmate of the Psychiatric Compartment in the Jewish Hospital at Warsaw. She came of a long-lived family and there was no nervous heredity. The family had an especial gift for music but none for arithmetic. Up to the sixth year of her life Sabina grew up a healthy and intelligent child. She went to school and could read, write, and count. At the beginning of her seventh year she was seized with a grave attack of typhus fever, from which she seemed to make a fair recovery, when she was suddenly visited by epileptic attacks which succeeded one another for three days. After they had ceased she remained in an unconscious state for several days. She ceased to see and speak, was dirty to her clothes, ate feathers and other stuff. She had a stupid look and recognised no one. She became much emaciated. After some days the power of vision returned, she learned to speak, as if for the first time. Her intelligence slowly improved; when she was eleven she was about the level of a child of three. She had delusions of persecutions and fits of excitement. Admitted to the hospital she was small of stature, and looked no older than fifteen or sixteen, although she was twenty-two. The palate was high. She suffered from epileptic seizures in the form of the *petit mal*. For about ten days at a time she would remain apathetic, seeking the sun in summer and the stove in winter. Then she would suddenly become violent, complain, shout, and threaten. This state would last another ten days. Her intelligence was found to be weak. It was especially deficient in the power of generalising and gaining abstract ideas. The sense of past time was most inexact. When asked how long she had been in the hospital she answered two weeks, then nine hundred weeks, seventeen years, two years. She could not tell how old she was, or how many brothers and sisters she had; she cannot read or write, cannot

read figures, and only talks upon simple subjects such as engage the attention of young children. She does not care for music. She makes little distinction of persons, cares for nobody, and pities no one. She will not even keep herself clean.

When she came into the hospital Dr. Wizel was told that she had a remarkable faculty for arithmetic, being especially good at multiplication. He found that she could multiply two figures by two, giving the answer almost immediately and with few mistakes. She did not multiply so quickly if the multiplier and multiplicand were of the same power.

The weakness of imbeciles at counting is so well known that it has been used as a legal test. Cases have been published in which imbeciles were skilful at figures; but I never met with any of them. To teach them arithmetic is very difficult. Those who are laboriously dragged through addition, multiplication, and subtraction are often arrested by division. Sabina was found to be better at division than at addition and subtraction. Still, the performances in division were often surprising. She divided 576, 560, and 336 by 16 with astonishing quickness; also 225 and 270 by 15.

Considering her performances in multiplication and division, her failures in simple addition were remarkable. Of these Dr. Wizel quotes the following:

$$\begin{array}{ll} 57 + 63 \text{ given as } 141. & 68 + 35 = 102. \\ 48 + 53 = 163. & 58 + 24 = 92. \\ & 36 + 64 = 104. \end{array}$$

In subtraction she was equally deficient. She often gave the right answers, but much more slowly than with multiplication and division.

Sabina possesses another power which is rarely met with in ordinary people. Once Dr. Wizel asked her, "What is the product of  $23 \times 23$ ?" She quickly gave 529, and added, "That comes to as much as  $33 \times 16$  and 1." In a similar manner, when he asked her, "How much is  $14 \times 14$ ?" she gave the number 196, and voluntarily added, "That makes the same as  $12 \times 16 + 4$ ." Another time she gave the relative values—

$$\begin{array}{l} 729 (= 27 \times 27) = 24 \times 30 + 9; \\ 1296 (= 36 \times 36) = 81 \times 16; \text{ and} \\ 784 (= 28 \times 28) = 49 \times 16. \end{array}$$

Dr. Wizel found that in her reckonings Sabina makes much use of the numbers 16 and 10. It was difficult to get Sabina to explain by what mental processes she so rapidly got her answers. Dr. Wizel, however, gives a few examples:

$45 \times 18 = ?$  Answer: 810. Explanation: She has multiplied 90 by 9.

$78 \times 78 = ?$   $39 \times 39 \times 4 = 1521 \times 4 = 6084.$

All the great calculators have methods of their own. Wizel refers to the treatise of Binet, *Psychologie des Grands Calculateurs et Joueurs d'Échecs* (Paris, 1894). Binet had studied Inaudi and Diamandi, who were examined by the Academy of Sciences in Paris about ten years ago. I saw Inaudi at an exhibition in Edinburgh. A line of figures, casually suggested by members of the audience, was multiplied by another line, and the product given with astonishing rapidity. The

cyphers were written on a black-board behind the performer, who stood out upon a plank. They thus could be read by the spectators, but not by Inaudi. Nevertheless he was able to hold in his memory, and repeat all the figures. In adding he used to begin at the left side with the higher numbers. He dealt with the numbers as sounds—that is, they had to be repeated to him orally—whereas Diamandi regarded them as seen figures. Binet observes that, besides the capacity of keeping the figures in memory and rapidly calculating, it is of importance that the reckoners should keep up the use of their talent: for without practice they seem to lose much of their facility. The possessors of this wonderful faculty generally come of obscure families who never showed particular skill in arithmetic.

WILLIAM W. IRELAND.

*The First Symptoms of Neuropathy in Children* [*Die ersten Zeichen der Nervosität des Kindesalters*]. (Pamphlet, oct., pp. 38, Berlin, 1904.) Oppenheim.

In this pamphlet, Dr. Oppenheim treats of the symptoms met with in children of a neuropathic temperament. He does not deal with organic diseases of the brain, but confines himself to such minor affections as early neurasthenia and hysteria. In childhood, he observes, we do not find the associated groups of symptoms which characterise these affections in the adult, but a great variety of isolated nervous derangement. The ordinary reactions of pain and pleasure are exaggerated, transposed, or fail to appear. The emotions shown by laughing and weeping and other outward signs are of abnormal force. Excessive timidity, delirium with hallucinations and frightful dreams by night, even day-dreams are sometimes observed. There is fear or horror at the sight of some beast, or of any new animal. There may be troubles of digestion, dislike to particular articles of food, palpitation, coldness of the hands and feet, and other vasomotor disorders. Some of the professor's observations are curious. He had a little patient who had such a hyperæsthesia of the hair of the head that she could not suffer it to be combed. This peculiarity was inherited from her mother and grandmother. Dr. Oppenheim had another patient, a lady who was troubled with the same hyperæsthesia which had come down from childhood. She was also affected with hysteria and neurasthenia. The sensibility of the scalp was greater at times, but in general she could not get her hair combed, or wear a net, and her locks appeared in an untrimmed state. He also mentions a boy who was so distressed at any attempt to brush and comb his hair that it was always in an untidy condition.

Oppenheim observes that in infantile diplegia, a born organic brain disease, the motor reaction usually following upon terror is much increased, though he cannot find that this is accompanied with greater mental emotion. In one case noises such as striking the table with the hand caused tonic spasms in the muscles of the trunk and limbs, and these did not cease to follow the frequent repetition of the stimulus. Dr. Oppenheim had a patient, a boy eleven years of age, in whom vomiting was caused by everything that excited him, especially by anything that promised him pleasure, such as a drive in a coach or on the