Epitome of Current Literature.

1. Anthropology.

The Median Occipital Fossa [*Intorno alla fossetta occipitale mediana o vermiana*]. (*L'Anomalo, anno ix, Nos.* 2—6, *Febr.*, 1903.) *Zuccarelli.*

In the earlier discussions of the doctrines of Professor Lombroso a good deal was heard of the median occipital fossa, which the new school regarded as one of the unequivocal stigmata of the *reo nato*, as an atavistic character connecting the criminal with primitive and savage man and with the anthropoid apes. Some difficulty was, however, experienced in making clear the relationship of the condition to crime, and even so friendly a critic as Professor Benedikt had to confess that to his mind a large vermian fossa suggested mainly a marked development of the occipital sinuses, and should therefore imply, if anything, a tendency to piles rather than to homicide. Subsequently this stigma seems to have been a little under a cloud, but latterly there are signs of its again coming to the front. Lombroso himself dealt with it in a recent number of his *Archivio*, and in this paper one of his most zealous disciples contributes further to its reinstatement.

Zuccarelli has looked for the fossa in a series of twenty-one skulls of criminals, and has found it well marked in four (19·04 *per cent.*). He has also examined 472 other skulls classed as normal (322), slightly abnormal (101), and very abnormal (49), and finds that the fossa exists in only 0·31 *per cent.* of the normal as against 2·04 *per cent.* and 2·97 *per cent.* respectively in the other groups. Incomplete development of the fossa was noted in the same proportion (0·31 *per cent.*) of the normal skulls, while in the abnormal it was found in 5·33 *per cent.* These results are, therefore, in general agreement with the figures given by other Italian anthropologists, of whose statistics the author gives a summary in tabular form. He takes it as established that the vermian fossa is most frequently met with in criminals, that it is not uncommon in the insane, and that it is very rare in the normal. He regards it as a sign of reversion to a pre-human type, and considers that its frequent association with an enlarged middle lobe of the cerebellum is specially significant in view of recent experiments alleged to show that disorders of this part of the brain are connected with peculiar emotional symptoms.

W. C. Sullivan.

2. Neurology.

Increase of Cortical Excitability and Epileptic Phenomena produced by Decalcifying Agents [*Aumento dell' eccitabilità corticale e fenomeni di epilessia provocati da reattivi decalcificanti*]. (*Arch. di Psichiat., vol. xxiv, fasc.* 4, 1903.) *Roncoroni.*

Sabbatani, in an important series of researches, showed that calcium had a special moderating influence on cellular activity, and that its

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presence in the blood was a necessary condition for the coagulation of that fluid. Roncoroni, in the series of experiments recorded in this paper, has confirmed and amplified these results as regards the action of this metal on cortical excitability. The method pursued was as follows:—The motor area in a dog was exposed, and the minimum induction shock that would cause elevation of the corresponding fore-paw was determined; solutions of various reagents were then applied on cotton pads to the cortex, and its excitability was again tested. All the reagents used were salts of sodium; the kation being thus the same in all the experiments, and being in itself indifferent, the effects could clearly be attributed entirely to the action of the various anions with which the sodium was combined, and which had the common property of fixing calcium either by precipitating it or by decreasing its ionisation. This action was uncomplicated in the case of some of the salts (biphosphate and sulphate of soda); in others (chromate and fluoride) the anion had a specific toxic influence; and in others, again (carbonate and pyrophosphate), a possibly disturbing element was introduced by hydrolytic decomposition.

The results, which are given in detail, were clearest in the case of the simpler agents, the phosphate and sulphate of soda; thus a 5 to 7 *per cent.* solution of the phosphate caused a considerable increase of cortical irritability with spontaneous epileptic attacks starting in the affected area, and this irritability could be at once reduced even below the normal by the application of a solution of chloride of calcium.

In the case of the salts whose action was complicated by toxic and hydrolytic factors the results were less clear, but wherever it was possible, by much dilution or otherwise, to diminish or neutralise the disturbing element, the calcium-fixing influence was apparent in increased irritability. Control experiments with acetate and lactate of soda, which have no decalcifying action, and whose anions are not toxic, did not affect the cortical reaction at all.

As far as comparison was possible, it appeared that the effects of the different salts on the cortical irritability varied pretty regularly with their decalcifying and with their anticoagulating actions.

The author concludes, therefore, from his own experiments and from Sabbatani's, that calcium exerts a moderating influence on the cortical cells, so that its diminution is attended by increased irritability, and its excess by phenomena of paralysis. This suggests the view that possibly some forms of epilepsy may be due to a deficiency of calcium ions in the cortex. The author adds that he is engaged in testing this idea therapeutically, and so far with encouraging results.

W. C. SULLIVAN.

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3. Physiological Psychology.

The Illusion of Weight in Abnormal Persons [*L'Illusion de Poids chez les Anormoux*]. (*Arch. de Psychol., Dec.*, 1902.) *Claparède.*

It is well known that normal persons experience an illusion when lifting objects of equal weight but different size, the smaller seeming

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