boundary of the granular layer. In the latter position they form basketworks enclosing Purkinje's cells. The transverse fibres are mostly delicate, but a number of large spider-cells at the border of the granule layer give off coarse fibres, running to the surface. The largest collection of glia-nuclei is in the same situation. In the granule layer also the changes are of unequal degree. They consist in loss of granules, the place of which is taken by hypertrophied neuroglia fibre and nuclei. In the medulla the hypertrophy is rarely of great extent, and appears to prefer the immediate neighbourhood of the vessels, where large, coarse-fibred spider-cells are also found. Fibres and nests of glia-nuclei occur, however, between the nerve-bundles. In general, the rule is that in progressive paralysis the molecular layer is most involved, then the granule layer, more in spots, and last and least the medulla. Hence it is the dendrites of Purkinje's cells which appear to be chiefly affected in this disease, and their bodies also vanish in advanced cases. The morbid process thus seems to advance from without inwards. Little clinical value is claimed for these results, owing to the irregular distribution and frequently slight degree of the foci of disease; but it may be supposed that the changes contribute to the ataxy and incoordination. The paralytic seizures are more likely, from these cases, to be connected with diseased foci in the thalamus. No relation could be detected between the cerebellar changes and absence or increase of the reflexes.

W. R. DAWSON.

The Topography of Degeneration in the Cortex of Paralytics in relation to Flechsig's Association Centres [*Die Topographie der paralytischen Rinden Degeneration und deren Verhältniss zu Flechsigs Associations-Centren*]. (*Neur. Cbl., No.* 2, 1902.) *Schaffer, Karl.*

Dr. Karl Schaffer, of Budapest, gives the results of his examination of the brains of three general paralytics. His paper is illustrated with five lithographs, showing sections of brain stained by Weigerts-Wolter's method. The degenerated parts take on the stain poorly. Schaffer finds the most degenerated parts in general paralysis to be the anterior and basal portions of the frontal lobes, the whole parietal lobes, the posterior median convolutions, the insula, and the temporal gyri, and the occipital lobes and the upper surface of the cerebellum. Less affected were the anterior median gyrus, the margins of the calcarine fissure, and the inferior occipito-gyri. This showed that degenerative process most affected the association centres of Flechsig, his sensory spheres being very much less touched. Schaffer holds that the degeneration of the cortex in general paralysis is not haphazard but selective. He upholds Flechsig's views, and considers that they have been confirmed by the recent researches of Ramon y Cajal, who has made an original study of the nerve-tissues in the fœtus and in the newly-born child. The latter describes a specific plexus of centripetal nerve-fibres, which terminate in the motor area of the cortex, in the sphere of bodily sensibility, and in the visual area. It is significant that this plexus does not pass into Flechsig's association centres, confirming Schaffer's observation of the posterior median convolution being, in general paralysis, much more degenerated than the anterior. These considera-

tions induce Schaffer to think that the posterior median gyrus belongs rather to the association centres than to the sensory areas.

Cajal confirms the observations of Flechsig that the fibres of the association centres become mature later, and shows that these centres in the new-born child, as well as in some small mammalia (the mouse, the rabbit), have no exogenous terminal fibres; while, at the same time, the pyramidal cells and the nerve-cells of the zonal layer have a special appearance in the embryonic development. He largely agrees with Flechsig's views, and considers his anatomical and physiological dualism in the cortex as rational *a priori*, but he differs in regarding the association centres as wanting a specific terminal plexus, and not projection fibres. Cajal also holds, as against Flechsig, that the association centres occur not only in the anthropoid apes, but also in the smooth-brained animals. WILLIAM W. IRELAND.

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7. Sociology.

Judicial Condemnations of Unrecognised Lunatics [*Les aliénés devant les tribunaux*]. (*Rev. de Psychiat., March*, 1902.) *Pactet.*

In this critical review the author, by reference to some of the recent literature on the subject, illustrates the frequency with which persons suffering from mental disease are committed to prison for criminal acts. A number of personal observations (referring chiefly to general paralytics) are quoted to the same effect. To prevent such miscarriages of justice the author suggests that all persons accused of criminal offences should be submitted to examination by an alienist; and he quotes the opinion of Dr. Paul Garnier—an exceptionally competent judge in the matter—as to the practicability of such a plan, at all events in large centres of population. The author also advocates the Belgian system of frequent examinations of prisoners by alienist inspectors, and recommends certain modifications in the French procedure of *expertise* in criminal cases. W. C. SULLIVAN.

Criminal Asylums and Sections for the Insane in Prisons [*Manicomii criminali e sezioni per folli nelle case di pena*]. (*Riv. mens. di Psychiat. forense, Feb.*, 1902.) *Penta.*

In Italy, as in most other countries where such institutions exist, the admissions to criminal lunatic asylums have increased enormously in recent years. Thus, in spite of the opening of two new asylums of the same class, the original criminal asylum of Aversa, which in 1876 contained nineteen patients, in 1898 contained 209. This increase Penta ascribes, in part, to a real increase in lunacy, but much more to wider knowledge of the nature of insanity, and more particularly of the close connection between mental disease and crime. In face of this condition of things, the future of the criminal lunatic asylum becomes an urgent problem. Penta's opinion is that a multiplication of these institutions is undesirable. He thinks that they should be reserved for incorrigible degenerates who, with or without co-existing insanity of