the author concerning cerebral pressure on the one hand, and the question of compressibility of nervous masses on the other. The first point only is discussed in the present paper. He concludes that a pathological increase in the pressure of the cerebro-spinal fluid (in other words in the "cerebral pressure") does not exist. This view is in complete opposition with the generally accepted theories on the influence of agents which diminish the intra-cranial space; but is supported by a series of experiments too considerable for us to adduce or criticise here.—The author describes the phenomena usually ascribed to cerebral pressure being due to cerebral irritation.

Sigmund Fuchs on the Histogenesis of the Human Cerebral Cortex. (*Ibid.* 1883).—The chief questions which the author has proposed to himself are: (1) At what period of the foetal or extra-uterine life do medullated fibres (chiefly those which run parallel to the surface) make their first appearance in the cerebral cortex? (2) At what period are their number and calibre so far developed as to represent a system of fibres functionally equivalent with that in the adult?

He came to the following conclusions:—The new-born child possesses no trace of medullated fibres, neither in the central nor in the cortical portions. They are found in the former at the end of the first month only; in the cortex they appear at different times in the different layers. In the upper layer none are discovered before the fifth month; in the second layer, after the first year. The radiating bundles of the deeper layers appear in the second month; whilst the horizontal fibres of the third layer are found to be medullated in the eighth month.

During the seventh and eighth year the medullated fibres reach the disposition which they preserve throughout adult life.

The cortical medullated fibres, which in after-life are the thickest, are the first to make their appearance. We may assume that the chronological differences in the development of the medullated fibres correspond to their physiological interpretation. Pyramidal cells of the typical structure occur in the cortex at the time of birth. Deiter's connective tissue cells were clearly observed in the fifth month of child-life.

Zuckerkindl on the influence of the growth of Sutures and of the Cranial Shape in the direction of the Convolution (*Medic. Jahrb.* 1883, Part IV.). Many observers have tried

to prove that there are certain relations between the shape of the skull and the direction of the convolutions; in the dolichocephalic brain they thought it to be more longitudinal, in the brachycephalic more transverse. If this be the case, the usual direction must be departed from whenever external circumstances (such as intra-uterine pressure, premature synostosis of the sutures, &c.) alters the normal development of the skull. The author closely examined six brains from skulls deformed by synostosis; he found the altered shape of the brain persists after removal, and that the convolutions present the alterations just described. He also examined the brain of a child whose head had been subjected to abnormal pressure "in utero," on account of the deficient amount of amniotic fluid, and observed similar phenomena.

We may go still further and show that under normal circumstances the sutures exert an influence upon the convolutions. The frontal gyri have not everywhere the same shape, breadth, thickness and direction. Quite in front they are usually narrow, thrown into numerous folds, and connected with one another by transverse pieces. Posteriorly, when they pass into the ascending frontal they are wide, thick, much straighter. This dissimilarity is easily explained by the topographical relations between the convolutions and the coronal suture. As long as the skull grows rapidly, the convolutions will lengthen longitudinally wherever the skull expands in that direction; this is the case for the posterior part of the frontal gyri, which are situated in the region of the coronal suture. Anteriorly and inferiorly, however, where no suture allows of such a ready expansion, the growing convolutions must become more concentrated, closely pressed together and thrown into folds. Similar considerations obtain with reference to other parts of the cerebral surface.

V. Rogner, On the Variations in the Cerebral Fissures in the Hare, the Sheep, and the Pig (*Zeitschr. für Wissensch. Zoologie*, vol. 39).—Numerous variations are to be observed in the disposition of the cerebral sulci of these animals, even on the almost smooth brain of the hare. The author reaches the important conclusion, that these variations are not to be considered as mere anomalies, but as transitional forms between the type of sulci in one kind of animals, and that observed in other kinds.

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