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A REMARKABLE PECULIARITY OF AN ANTHROPOID BRAIN.

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Among the features of the cerebral surface, on whose presence or absence the differential characters of the human brain as compared with that of the anthropoid apes, have been established by anatomists, the so-called transition convolutions occupy a prominent place. As is well known, the occipital and parietal lobes of the human brain are connected with each other by means of short gyri, which bridge over those fissures, which if uninterrupted would separate these lobes like a chasm. First described by Gratiolet as *plis de passage*, and known among English writers as annectant or transition gyri; it is the one among them which borders on the great longitudinal fissure that has been most closely studied.

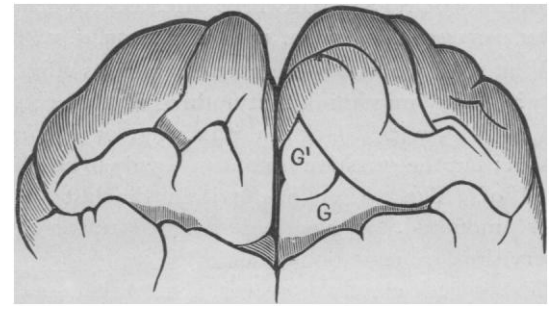
With exceptions to be noted, writers on the human and anthropoid brain agree in stating that the brain of the Chimpanzee differs from the human brain, in failing to exhibit this, the so-called first transition convolution, inasmuch as it is always concealed by the junction of the internal with the external perpendicular occipital fissures.

The same authorities also observe that while there is this sharp demarcation between the brain of the Chimpanzee and that of man, that another anthropoid resembles the human being in this very respect, namely the Orang, in which animal this fissure is present and superficial.

The decease of a large number of anthropoid apes which have been on exhibition at various times during the past few years at the New York Aquarium, and whose bodies were kindly placed at my disposal by the managers of that institution, has enabled me to extend the observations made on the brains of the Chimpanzee and Orang by previous writers.

The first Chimpanzee's brain obtained by myself, differed in no noteworthy respect from those described by Marshall, Gratiolet, Pansch and others, and was utilized for microscopical study.* The second, that of a very large animal, one which had reached the age of puberty, and weighing 389.86 grammes, presented the interesting anomaly I am about to describe, and whose demonstrable existence adds another proof to the many which have been accumulating, that there is no absolute and impassable line of demarcation between the human and simian brain. In the first place, as shown in the subjoined outline diagram, the occipital lobes of this brain are unsymmetrical.

On the right side the internal perpendicular occipital fissure does not coalesce with the external, while on the left side it does. The result is that on the right side, we have an excellently developed first transition gyrus [G, G'] evident and superficial, as in the human being, while on the left side it is concealed as in the ordinary Chimpanzee type. That is, the right side of the brain



Outline diagram of occipital end of cerebrum, dorsal view, x⅔.

shows a higher grade of development than the left. In so far as the left side is usually the better developed one this asymmetry is anomalous. Yet it shows that the old line of demarcation is not a correct one. Though the transition gyrus is concealed on the left side, yet a portion of it is visible, showing that on the whole this brain exhibits a tendency to a more human-like relation.

If we now proceed to compare the transition gyri of an Orang's brain with those of this Chimpanzee's right hemisphere, and of Man, we are struck by the observation that its disposition and proportions are more human-like in the Chimpanzee than in the Orang. And this applies to the Orang in my possession as well as to those figured by Tiedemann, Gratiolet and Bischoff. Taking the occipital lobe of the Orang as a whole, its physiognomy, if I may so term it, is lower and less human like, than that of the Chimpanzee.

The fact that the arrangement of the gyri and fissures bordering on the occipital fissures is thus shown to be inconstant, and that as Vogt has humorously shown, some of the South American monkeys resemble the human being more strongly in this respect than the average Chimpanzee and Gorilla (Pansch), should make us careful in basing fundamental characterization on such slight morphological factors.

I should state that Marshall and Bischoff while failing to ever find the gyrus under consideration appearing at the surface, yet have identified it as concealed in the depths of the perpendicular fissure.

In the occipital lobe of an imbecile recently executed for murder at St. Louis, and whose brain was referred to me for examination, I have found the external occipital fissure perfect as in the embryo, though intersected by collateral fisssures, and exhibiting a bevel, repeating to some extent its disposition in the anthropoid apes.

*The peduncular tracts of the anthropoid apes. *Journal of Nervous and Mental Diseases*, July, 1879.

THE Albert Medal of the Society of Arts for 1879, was presented to Sir W. Thomson for his electrical researches, especially those relating to the transmission of telegraphic messages over ocean cables, last week, at a meeting of the council, held at Marlborough House. At the same time the Albert Medal for the current year was presented to James Prescott Joule, F: R. S., for the researches by which he established the true relation between heat, electricity, and mechanical work. The *conversazione* of the Society was also held last week, when Mr. Donald Currie, M.P., was presented with the Fothergill Gold Medal, the award of which we recently announced.