

normal human brain. The frontal height is greater than in that of other anthropomorpha; the frontal lobe is in all respects larger as compared with the occipital lobe; and certain folds of brain-substance, styled "bridging convulsions," which in the human brain are interposed between the parietal and occipital lobes, also occur, though greatly reduced, in the brain of the orang; while they appear to be wholly wanting in the chimpanzee, the gibbon, and other apes which superficially present a greater resemblance to man. Referring to the convolutions of the central cerebral lobe, Huschke says: "With their formation in the ape, the brain enters the last stage of development until it arrives at its perfection in man;" and the higher class of brains may be arranged between the extremes of poorly and richly convoluted examples.

But it must not be overlooked that, apart from structural differences, relative, and not absolute mass and weight of brain has to be considered, otherwise the elephant and the whale would take the foremost place. "The brain of the porpoise," Professor Huxley remarks,* "is quite wonderful for its mass, and for the development of the cerebral convolutions;" but it is the centre of a nervous system of corresponding capacity, while as compared with the size of the animal, the brain is not relatively large. Vogt states the weight of the human body to be to the brain, on an average, as 36 to 1; whereas in the most intelligent animals the difference is rarely less than 100 to 1.

Assuming the existence of some uniform relation between the size of the brain and the development of the intellectual faculties, along with whatever is recognized as most closely analogous to them in the lower animals, it might be anticipated that we should find not only a graduated development of brain in the anthropomorpha as they approximate in resemblance to man; but, still more, that the progressive stages from the lowest savage condition to that of the most civilized nations should be traceable in a comparative size and weight of brain. Dr. Carl Vogt, after discussing certain minor and doubtful exceptions, thus proceeds: "We find that there is an almost regular series in the cranial capacity of such nations and races as, since historic times, have taken no part in civilization. Australians, Hottentots, and Polynesians, nations in the lowest state of barbarism, commence the series; and no one can deny that the place they

* "Mr. Darwin's Critics: Critiques and Addresses."