

large masses of darker clouds, which seemed as if pouring their substance into the central chasm. The figure of the solar spots did not undergo any perceptible change of form during the progressive passage of the edge of the moon over them.

“On the Brain of the Negro, compared with that of the European and the Ourang-Outang.” By Frederick Tiedemann, M.D., Professor of Anatomy and Physiology in the University of Heidelberg, and Foreign Member of the Royal Society.

It has long been the prevailing opinion among naturalists that the Negro race is inferior, both in organization and in intellectual powers, to the European; and that, in all the points of difference, it exhibits an approach to the Monkey tribes. The object of the present paper is to institute a rigid inquiry into the validity of this opinion. The author has, for this purpose, examined an immense number of brains of persons of different sexes, of various ages, and belonging to different varieties of the human race, both by ascertaining their exact weight, and also by accurate measurement of the capacity of the cavity of the cranium; and has arrived at the following conclusions. The weight of the brain of an adult male European varies from 3lbs. 3oz. to 4lbs. 11 oz. troy weight: that of the female weighs, on an average, from 4 to 8 oz. less than that of the male. The brain usually attains its full dimensions at the age of seven or eight; and decreases in size in old age. At the time of birth, the brain bears a larger proportion to the size of the body than at any subsequent period of life, being then as one sixth of the total weight; at two years of age it is one fourteenth; at three, one eighteenth; at fifteen, one twenty-fourth; and in the adult period, that is, from the age of twenty to that of seventy, it is generally within the limits of one thirty-fifth and one forty-fifth. In the case of adults, however, this proportion is much regulated by the condition of the body as to corpulence; being in thin persons from one twenty-second to one twenty-seventh, and in fat persons often only one fiftieth, or even one hundredth of the total weight of the body. The brain has been found to be particularly large in some individuals possessed of extraordinary mental capacity. No perceptible difference exists either in the average weight or the average size of the brain of the Negro and of the European: and the nerves are not larger, relatively to the size of the brain, in the former than in the latter. In the external form of the brain of the Negro a very slight difference only can be traced from that of the European; but there is absolutely no difference whatsoever in its internal structure, nor does the Negro brain exhibit any greater resemblance to that of the ourang-outang than the brain of the European, excepting, perhaps, in the more symmetrical disposition of its convolutions.

Many of the results which the author has thus deduced from his researches are at variance with the received opinions relative to the presumed inferiority of the Negro structure, both in the conformation and relative dimensions of the brain; and he ascribes the erroneous notions which have been hitherto entertained on these subjects chiefly to prejudice created by the circumstance that the facial angle

in the negro is smaller than in the European, and consequently makes, in this respect, an approach to that of the ape, in which it is still farther diminished. The author denies that there is any innate difference in the intellectual faculties of these two varieties of the human race; and maintains that the apparent inferiority of the Negro is altogether the result of the demoralizing influence of slavery, and of the long-continued oppression and cruelty which have been exercised towards this unhappy portion of mankind by their more early civilized, and consequently more successful competitors for the dominion of the world.

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June 16.

FRANCIS BAILY, Esq., V.P. and Treasurer, in the Chair.

Moses Montefiore, Esq., was elected a Fellow of the Society.

The following papers were read, viz.

1. "Researches on the Tides; Sixth Series. On the Results of an extensive system of Tide Observations, made on the Coasts of Europe and America, in June 1835." By the Rev. William Whewell, F.R.S., Fellow of Trinity College, Cambridge.

The author having, in several previous communications to the Royal Society, urged the importance of simultaneous tide observations made at distant places, here gives an account of the steps taken to carry this plan into effect, in consequence of his representations, both by the Government in England, and by the other maritime powers of Europe. He explains, in the present paper, the general character of the observations thus obtained, the mode employed in reducing them, and enters at considerable length into a discussion of the immense mass of information which they supply with respect to the phenomena of the tides. One of his principal objects was to fix with precision the form of the *Cotidal lines* by which the motion of the tide wave is exhibited. He devotes one section of the paper to an investigation of the general form of these lines; and another to a nearer approximation to an accurate map of these lines, more especially as they exist in the German Ocean. The 4th section treats of the height of the tide in its total range from high to low water; the 5th relates to the diurnal inequality; the 6th to the semimenstrual inequality; and the 7th and last comprises general remarks on the tables which accompany the paper.

2. "On the Tides at the Port of London." By J. W. Lubbock, Esq., F.R.S.

The discussions of tide observations which the author has hitherto at various times laid before the Society, were instituted with reference to the transit of the Moon immediately preceding the time of high-water; from which the laws of the variation in the interval between the moon's transit and the time of high-water have been deduced. But the discussion of nineteen years' observations of the tides at the London Docks, which is given in the present paper, has been made with reference to the moon's transit two days previously, and proves very satisfactorily that the laws to which the phenomena are subject