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#### ARTICLE II.

Anatomical Report on the Skull of Spurzheim, read before the Boston Phrenological Society, by NATHANIEL B. SHURT-LEFF, M.D.

Having been appointed a committee on the skull of our lamented friend, Spurzheim—the anatomist who, by dissecting the brain, first displayed to the eye its fibrous and ganglionary structure, and demonstrated the direction and connection of its filaments—the discoverer of many of the relations existing between the spiritual faculties of the mind, and their material cerebral instruments—the philosopher who, by the greatness of his own mind, raised craniology, and physiognomy to the ethical science, Phrenology,—I offer with diffidence the following Report, fearing that it is unworthy of its subject, and less minute and extended than may have been wished.

Deeming the mental characteristics of this distinguished man well known, I shall not advert to them, but shall confine myself as strictly as possible to an anatomical description of such parts of the cranium, as seem to have a phrenological bearing, or, in other words, which immediately enclose the encephalon. To others, more experienced in cranioscopical taxis, is left the opportunity of determining the exact form and size of the development of the different individual portions of the cerebral mass. Adhering to the phrenological motto 'res non verba quaso,' I shall merely state facts, and leave others to draw their own conclusions.

It is well known that the skull of Dr. Spurzheim received the funeral honors which were bestowed upon his other remains, and that it was the intention of his Boston friends to deposite it in the grave with his body.\* This last intention was never carried into

effect, it having been subsequently understood that such interment would violate an often expressed wish of Dr. Spurzheim. On this subject his friend, George Combe, Esq., of Edinburgh, the distinguished writer on phrenology, says in a letter to Mr. Capen, 'The whole conduct of your countrymen towards him (Dr. Spurzheim,) was excellent. In one particular only, would a knowledge of Dr. Spurzheim's own wish have made an alteration. I have often heard him say, 'when I die, I hope they will not bury my skull: it will prove what my dispositions were, and afford the best answer to my calumniators.' Dr. Gall expressed a similar wish in regard to his own, when he returned to Cuvier a skull which that great naturalist had sent with the message ' that it appeared to him to confirm his (Gall's) doctrine of the physiology of the brain.' ' Take back that skull,' said the then dying philosopher to Cuvier's messenger, and tell Cuvier that there is now only one wanting, to complete my collection: it is MY OWN; it will soon be there as a powerful testimony of the truth of my doctrine.'

Dr. Spurzheim's skull was therefore prepared and bleached by Dr. Lewis and myself, and is now preserved with the brain in a fire-proof safe, in the society's hall, equally free to be seen by the friends and 'calumniators' of the great spirit of its late possessor. This skull is much larger than the average of large crania, as may be inferred by the immense weight of the brain which it contained,\* and much the greatest portion of which was situated in the part of the cavity of the cranium, anterior to the auditory orifices. Indeed, with the exception of two or three, it is the largest skull that I have ever seen.

of Italian marble, by European artists, in imitation of the tomb of the Scipios. The word 'SPURZHEIM,' cut upon the stone in Roman capitals, though a simple inscription, speaks more eloquently than could any labored epitaph. This beautiful monument is enclosed by an elliptical iron fence, and was erected by the munificence of Wm. Sturgis, Esq., of this city.

\* Dr. S. died on the 10th of Nov. 1832. His brain was weighed on the 12th. Being present, I took an account of the weight, which, after deducting for that of the napkins, &c., which were used, was exactly 3 pounds 7 ounces and 1 dram, or 55\frac{1}{5} ounces avoirdupoise. The brain was previously deprived of its liquors, and divested of the dura-mater.

<sup>\*</sup> Dr. S. lies buried on the most conspicuous mound in the cemetery at Mount Auburn, under a beautiful monument, exquisitely carved from a block

That there may be no misunderstanding, with regard to the dimensions of the skull, I have taken the measurements, in inches, and as far as practicable, from anatomical points.

es, and as far as practically
Greatest circumference (measured horizontally)
sinuses
Distance from occipital protuberance to the naso-frontal ar-
ticulation, measured over the head
the occipital bone
naso-frontal articulation to the anterior ex-
tremity of the sagittal suture
occipital protuberance to superior angle of the
occipital bone
occipital protuberance to anterior extremity of
the sagittal suture 1-2
Greatest breadth of skull measured between the temporal
hones 1 inch above the orifices of the ears 1-4
Distance from mastoid process to mastoid process
ear to ear 1-2
paso-frontal articulation 4 1-2
summit of head
superior angle of occipital bone
ear over the summit of the skull in a
vertical direction
head11 1-2
back of the skull at the
occipital protuberance 3-4
parietal protuberance to parietal protuberance 1-2
between the anterior inferior angles of the parietal
1-10
Camper's* facial angle

<sup>\*</sup> Notwithstanding the prominence of the forehead, this measurement is taken correctly. Two causes combine to make this angle small in the head of Dr. Spurzheim: 1st, the great length of the face; and 2d, the extra high situation of the ear. This is another fact which goes against the intellectual angle of Camper.

The other measurements agree with the following, published in No. XXXIX of the Edinburgh Phrenological Journal, taken from the cast which the society sent to Edinburgh.

'Greatest circumference of head (measured horizontally o	ver Indi-
viduality, Constructiveness, Destructiveness, and Phil	oprogen-
itiveness,)	22 1-4
From occipital spine to Individuality, over the top of the	Donativski
head	13 1-2
ear to ear, vertically over the top of the head	
Philoprogenitiveness to Individuality, in a straight	
line	7 6-10
Concentrativeness to Comparison	6 1-2
ear to Philoprogenitiveness	4 1-4
ear to Finoprogentiveness	4 7-8
Individuality	5 1-9
Benevolence	5 1 9
Firmness	1-2
Destructiveness to Destructiveness	6 1-4
Secretiveness to Secretiveness	6 1-10
Cautiousness to Cautiousness	5 1-4
Ideality to Ideality	4 7-8
Acquisitiveness to Acquisitiveness	5 1-4
Constructiveness to Constructiveness	4 7-8
Mastoid process to Mastoid process	5 1-4'
···· Mastoru process to master P	

The discrepancies between these two lists of measurements are of very little importance. All the measurements in that from the skull were taken several times, and found to agree with others that I took from a cast in my collection, which I made at the same time, and in the same mould, with those sent to Europe. The errors are therefore in the list of our Edinburgh friends, and may have arisen from the accidental moving of their callipers.

The texture of the skull is fine, and the substance compact, with little or no diploë. Externally, the sutures are very distinct; but internally they are so obliterated as to be scarcely visible. I have never seen the interior of a cranium, where the digital impressions, adapted to the exterior of the convolutions of the brain, are so well marked; on this account a mould, particularly of the anterior region, would give as good an idea of the form and size of the convolutions, as the best possible cast of the brain. Such a mould

would also give a correct idea of the form of the encephalon. have in my collection a cast of the brain, which I took soon after Dr. Spurzheim's decease; and which is the best that could be obtained; nevertheless, on account of its flattened appearance and indistinctness, I have never multiplied it. Moulds representing the form of the cavity of the cranium, or rather the contents of this cavity, have been taken; one from the base, and another from the vault. These, however, have been joined together by an unskilful artist, more intent upon getting money than giving a true representation of the interior of the skull. The result, therefore, is that the cast which we possess in the cabinet, and which has been circulated, is from half of an inch to an inch higher than the cavity of which it pretends to be a mould. By the aid of casts which I took at the same time, together with the skull itself, and the original incorrect cast (which I had the good fortune to obtain,) I have been able, in a great degree, to rectify the mistake. Nevertheless, I would not have this considered otherwise than an approximation to the truth. If a cast of this cavity is really needed, another should be taken, and that by responsible workmen, that accuracy, so essential to phrenological observation, may be secured.

In point of thickness, with a few exceptions, which will be mentioned as each bone is considered, this skull does not vary from the standard measure. As is the case in ninety-nine out of one hundred skulls, the orbitar portion of the frontal bone, the squamous of the temporal, and the inferior of the occipital, are so thin as to be translucent, and the other portions thick and opake.

Of the frontal bone, the superior lateral portions on both sides, lying against the coronal suture, above the temporal ridges, and moulded on the organs of Marvellousness, and Imitation, are somewhat thicker than the other parts of the same bone; while the portion lying directly between the above-mentioned parts and over the organs of Benevolence, is of the usual standard thickness. Those portions called the frontal eminences, particularly the innermost parts which form the wall before the organs of Causality, and also the portions over the organ of Tune, on both sides of the head, notwithstanding the ridge passing over the latter, are, from the

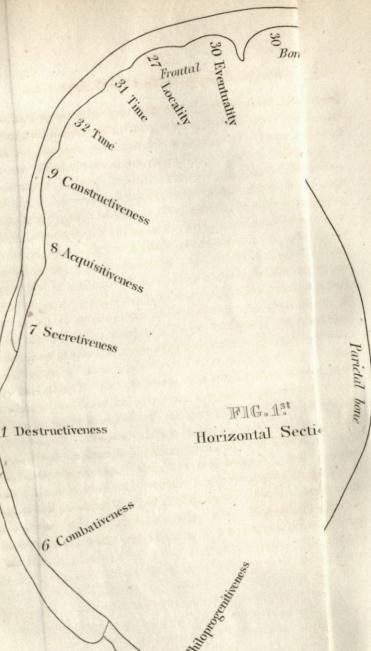
thinness of the bone translucent, and very distinctly defined within. The frontal sinuses, though prominent, are small for a man of Spurzheim's age, (56 years,) and extend only over the organs of Individuality, Form, Size, Weight, whose developments are very obviously moulded by the inner plate of the skull. It was the opinion of Dr. S. that his own frontal sinuses were small: this judgment is verified by the skull itself. The orbitar plates of this bone are peculiar for the depth of their digital impressions, and for the definiteness and agreement of these with the divisions on the marked busts. Could it have been possible for either Gall, or Spurzheim himself, to have marked the division lines of the organs on the outside of this skull from these impressions within, I believe he would have been astonished at the exactness of the correspondence just mentioned. This is partly shown in the horizontal section (fig. 1.) which I have traced with the greatest accuracy from the skull, its vault being divided in such a manner as to allow it to be done without any chance of error. The section from which the drawing is traced is marked by the dotted line in figure 2, and is made (fig. 1.) in the range of the developments of the organs of Eventuality (30,) Locality (27,) Time (31,) Tune (32,) Constructiveness (9,) Acquisitiveness (8,) Secretiveness (7,) Destructiveness (1,) Combativeness (6,) and Philoprogenitiveness (3). Figure 2, represents a vertical section, likewise traced from the skull, giving a profile view of the skull. As this drawing was made in the median line, the inner plate was not traced, for the reason that the bone, being thicker in that part and forming a ridge for the attachment of the falciform process of the dura-mater, would not communicate a correct idea of its thickness.

Of the Sphenoidal bone, nothing is peculiarly worthy of remark, except the greater than usual extent and depth of the Sella Turcica, the cavity in which lay the pituitary body, and the greater prominence of the clinoid processes.

The Temporal bones are thin, except at their occipital portions, which are thicker than common, and their mastoid and petrous portions, which, though generally thick, are here more bulky than usual.

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Occipital Bon SECTIONS T



Nothing uncommon exists with respect to the Occipital bone, except the great size of the foramen ovale, or hole in which the medulla oblongata lay. The width of this hole is one inch and six-twentieths; the length, one inch, and eleven twentieths.

The Parietal bones are the most irregular in point of thickness, of all the bones in Dr Spurzheim's cranium. At their posterior inferior angles, over the organs of Combativeness they are much thicker than we usually see parietal bones. This is well shown in the drawing of the horizontal section of the cranium. The portions of these bones over the organs of Self-Esteem and Love of Approbation are also more thick, while their superior portions lying over the organs of Firmness are very thin, even to translucency. Again, there are portions running from the anterior inferior angles of these bones to the thin portion just mentioned, which are moulded on the organs of Acquisitiveness, and Conscientiousness, which are much thickened.

Having completed, in as few words as possible, a description of the skull committed to me, I shall, without drawing any conclusions, ask the following question. From the knowledge which we possess relating to the characteristics of Dr Spurzheim, together with the fact that the bones of the frontal region and part of the sincipital are thinner than usual and more distinctly marked with digital impressions, may we not infer that the organs on which these bones are formed, continually changing and forming anew, are more active than those on which the bone has become thickened without other marks than those indistinctly determined by the boundaries of organs?