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117. The Use of Diagrams.

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of bones were concerned. Both in mass and weight the two limbs were, to all intents and purposes, similar at birth, and the preponderance in bulk and strength, which later on distinguishes the right arm, was acquired during life, and was caused by the greater amount of work it was called upon to perform.

All the evidence at our disposal went to show that right-handedness was due to a transmitted functional pre-eminence of the left brain, and that this was the factor which prevented an oscillation of the condition from one side to the other when the viscera were reversed.

The motor paths which took origin in the cortex of the two cerebral hemispheres crossed to opposite sides of the body as they proceeded to their ultimate destinations. But it was not only in this respect that the left cerebral hemisphere stood out pre-eminent. The active speech centre was located in the left brain. A still fuller significance was given to this arrangement by the fact that in left-handed people the predominance of the right cerebral hemisphere was still further accentuated by the transference to it of the active speech centre.

The functional pre-eminence of the left brain was not a haphazard acquisition which has been picked up during the life of the individual. There could not be a doubt that the superiority of the left cerebral hemisphere rested upon some structural foundation which was transmitted from parent to offspring; and further, that the exceptional cases of right-brainedness and left-handedness, which we every now and then observed, were due to the transference of this structural peculiarity from the left to the right side, or more probably to a transposition of the two cerebral hemispheres in the same way as transposition, either partial or complete, of the thoracic and abdominal viscera occurred.

The last part of the lecture was devoted to a study on the two sides of the brain, of the development and growth-changes of the portion of cerebral cortex which has recently been mapped out by Grünbaum and Sherrington as being that which presides over the voluntary movements of the upper limb.

Method.

Petrie.

The Use of Diagrams. *A Note in Reply to Professor Arthur Thomson* (MAN, 1902. 95). By *W. M. Flinders Petrie, D.C.L., LL.D., F.R.S.*

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As I see that in one instance (MAN, 1902. 95) the main point of my paper (MAN, 1902. 61) seems to have been overlooked, the same may occur in other cases. I would therefore repeat here that the system and treatment of research diagrams (which I dealt with there) is entirely different from that of expository diagrams. In research general correlations are sought for and exactitude is not wanted, but only the clearest system to use in searching. In expository diagrams, which I did not touch on, the exactitude of a few relations has to be shown.

I purposely did not expatiate on the obvious lack of equality of scales in the form of diagram I proposed, as that is of no consequence in research diagrams; and I carefully used the words "varies *with*" instead of "*as*" in writing to avoid any misconstruction; further, I said that the diagram showed ratios, &c., "*sufficiently* for all comparative purposes," that is, where mere comparison is needed, and not absolutely accurate relations. Thus I had guarded already against any suppositions that final accuracy was attained in such preliminary work; though whether any more minute accuracy is of use in present problems is very doubtful.

The exaggeration of variations, which seems to offend Professor Thomson, is a point of great value in such diagrams, and has to be brought into the design for the sake of clearness. It is not in the least of a "misleading nature" to anyone who understands the principle of "concentrated errors," which is the soul of diagram study of variations (see *Pyramids of Gizeh*, p. 238); without that no graphic reduction of triangulations could be carried out.

I hope these notes will suffice to show that Professor Thomson's objections do not concern the case of research diagrams (which was the object of my paper), but are details which I did not point out as they were so geometrically obvious. It would be a great mistake to burden research diagrams by enforcing that equality of scale in all cases which it is supposed that I had overlooked. W. M. FLINDERS PETRIE.

Method.

Thomson.

The Use of Diagrams. *A Rejoinder to MAN*, 1902. 117. By Arthur Thomson, M.A., Professor of Human Anatomy in the University of Oxford. 118

I have little to add to what I have already stated. I may, however, point out that in his original article (61) Professor Petrie defined the research diagram as one in which the main object "is to present as many variables as possible in one view, with such clearness that the eye can grasp any two at once without being distracted by others." Furthermore, he subsequently stated (p. 82) that the results obtained by his system of triangles were sufficient for "all comparative purposes." Professor Petrie in his present note now says that in research diagrams "general correlations are sought for and exactitude is not wanted," a statement which is certainly not a repetition of his former views as expressed in his previous article (61). The Professor further adds that by "comparative purposes" he meant "when *mere comparison* is needed, and not absolutely accurate relations," an interpretation of his meaning which is certainly not conveyed by the words employed in his original paper. The object of my criticism of his method was to render this clear and so warn others against falling into the possible error of supposing that the results obtained were sufficient for "*all comparative purposes*." This, and this alone, must be my justification for the use of the expression "misleading nature" employed in my previous communication (95).

If the exaggeration of variations be the object of Professor Petrie's method, then there is much to be said in its favour. At the same time it should be borne in mind that correlations which are based on a system in which exactitude is sacrificed are themselves liable to be inexact. ARTHUR THOMSON.

Crete.

Bosanquet.

A Mycenæan Town and Cemeteries at Palaikastro. By R. C. Bosanquet, M.A., Director of the British School of Archaeology at Athens. 119

During April and May 1902 the British School at Athens undertook preliminary excavations at Palaikastro. I was accompanied by the architect of the School, Mr. Heaton Comyn. The plain of Palaikastro, the largest plain on the east coast of Crete, measures three miles from east to west and two from north to south. It lies north of Zakro, and north-east of Praesos, the sites explored last year by Mr. Hogarth and the British School respectively. (MAN, 1901. 147-148.)

There seems to have been no large settlement here from Mycenæan times until the middle of the nineteenth century; but in that early age it was one of the principal centres, perhaps the capital, of Eastern Crete. The excavations were rewarded by the discovery of a Mycenæan town extending over an area of at least five hundred by three hundred yards, and of cemeteries which throw new light on the burial customs of the earliest inhabitants.

The most conspicuous feature of the plain is a steep table-topped headland called Kástri, which juts out into the sea midway along the low, and in parts marshy, beach. In spite of its acropolis-like form it does not seem to have been fortified. The scanty remains on its summit are those of a very late Mycenæan village. Beneath them we found a few fragments of much earlier pottery, including some Kamárais ware. At the foot of Kástri, and sheltered by it from the north, lies a sandy crescent-shaped bay, the natural harbour of the plain. A small promontory forms the southern horn of the