

Psycho-analysis is a lengthy process, demanding much tact and ingenuity from the psychologist or physician, but its results are of such surpassing interest and value that it should be regarded as one of the most important methods of mental science.

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### THE SURVEY OF INDIA.<sup>1</sup>

THIS general report for 1911-12, which has lately appeared, states concisely the progress made in the various departments of the Survey of India, the detailed descriptions and discussions of results being present in vol. iii. of the Records of the Survey. In the year under review, Colonel S. G. Burrard, F.R.S., was confirmed as Surveyor-General in succession to Colonel F. B. Longe. Topographical surveys were pushed on in various parts of the country, and work was done to meet some special requirements, of which may be mentioned the large-scale map of the Delhi site, with contours at 5 ft. vertical interval for the use of the town-planning committee. On the Geodetic Survey the astronomical latitudes of eleven stations were determined, and at one of these, Bihar, the largest southerly deflection of the plumb-line as yet found in India was found. Pendulum observations were made over the same region. In the principal triangulation the Sambalpur meridional series was commenced, and carried from lat. 23° to lat. 22°. In Kashmir secondary triangulation was carried along the Hunza and Kanjut valleys to form a connection with the Russian triangulation in the Taghdumbash Pamir.

The field detachments of the Magnetic Survey were employed on the detailed examination of the Deccan trap area in Central India and Hyderabad State, where considerable abnormalities exist. Comparative observations were made at the survey base stations, and a large number of repeat stations were visited for observation. In the Map Publication Office orographic colouring, by means of a series of colour tints from light green through yellows, browns, purples, and red, has been adopted for the one-millionth scale in place of shading as facilitating the provision of information. These sheets differ in size and in the unit (foot) of the vertical measurements from those of the international map, but as they form the key to the whole system of nomenclature and the arrangement of the topographical sheets, they cannot be dispensed with.

A series of "departmental papers" is to be commenced. These will be numbered serially, and will include all papers which, being published for departmental use, do not fall within the scope of the "Professional Papers," and are not of public interest.

Those, however, who are interested in the technical details of surveying will turn rather to the third volume of the Records of the Survey of India, where full accounts of this work will be found. Topographical surveys included triangulation, levelling, traversing, and detailed measurement on various scales from 1 in. to one mile, to 20 in. to one mile in cantonment survey. Many points of interest and modifications in procedure are noticed, among which we may mention the experimental use of Bristol boards instead of drawing paper on the plane-tables used in the field. If these are fastened firmly to the board by one edge only, and loosely by cloth slips

<sup>1</sup> General Report on the Operations of the Survey of India during the Survey Year, 1911-12. Prepared under the Direction of Colonel S. G. Burrard, F.R.S., Surveyor-General of India. (Calcutta: pp. vii + 36 + 12 maps, 1913.) Price Two Rupees or Three Shillings.  
"Records of the Survey of India." Vol. iii., 1911-12. Prepared under the direction of Col. S. G. Burrard. Pp. 176 + 12 maps. (Calcutta.) Price 4 Re. or 6s.

on the other sides, the trouble arising from distortion of the sheet when working in very dry climate is greatly reduced. Further experience with these boards is awaited.

In geodetic work the use of a new and more powerful zenith-telescope is reported, and determinations of latitude were made with it at eleven stations. Of these all stations but one, Khajnaur, on the north side of the Siwalik Hills, the attraction of the plumb-line is southerly, the largest value being at Biharas, mentioned above. In the pendulum work, observations were made to the north of the Ganges in a region which showed unusually low density, and it is suggested that Karachi, situated on the edge of the high plateau which forms the southern edge of the Ganges valley, may be near the crest of a ridge of high density. An important piece of work in this connection was an investigation of the isostatic theory of Mr. Hayford, with respect to a number of Indian stations, and the results obtained for the above-mentioned stations are given. In the account of precise levelling it is mentioned that experiments are being carried out with a new pattern of aluminium staff.

A full account of the magnetic survey and work in the observatories is given, but this calls for no special remark. In an appendix is given a synopsis of geodetic work near Dehra Dun, which is illustrated by a map showing the triangulation and gravity observation stations, as well as the lines of precise levelling. The whole volume forms a valuable contribution to the literature of high-grade surveying.

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### THE ASSOCIATION OF TECHNICAL INSTITUTIONS.

THE twenty-first annual meeting of the above association was held at the Clothworkers' Hall, Mincing Lane, on January 30 and 31 last, and was attended by upwards of 120 delegates representing all the important technical institutions in the United Kingdom, of whom about ninety-seven are enrolled in the association.

The new president, Sir Alfred Keogh, K.C.B., on taking the chair, delivered his inaugural address, in which he dealt with the report of the Royal Commission on the reconstitution of the University of London, and especially with that part of it concerned with technological studies. He expressed great satisfaction with the position accorded to the faculty of technology in the proposals of the Commission, particularly with respect to the methods of administration and with the prominence assigned to the sphere of utility in educational questions.

The Commission recommended the establishment of a self-governing faculty of technology in the University, such faculty to embrace all branches of applied science. He dwelt upon the extreme importance of bringing the specialisation of science well within the sphere of the University, and expressed gratification that entrance to the University would be made more accessible to the fit student with greater freedom for the teacher.

Various questions of considerable importance to the well-being of technical institutions were considered. Amongst them, the registration of teachers and the proposals of the newly established Teachers' Registration Council. Great satisfaction was expressed with the happy solution of this extremely difficult question by means of which the profession of teacher had been unified, and it was unanimously agreed that it was desirable that all eligible members of the teaching staffs of technical institutions should seek enrolment.