

basi-facial angle, a measurement which was independently arrived at by Dr. Rivet (*L'Anthropologie*, xx., 1909, pp. 35, 175). The majority of the crania exhibit one of the two main forms of artificial deformation, *i.e.* occipital flattening, or cradle-board compression, and fronto-occipital flattening ("flat-head" deformation). Each variety predominates in, but is not limited to, a certain type of people, thus indicating an exchange of customs.

The predominating type is that of the brachycephals, who range in stature from moderate to well developed, with good, though not pronounced, muscular development. They were probably the people among whom prevailed, and who communicated to their neighbours, the intentional fronto-occipital deformation. The other type, less well represented, indicates Indians of stature and strength similar to those of the people just mentioned, but with oblong, mesocephalic to dolichocephalic skulls. They were, in all probability, remnants of a relatively large local strain of dolichocephals mixed with the more numerous round-headed people. The physical characters of these people approach, on the one hand, those of the more northerly tribes of Missouri, Illinois, and parts of Tennessee and Kentucky, and, on the other, those of the more westerly and south-westerly tribes, represented in northern Texas



Bottle from Glendora, Ouachita Valley, La.

and especially by the oblong-headed type among the Pueblo Indians. The prevalent occipital flattening of the skull would point likewise to a connection with the south-west and the north-east. In addition, a few crania from these two States resemble very closely the subtype of the eastern Algonquians.  
A. C. HADDON.

#### THE TABULATION OF VITAL STATISTICS.

ATTENTION has so often been directed in these columns to the desirability of the adoption of more scientific methods in our Government departments that it gives us pleasure to notice the paper which was read by Dr. T. H. C. Stevenson before the Royal Statistical Society on June 21. Dr. Stevenson was appointed last year Superintendent of Statistics in the General Register Office for England and Wales, and his paper on suggested lines of advance in English vital statistics is, in effect, an outline of all the changes which it is proposed shortly to introduce in the mode of compilation of the vital statistics issued from that office, and of the mode in which it is proposed to compile certain tables in the census reports, more

especially those relating to the new data to be obtained in 1911 (see *NATURE* for April 7, p. 152).

That a civil servant should, with the approval of his official superiors, submit for criticism to a scientific society, before their final adoption, a statement of changes which it is proposed to introduce is, we believe, a course wholly without precedent, and deserves the warmest commendation. Taken in conjunction with the acceptance by the Registrar General, Mr. Bernard Mallet, of many of the suggestions made by the Statistical Society for the improvement of the census, the course augurs well for the thoroughly scientific spirit in which his office will be conducted.

The matter of Dr. Stevenson's paper is too detailed for abstraction in these columns, but it may be noted that it is intended in future to tabulate vital statistics by administrative instead of by registration districts, and that the data as to number of children which will be obtained at the next census will be tabulated, not only for different occupations of father, as suggested in the article in this journal to which reference is made above, but also by the number of rooms occupied or the number of servants employed, so as more clearly to distinguish the different social strata. It is also proposed to introduce the card-system for vital statistics and for census work, and to use mechanical methods for sorting and counting the cards. The frankness with which Dr. Stevenson points out difficulties and asks for suggestions is one of the most pleasing features of a paper on which he can be unreservedly congratulated.

#### UNIVERSITY AND EDUCATIONAL INTELLIGENCE.

ENTRANCE scholarships have been awarded at Bedford College for Women (University of London), as follows:—Pfeiffer scholarship in science (value 50*l.* a year for three years) to Miss W. R. Smyth, of the North London Collegiate School; Henry Tate scholarship in science (value 50*l.* a year for three years) to Miss F. M. Lunniss, of the Cambridge and County School.

WITH the view of securing uniformity in the statistics concerning higher education, the Carnegie Foundation for the Advancement of Teaching has issued, as Bulletin No. 3, a series of standard forms for financial reports of colleges, universities, and technical schools. The forms as they are published are the result of a prolonged inquiry concerning the practice of universities and colleges in the United States in the rendering of public financial statements of their receipts and expenditures. The object of the forms is to make it easy for students of education and others to answer the questions, What is the total income of a given institution for the year? What is its annual expenditure? What are the assets at the end of the year? The forms may be commended to the attention of officials who are responsible for preparing balance sheets and other statistics in connection with universities and colleges in this country.

MR. SIDNEY BALL, fellow and senior tutor of St. John's College, Oxford, and Prof. I. Gollancz, professor of English at King's College, London, have been elected the first fellows of the English foundation of the A.K. travelling scholarships. It may be remembered that these fellowships, each of the value of 660*l.*, were recently founded in this country by Mr. Albert Kahn, of Paris, to enable the fellows to travel round the world. The object of the founder is that persons selected from the first rank of those engaged, in whatever way, in the education of the nation may become better qualified to teach and to take part in the instruction and education of their fellow-countrymen. The trustees are the Lord Chancellor, the Lord Chief Justice, the Speaker, Lord Avebury (nominated by the founder), and the principal of the University of London (Dr. Miers), the last-mentioned being honorary secretary to the trustees. The affairs of the trust are administered at the University of London.

THE current issue of the *Reading University College Review* contains several articles of interest. An editorial

discusses the American faith in universities. The institution and development of universities, each of which is wholly dependent upon a particular State, is, the writer maintains, the most conspicuous activity that has of late been shown in America. The American recognises more and more that university life, under favourable conditions, can give a training in comradeship and personal character which is one of the best preparations for efficient citizenship. He wants, too, the best knowledge—useful and technical—because without it he knows he cannot have the right kind of citizens. Prof. H. N. Dickson contributes an essay on higher education and commerce, and points out that those universities and colleges which are able to provide instruction of the higher kind in commercial subjects are steadily increasing in number. An address delivered by Prof. A. L. Bowley last May on progress and leisure is also included.

In reply to a question asked in the House of Commons, Mr. Lloyd George has informed Mr. Duncan Miller that he is not prepared to propose any additional grants to the Scottish universities during the current financial year beyond the sum of 21,000*l.* included in the Supplementary Estimate issued on July 13, but as regards the future he has expressed willingness to sanction, subject to certain conditions, a further addition to the existing grants, provided that suitable schemes of expenditure can be submitted by the authorities of the several institutions concerned. For the current financial year the total grants in aid to Scottish universities and their allocation will be:—

	Grant under Universities (Scotland) Act, 1899	Grant under Education and Local Taxation Account (Scotland) Act, 1892*	Grant from Votes, Class 4, Sub-head I.	Supplementary Estimate	Total
St. Andrews ... ..	6,300	4,500	—	4,000	14,800
Dundee University	—	—	1,000	—	1,000
College ... ..	—	—	—	—	—
Glasgow ... ..	12,180	8,700	—	6,250	27,130
Aberdeen ... ..	8,400	6,000	—	4,500	18,900
Edinburgh ... ..	15,120	10,800	—	6,250	32,170
	£42,000	£30,000	£1,000	£21,000	£94,000

\* Payable from the Local Taxation (Scotland) Account.  
† Includes £1,000 for Dundee University College.

FOLLOWING an order of the House of Commons, the Board of Education has issued a return by each county council in England and Wales, except London, of the rates levied for elementary education, and of the rate levied for higher education. So far as higher education is concerned, it is interesting to notice that Glamorganshire is most highly rated for this purpose, the rate being 3*d.* in the pound, and bringing in 43,030*l.* Eleven counties levy a rate of 2*d.* or more, but less than 3*d.* They are, in order:—

	Rate <i>d.</i>	Amount raised <i>£</i>
Yorks: West Riding ... ..	2·97	92,948
Cardigan ... ..	2·88	2,647
Monmouth ... ..	2·73	13,074
Denbigh ... ..	2·46	6,096
Merioneth ... ..	2·31	2,049
Herts ... ..	2·13	14,853
Cheshire ... ..	2·12	30,746
Westmorland ... ..	2·10	3,771
Flint ... ..	2·10	3,636
Pembroke ... ..	2·10	2,813
Salop ... ..	2·00	11,131

A number of counties levy a smaller rate than a half-penny in the pound; these are Devon, Dorset, Hereford, Lincolnshire (three divisions), Notts, East Suffolk, West Suffolk, East Sussex, and the North Riding of Yorkshire. The Holland division of Lincolnshire raises nothing for higher education; the Kesteven division raises 10*l.* only, Hereford 35*l.*, East Suffolk 58*l.*, and Dorset 100*l.* Two counties only raise more than 50,000*l.*, namely, the West Riding, 92,948*l.*, and Lancashire, 65,082*l.*

A SCHOOL of aviation is to be established near London in memory of the late Mr. C. S. Rolls. A sub-committee of the Aërial League has had the scheme under considera-

tion, and its cost for the first year is likely to be 2500*l.* The primary aim of the school will be to provide training in aeroplane manufacture and flight, and to obtain a class of men grounded in the subject from beginning to end, including such laboratory and theoretical work as funds and the gifts of apparatus may permit. The laboratory will be open for the use of students from technical institutions already providing elementary classes in the theory of flight, and also for public demonstrations in order to spread an interest in aeronautical science. Men who have undergone courses of training in engineering schools, and competent engineers and mechanics, will be eligible as students. The practical work of students will be directed to securing machines offering greater stability and trustworthiness, lower power and fuel consumption, diminished capital cost and expense of maintenance, and a higher factor of safety than the apparatus now used. In order that an early start may be made, two machines are to be bought at once, and the students will build all further machines, and also those of selected inventors whose ideas are judged to be worthy of construction and practical trial. The funds will be administered by an independent committee of management, including practical men of science. Mr. Patrick Y. Alexander has offered to equip the proposed laboratory with the necessary practical apparatus. The new institution will probably be called the Rolls Memorial School.

SOCIETIES AND ACADEMIES.

PARIS.

**Academy of Sciences, July 18.**—M. Émile Picard in the chair.—P. Villard and H. Abraham: The existence of two explosive potentials; a reply to a recent note of M. Amaduzzi. The authors state that their original intention was to bring forward a theory of the silent and continuous discharge, characterised by luminescence at the anode, based in accordance with the modern hypotheses as to the passage of electricity in gases.—L. Maquenne and E. Demoussy: The toxic qualities of certain salts towards green leaves. The salts of ammonium are shown to be specially dangerous in this respect, while calcium chloride and sea salt have very little effect.—A. Laveran and A. Pettit: The forms of endogenous multiplication of *Haemogregarina sebai*. Observation in this organism shows for a given species a great variety in the multiplication cysts, both in dimensions and number of merozoites, such that it is necessary to beware of assuming the existence of different species too readily.—Joannes Chatin: The variations of structure of the sclerotic among vertebrates.—Ch. Platrier: A problem of rational mechanics and its application to the theory of propulsive helices.—Ernest Esclangon: The passage of the earth through the tail of Halley's comet.—M. Schuilhof: Some remarks on the inequalities of the longitude of the moon.—Jules Drach: The logical problem of the integration of differential equations.—Serge Bernstein: The equations of the calculus of variations.—Sigismond Janiszewski: The geometry of cantor lines.—L. Zoratti: The notion of a line.—Jean Chazy: A differential equation of the third order which has its critical points fixed.—René Garnier: A class of differential equations the general integrals of which have their critical points fixed.—Witold Jarkowski: Some theorems on "sustainers."—A. Tanakadate: A photographic study of the current of air produced by the movement of a helix.—E. Mathias and H. Kamerlingh Onnes: The rectilinear diameter of oxygen. Experiments in the case of oxygen give an affirmative answer to the question whether the deformation of the surface when the critical temperature is lowered leaves intact its rectilinear form.—A. Perot and J. Bosler: The theory of the luminescence of the mercury arc *in vacuo*.—A. Tjian: The action of ultra-violet rays on gelatine. These rays destroy jellies, causing their liquefaction or solution, thus forming a contrast to the action of the same rays in coagulating albumen.—G. A. Hemsalech: The relative periods of calcium rays in the spark of self-induction. Experiments of this character provide useful indications in the analysis of bodies containing unknown impurities.—