

the straightness of the nose and brow, the squareness of the nasal outline, and the frontal temporal region: the features are, in a word, short, square, and light.

All the characters grouped together under each of the three racial types, Semite, Hittite, and Philistine, do not pass as a single unit in heredity. The analysis of modern Jewry shows that the characters which make for "roundedness" as opposed to that of "squareness" as well as of length and heaviness as opposed to either, are inherited as simple characters in a Mendelian manner. The results obtained by following the matings of these types show that the rounded Armenoid type of face is dominant to the small, squared Philistine type, and that the heterozygous form may be often as extreme as the pure Armenoid, though generally it is less so. The Semitic long and heavy type is certainly recessive to the Armenoid, and probably so to the Philistine, but the evidence is scanty in this latter case. The Philistine type breeds pure when mated like to like; the Armenoid likewise, if one or both parents are homozygous, failing which it may split into rounded and squared types as 3:1. When the Armenoid Jew is mated to the non-Jew the result is exactly the reverse of that recorded for the mating Philistine \times Armenoid. The Gentile (Western European) type is dominant.

Although the Philistine type of face is often identical in appearance with the Western European, nevertheless it is genetically entirely different. In other words, the straight, short, squared features of the Western European are induced by a different chromosomal mechanism from that which induces the like character in the Philistine—the two peoples are then essentially different in origin. The diversity of the Jewish type and its frequent similarity to that of the people of Western Europe receives ample explanation from the kaleidoscopic rearrangements of the original elements which went to compose the Jewish Race before 500 B.C.

The Experimental Explosions in France.

THE arrangements for the experimental explosions next month in France (*NATURE*, vol. 113, p. 135) are now practically complete.¹ They will be carried out by the military services, though details as to time, etc., have been settled by a committee on which various scientific bodies are represented. There are to be three main explosions, in each of which rather more than ten tons of explosives will be fired on the surface of the ground. The site of the experiments is to be the neighbourhood of La Courtine, about forty miles west of Clermont-Ferrand, and the explosions will be made at three different points about one-third of a mile apart, the centre of the triangle formed by them being in lat. $45^{\circ}44'8''$ N., long. $2^{\circ}14'7''$ E. The times have been chosen so that the experiments may be made under different meteorological conditions, the first on May 15 at about 19 h. 30 m. civil time, the second on May 23 at 20 h., and the last on May 25 at 9 h.

Arrangements have been made for the help of observers distributed along the eight principal azimuths from the origin, and they will no doubt be assisted by a very large number of voluntary observers. The most important element is, of course, the time at which the sound is heard, and for this purpose it is suggested that observers should regulate their watches by the hourly signals from the Eiffel Tower. While the ear is a very sensitive receiver

¹ The conditions of the experiment are described by M. G. Bigourdan in *Comptes rendus* of the Paris Academy of Sciences, vol. 178, 1924, pp. 25-28, and by Prof. C. Maurain in *La Nature* for March 22.

and good observations may be made by hearing alone, a simple form of stethoscope would enable the sound to be heard at very great distances. The details which it is suggested that observers should notice are the time as exactly as possible, the apparent direction of the sound both horizontally and vertically, the intensity of the sound according to an arbitrary scale, and also the movement of windows, etc., the nature of the sound whether single, double, rolling, etc., and the meteorological conditions at the time. The earth-waves, it is expected, will be registered at considerable distances from the source, and their records will no doubt add to or confirm our knowledge of the velocities of condensational and distortional waves in the superficial layers (*NATURE*, vol. 111, p. 585).

If not too late, one or two other points may be suggested as worthy of close attention. Except near the source the air-waves that shake windows are usually different from the sound-waves and near the ground travel with a slightly less velocity (*NATURE*, vol. 112, p. 602). They seem to take a lower course in crossing the silent zone and in the outer sound-area they precede the sound. It is desirable that the relative order of the sound-waves and the rattling of windows, and the interval between them, should be observed at all distances. In the case of double or multiple reports being heard, the intervals between them and the order of intensity should be recorded. Many of the previous observations of multiple reports are vitiated by the doubt as to the singleness of the original explosion.

C. DAVIDSON.

University and Educational Intelligence.

CAMBRIDGE.—Dr. E. Lloyd Jones, Downing College, has been re-appointed as demonstrator of medicine. The Linacre Lecture at St. John's College will be delivered by Sir Charles Sherrington, president of the Royal Society and honorary fellow of Gonville and Caius College. The lecture will be at 5.15 P.M. on May 6 in the Anatomy School, and the subject will be "Problems of Muscular Receptivity."

GLASGOW.—The following degrees have been conferred:—*Ph.D. in the Faculty of Science*: P. F. Gordon, for a thesis entitled "The Separation of the Components of Petroleum"; and Mr. R. C. Smith, for a thesis entitled "Sintering." *Ph.D. in the Faculty of Arts*: Mr. I. L. G. Sutherland, for a thesis entitled "A Critical Examination of some Current Tendencies in the Theory of Human Conduct." *Ph.D. in the Faculty of Engineering*: Mr. D. S. Anderson, for a thesis entitled "The Evaporative Condenser. A Study of Heat Transmission by Film Evaporation"; and Mr. R. M. Brown, for a thesis entitled "Investigation into some of the Effects of Cold Drawing on the Properties of Iron and Steel."

MANCHESTER.—The extra-mural department of the University has arranged for summer courses of post-graduate study in mathematics to be held at University College, Bangor, from Monday, August 18, to Saturday, August 30. The courses are intended to afford facilities for advanced study in mathematics to teachers and others who are unable to attend courses during the regular University terms. Each course will consist of twenty lectures of one hour each, two lectures being taken on each of ten mornings. The following three alternative courses are proposed: (1) higher geometry, by Mr. H. W. Richmond (King's College, Cambridge); (2) theory of functions, by Prof. L. J. Mordell (University of Manchester);

and (3) elements of the theory of relativity, by Prof. Sydney Chapman (University of Manchester). The fee for any of the three courses is three guineas. Application to attend the courses should be made immediately, as the holding of the courses depends to some extent on the number of applications received. A registration fee of half a guinea should be sent with the application to Miss D. Withington, The University, Manchester. This fee will be refunded should the course not be held, or included in the tuition fee if the course is held.

OXFORD.—Trinity Term has now begun, and it is expected that the sittings of the Statutory Commission will give much occupation to the University and College authorities, many of whom will be engaged in preparing draft statutes for the approval of the Commissioners.

The Hope Department has lately received a large and valuable addition to its collection of Lepidoptera by the bequest of the late Mr. A. H. Jones, sometime treasurer of the Entomological Society of London. Mr. Jones's series contains many thousand specimens, mostly collected by himself in various British and European localities, including Russia.

ST. ANDREWS.—The Senatus Academicus has resolved to confer the following honorary degrees at the public graduation ceremonial on June 27:—*LL.D.*: Prof. G. B. Brown, Watson-Gordon professor of fine art in the University of Edinburgh; Mr. Walter De La Mare, author; The Right Hon. James Mackay, Viscount Inchcape of Strathnaver; The Rev. Dr. C. A. Richmond, president of Union College and chancellor of Union University, New York; and Prof. A. M. Stalker, Dundee, emeritus-professor of medicine in the University.

ACCORDING to the Bombay correspondent of the *Times*, Sir Currimbhoy Ebrahim, a well-known Bombay merchant, has offered the University of Bombay ten lakhs of rupees (66,600*l.*) for the promotion of the higher education of Mohammedans.

APPLICATIONS are invited by the Ministry of Agriculture and Fisheries for a number of research scholarships in agricultural and veterinary science, each tenable for three years and each of the annual value of 200*l.* Particulars of the conditions attached to the scholarships, and the prescribed form to be filled up by candidates, may be had from the Secretary of the Ministry, 10 Whitehall Place, S.W.1. The latest date for the receipt of applications for the scholarships is July 15.

THE Yorkshire Summer School of Geography, which was held in 1913, 1914, and 1920, at the County School, Whitby, is to be repeated this year on August 11-23, the work of organisation being undertaken by the University of Leeds. In contrast with previous years, when all aspects of geography have been dealt with, the course this year will be confined to physical geography. The Geological Department of the University will be responsible for the work, and next year the Department of Geography will organise a similar course devoted to the economic aspects of the subject. The course will consist of lectures, laboratory work, field work, and demonstrations. Six formal courses—on topographical maps, geological maps (general), geological maps (special areas), weather charts, surveying, and rocks, minerals, and soils—will be available, and students will be asked to choose four, including that on rocks, minerals, and soils. Particulars of the course can be obtained from the Secretary of the Yorkshire Summer School of Geography, University of Leeds. Applications to attend must be received not later than May 12.

Early Science at the Royal Society.

May 4, 1671. Mr. Oldenburg desired, that Mr. Hooke might be put in mind to observe the obscuration of a fixt star, which would happen according to Mr. Flamstead's pre-advertisement on the 6th of that month of May.

May 5, 1670. Dr. Christopher Wren produced a new contrivance of his for a more convenient winding up of weights by ropes, and serving for wells, mines, and cranes, and thought applicable to clocks.

1686. Anne Taylor, not yet four years old, being grown prodigiously fat and corpulent for that age, was shewn before the Society. She weighed forty-eight pounds and a half.

May 6, 1663. Mr. Hooke was ordered to bring in some experiments . . . concerning the condensation of air in the compressing engine. The queries were ordered to be entered and [among them] were "What variation there will be found in the refraction of the rays of light?" How those [animals] that live endure it? Whether pleasantly or with regret: if it seems painful to them and offensive?

1669. Sir Robert Moray mentioned that Mr. Greatrix had improved his engine for going under water with; and that by means thereof he could sink himself ten fathoms under water, and stay there with ease enough as long as he pleased, going up and down, stooping and working.

May 8, 1661. It was proposed that the Society write to Mr. Wren and charge him in the King's name to make a globe of the moon. *N.B.* The King's command was signified by a letter to Wren under the joint hands of Sir Robert Moray and Sir Paul Neile, dated from Whitehall, the 17th of May 1661. His majesty received this globe with peculiar satisfaction and ordered it to be placed among the curiosities of his cabinet (*see* Ward's "Lives of the Professors of Gresham College").

1672. Mr. Cook produced a piece of steel polished, to be used in the reflecting telescope. Mr. Hooke was desired to make tryal with it, though he said it was falsely polished.

May 9, 1666. It was ordered that the president be desired to write a letter to those of the nobility who were members, concerning their arrears, the occasions of the Society requiring a present supply of money.

1667. Among the experiments, appointed were—To try in St. James's park between that and the following meeting, the experiment of measuring the Earth.

1678. The minutes of the last meeting being read gave occasion of much discourse concerning respiration, and of what use the air might be for continuing sense, motion, and life.

1679. Mr. Hooke produced and read a paper, containing a description of the way of flying, invented and practised by one Mons. Besnier, a smith of Gable in the County of Mayne, the contrivance of which consisted in ordering four wings folding and shutting . . . to be moved by his hands before and legs behind, so as to move diagonally, and to counterpoise each other: by which he was, it was said, able to fly from a high place cross a river to a pretty distance. Mr. Henshaw conceived, that by reason of the weakness of a man's arms for such kind of motions, it would be much more probable to make a chariot or such like machine with springs and wheels to move the wings, that should serve to carry one or more men in it to act and guide it.

May 10, 1665. Mr. Evelyn read a letter from Deal in Kent, concerning Sir William Petty's double-bottomed boat.