

made his mark and his influence felt wherever those interests drew him. As an electrical engineer his far-sighted and vigorous pioneer work made him known as in the first rank in Europe and America. His early recognition of the genius of C. E. L. Brown (Brown, Boveri and Co.), as indicated, for example, in his series of articles in 1901-2 on "The Debt of Electrical Engineering to C. E. L. Brown", illustrated his intuitive engineering faculty for seizing and advancing upon the best features of current practice, when not actually initiating them. He had been very appreciative of encouragement in his early career from such men as Gisbert Kapp and André Blondel, and this made him ever watchful to encourage and give such praise as might fairly be given to his young assistants; indeed, many of them were of his own age or older, since he had achieved much, and had established himself, while yet quite a young man.

Behrend's literary and philosophical leanings resulted in his home being built around his library, whether in Cincinnati, Milwaukee, Pittsburgh, or Boston; while a strong antiquarian bent for early colonial furniture turned him into a collector of note. He had a wide knowledge of general scientific writings, and perhaps no man held a higher place in his esteem than Thomas Henry Huxley; he made a pilgrimage to Mrs. Huxley at 'Hodeslea' in 1910. Charles Darwin, Andrew D. White, John Perry, were intimate book acquaintances. But it was not merely such men, their fame already established, whom he held in honour, for he often showed himself an alert and aggressive champion of interests which would otherwise have continued in undeserved neglect, as witness his well-known successful activities on behalf of Oliver Heaviside.

Behrend was the recipient of many honours, and year before his death the honorary degree of

doctor of engineering was conferred upon him by Darmstadt. As an American citizen he was loyal and patriotic, but believed that the time was past for intense nationalistic feeling in men of affairs. Of comparatively small stature and frail health but intense vitality, Behrend was an antagonist indeed to be reckoned with when his indignation was stirred, but was a man of large generosity, both in sentiment and practically, to a host of men who long will gratefully remember him.

As publicity has been given to the fact that Dr. Behrend took his own life, it should be recorded here that he was convinced that he was suffering from an incurable cancer. His last years were enriched by his marriage in 1926 to Margaret Plumer Chase, of whose devotion during the long illness preceding his death he wrote in eloquent terms.

WE regret to announce the following deaths:

Prof. Bernhard Bang, formerly veterinary adviser to the Government of Denmark and professor of internal diseases at the Royal Veterinary College, Copenhagen, known for his work on tuberculosis, on June 22, aged eighty-four years.

M. Albert Durand de Grossouvre, *correspondant* for the Section of Mineralogy of the Academy of Sciences, Paris, aged eighty-two years.

Prof. Aimé Sneider, formerly professor of zoology in the University of Poitiers, known for his work on the parasitic Protozoa, on March 27, aged eighty-seven years.

Prof. J. W. Young, professor of mathematics in Dartmouth College, Hanover, New Hampshire, author of numerous works on the fundamental concepts of algebra and geometry, on Feb. 17, aged fifty-two years.

News and Views

Early Man in Java

ON p. 20 of this issue of NATURE there appears a letter on the recently found Ngandong skull, from Prof. E. Dubois, whose discovery of *Pithecanthropus erectus* and close association with palaeontological research in Java entitle him to speak with authority on the question of early man in south-east Asia. After careful study of Dr. Oppenoorth's paper, he has arrived at the conclusion that Ngandong man and Wadjak man are one identical type. This view carries with it certain implications, to which Prof. Dubois briefly refers, of no little importance in the study of the evolution of human types. Wadjak man is represented by two skulls discovered in the terraces of a dried-up fresh-water lake near the southern coast of Java, one in 1889 and the second by Prof. Dubois himself in the following year, and brought back by him from Java in 1895, but not described until 1921. These skulls have been regarded as ancestral to the Australian; but it has been pointed out, notably by Sir Arthur Keith, that Wadjak man, so far as described, presents certain points of resemblance to Rhodesian man—for example, in the relatively enormous size of the

palates, of which the area is identical. Prof. Dubois regards one of the Wadjak skulls, which in this respect differ *inter se*, as approaching the Ngandong skull in the shape of the occiput and other points; while Oppenoorth says of the latter that it resembles the Rhodesian skull, especially in the shape of the occipital bone, while the back of the skull "bears a resemblance to the Australian race". Thus with the Talgai skull of Queensland—probably pleistocene, and probably a relative of the Wadjak man, but still more closely related to the modern Australian—the newly discovered Javan skull apparently helps to link up a group of skulls, reaching out experimentally, if not in a direct line of ascent, to the modern Australian type.

Magic and Medicine Men

ALTHOUGH there is a great similarity in the supernatural performances of witches and medicine men wherever recorded, the selection of certain alleged powers of West African magicians as the subject of a challenge by the local Council of the Christian Missions (see NATURE, June 11, p. 862) adds interest to the

practices of certain members of the Bear gens of the Fox Indians of Oklahoma, to which reference is made in a recent publication of the Bureau of American Ethnology ("Notes on the Fox Wápanowiweni": by Truman Michelson, *Bull.* 105). The bear, it may be mentioned, in parenthesis, is considered among the Fox to be the most dread form of witch. An Indian informant, who, significantly enough, wished to remain anonymous, stated that he himself had seen certain members of the gens remove stones or feathers from a box without touching it or its contents. Balls of fire were produced, and skins of snakes and cat and otter skins came alive and spoke. In the matter of the closed box the identity with the West African claim is noteworthy. Other performances resembled those of the spiritualistic medium. Stones ran round in a circle. The witches successfully called on the Wápanowi birds (spirits) to come; they handled red-hot coals without suffering harm, and plunging their bare arms into boiling water, took out meat with impunity. This last feat has been recorded among a number of the American Indian peoples.

An attempt by Fox Indian witches to injure or kill an individual who sought to ward off their attempts on his sister, was frustrated by giving them a feast at which the food provided by their host and intended victim was the head of a witch who had been captured by burning cedar leaves. When the witches invited him to a ceremonial feast, they were unable to take the meat from boiling water with bare arms, but he succeeded; they handled red-hot coals and he did the same. Then they became afraid. The next day the ceremony ended without any special event. Presumably the intended victims had evaded the danger. It will be remembered that it was claimed for the notorious medium Home that he had transferred his immunity to red-hot coal to someone else for a brief period; but with the Fox the transfer would seem to have been involuntary, although, it is said, the intended victim had been told previously "how to excel in shamanistic tricks". It has been questioned whether medicine men and shamans have the hypnotic powers sometimes claimed for them—rather, it is to be feared, as the last resource of an exhausted attempt at explanation; but it may be noted that it is said of one Fox witch that "when he was looked at steadily by anyone, the other became sleepy, . . . and . . . when [anyone] did not take his gaze from him, he fell asleep".

Anniversary of the Science Museum

THE South Kensington Museum was first opened to the public on July 1, 1857, and the seventy-fifth anniversary is being marked at the Science Museum by a special exhibition of technical apparatus, etc., which will remain on view until October. The wonderful progress which has been made in all branches of science and technology is shown by exhibiting examples which were in use during the decade 1850-60 alongside the corresponding types which are in use to-day, and emphasising the contrast in the descriptive notices. Air, land, and water transport are represented, and the remarkable ad-

vances which have been made in mathematical instruments, lighting equipment, telegraphy, typewriters, sewing machines, marine engines, pumping machinery, stationary engines, metallurgy, and other fields are shown by actual examples or by scale models. The discovery of the first artificial dye by W. H. Perkin in 1856 provides a very striking example of the progress made in industrial chemistry when the products of that date are compared with those of the dyeing industry of to-day. Besides a type exhibit placed among the others of the exhibition, a much larger and more representative display of modern dyes and dyed materials has been arranged in Gallery 66 on the top floor of the Museum. A series of plans shows how the Gore Estate has been developed by the Commissioners of the Great Exhibition of 1851 during the past eighty years, from the original group of green fields to the great intellectual centre which it is to-day. Since the South Kensington Museum, now represented by the Victoria and Albert Museum and the Science Museum, was established on the initiative of the Prince Consort, the attendance records total more than seventy-eight million, and about two million visits annually are still recorded.

National Prosperity and Control of Production

IN a pamphlet entitled "The Next Step", Capt. Harold Macmillan, M.P., advances the proposition that prosperity is conditioned by equilibrium in production. If the forces of production are properly distributed in the production of consumptive goods, and if the rate of saving is equalled by the rate of capital investment, then the total products will exchange against each other and prices and employment will be stable. This is the ideal production balance, but the difficulty of maintaining it becomes evident when it is visualised as a continuous rather than a static balance. Fluctuations are inevitable, and the balance may be upset by financial, political, or industrial forces. Capt. Macmillan therefore argues that it is necessary to create an organisational structure which will guide the flow of capital investment, secure the production of commodities in the quantities which scientific market study directs, and maintain stability of prices as the governing principle in credit policy. To attain these ends, he advocates the following programme: (1) a scientific system of selective protection of our home market; (2) the establishment of representative national councils for each industry, to co-ordinate purchasing, production, marketing, and research; (3) the creation of an investment and development board representing the Government, industry, and finance, to direct investment into the correct channels, to influence credit policy, and to direct the efforts of the councils of industry so as to achieve a new internal production balance in relation to the most scientific estimation of market requirements; (4) reflation to the 1928 price level.

CAPT. HAROLD MACMILLAN also advocates the "planning of stability". He argues that Britain has inherited a population and economic structure adjusted to a stage of world development which is past. Adjustments must now be made which ought to have