

Accepting Prof. Thomson's equation, it can be shown that the sum of the test-measurements operates as the general factor in his hierarchies. If we assume that intelligence depends on the number and systematic arrangement of the unorganized synapses of cortical neurones, this interpretation appears equally plausible from a physiological point of view. He reiterated his belief in the reciprocity principle and his opinion that the bipolar factors obtained by correlating tests and persons respectively are essentially identical.

Dr. W. Stephenson said that Prof. Thomson would appear to take tests for granted and to seek to identify the qualities of persons tested with selected factor axes. It seemed to him that tests should have something to say about the axes to be selected, and that we should define axes at the *outset* on psychological grounds. Mathematical theorems would then be used to see whether these axes are consistent with facts.

There is a great deal of equivocality in the use of the word 'ability' in factor analysis, and he proposed a definition which relates abilities to what he called *non-fractional* factors for cognitive activity, a *non-fractional* factor being a kind of compound of the 'fractional' factors usually discussed.

A general discussion followed the papers. In summing up, Prof. Godfrey Thomson said that as Thurstone was not present he thought he ought to say something on behalf of the idea of 'simple structure'. Recently he had heard Prof. P. A. M. Dirac support the thesis that when he found a hypothesis or solution of great mathematical beauty he could have considerable confidence that it would correspond to something real in physical Nature. Something of the same sort, Prof. Thomson imagined, was behind Thurstone's faith in 'simple structure'.

On the other hand he felt that Prof. Spearman would have been justified in putting up a more fundamental defence of  $g$  than he had. For the blemishes criticized in Thurstone's work could be removed by care, and Thurstone might still attain 'simple structure' in chosen batteries. The real defence of  $g$  was surely that it had proved to be useful.

## University Events

ABERDEEN.—On March 29, the honorary degree of LL.D. was conferred on the following among others: Prof. J. Gray, professor of zoology in the University of Cambridge; Dr. J. McIntosh, director of the Bland-Sutton Institute of Pathology, Middlesex Hospital.

The ordinary degree of D.Sc. was conferred on Dr. J. S. McPetrie for a thesis entitled "Studies in the Production and Propagation of Radio Waves".

CAMBRIDGE.—Dr. O. M. Solandt, of Trinity Hall, has been appointed University lecturer in mammalian physiology.

N. B. Slater, of Gonville and Caius College, has been appointed second junior observer at the Solar Physics Observatory.

Sir Edward Mellanby, of Emmanuel College, secretary of the Medical Research Council, will deliver the Rede Lecture at 5 p.m. on April 28, the subject of which will be "Some Social and Economic Implications of the Recent Advances in Medical Science".

## Science News a Century Ago

### The Royal Society

At a meeting of the Royal Society on April 11, 1839, James Finlay Weir-Johnston (1796–1855), the agricultural chemist, read a paper "On a New Equiatomic Compound of Bicyanide with Bin oxide of Mercury". In the paper he gave an account of the properties of "a salt, obtained by agitating, with red oxide of mercury, a small portion of hydrocyanic acid, and which he found to be distinguished from the bicyanide of mercury by its sparing solubility in cold water, by the alkaline reaction exhibited by its solution (a property which indicates an excess of mercury) and by its susceptibility of detonation by heat, depending on this excess being in the state of an oxide and on the carbon of the cyanogen it contains, and the presence of which is shown by the disengagement of hydrochloric acid gas when acted on by hydrosulphuric and hydrochloric acid".

At the same meeting Felix Savart (1791–1841), the successor of Ampère at the Collège de France, Mace-doine Melloni (1798–1854) the Italian physicist, and Lambert Adolphe Jacques Quételet (1796–1874), the Belgian astronomer and statistician, were elected foreign members.

### Lacaille's Astronomical Observations at the Cape

On April 12, 1839, the concluding part of Thomas Maclear's paper "On the Position of Lacaille's Stations at the Cape of Good Hope" was read. The lapse of 85 years since Lacaille's visit had obliterated all local evidence of the French astronomer's operations, and the fact that he had been there at all was only kept alive by the inquiries of Captain Everest in 1821. Having by inquiries found the house Lacaille resided in, Maclear measured the position of the house relative to the Royal Observatory by triangulation. He then proceeded to discover the exact site of Lacaille's northern station at Klyp-Fonteyn. With the assistance of a party from the Royal Engineers he made excavations of various ruins and so unearthed the foundation of the granary used by Lacaille.

### Geology in Russia

"SOME idea of the activity of the Russians in pursuit of science, but especially that of geology," said the *Athenæum* of April 12, 1839, may be gathered from the following statements. "The Inspector in Chief of Mines, the Count Cancrina, has for several years obtained his Imperial Majesty's permission to make geological and mineralogical researches in various parts of the vast empire, and a scientific committee has been established to superintend the publication of a work entitled 'Annals of the Russian Mines'. M. Parrot, Professor at the University of Dorpat, was ordered by the Russian government to explore Armenia and Transcaucasia. . . . M. Kupffer has determined the height of the Elbrous, the culminating point of the Caucasian chain, and is at this moment making meteorological and magnetic observations throughout the Empire. Baron de Humboldt and M. Rose have traversed the northern mountains, M. de Pasch has described the chalk formations in the south of Poland, M. Pander those of the neighbourhood of St. Petersburg . . . M. de Semenoff, principal engineer of mines, has described the geological formation of the northern part of the Altai Mountains."