

Newcomb had, however, suggested many years before the possibility that the lunar fluctuation might arise from changes in the earth's rate of rotation.

Prof. de Sitter stated that his work had been assisted by excellent series of photographs of the satellites obtained at many observatories. He made a comparison between the accuracy of heliometer and photographic positions; the probable error of one position with the former was 0.075", while that from a plate with six images, measured in two positions, was 0.02"-0.03".

### Weather and Health.

AN interesting report, prepared by Dr. Ellsworth Huntington with the advice of a strong committee, based on the daily meteorological and mortality records of the city of New York from April 15, 1882, to Mar. 24, 1888, appears as *Bulletin No. 75* of the National Research Council (National Academy of Sciences, Washington). Gross mortalities at ages under five years and over five years are considered separately, also mortalities in these age periods from causes other than pneumonia and influenza. Mortality from pneumonia and influenza (all ages) forms a separate group. The data are expressed as percentages of the daily average of the particular year, and, when necessary, corrections for seasonal trend are introduced. For sufficient reasons, graphical methods are chiefly used, in particular climographs: that is, a third variable, daily deaths, is shown by contour lines on a bivariate diagram, for example, of temperature and relative humidity. It is contended that the method leads to clearer results than the use of correlation coefficients and massed averages.

The principal conclusions reached are these. Judging by the data of deaths from all causes except pneumonia and influenza among persons over five years of age, the optimum temperature is close to 65° F. Among children under five years the optimum is about 10° lower. Among extremely young infants, however, there is evidence that the optimum is higher. So far as influenza and pneumonia are concerned, it appears that the chances of contracting the disease are at a maximum with the lowest and a minimum with the highest temperatures, but that the chances of death after the disease has been acquired are subject to the influence of the normal temperature optimum. It appears that at the optimum temperatures, low atmospheric humidity is harmful but, among young children, plays only a minor part. Above the optimum temperature, the best humidity appears to be progressively lower as the temperature rises.

Much stress is put upon the relation between interdiurnal variability of temperature and mortality. "No matter whether a drop of temperature causes the mean temperature to be better or worse, it tends to produce a stimulating effect which induces a relatively low death-rate both on the day in question and the next day. In similar fashion, no matter whether a rise of temperature brings a favourable or unfavourable mean temperature, its effect for two days is to raise the death-rate." Still more interesting is the apparent fact that a moderately high degree of variability of temperature from day to day is more favourable than low variability. In this respect there is a similarity between the experience of New York and of Stockholm, which suggests that there is a definite optimum variability independent of temperature.

The author asks whether "the apparent difference from season to season" may not "merely represent

the fact that in cold weather we are protected from changes of temperature". He finds that ideal weather in New York would be characterised by an average temperature of about 65° and a relative humidity of nearly 90 per cent. The preceding ten days should have been characterised by fairly strong changes of temperature, averaging 4°, and should culminate in a fall of 10° or 12°. It seems that south-east England, outside the smoke-laden area of London, approaches as near to the ideal as we may hope to come, but the author points out that many other variables remain to be considered.

### University and Educational Intelligence.

CAMBRIDGE.—The Sadleirian professorship of pure mathematics will be vacant on Sept. 30, 1931, by the resignation of Dr. E. W. Hobson.

The Appointments Committee of the faculty of mathematics has reappointed Mr. S. W. P. Steen, of Christ's College, and Mr. T. G. Room, of St. John's College, to be University lecturers in the faculty, and Mr. E. C. Bullard, of Clare College, to be University demonstrator in geodesy.

A report has been received from the managers on the regulations for the Quick professorship of biology. In October, Prof. G. H. F. Nuttall retires from the chair, after having held it for twenty-five years. By the terms of Mr. Quick's will, the benefaction must always be used to promote "study and research in the sciences of vegetable and animal biology". Authority is given to the managers, however, to propose to the University changes in the particular field of biology with which the chair shall be associated. From 1906 until 1919 this field was defined as protozoology; in 1919 parasitology replaced protozoology. The managers now recommend to the University that the next tenure of the Quick professorship should be associated with the field of research which they define as the study of the "Biology of the Cell". If this recommendation is approved, they intend to offer the chair to Mr. D. Keilin, who has for some years been carrying on research work of this type in the Molteno Institute.

The University has conferred the honorary degree of M.A. on Mr. E. Everett, on his retirement, after more than forty years' service, from the post of assistant to Sir J. J. Thomson at the Cavendish Laboratory.

DURHAM.—The Council of Armstrong College has appointed Dr. E. G. Richardson to be lecturer in physics. Dr. Richardson is at present lecturer in physics at University College, London, and is engaged on research in connexion with the propagation of high frequency radiation in gases.

LONDON.—The London School of Economics and Political Science has been granted the sum of £142,000 by the Rockefeller Foundation. This sum has been allocated as follows: £60,000 for reconstructing and extending the library; £10,000 for the purchase of additional books; £30,000 towards the purchase of land for new school buildings; and £42,000, in annual grants of £6000, for providing increased facilities for post-graduate teaching and research.

The late Mr. Clifford B. Edgar has bequeathed £4000 to the London School of Hygiene and Tropical Medicine for the promotion of research. Mr. Edgar was a graduate of the University, and intimately connected with its work for many years, having acted as chairman of the Finance Committee from 1910 until 1920.

The Court of Common Council has renewed for 1931