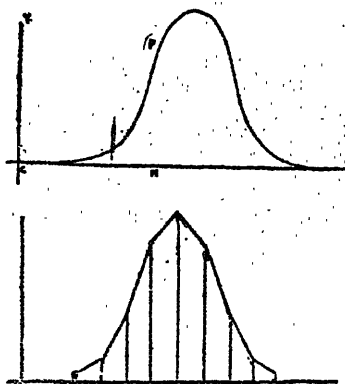


firmer upon which to stand than theoretical deductions. We desire a firm, unassailable foundation of facts; we desire statements that are mathematical in their accuracy. At last, I am rejoiced to point out, a beginning has been made, and that by Karl Pearson, the well-known Professor of Mathematics in University College, London. If it will not detain you too long, I desire to bring before you Karl Pearson's method, for it appears that, applied by the insurance actuaries to the data possessed by them, it will solve this question of the exact value to be placed upon parental disease as a factor in estimating the probability of life in the individual. You will find a very clear presentation of the method by Robert Worthington in the July number of the *Journal of Anatomy and Physiology* (vol. xxxv. pt. 4, p. 455 *).

Karl Pearson's method consists in taking, say, 1,000 measurements of one organ, sorting these measurements into groups in such a way that those in any particular group differ only within a small specified range. For example, if the measurements be of stature, they might be sorted into groups differing by half an inch (if of life periods by groups of a year of age.) If now such a system of group measurements be plotted on paper with reference to two axes at right angles, so that the ordinates represent the number of measurements, and the abscissae their typical measurements, then on joining the points so obtained, we shall obtain a polygon somewhat of the form shown in this diagram:—



* Pearson's most important papers on the subject are :
 Contributions to the Mathematical Theory of Evolution, *Phil. Trans. R.S.*, 185 A.
 On Skew Variation in Homogeneous Material, *Phil. Trans. R.S.*, Vol. 186 A.
 Regression, Heredity and Panmixia, *Phil. Trans.* 187 A.
 On the Inheritance of the Cephalic Index (Miss Fawcett and K. Pearson, *Proc. R.S.*, 72, p. 413.)
 A First Study of the Variability and Correlation of the Hand (Miss Whitely and K. Pearson, *Proc. R.S.*, 75, p. 126.)