

since Darwin's day, but we have said enough to show that Mr. Bateson has made an important step towards reaching solid ground, and a timely protest against attempting to give a false appearance of simplicity to the intricacies of nature.

(c) *Statistical Study of Variation*.—The application of statistical methods to the study of variation may not sound very attractive to the outsider, and yet if he take the trouble to read Prof. Karl Pearson's essay on the relative variability of man and woman he will find how important the method is in regard to conclusions which he cherishes or abhors.

The statistical method measures a selected character—in man or crab, in buttercup's petals or sparrow's egg—and after a sufficiently wide survey plots out a curve showing the amount of variation which occurs and the proportionate number of variants on either side of the average.

If curves be constructed for individuals of different age, it may be shown that there is a greater death-rate among the variants on one side of the average than on the other, and this leads on to a measurement of the action of natural selection.

Of course there are many difficulties in the use of the method and in the interpretation of the results, but what concerns us here is that Mr. Galton, Prof. Weldon, Prof. Pearson, and others have introduced a method of measurement into a domain where certainties are few and platitudes many.

(d) *Isolation*.—A formidable objection to the Darwinian theory, first stated by Professor Fleeming Jenkin, and often urged since, is that particular variations of small amount would tend to be lost or neutralized by intercrossing. In artificial selection the breeder takes measures to prevent this—by isolation; but what is the factor in natural conditions?

The usual Darwinian answer to the difficulty is to suppose that numerous similar variations occur at once. Thus Weismann says, "The necessary variations, from which transformations arise by means of selection, must in all cases be exhibited over and over again by many