

V. *Questions bearing on Specific Stability.* By FRANCIS GALTON, D.C.L., F.R.S.

[Read April 3rd, 1895.]

At the suggestion of your President, I beg to submit three questions to the notice of this Society. They bear on a theoretical question of much importance; namely, the part played in Evolution by "organic stability."

The questions are more especially addressed to those who have had experience in breeding, but by no means to breeders only; nor are they addressed only to Entomologists, being equally appropriate to the followers of every other branch of Natural History.

I should be grateful for replies relating to any species of animal or plant, whether based on personal observation or referring to such observations by others as are still scattered through the wide range of periodical literature, not having yet found a place in standard works.

The questions are for information in the following subjects:—

- (1) Instances of such strongly-marked peculiarities, whether in form, in colour, or in habit, as have occasionally appeared in a single or in a few individuals among a brood; but no record is wanted of monstrosities, or of such other characteristics as are clearly inconsistent with health and vigour.
- (2) Instances in which any one of the above peculiarities has appeared in the broods of different parents. [In replying to this question, it will be hardly worth while to record the sudden appearance of either albinism or melanism, as both are well known to be of frequent occurrence.]

NOTE:—The question is *not* asked now whether such peculiarities, or “sports,” may be accounted for by atavism or other hypothetical causes.

- (3) Instances in which any of these peculiarly characterized individuals have transmitted their peculiarities, hereditarily, to one or more generations. Especial mention should be made whether the peculiarity was in any case transmitted in all its original intensity, and numerical data would be particularly acceptable that showed the frequency of its transmission (*a*) in an undiluted form, (*b*) in one that was more or less diluted, and (*c*) of its non-transmission in any perceptible degree.*

It is impossible to explain to a general meeting the precise way in which the desired facts would be utilized. An explanation that would be sufficiently brief for the purpose could not be rendered intelligible except to those few who are already familiar with the evidence, and the technical treatment of it, by which the law of Regression is established and with the consequences and requirements of that law. Regressiveness and Stability are contrasted conditions, and neither of them can be fully understood apart from the other.

I may as well take this opportunity of appending a list of my various memoirs on these subjects. They appeared from time to time in various forms as the inquiry progressed, and as suitable openings occurred for writing or speaking. The more important of these are Nos. 1, 3, part of 6, 7, and 8, in the following list. Nos. 1 to 5 refer to Regression only. The whole are on the table in two volumes, the loose memoirs being bound together to form one of them, and “Natural Inheritance” being the other. I hope that the Society will do me the honour of accepting these, and keeping them in their library.

* Communications should be addressed to F. Galton, 42, Rutland Gate, London, S.W.

LIST OF MEMOIRS BY THE AUTHOR ON REGRESSION
AND STABILITY.

- (1) Typical Laws of Heredity. Journ. R. Institution, 1877.
This was the first statement of the law of Regression, as founded on a series of experiments with sweet peas.
- (2) Pres. Address Anthropol. Section Brit. Assoc., 1885. Here the law of Regression was confirmed by anthropological observations.
- (3) Regression towards Mediocrity in Family Stature. Journ. Anthropol. Inst., 1885. A revised and illustrated reprint of No. 2.
- (4) Family Likeness in Stature. Proc. Royal Soc., 1886.
- (5) Family Likeness in Eye-colour. Proc. Royal Soc., 1886.
- (6) Natural Inheritance (Macmillan & Co.), 1889. This volume summarises the results of previous work.
- (7) Patterns in Thumb and Finger Marks . . . and the resemblance of their classes to ordinary genera. Phil. Trans. Royal Soc., 1891.
- (8) Discontinuity in Evolution. Mind., 1894. This is an article on Mr. Bateson's volume.