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## Questions bearing on Specific Stability.

BY FRANCIS GALTON, D.C.L., F.R.S.

[The following paper, which has just appeared in the *Transactions of the Entomological Society* (1895, pp. 155—7), is, we think, of such importance that we obtained the kind permission of Dr. Galton to reprint in this Journal, in the hope that some of our readers may help to elucidate the many problems connected with Specific Stability. Communications relating to the subject should be addressed to Dr. Galton, 42 Rutland Gate, London, S.W.]

“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 on 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 this peculiarly characterised individuals have transmitted their peculiarities, hereditarily, to one or more generations. Especial mention should be made whether the peculiarity was in any way transmitted in all its original inten-

sity, and numerical data would be particularly acceptable that shows 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 . . . the precise way in which the derived facts would be utilised. 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. The most 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.

"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 on sweet peas.
- 2.—'Presidential 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. Roy. Soc.*, 1886.
- 5.—'Family Likeness in Eye-Colour.' *Proc. Roy. Soc.*, 1886.
- 6.—'Natural Inheritance.' Macmillan and Co., 1889. This vol. summarises the results of the previous work.
- 7.—'Patterns in Thumb and Finger Marks, and the resemblance of their classes to ordinary genera. *Phil. Trans. Roy. Soc.*, 1891.
- 8.—'Discontinuity in Evolution.' *Mind*, 1894. This is an article on Mr. Bateson's volume."