

to give up all belief in Darwin's theory of pangenesis. After an examination of the evidence in support of the Lamarckian postulate Galton summed up as follows:—

“The inheritance of characters acquired during the lifetime of the parents ‘includes much questionable evidence, usually difficult of verification. We might almost reserve our belief that the structural cells can react on the sexual elements at all, and we may be confident that at the most they do so in a very faint degree—in other words, that acquired modifications are barely, if at all, *inherited* in the correct sense of that word.’

(1) In regard to climatic variations, Galton doubts any reaction of the ‘body’ upon the germs, but believes that the germs are themselves directly affected.

(2) The same is true in many constitutional diseases that have been acquired by long-continued irregular habits.

(3) The cases of the apparent inheritance of mutilations are outnumbered by the overpowering negative evidence of their non-inheritance.

(4) The case of Brown-Séquad's hereditarily epileptic guinea-pigs, in consequence of an operation performed upon the parents, is *perhaps* interpretable as the result of imitative influence.

(5) It is hard to find evidence of the power of the personal structure to react upon sexual elements, that is not open to serious objection. That which appears the most trustworthy lies almost wholly in the direction of nerve changes, as shown by the inherited habits of tameness, pointing in dogs, and the results of Dr. Brown-Séquad.”

Weismann, however, has the credit of having brought the scepticism to a climax. He denied all inheritance of acquired characters, finding no convincing evidence that characters impressed upon the parental organism by the surroundings, or acquired as the result of use and disuse, can be transmitted. More than that, however, Weismann's whole theory of variation, adaptation, and heredity raises, he believes, strong probabilities against the inheritance of acquired characters. It is necessary to quote a few of his sentences.