

The subject was continued by Mr. Francis Galton, who read a paper entitled, "Feasible Experiments on the Possibility of transmitting Acquired Habits by means of Inheritance," in the course of which he said that feasible experiments have yet to be designed that shall be accepted as crucial tests of the possibility of a parent transmitting a *congenital* aptitude to his children, which he himself possessed, *not congenitally*, but merely through long and distasteful practice under some sort of compulsion. The requirements are to eliminate all possibility of parental or social teaching, to bring up all the descendants in the same way, to make simultaneous experiments on many broods during many generations, and, lastly, to economize time, money, and labour. This list of requirements points with emphasis to experimenting on creatures that are reared from eggs, as fowls, fishes, and moths. *Fowls*.—The largely extending practice of hatching eggs in incubators for commercial purposes, and the varied aptitudes of poultry, make them very suitable subjects. Birds are said to have an instinctive dread of various insects; hence mimetic insects, that are really good for food, are avoided by them. Do such insects exist, and could they be easily reared, which poultry would avoid at first, though experience would soon teach them to like and to eat greedily? Similarly as regards sounds and cries, which would frighten at first, but afterwards be welcomed as signals for food, &c. Would the stocks of two breeders, one of whom adopted such experiments as these and the other did not, differ in instinct after many generations? *Fish*.—The experiment (quoted by Darwin) of Möbius with the pike, using a trough of water divided by a glass plate into two compartments, in one of which was the pike and in the other were minnows, was mentioned as an example. The pike, after dashing at the minnows many times, and each time being checked and hurt by the glass plate, during some weeks, finally abandoned all attempts to seize them, so that when the plate was removed the pike never afterwards ventured to attack the minnows. The question, then, is, whether fish reared for some generations under conditions which compelled them to adopt habits not conformable to their natures would show any corresponding change of instinct. Of course each generation would be reared in a separate tank from its parents. *Moths*.—Experiments have been made for the author by Mr. Frederic Merrifield with *Selenia illustraria*, which has two broods yearly. They are being made for quite another purpose, but have already shown the ease of breeding hardy moths on a large scale when the art of doing so is well understood. All larvæ are fastidious in their diet, but it may well be that certain food which they would not touch at first would after a while be greedily eaten, and be found perfectly wholesome. Experiments on the lines here suggested ought to show the proportion of cases in which acquired aptitudes of several kinds are *certainly not* inherited. They might also, perhaps, show that in a small proportion of cases they *certainly are*. Thus limits would be fixed within which doubt remained permissible. The object of this paper is to invite experts to discuss the details of the most appropriate experiments.