

As Professor Lloyd Morgan says, "by his patient collection of data, by his careful discussion of these data in the light of principles clearly and definitely formulated, by his wide and forcible advocacy of his views, and above all by his own observations and experiments, Mr. Romanes left a mark in this field of investigation and interpretation which is not likely to be effaced".

When Weismann, aided by Galton and others, ran the doctrine of Use-inheritance to earth, and showed, at least, that it was an illegitimate postulate until definite evidence was forthcoming, the supporters of the Lamarckian theory of instinct began to recant. Thus, A. Forel, famous for his observations on ants, says, "I formerly believed, as others did, that instincts were inherited habits. I am now convinced, however, that this is an error, and have accepted Weismann's conclusion. Indeed, one cannot see how a truly acquired habit, as in piano-playing or bicycle-riding, can transmit its mechanism to the germ-plasm of the offspring." In 1883 Weismann distinctly committed himself to the conclusion that all instincts have their roots in germinal variations. Following Darwin, he showed how difficult it was to give a Lamarckian interpretation of such cases as the nuptial flight of the queen-bee, which occurs but once in a lifetime, or the slave-keeping instincts of some sterile worker-ants.

As in other departments of biology, so here, the only way of escape from the muddy quagmire of verbal dispute and the will-o'-the-wisps of irresponsible speculation is the way of experiment. The most notable pioneer on this path is Professor C. Lloyd Morgan. Following the old experiments of Spalding, and influenced perhaps by the new movement in human psychology towards experimental work, Mr. Lloyd Morgan set himself to observe young chicks hatched in an incubator, away from all taint of parental education or possibility of imitation. He afterwards extended his observations to other birds. It is plain that this is the only method of precisely determining what powers are really born in the creature, and much success has attended his investigations. Mr.