

"communication of ideas," on which level or line is also placed "Hymenoptera."

The writer has not studied Mr. Romanes enough to understand his chart, and therefore cannot see why the *Hymenoptera* are there placed, except it be that in that class of insects the communication of ideas is earliest seen. He does not note altruism in the chart.

It seems to me altruism is allied to "sympathy," and to the maternal faculty of affection. At first thought it seemed as if altruism might be the outgrowth of maternal love and regard. But two instances of its manifestation in members of a colony of domestic fowls appear to be adverse to that conclusion. These may be described in detail.

A relative of the writer, Mrs. R—, of Stockton, was occupied in 1881 with the care and study of several dozen chickens. One day she was feeding them meat cut in small pieces, and most of her feathered family gathered around and fed from her hand. But one little white pullet was too timid to come up and get her portion. A strong gray chicken, nearly full grown, and which sustained no family kinship to the other, seemed to observe and take in the forlorn situation of the one standing back, began to fight, and tried to drive away the cluster, as if to make room for the lagging associate. But it did not stir or move toward the feeding group. The gray, failing in that effort, boldly came forward, took a fragment of meat, carried it to the hungry chicken and dropped it at its feet, and then moved away, as if it had done a useful and friendly act.

On another and subsequent occasion, Mrs. R— was again feeding her poultry from her hand. As she appeared, they hurried out from under a sheltered retreat, and with natural eagerness each swallowed its coveted portion. But one Black Spanish member timidly remained behind under cover, though in sight. After devouring a few pieces of meat, a vigorous brown Leghorn seized a good-sized piece, ran to a corner, and hid it. She then went to the retreat and induced the backward party to go out. They two went to the place of concealed store, when the Leghorn brought forth the reserved morsel of meat and dropped it before her companion, which at once accepted the gift.

Here are two examples of the altruistic faculty developed in members of the body politic of domestic fowls. As these instances are found in

young individuals wherein the maternal faculty of love and regard for offspring has never been called in action, must we not conclude that altruism in them is an outgrowth of energies remote from the maternal characteristic? The immediate mother of those chickens was the incubator.

It is of interest to determine how early in the growth of mind altruism can be perceived.

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DO CATTLE COUNT?

Editor Popular Science Monthly:

Reading, not long ago, a sketch in our local paper, entitled "Can Animals Count?" said to have been taken from *The Popular Science Monthly*, recalls to my mind an incident that I have heard my father relate.

My grandfather Butterfield kept a hotel on the Green Mountains, five miles from Manchester, Vermont, more than a hundred years ago. It was his custom to salt his cattle every Sunday morning.

After vegetation started in the spring he would turn his young stock into the forest to get their living, being short of cleared pasturage.

These cattle would remain away a week, but would invariably come to the barn every Sunday for their salt, and after eating it would return to the woods again.

Now, if this does not prove that animals can count, it proves that they are creatures of very regular habits.

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Note—In 1872, when we were living at Compton, a magnificent tom-cat used to come to the back-door of our house, almost every night, and cry aloud, until a 3-months' old kitten we had was let out, when the elder cat presented the younger with a field-mouse, which the latter immediately "collared" and greedily devoured. As the kitten was born at Joliette, there could have been no pre-natal connexion between the two cats. If this was not "altruism," what was it? *Altruism* (from *L. alter*, another) is, we need hardly say, the opposite of selfishness. Ed.