The Definitive "Are Beavers Born With The Innate Disposition To Build Dams, Or Do They Learn It From Older Beavers?" Thread

Post by “Cassius” of July 7, 2024 at 7:37 AM

The University of Chicago article ends as written below, and its overall tone and content appears to me to reinforce the position of something like: "Beavers *are* born with innate dispositions to build dams, but the more exposure they have to their groups while growing up the better they build."

At this moment I would say that of the three cites above, the University of Chicago article appears most persuasive, while the other two articles are more "fluffy." However even the University of Chicago article is more of a "history of science" approach than a "this is what was found in laboratory tests under controlled conditions" approach. It would be highly desirable to find instances of the latter.

The Contemporary Resolution:

Three basic positions have been taken on animal instinct. From Descartes through the early work of Lorenz, instincts were understood to be constituted by chains of reflexes that respond to certain environmental releasers. James Watson, B. F. Skinner, Z. Y. Kuo, and other behaviorists in the first part of the twentieth century rather attempted to account for apparently fixed patterns of behavior by appeals to subtle modes of conditioning. The later Lorenz and evolutionary biologists like Ernst Mayr (1904–2005) established the third and most recent conception of instinct, one that recognized the role of genetically determined, species-specific information as well as the environmental conditions required for the implementation of the information. Mayr epitomized this recognition in his proposal that two kinds of programs governed animal behavior, a more closed program and a more open program (Mayr 1974). Closed programs were those in which the releasing mechanisms were controlled by the genome of the species, such as mate recognition and display in many animals. For instance, fertile female Drosophila of one species, if reared in isolation and placed among males of several species that displayed to her, would unerringly receive only the male of her own species. However, freshly hatched graylag goose chicks would follow any object of the right size, if exposed to the moving object (e.g., Lorenz’s head while swimming) during a critical period in the young gosling’s life. The chicks rapidly learned the stimulus that released the fixed behavior of following. In some species of bird, a chick raised with chicks of a different species would imprint on the foster species and attempt to mate with its members. These cases of imprinting represent a more open program. The mechanisms of instinct, therefore, differ depending on the species of animal and the relative open or closed character of the program.

Most behavior biologists today recognize these different instances of instinctual modes of behavior and have thus revitalized the instinct concept.

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Instinct
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