

An approach through the looking-glass

WAYNE A. HERSHBERGER (1986)

<https://link.springer.com/content/pdf/10.3758/BF03200092.pdf>

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Research Question

Can the chicken learn to **exploit positive feedback** polarity?

In other words, can a living organism learn how to get a reward by **avoiding** the rewarding option?

- The chick should be unable to consummate his **approach responses**.
- Instead, he should persistently chase the food cup away from himself, Evincing the runaway behavior of a control loop subjected to positive feedback.
- Moving the food cup alone in this manner delimits the positive feedback to a small part of the visible environment. However, since that part is central to the instrumental act, **the reversal should impair performance**.

Hypothesis

Experiment

Forty Hyline-950 cockerel chicks, newly hatched, served as subjects. They were tested in four groups of 10 each.

Novelty

Using an **altered environment** rather than an altered organism.

Result

- Chicks in the positive-feedback group showed **longer response duration** to reach the food cup, and the percentage of their **successful trials** was lower than the negative-feedback group.
- There are no significant differences among the four groups on normal but unfamiliar environment test trials that each chick participated in on the final test day.


To read more about the differences between “**2-Alternative choice paradigm**” and “**approach vs. avoidance paradigm**”, look at these papers:

THE MISBEHAVIOR OF ORGANISMS

KELLER BRELAND AND MARIAN BRELAND
Animal Behavior Enterprises, Hot Springs, Arkansas

<https://sites.oxy.edu/clint/learn/articles/TheMisbehaviorofOrganismsbreland.pdf>

Available online at www.sciencedirect.com

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The misbehavior of value and the discipline of the will

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<http://www.princeton.edu/~ndaw/dnsd06.pdf>

A lot of recent works on this topic:

Opinion CellPress

Action versus valence in decision making

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<https://www.sciencedirect.com/science/article/pii/S1364661314000205>