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A Reevaluation of Capaldi and Miller's "Counting in Rats: Its Functional Significance and the Independent Cognitive Processes That Constitute It"

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Poster Presentation P58

**A REEVALUATION OF CAPALDI AND MILLER'S "COUNTING IN RATS:
ITS FUNCTIONAL SIGNIFICANCE AND THE INDEPENDENT COGNITIVE
PROCESSES THAT CONSTITUTE IT"**

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In 1988, Capaldi and Miller ran a series of runway experiments investigating how rats count reinforcing events by using two randomly alternating sequences of trials in which a rat can potentially predict that a nonreinforced trial will always follow after two consecutive reinforced trials. Capaldi measured the time a rat took to reach the goal box of the runway to determine whether the rat expected to be reinforced upon reaching the goal box. The present study attempts to replicate, and hopefully improve upon, Capaldi and Miller's first of seven sub-experiments within their study. To eliminate potential error caused by differences in handling the rats prior to reinforced trials compared to nonreinforced trials, the present study utilized a closed circuit runway in which rats are not handled between trials. Furthermore, to make the previous study's results clearer, the original runway design was adapted to a y-maze which provided a greater potential number of reinforcers to be delivered per sequence of trials.