Discrimination of the Numerosities 2-5 by Rats (Rattus norvegicus)

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Abstract
The present study examines rats' abilities to discriminate numerosities in a computerized task. Three groups of rats (R2B, G2A, and G3A) were trained in a task involving the discrimination of numerosities 2-5. The results showed that all groups performed at a high level in the task, with the highest accuracy achieved by Group G2A. The findings are discussed in light of previous research on numerical competence in non-human primates.

Introduction
The study of numerical competence in non-human animals has been an active area of research in recent years. This study examines rats' abilities to discriminate numerosities in a computerized task. Previous research has demonstrated that non-human primates possess a range of numerical abilities, including subitizing and the ability to make relative and absolute numerosity judgments. The present study extends this research to investigate whether rats can also acquire such abilities.

Method
The study was conducted in a laboratory setting, with each rat housed in a separate cage. The task involved a touch-screen computer program that displayed pairs of numerosities (2, 3, 4, or 5) on a black background. The rats were trained to discriminate between pairs of numerosities, with the goal of achieving a high level of accuracy.

Results
The results showed that all groups performed at a high level in the task, with the highest accuracy achieved by Group G2A. The findings are discussed in light of previous research on numerical competence in non-human primates.

Discussion
The present study provides further evidence that rats can acquire numerical abilities, including subitizing and the ability to make relative and absolute numerosity judgments. These findings add to the growing body of evidence that numerical competence is not unique to humans, but is also present in other non-human species.

References