

# THE THINKING DOG

## COGNITIVE FLEXIBILITY AND INFORMATION REORGANIZATION IN DOGS

ELLEN TINNLER  
SUPERVISOR: JOHAN LIND

### INTRODUCTION

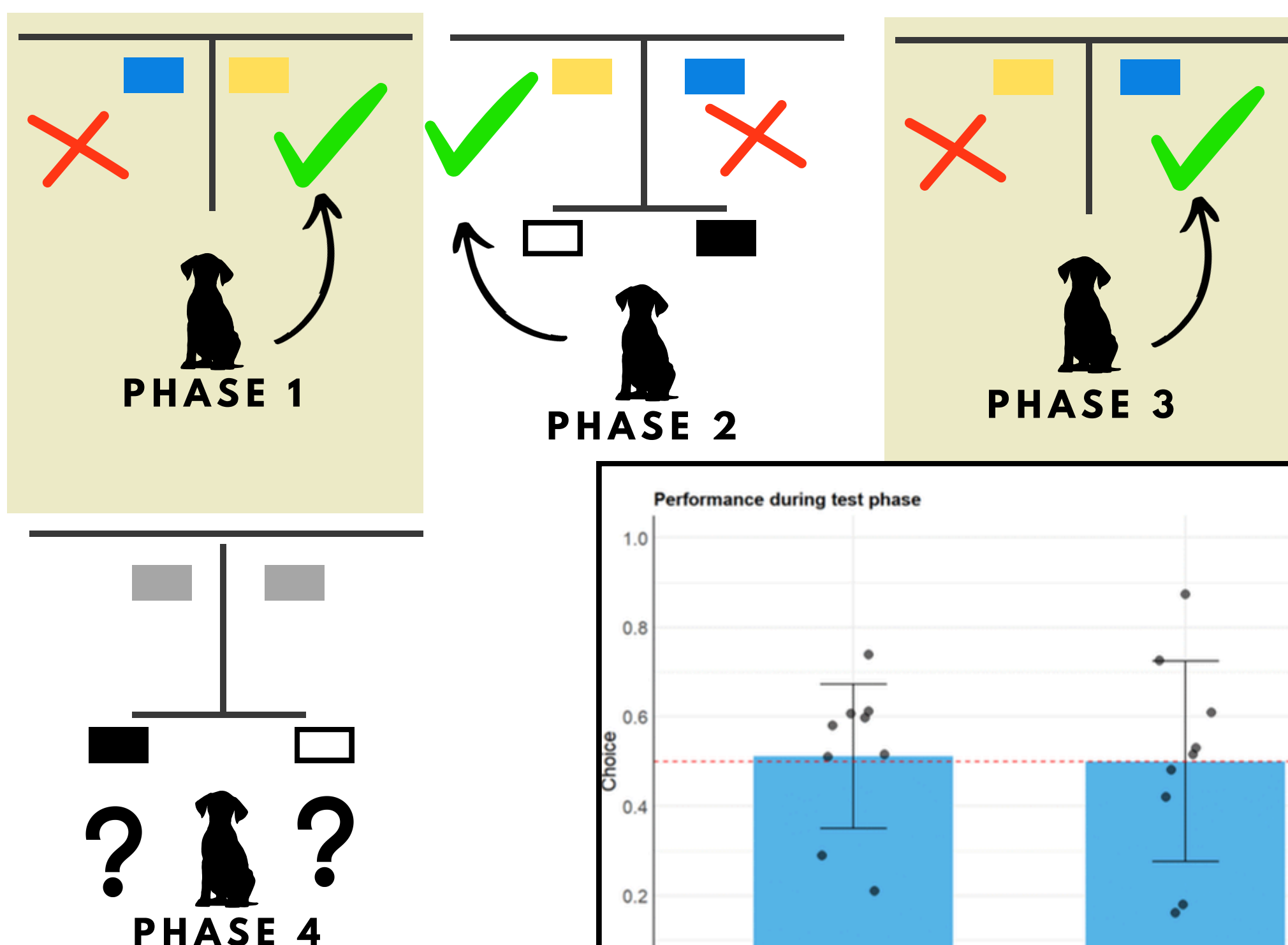
Adjusting behaviors to novel situations is considered a key factor in adaptation. Some theories argue that this flexibility stems from associative learning, while others suggest it may arise from complex cognitive processes like causal reasoning.

#### AIM

Investigate if dogs are capable of reorganizing previously learned information using causal reasoning to solve a novel problem

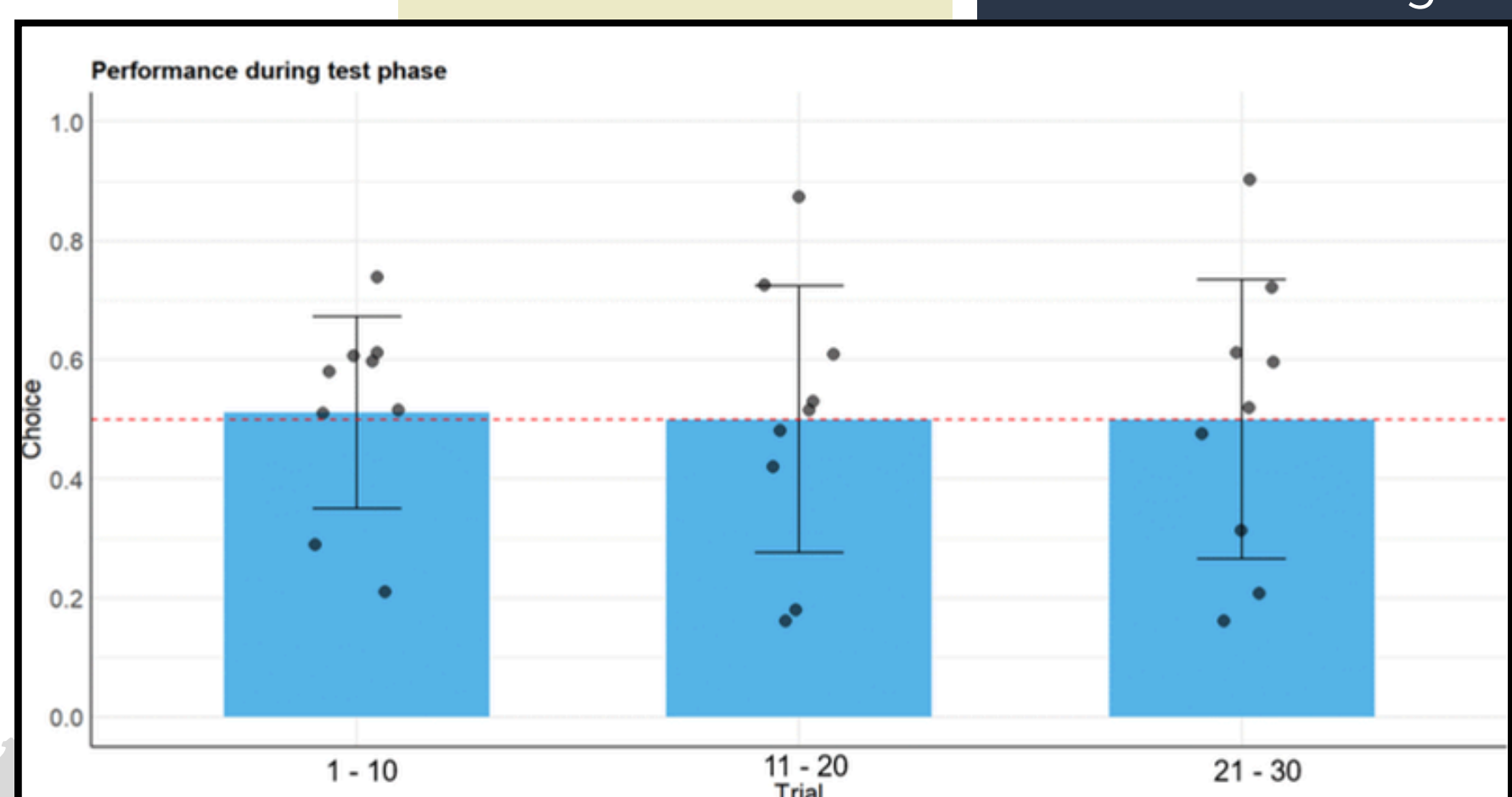
### METHOD

Nine dogs were trained to associate colored boxes with a reward and went through 3 different learning phases where they navigated an arena. By walking to the correct box they earned their reward, the rewarded color was randomised per dog. Phase 4 was the test phase where I assessed if the dogs understood the causal relationship between the colors.



### RESULTS & DISCUSSION

The dogs successfully learned to associate specific colors with a reward and adapted their behavior when those associations were reversed. However, in phase 4, their choices did not indicate an understanding of the underlying causal relationships as the choices appear random. This implies that, while dogs are proficient in associative learning, they may not reorganize learned information to solve novel problems. The findings support the view that flexible behavior in dogs is likely driven by associative processes rather than causal reasoning.



The average choices across 30 Phase 4 trials split into three blocks (1-10, 11-20, 21-30). Each point shows a dog's average choice per block. Dogs chose either 1 (Phase 2 associated color) or 0 (other color), shown on the Y-axis.