

Six types of classification problems

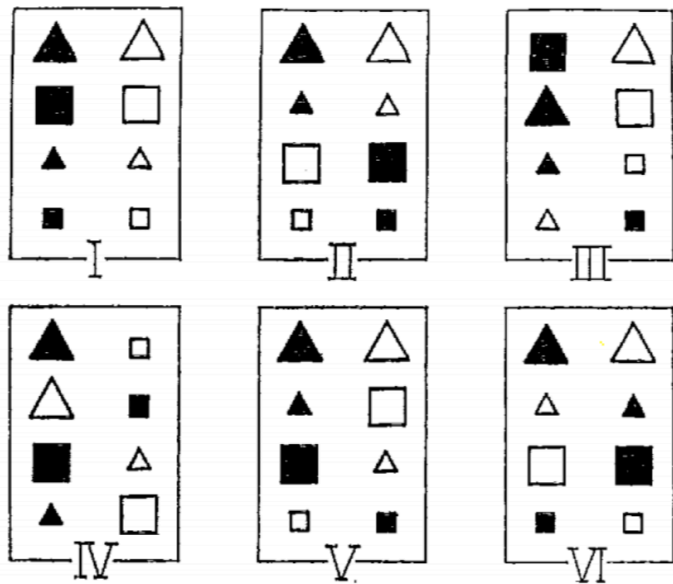
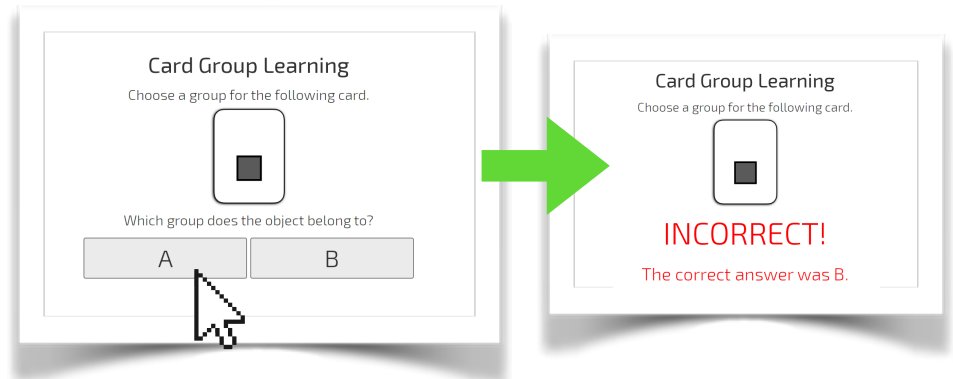


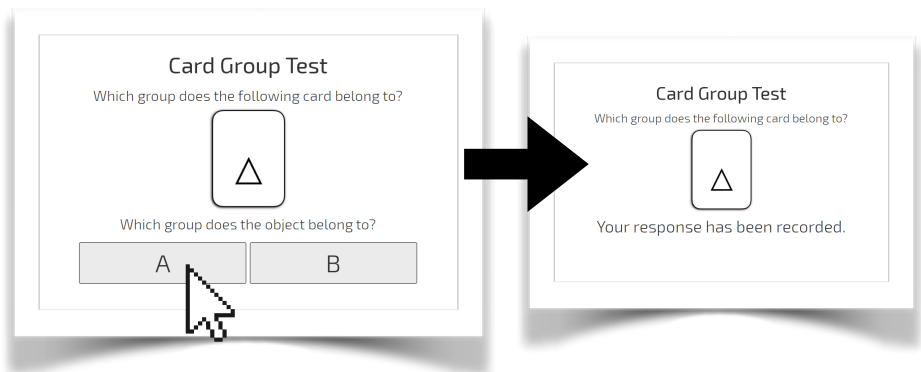
FIG. 1. Six different classifications of the same set of eight stimuli. (Within each box the four stimuli on the left belong in one class and the four stimuli on the right in the other class.)

Learning and Memorization of Classifications
Shepard, Hovland, and Jenkins, 1961

LEARN



TEST



Learning
phase length

Performance
incentive

Conditions
tested

Exp. 1

16 trials

increase
probability
of \$10 rwd

18
rule $\in [1,2,3,4,5,6]$
incentive $\in [\text{low}, \text{med}, \text{high}]$

Between Subjects Design (N= 294)

Exp. 2

32 trials

increase
probability
of \$10 rwd

4
rule $\in [2,4]$
incentive $\in [\text{low}, \text{high}]$

Between Subjects Design (N=95)

Exp. 3

32 trials

increase
magnitude
of rwd

4
rule $\in [2,4]$
incentive $\in [\text{low}, \text{high}]$

Between Subjects Design (N=90)

Exp. 4

32 trials

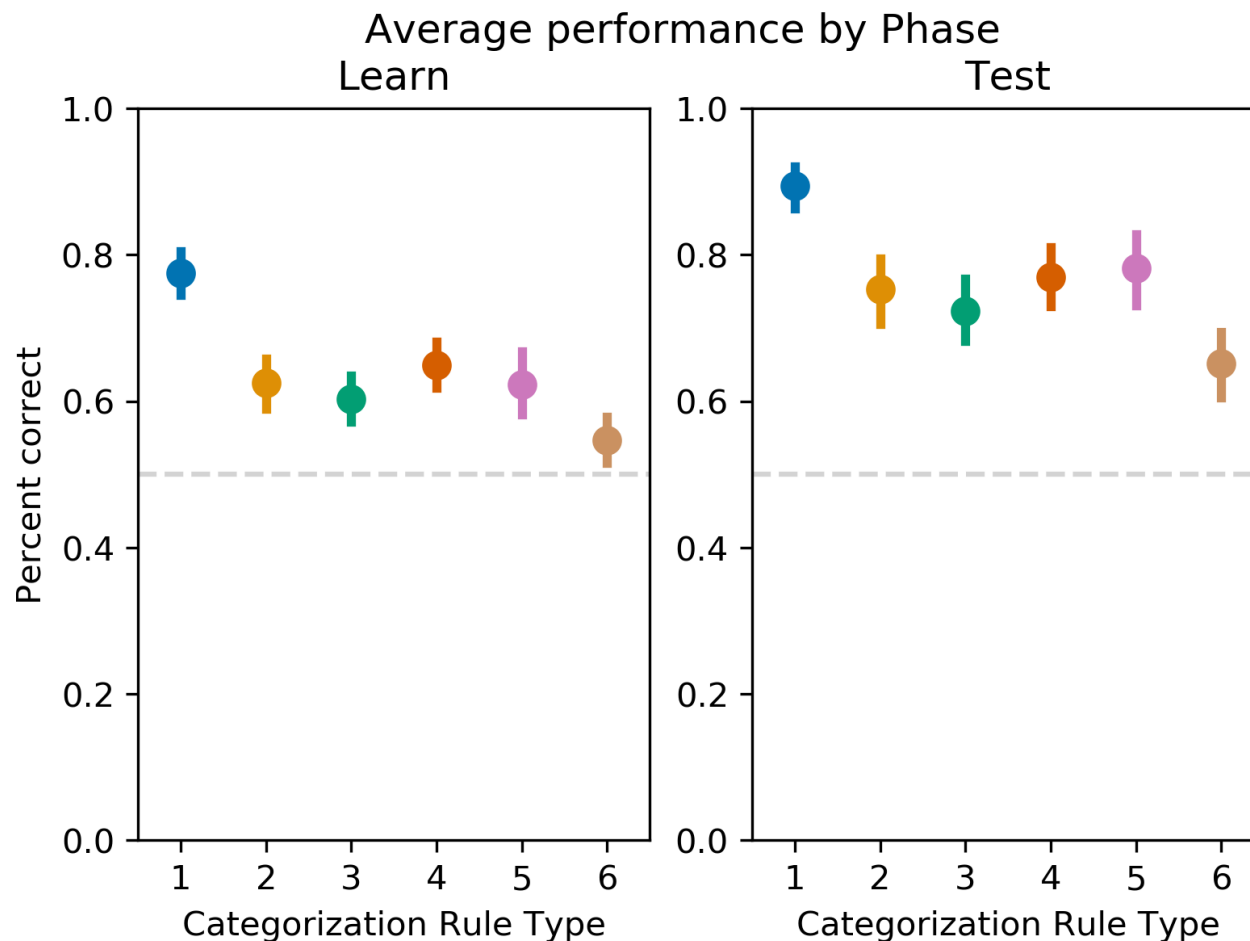
increase
magnitude
of rwd

4
rule $\in [2,4]$
incentive $\in [\text{low}, \text{high}]$

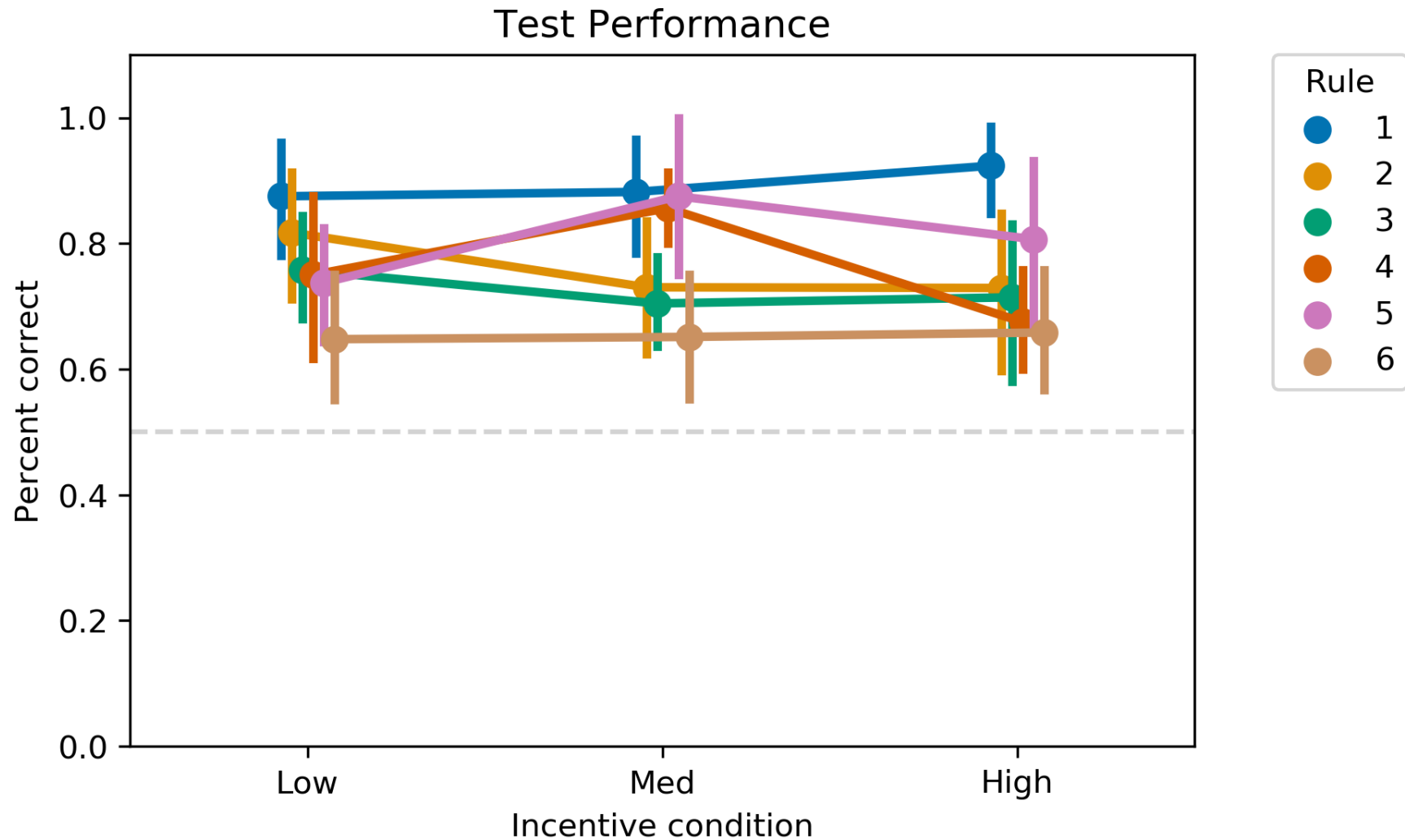
Within Subjects Design (N=29)

Exp 1 Results: Performance by phase

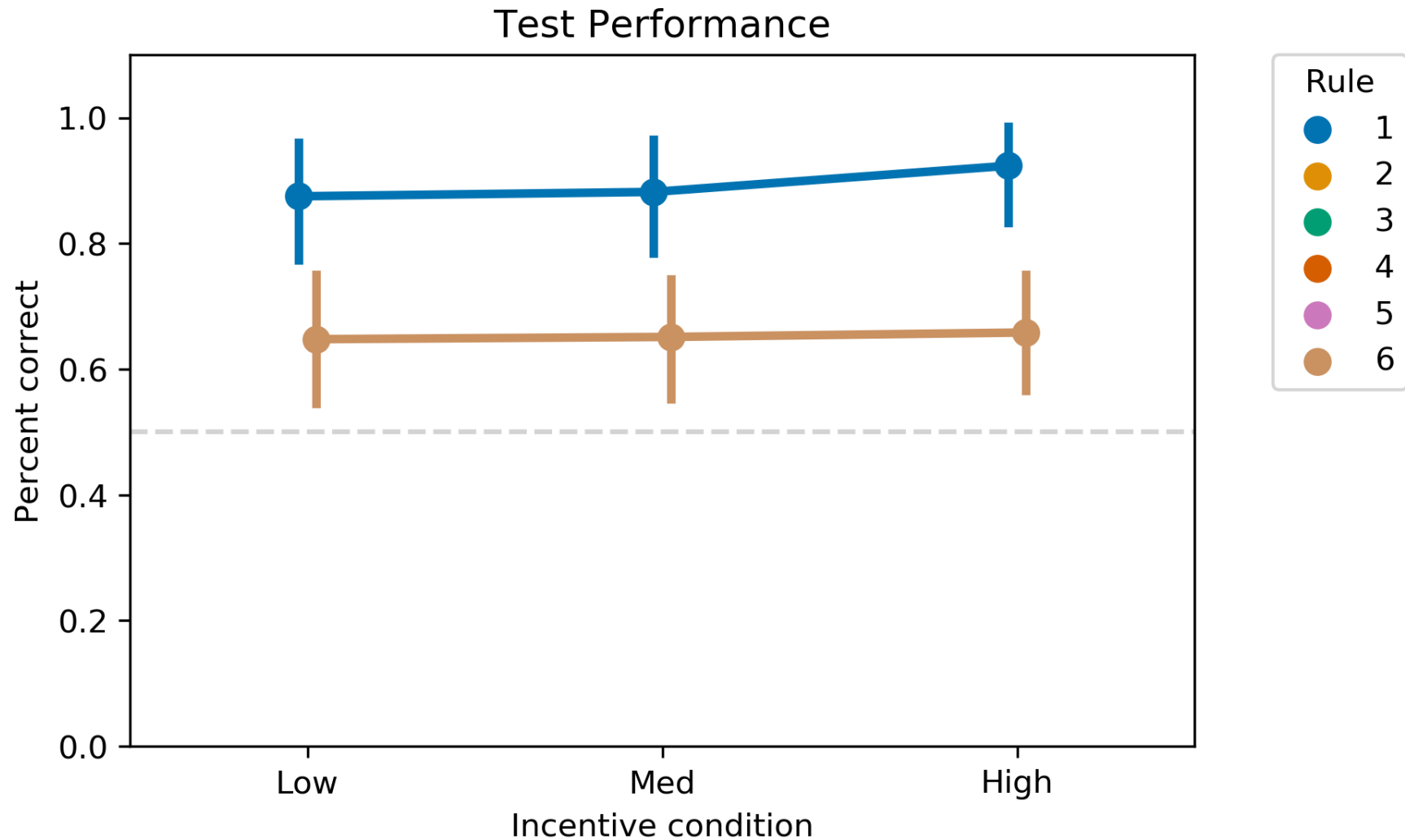
- N=292 across 18 conditions
(21 subjects were excluded due to admitting using memory help, repeating the instructions too many times, or experiment error)

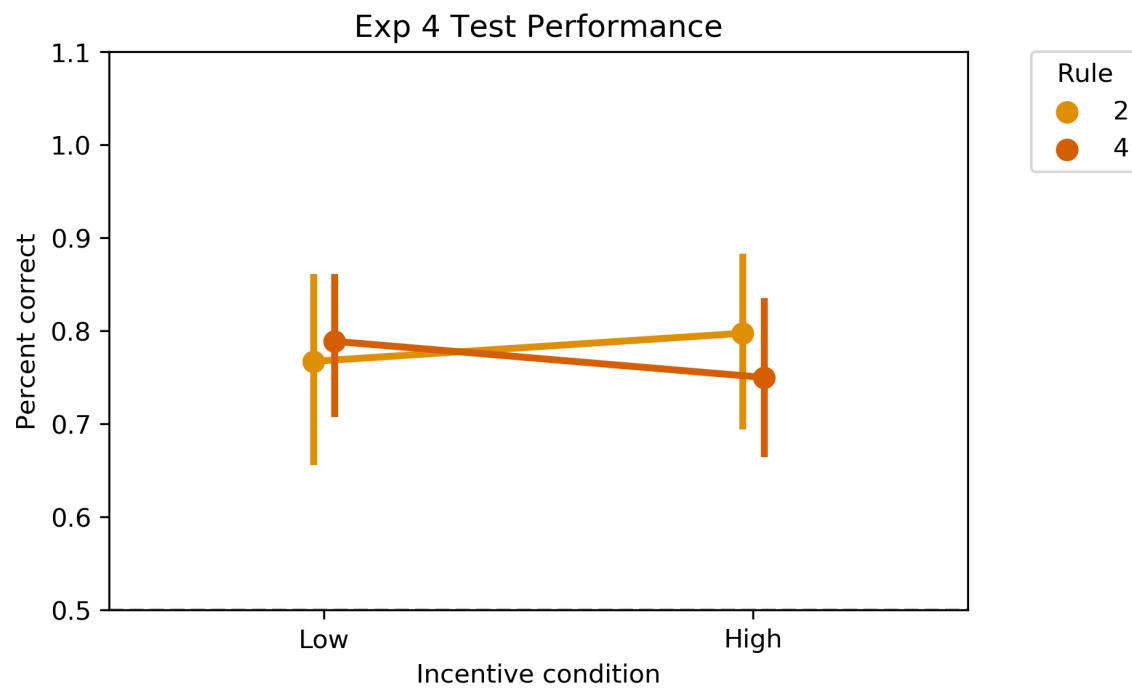


Exp 1 Results: Performance by incentive



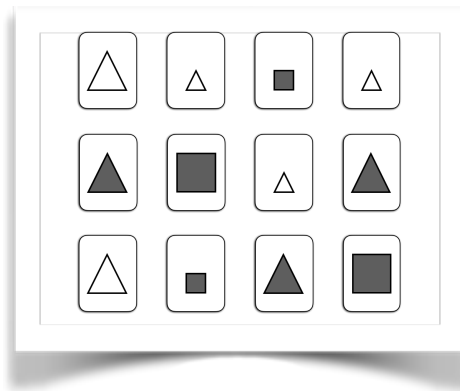
Exp 1 Results: Performance by incentive





Conclusions

- We replicate effect of rule on performance
- No effect of incentive on performance
- Next: non-discovery task incentive check
 - Rule changes difficulty but no learning required



**“Black squares and white triangles are in Group A.
How many Group A cards are there?”**