



# 基于特征关系的奖赏驱动注意效应 Reward-driven Attention Based on Feature Relationship

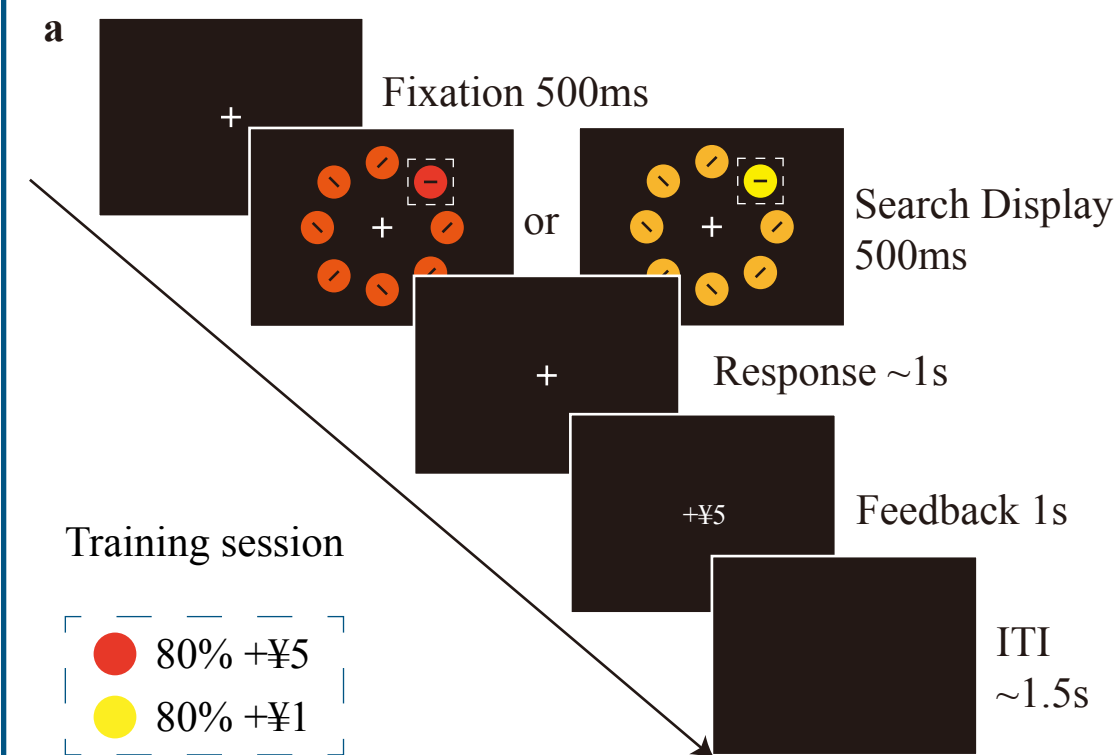
陈艺林, 龚梦园  
浙江大学心理与行为科学系, 杭州, 310028

## Introduction

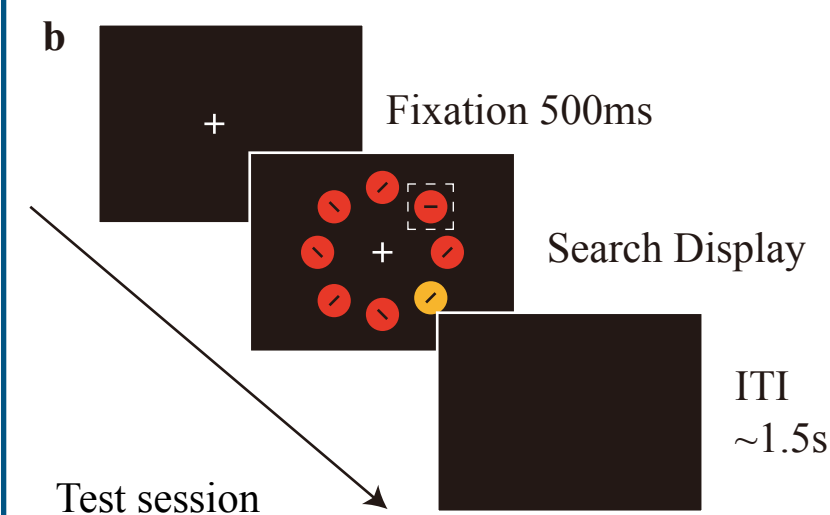
- Selection history (for example, reward history) guides attention.
- In the conventional view, selection history drives attention in a feature-based mechanism.
- Recent study found search history guides attention through feature relationship rather than feature value.

**Research Question:** Does reward history guide attention through feature relationship?

## General Procedure



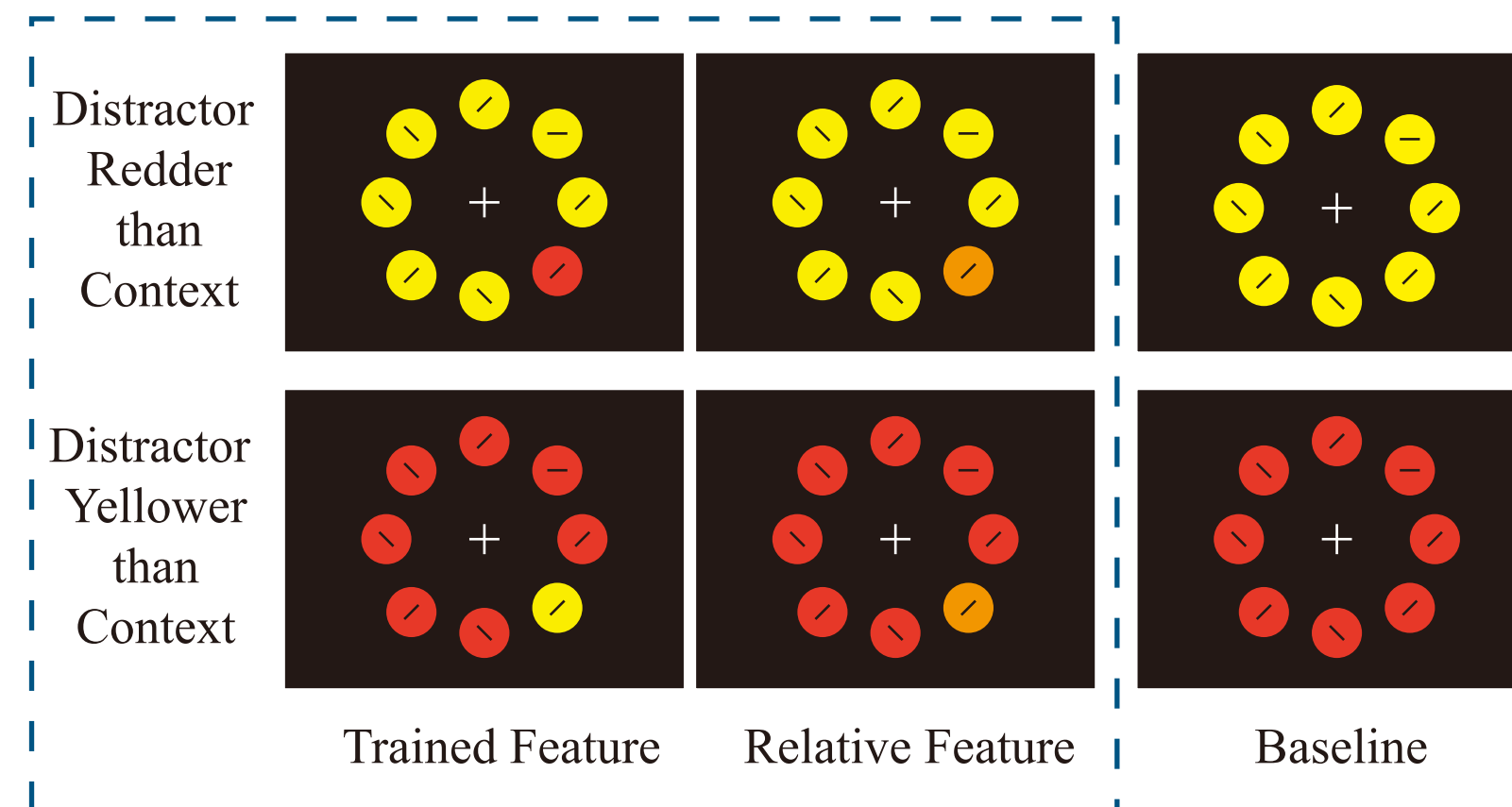
Color-reward contingency is balanced across subjects.



Task: find the uniquely orientated bar and report its orientation (horizontal/vertical)

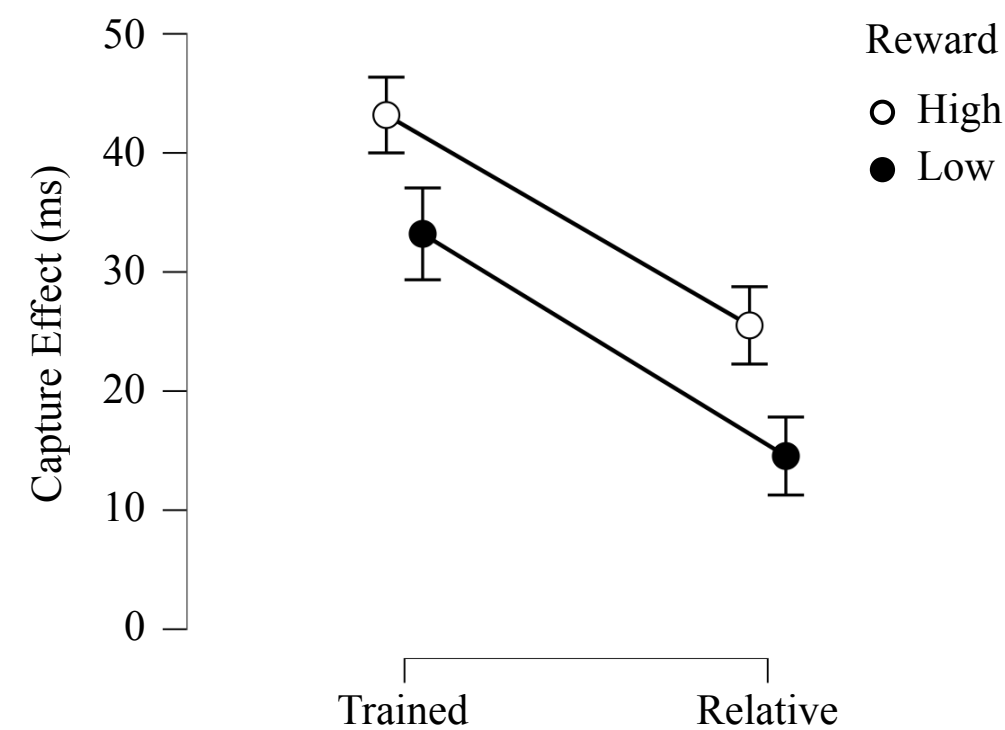
## Experiment 1

### Experimental Design - Test Display



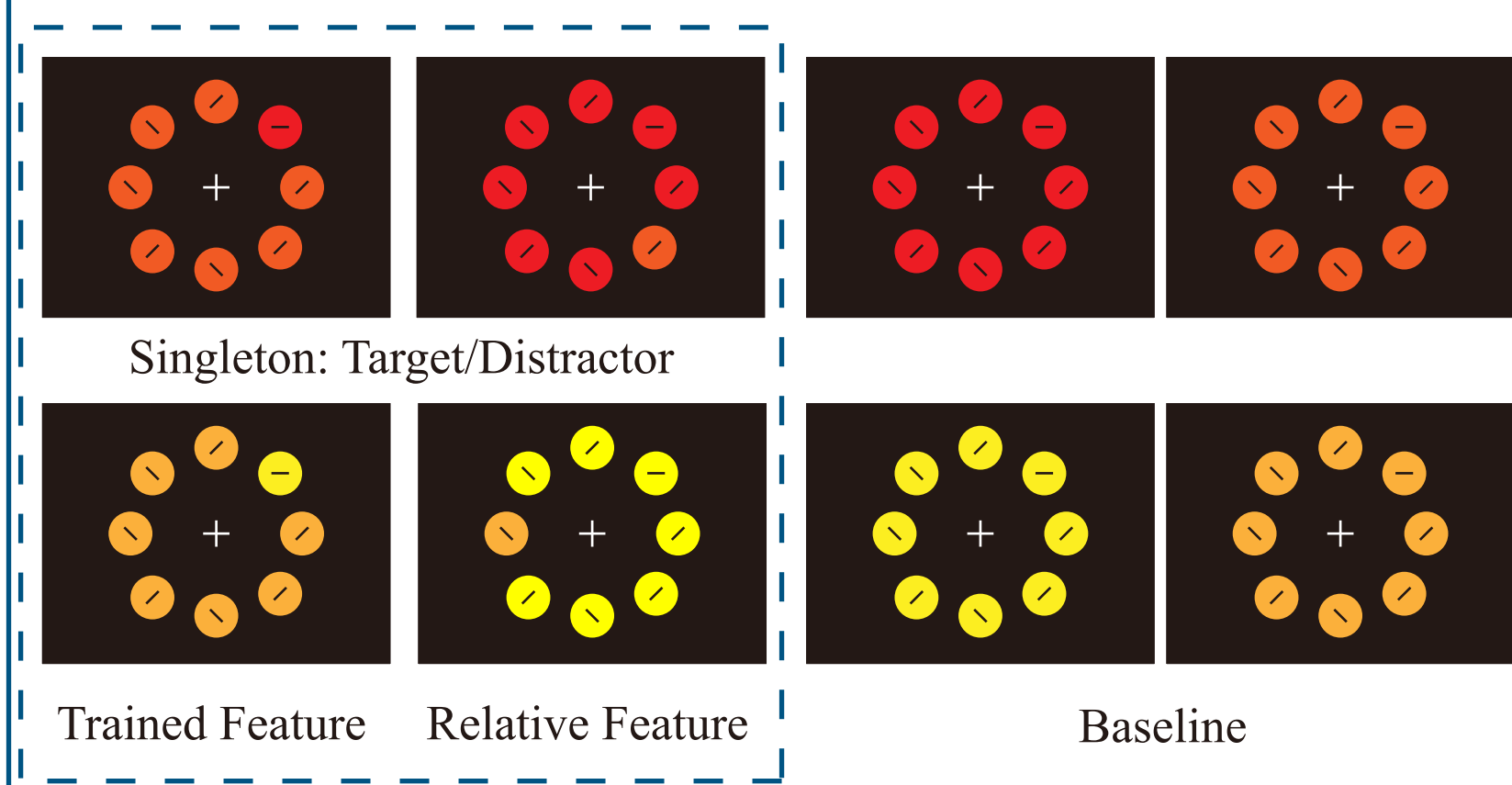
### Results

Capture Effect = Distractor RT - Baseline RT



## Experiment 2

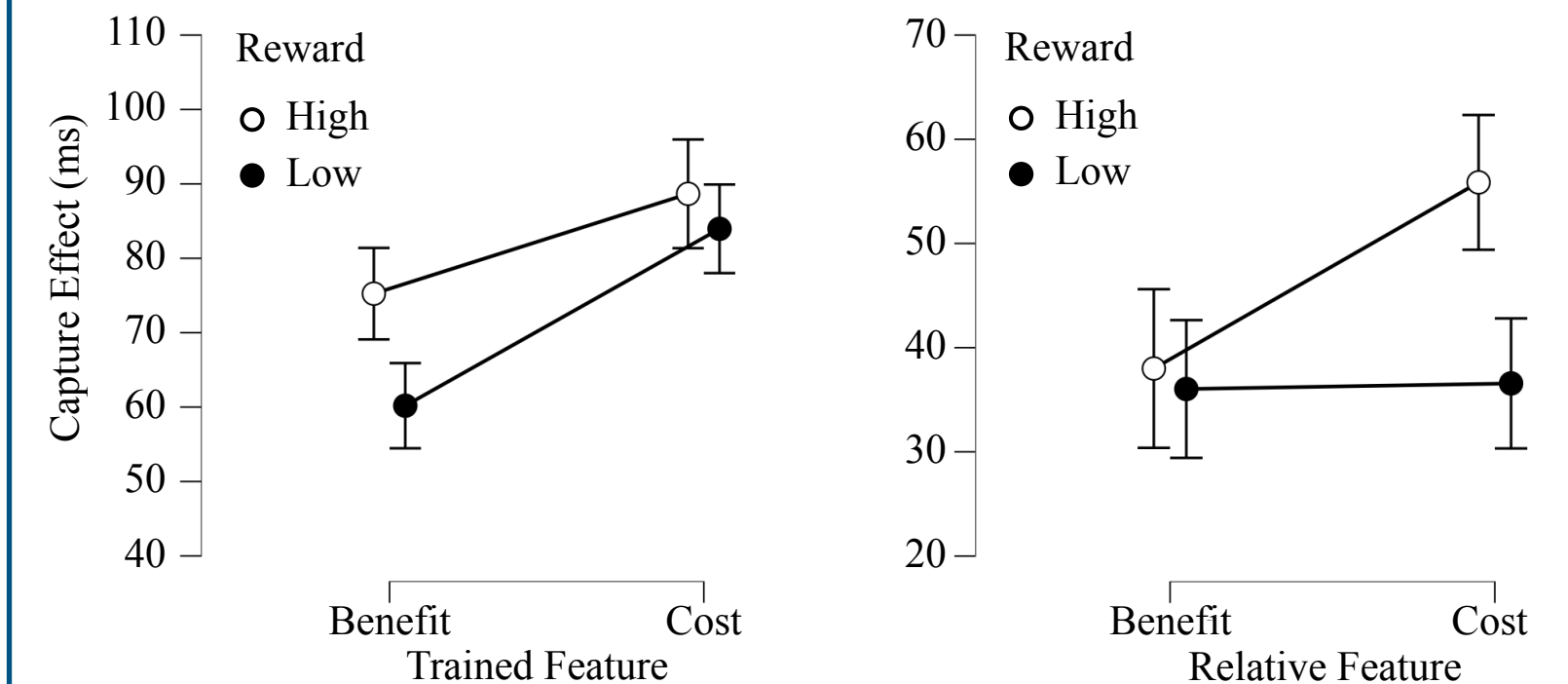
### Experimental Design - Test Display



### Results

Benefit Effect = Baseline RT - Target RT

Cost Effect = Distractor RT - Baseline RT



## Conclusion

**Reward-driven attention effect can be achieved through the feature relationship.  
Influence of feature relationship overrides influence of feature value.**

## Reference

1. Awh, E., Belopolsky, A. V., & Theeuwes, J. (2012). Top-down versus bottom-up attentional control: A failed theoretical dichotomy. *Trends in cognitive sciences*, 16(8), 437-443.
2. Liao, M. R., Britton, M. K., & Anderson, B. A. (2020). Selection history is relative. *Vision Research*, 175, 23-31.
3. Becker, S. I., Folk, C. L., & Remington, R. W. (2013). Attentional capture does not depend on feature similarity, but on target-nontarget relations. *Psychological Science*, 24(5), 634-647.