

# Exploring the Effect of Social Rewards in Enhancing Word Learning for Autistic Individuals

Tommy, Tam Tsz Ho (HKU)

Advisor: Dr Saloni Krishnan (Division of Psychology and Language Sciences, UCL)



## INTRODUCTION

A person's **social skills** are closely linked to language acquisition. There is a positive relationship between social skills and language proficiency in preschool students. Children with disrupted social skills tend to achieve lower language outcomes.

**Autistic** individuals often have social and communicative challenges. Consequently, language difficulties are prevalent among autistic children. They often have smaller vocabulary sizes.

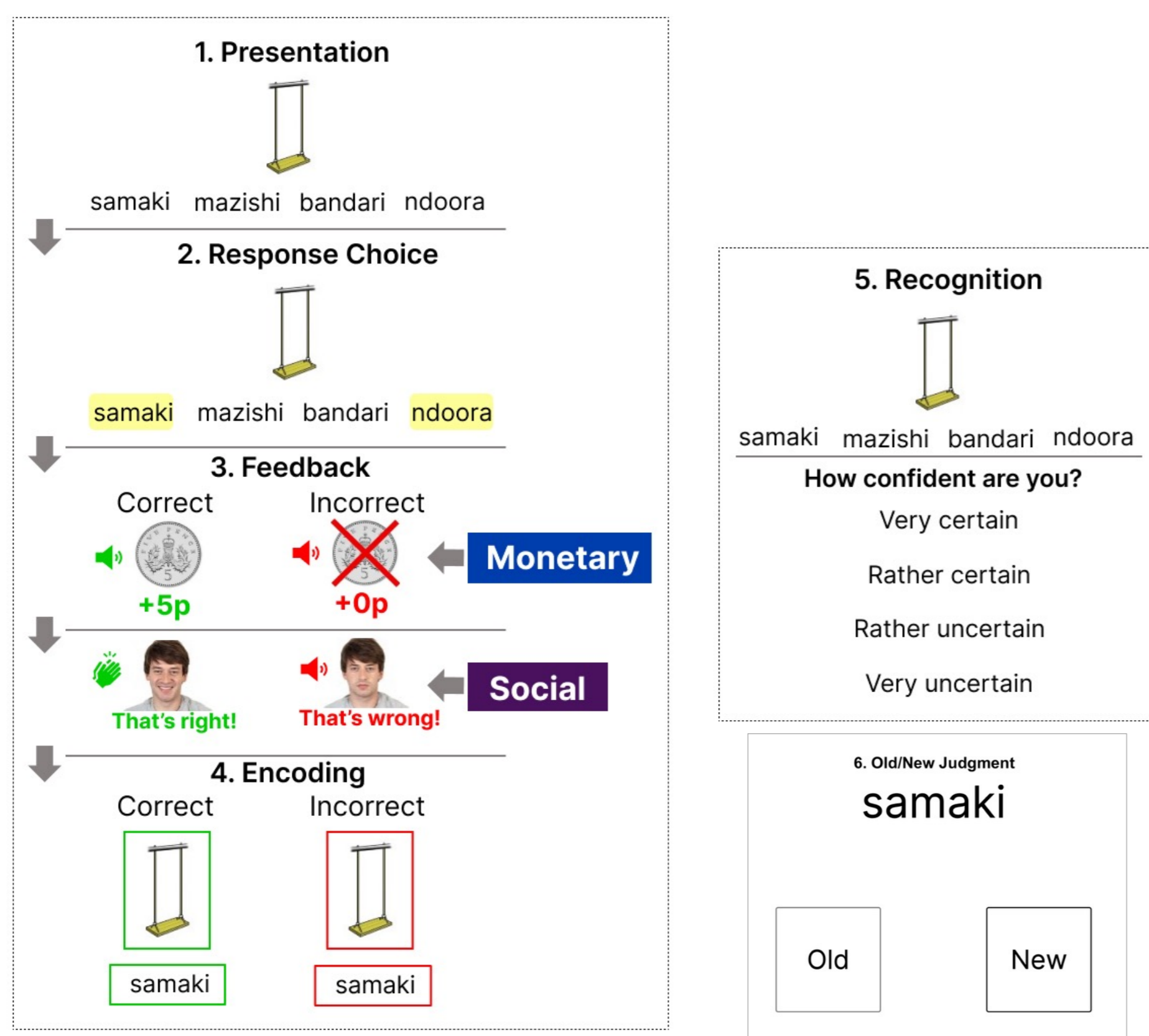
To better understand and address this issue, we examined **whether receiving social (and monetary) rewards would enhance autistic adults' word learning under different uncertainty levels.**

## METHODS

We will test autistic and neurotypical adults (18-24 years) who were native English speakers (with no knowledge of Swahili).

RQ1: Do social rewards enhance word learning in autistic adults?

RQ2: How do uncertainty levels affect word learning?



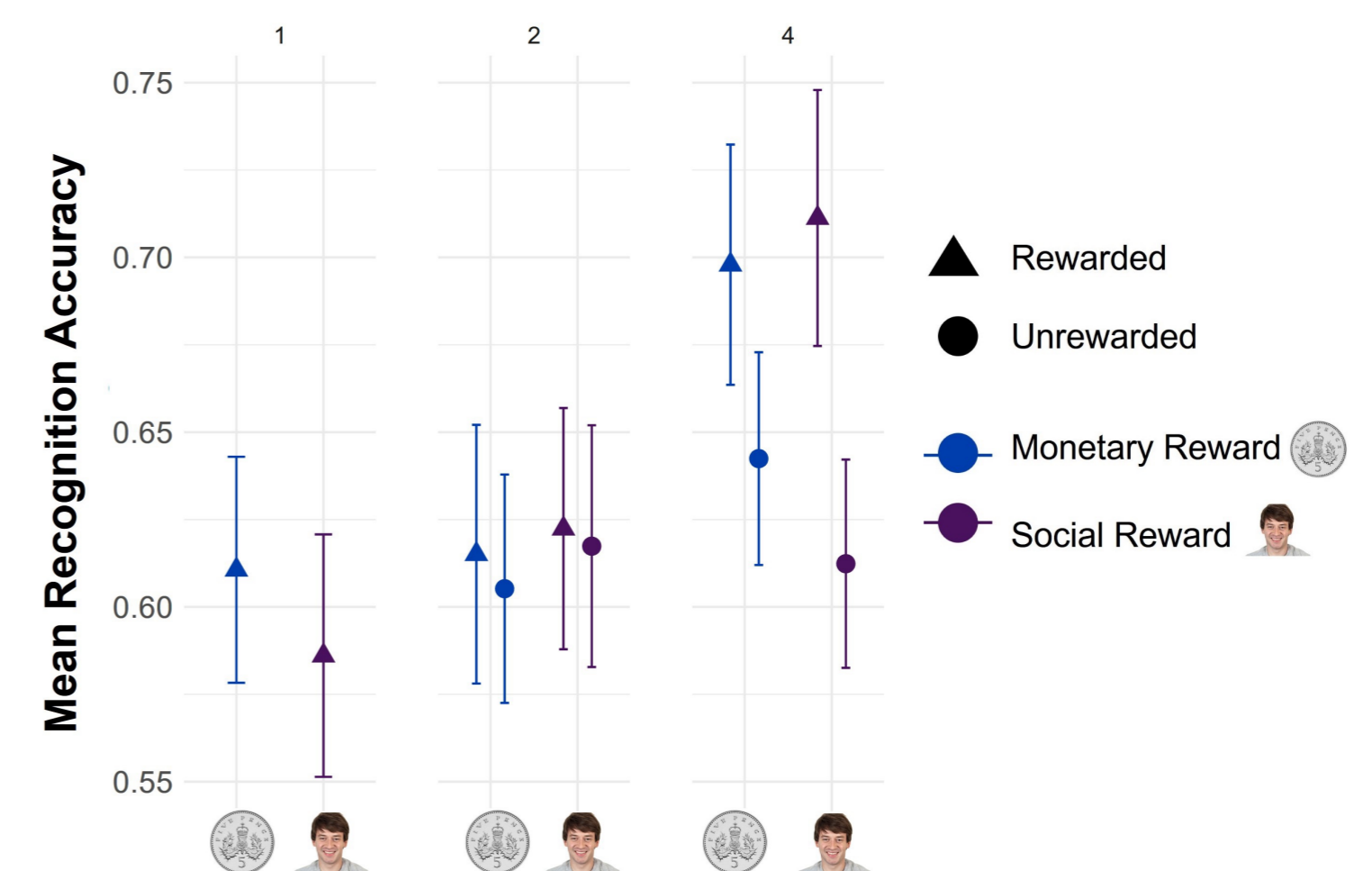
**Fig. 1.** Task layout. (1) Participants were presented with a picture and 4 possible Swahili words that matched the picture; (2) Participants had to choose a highlighted option (1/2/4 options); (3) Response selection was followed by feedback and differed by type of reward offered – monetary (5/0p) and social (smiling/ neutral face and clapping); (4) Feedback was always followed by a chance to encode the picture-word pairs; (5) Participants' recognition memory was tested. (6) Participants judge the word to be old (seen) or new (unseen).

## CONCLUSIONS

Exploring the motivations behind word learning in autistic adults can enhance our understanding of word learning profiles in autistic children. If social rewards are found to be less effective, this insight could inform the creation of individualised learning strategies, fostering more effective learning environments and encouraging the use of alternative motivators for enhancing word learning in autistic children.

## RESULTS OF PRIOR EXPERIMENTS

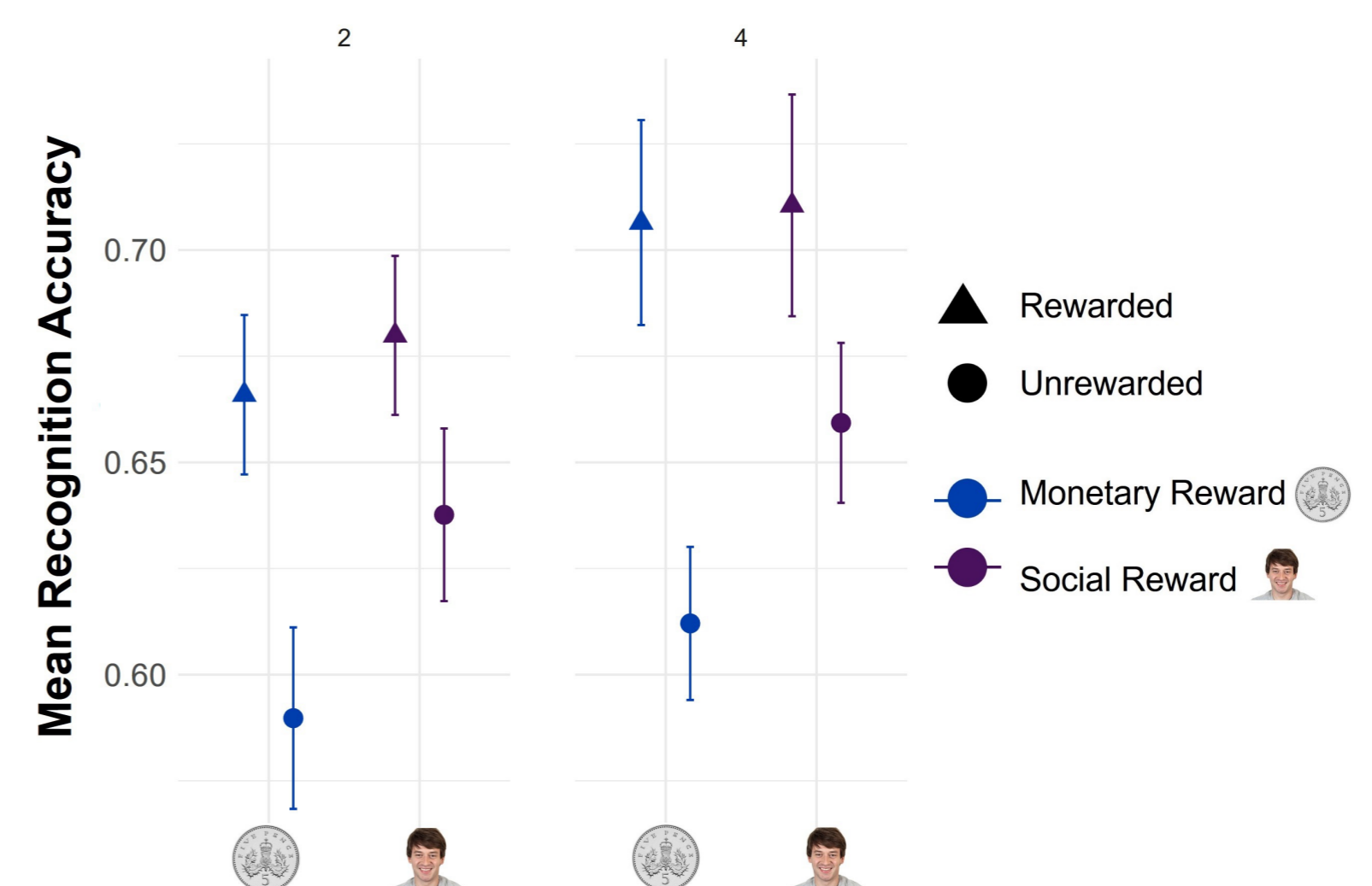
### Experiment 1. (Between-subjects; N = 114)



Findings:

- **Monetary & social rewards independently enhance learning**
- Counterintuitively, recognition was enhanced when **uncertainty increased**

### Experiment 2. (Within-subjects; N = 160)



Findings:

- **Word learning was greater in the social reward condition than in the monetary reward condition**

## EXPECTED RESULTS

Autistic individuals are **less responsive to social stimuli.**

- Autistic adults will show impaired learning with social rewards. Presenting them smiling faces after correct responses will not lead to a boost in word recall performance.

**Intolerance of unpredictability**

- Autistic adults will demonstrate reduced word learning in trials with greater uncertainty (2 out of 4 options) compared to trials with no uncertainty (1 option).