# Talker generalization of accent adaptation: Questioning its robustness

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## Background:

- Exposure to **multiple talkers of a single accent** → generalization to **novel talker of same accent**[1,2,3]
- Exposure to **multiple talkers of multiple accents** → generalization to **novel talker of same and novel accent**[2]
- Listeners learn systematic variation across talkers, but empirical evidence is limited

**What circumstances facilitate generalization of accent-adaptation?**

## Task:

Transcribe speech in noise, conducted on Mturk

**Stimuli:**

Example: "**Dad pointed** at the **grass.**"

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## Experiment 1: What exposure conditions facilitate accent-independent, talker-independent generalization?

**Conditions:**
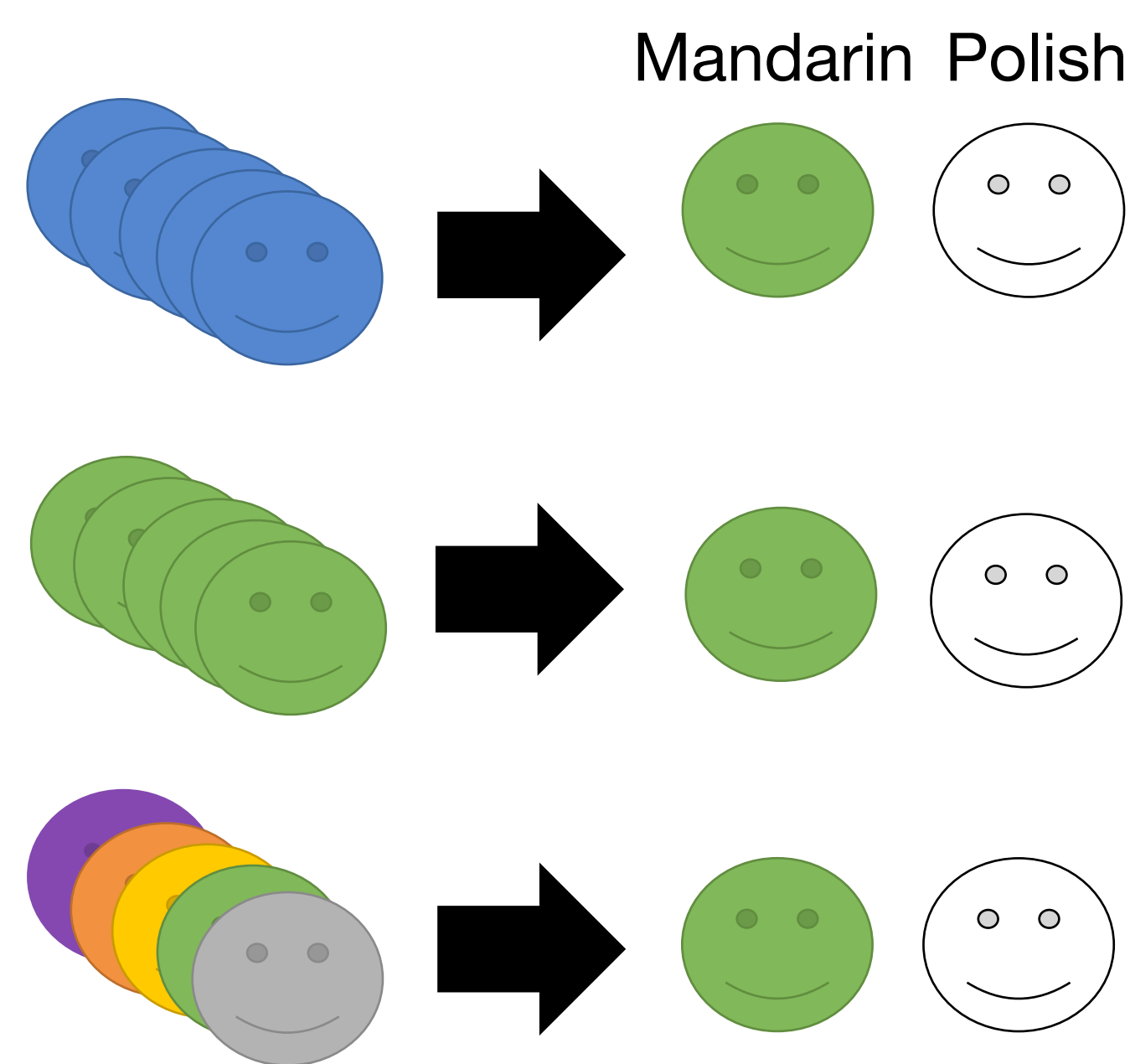
**English:** 5 native English speakers

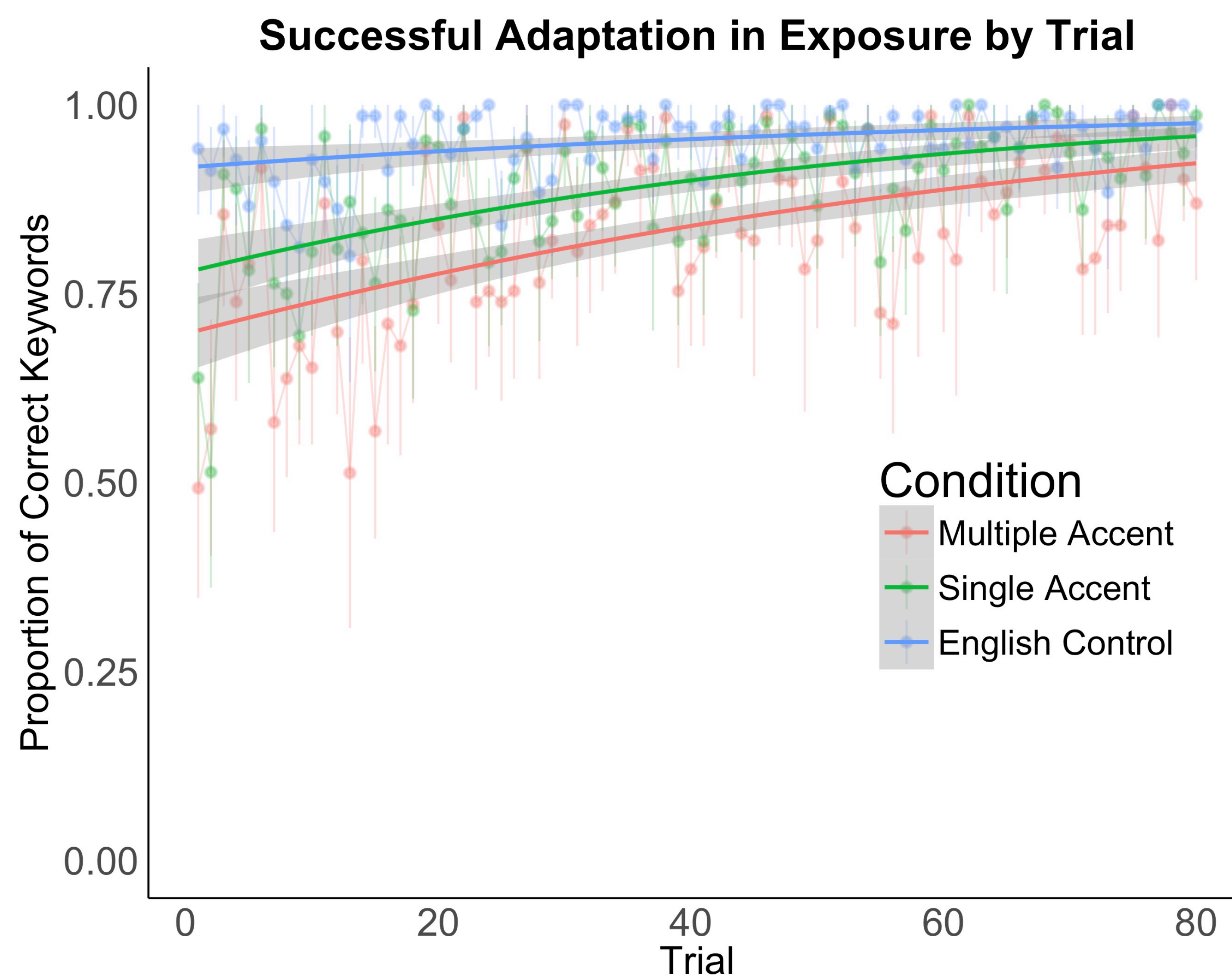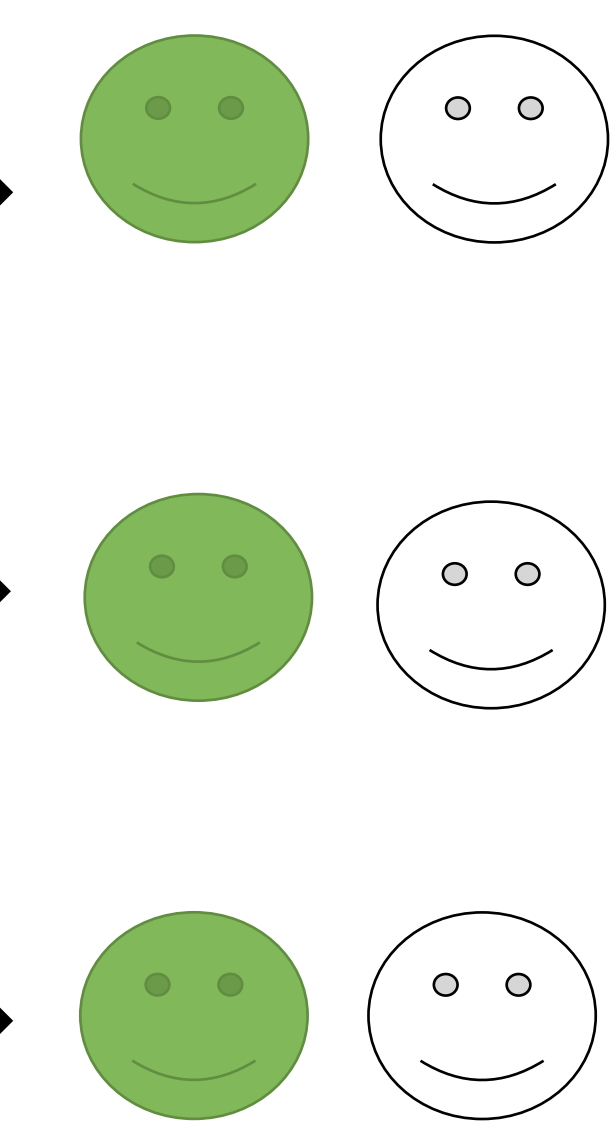**Single (Accent):** 5 Mandarin accented speakers

**Multiple (Accent):** 5 different accented speakers
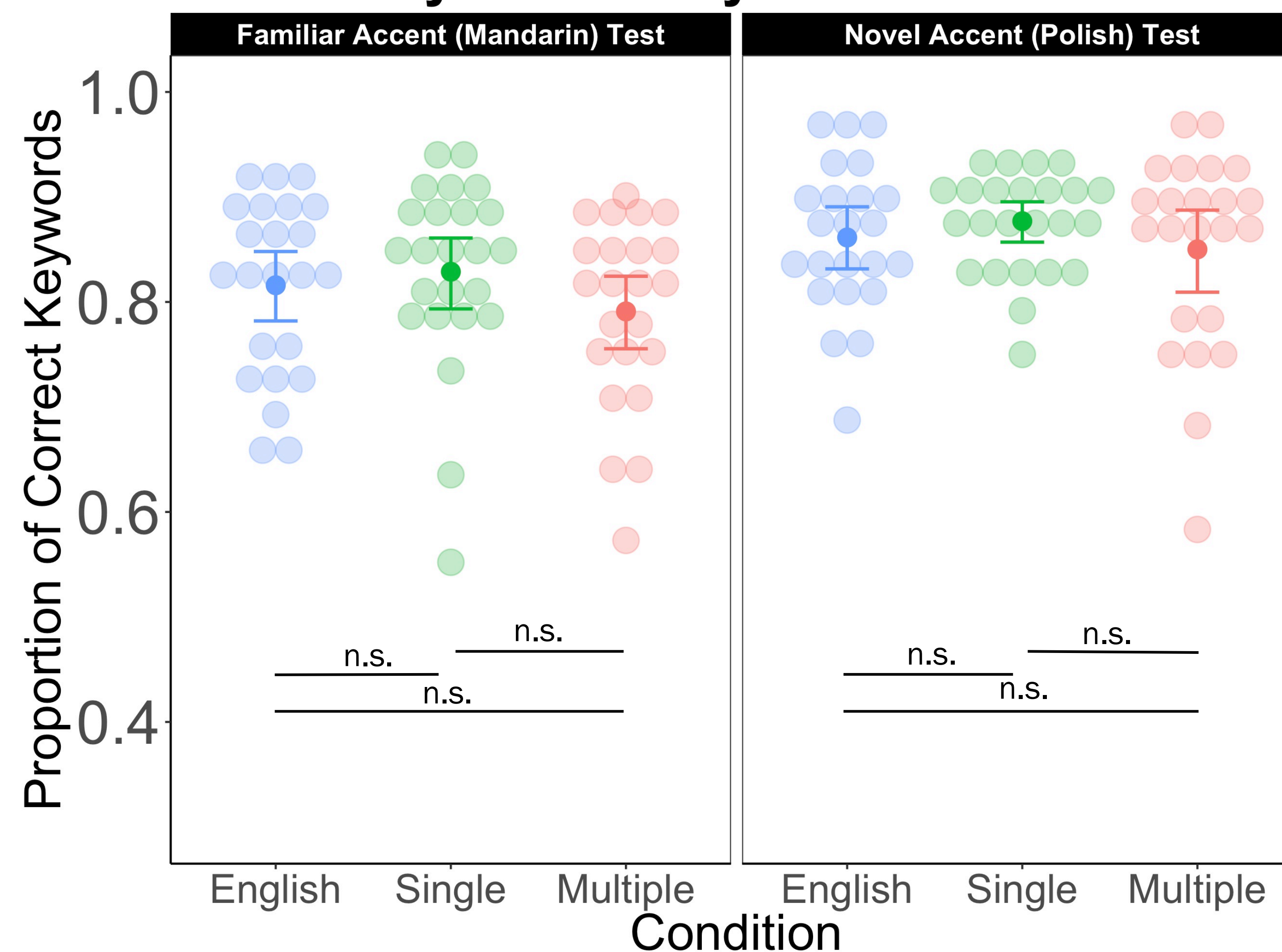


**Successful Adaptation in Exposure by Trial**

**Accuracy on Test by Test Talker Accent**

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## Experiment 2: Does exposure structure affect generalization?[3,4]

**Exposure Structure**

**English:** Blocked by speaker

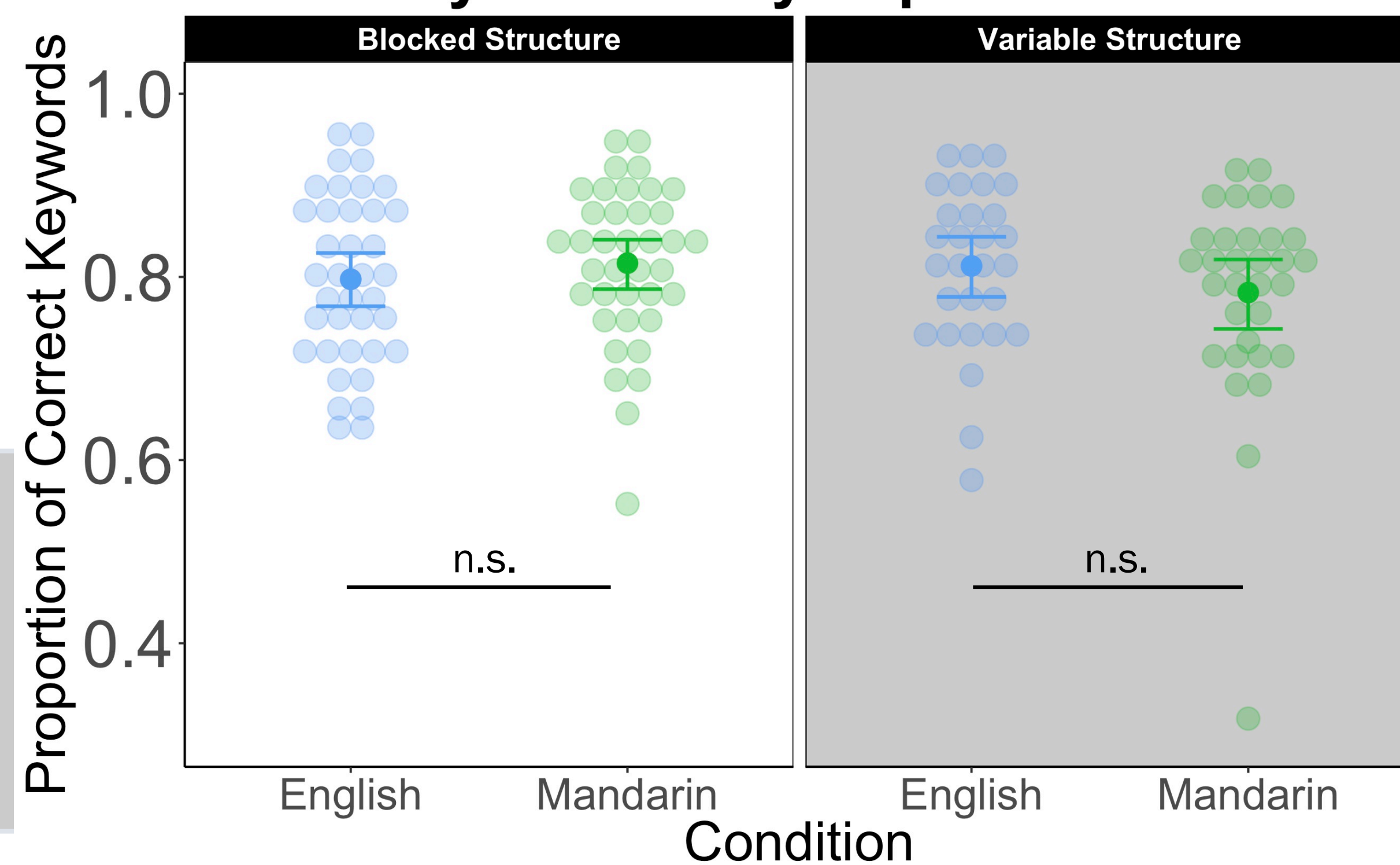**Mandarin (Accent):** Blocked by speaker

**English:** Variable structure

**Mandarin (Accent):** Variable structure



**Accuracy on Test by Exposure Structure**

## Experiment 3: Does generalization depend on specific test items?[3]

**Test Set**

**English:** Test 1

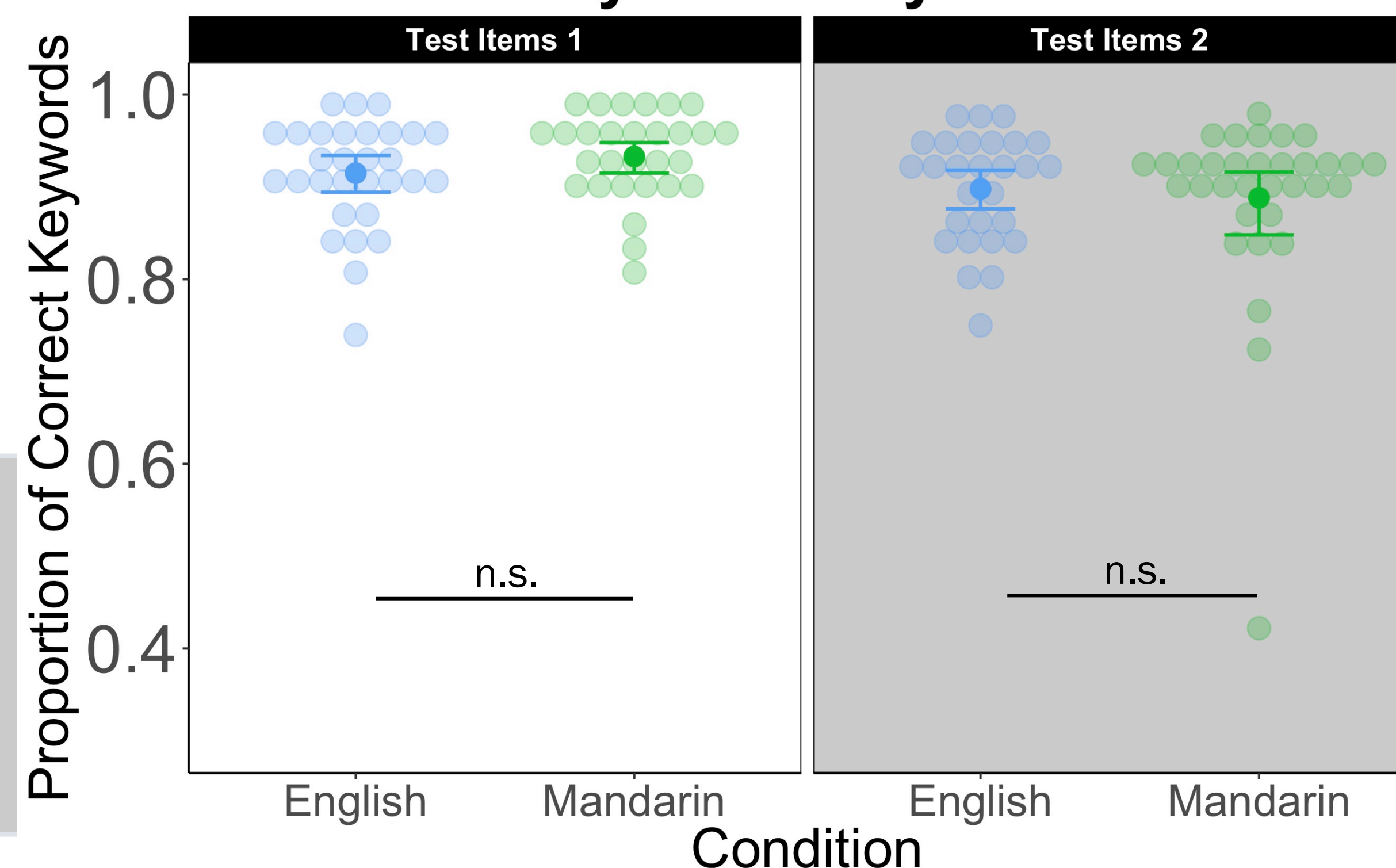**Mandarin (Accent):** Test 1

**English:** Test 2

**Mandarin (Accent):** Test 2



**Accuracy at Test by Test Items**

## Conclusions:

- **Multiple-talker exposure does not guarantee generalization**
- **Generalization may not be as robust as previously assumed**