

Rapid adaptation and generalization in foreign-accented speech perception

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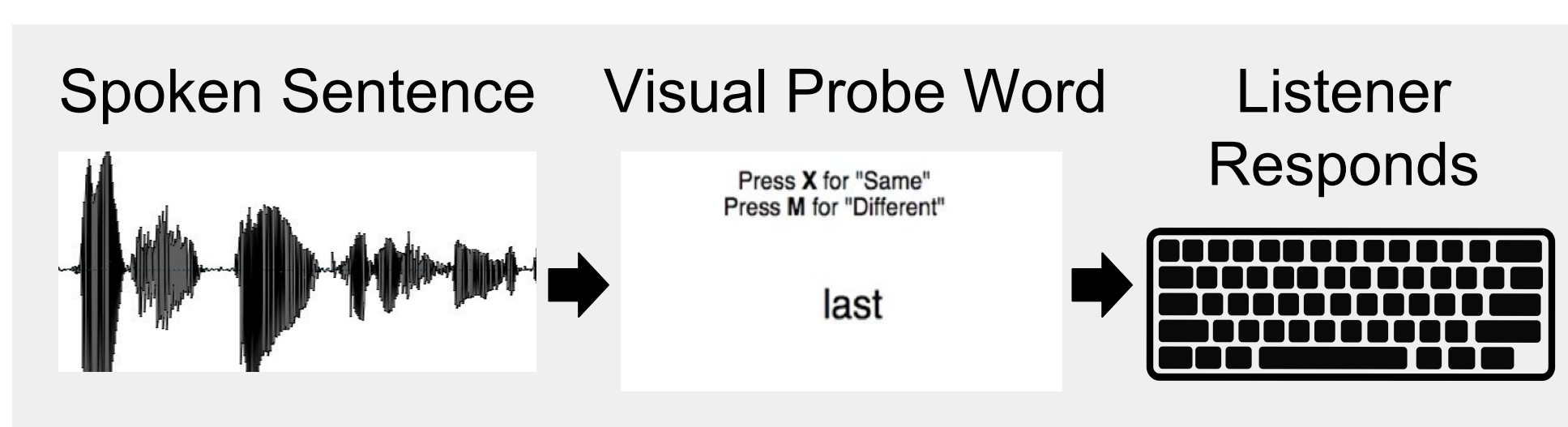
Questions

1. Can listeners fully understand a foreign accent within a minute?
2. Do we adapt to an accent or to a specific speaker?

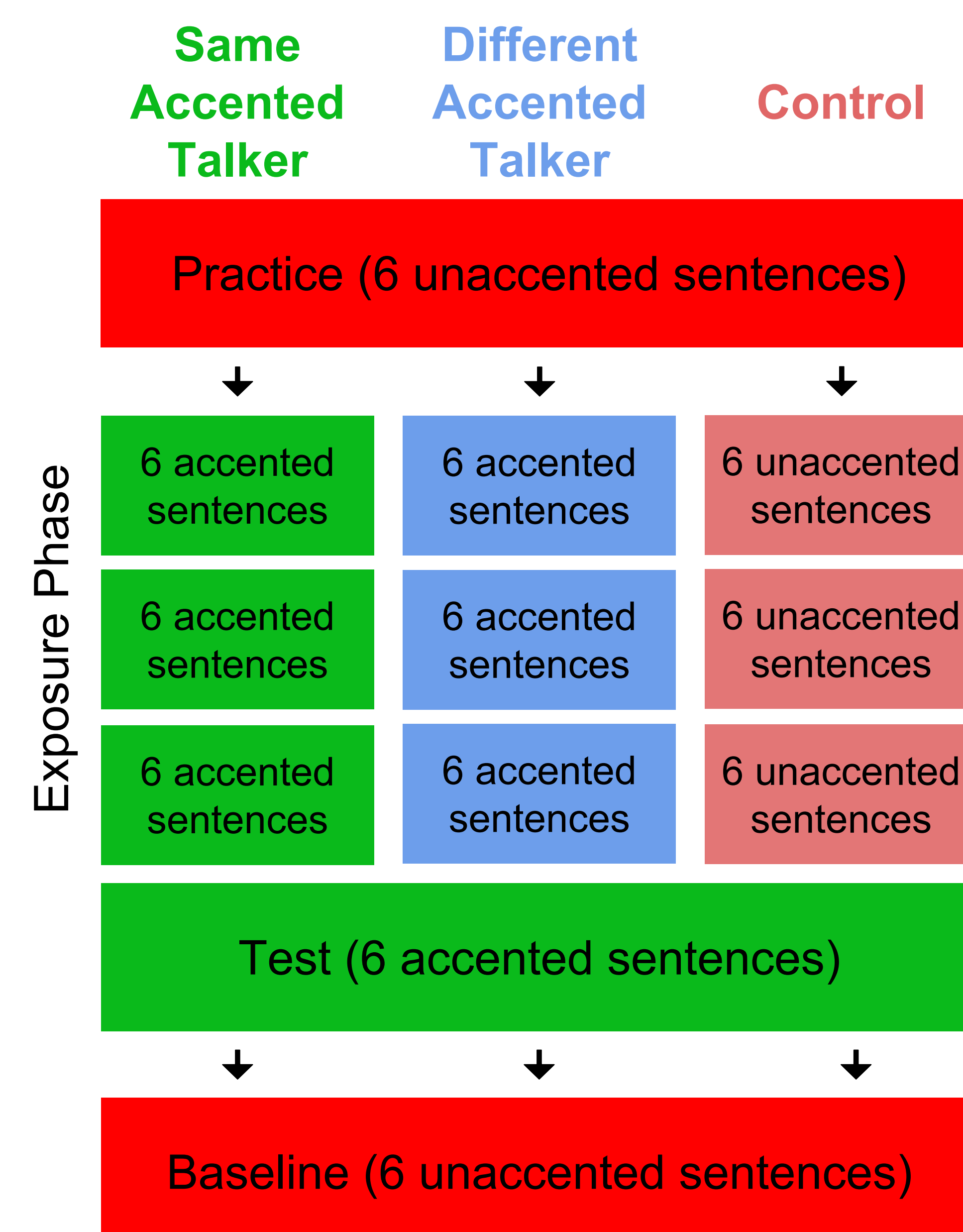
Accent Perception over the Web

- 56 subjects per condition

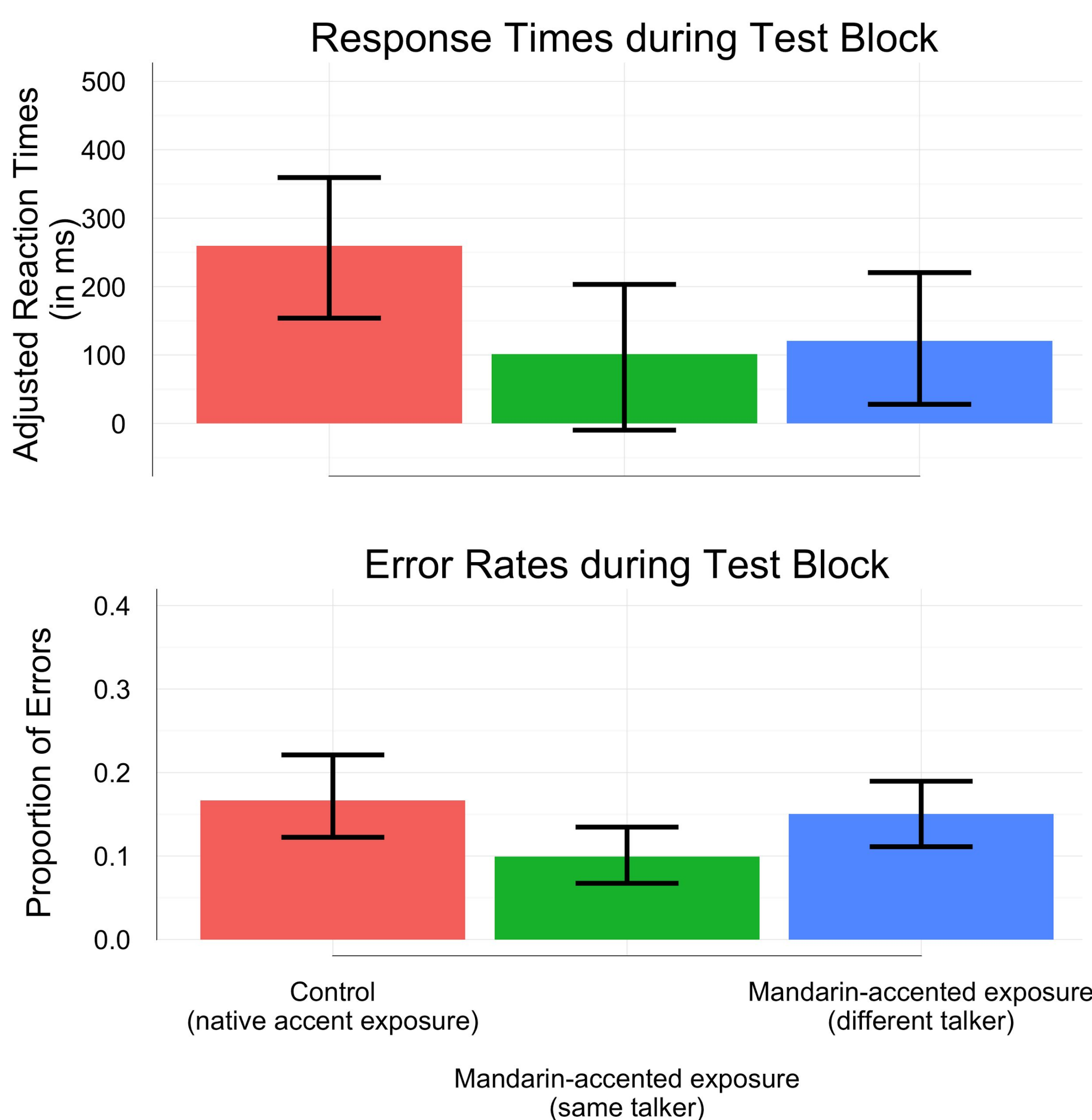
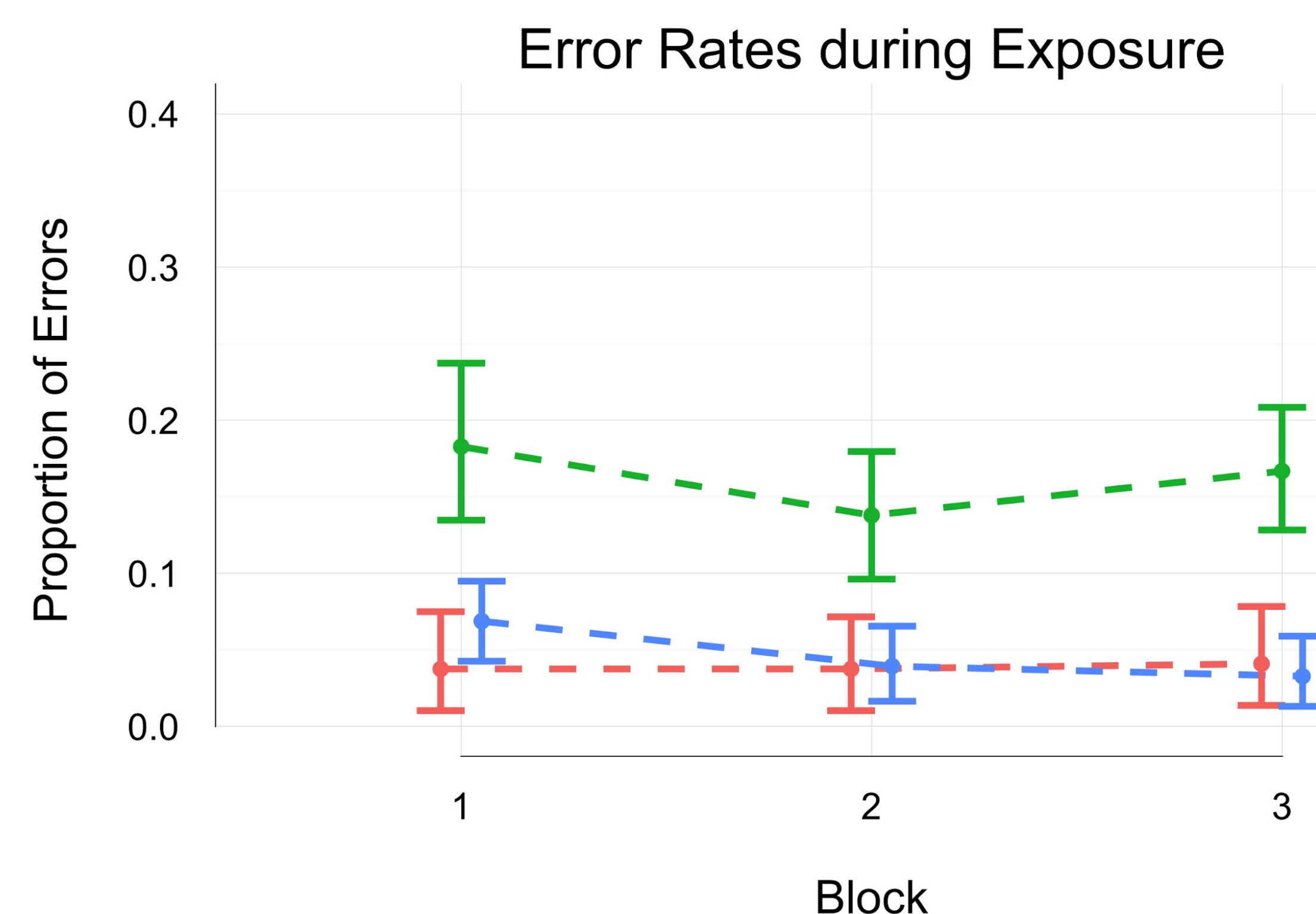
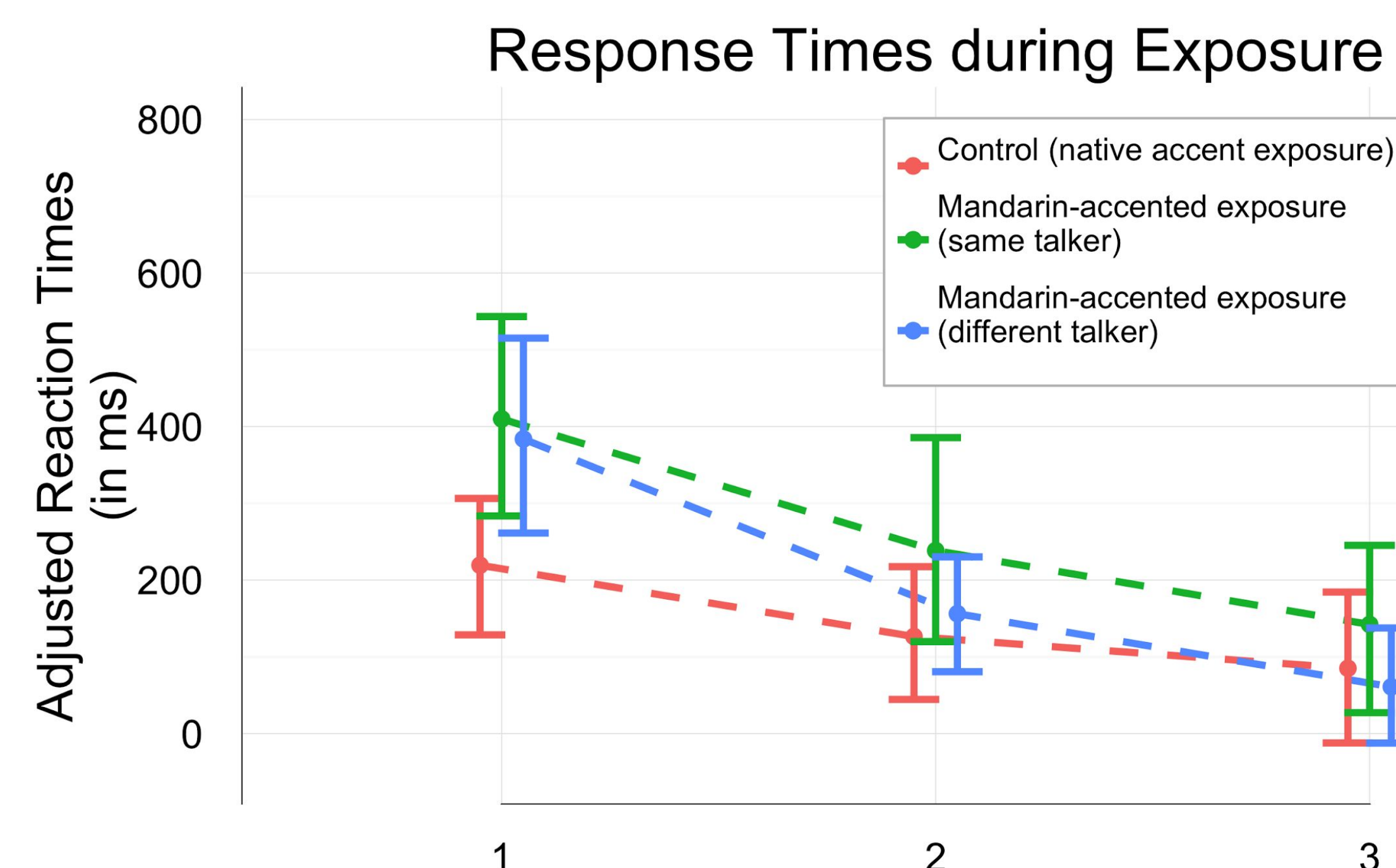
Trial Structure



Design



Results



1. Accented speech initially processed more slowly
2. Processing improves with exposure
3. Improvements are larger for accented speech

Subjects in **same talker** condition improved more than those in **control** condition.

1. Error rates initially higher for subjects in **same talker** condition (more heavily accented exposure talker)

No changes in error rates throughout exposure.

1. **Control** significantly slower and more errors when processing Mandarin-accented speech in test phase compared to **same talker**
2. **Different talker** and **same talker** conditions had similar reaction times
3. **Different talker** had higher error rates

Some effects of accent exposure talker-dependent (**same** ≠ **different**), others talker-independent (**same** = **different**).

Conclusions

1. Brief exposure leads to faster processing of accented speech but only slightly improved error rates.
2. Changes in processing speed seem to be talker-independent accent adaptation.
3. Changes in error rates seem to be talker-dependent and thus not accent adaptation.

Discussion

Possible effects on generalization:

1. Similarity in accent difficulty
2. Number of exposure speakers
3. Previous experiences with foreign accents (from any language)