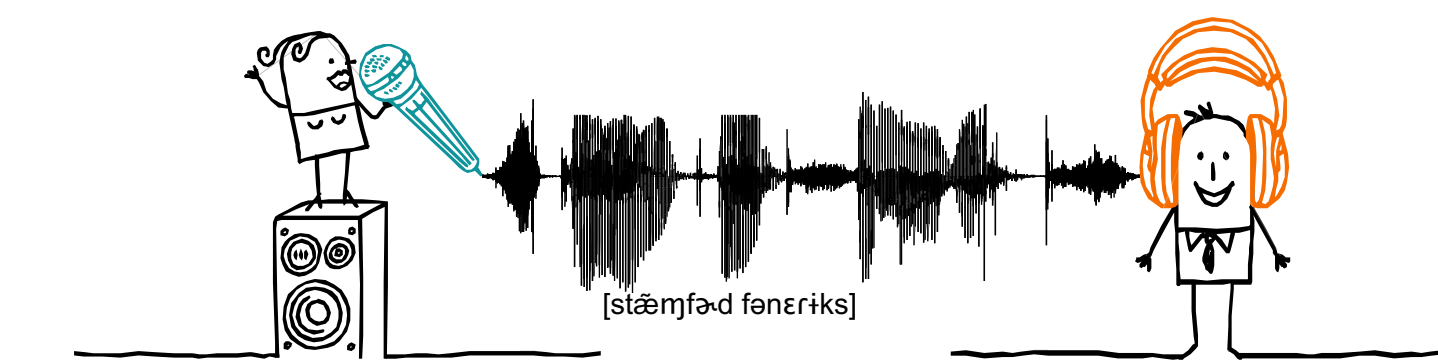


Talker voice and Stereotype in the False Recall of Spoken Words

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How do talker voice and social stereotypes influence immediate recall and the long-term recognition of spoken words?

Background

Memory for spoken words is an agglomeration of acoustic, phonetic and social information [1]

The same utterance produced by two talkers may be encoded differently, and is influenced by real and stereotyped experience and expectations [2]

Social information and linguistic information influence immediate recognition of words and the long-term categorization of vowels

- Maori English more robustly primes Maori words than does standard New Zealand English [3].
- Congruence between social prime (Business Professional) and phonological information (TRAP-backing) leads to false memory [4].

We investigate how talker voice and social stereotype influence the immediate recall and long-term recognition of spoken words more generally; honing in on specific behavioral patterns in social psychology:

- Activating negative stereotype (i.e. crime, ghetto) induces attentional biases toward African Americans. [5]
- Simply thinking about a Black person can render concepts like violence [5]

Method: DRM

Participants:
80 U.S. participants on Amazon Mechanical Turk

Talkers: DeShaun Conner

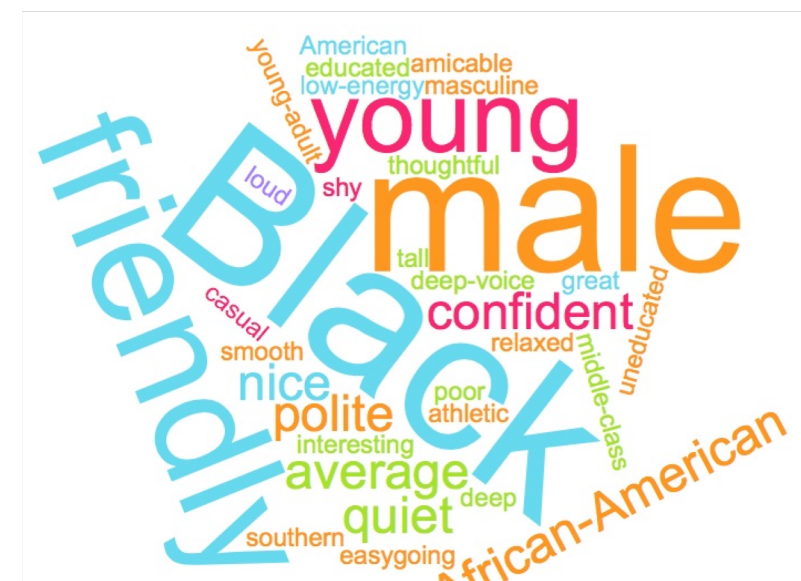
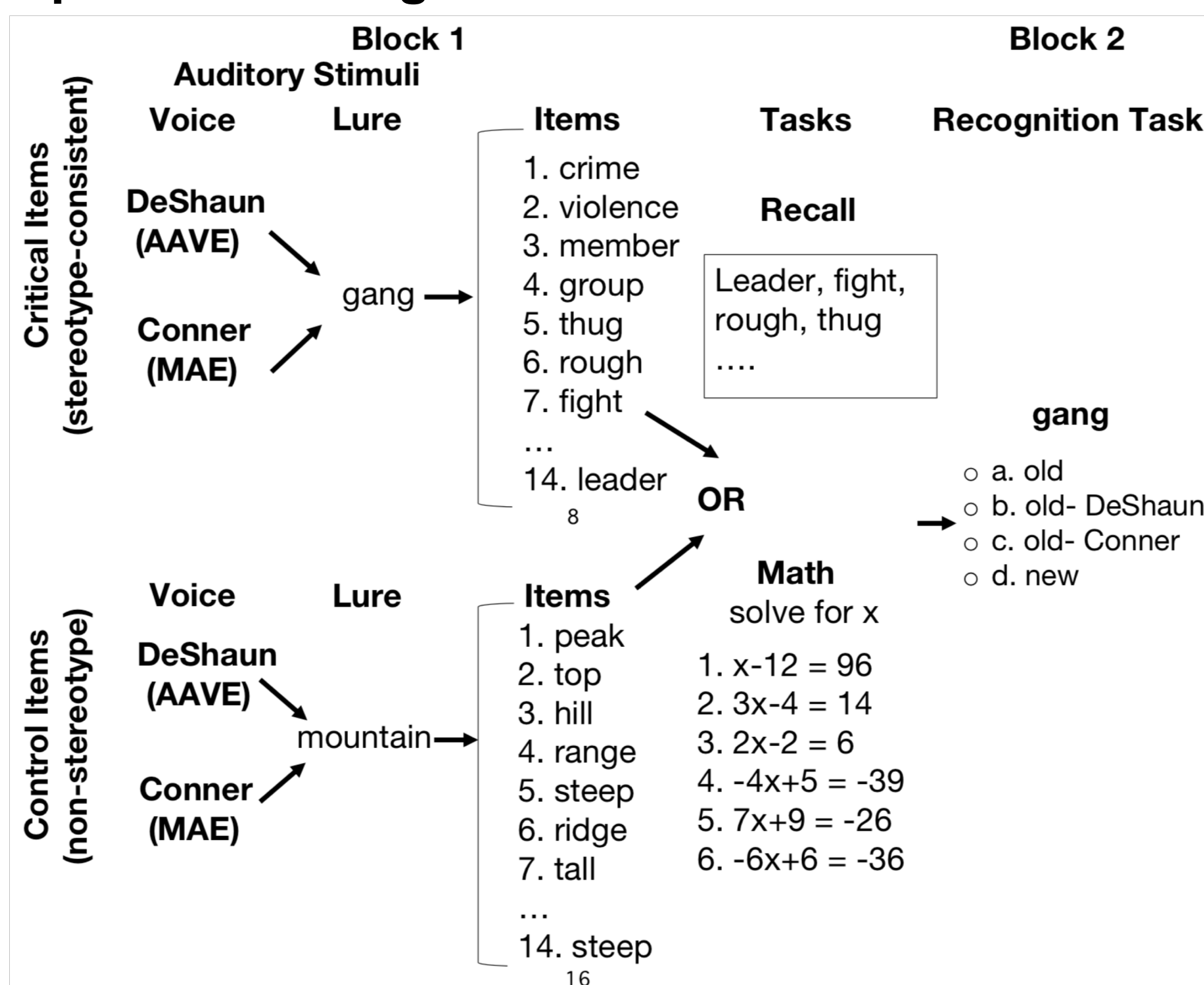


Fig.1 Participants descriptions of DeShaun



Fig.2 Participants descriptions of Conner

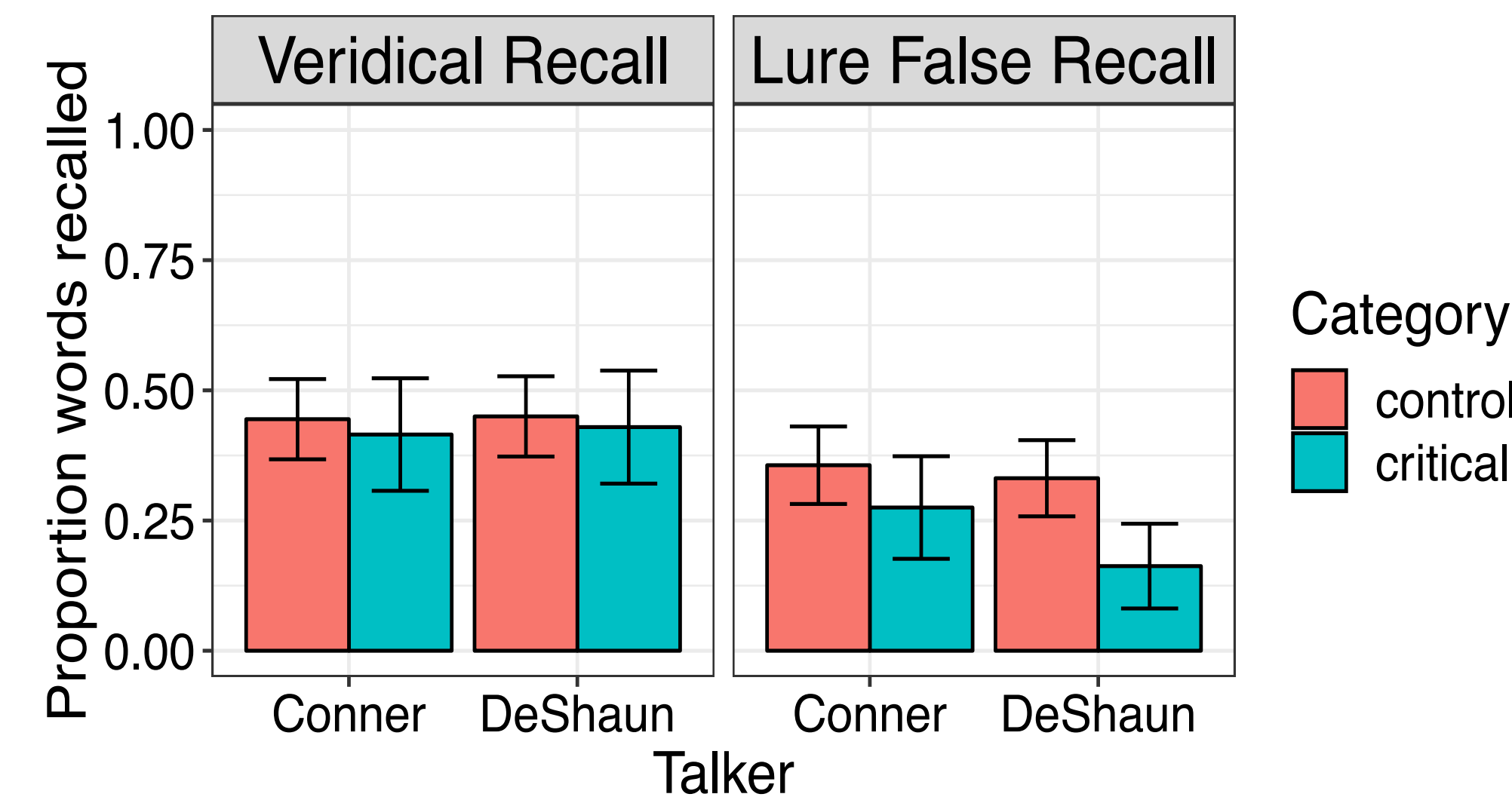
Experiment Design and Stimuli



Results: Recall

Question 1: Does talker voice interact with list category in immediate recall?

Fig. 3. True and False recall across talkers and lists



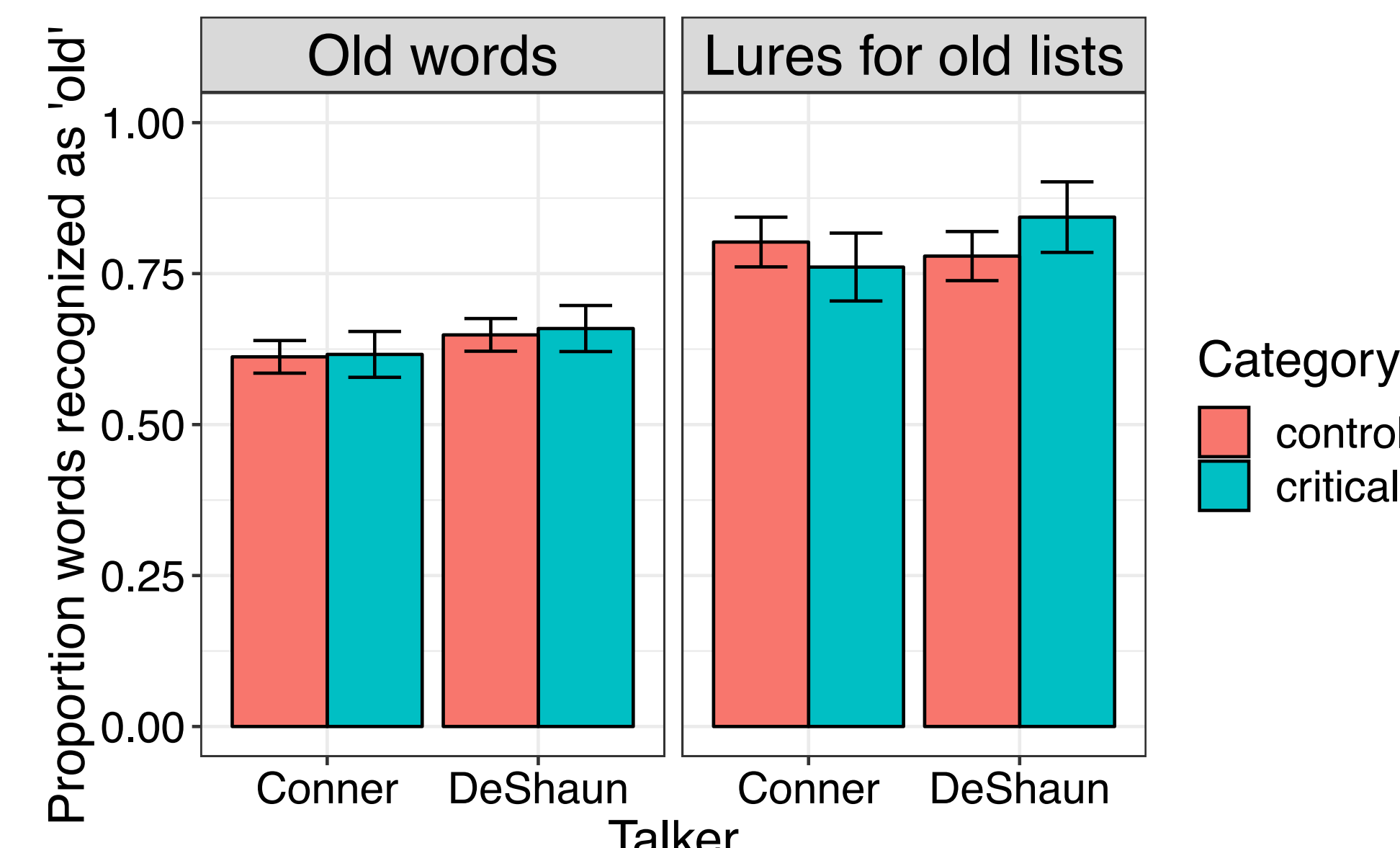
- Veridical: No effect of talker or list category
- Lure: Interaction between talker and list category [p<0.001].
-In Conner's voice, **no effects** of list category.
-In DeShaun's voice, critical lures recalled **less often** than control lures.

→ In immediate recall task, listeners differently recall unpresented lures based on list category, but only when list and talker evoke similar stereotypes.

Results: Recognition

Question 2: Does talker voice interact with list category in long-term recognition of spoken words?

Fig. 4. True & False Recognition Across Talkers & Lists



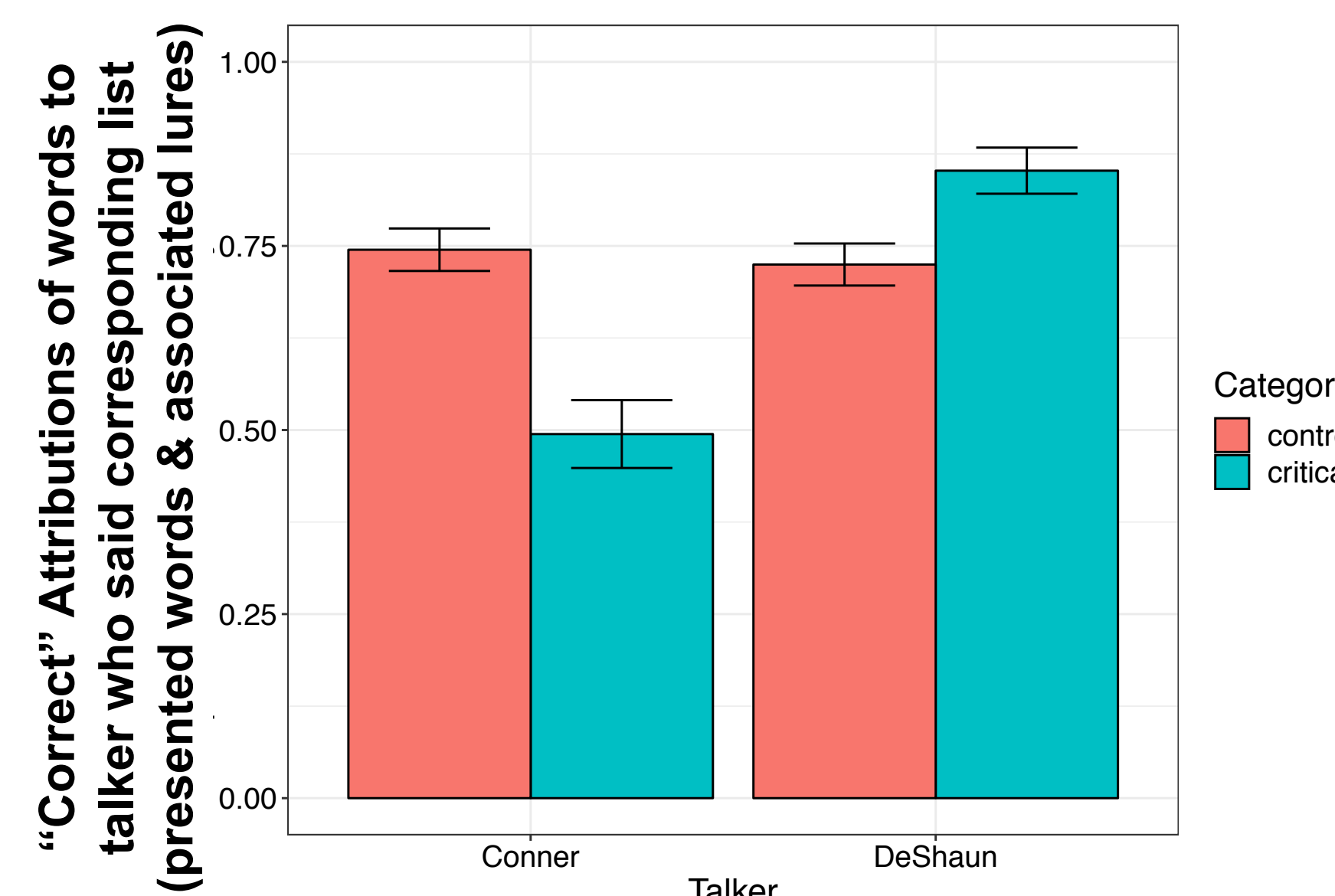
- Old words: no effect of talker or list category.
- Lures: Marginal interaction between talker and list category [p=0.074]. Critical lures may be recognized **more often** in DeShaun's voice than in Conner's.

→ More data needed, but interesting switch highlighting effect of time on memory

Results: Attributions to Items Associated with OLD lists

Question 3: Does attribution of words associated with Old lists interact with talker and list category?

Fig. 5. Attribution for presented words and unpresented lures associated with OLD lists



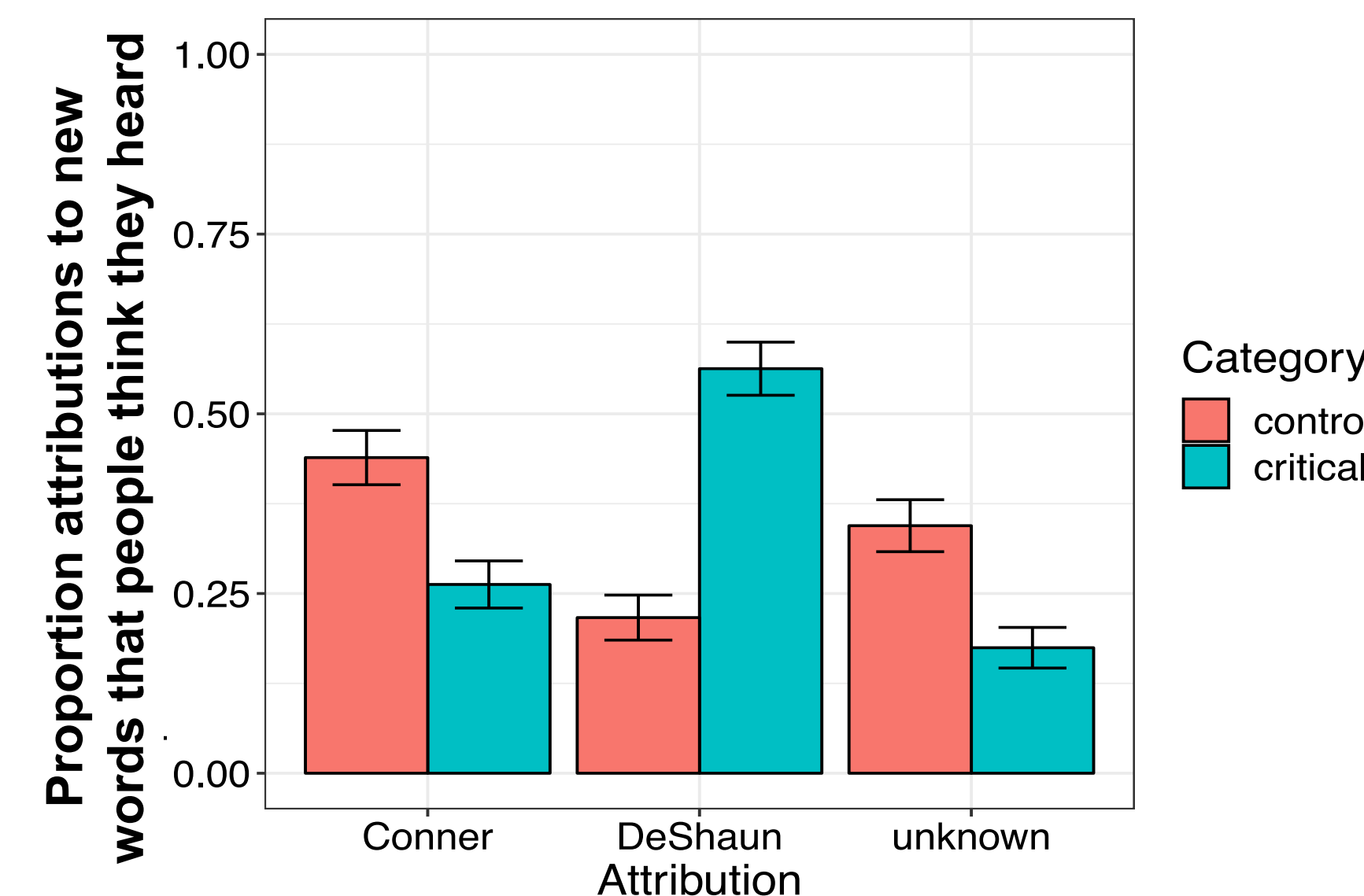
- No difference in attributions for control lists between DeShaun and Conner.
- Interaction between talker and list category.
-For Conner, words associated with critical lists are attributed **less often** than words associated with control lists [p<0.001].
-For DeShaun, words associated with critical lists attributed **more often** than words associated with control lists [p<0.001].

→ Compared to controls, listeners increase attribution of words associated with stereotype consistent lists to DeShaun and decrease attribution of them to Conner.

Results: Attributions to New Non-Lures labeled as OLD

Question 4: Does list category influence listener attribution to new words people think they heard?

Fig. 6. Attribution of False Alarms



- When participants think they've heard a new word, they **over-attribute** to DeShaun for critical words, and **under-attribute** to DeShaun for control words, relative to Conner and "unknown" [all p<0.001]

Discussion

Summary of Results

Veridical recall results showed no significant difference between talkers.

Listeners show a decrease in lure recall for DeShaun's voice for critical lists compared to control lists.

Listeners have a marginally higher recognition of lures in long-term recognition for critical lists in DeShaun's voice than critical lists in Conner's voice.

For old words, listeners increase attribution to stereotype-consistent words to DeShaun and decrease stereotype-consistent words to Conner.

Attributions to new words that people think they heard are biased to follow consistency between talker and list stereotype.

Discussion

Concepts stereotypically associated with African American personae may either inhibit spreading activation of those items in short term memory or result in greater attention to AAVE voice compared to MAE voice.

Consistent with findings that attention *decreases* false recall [7]

There is greater attention and precise lexical encoding for an AAVE voice relative to MAE. [8] in immediate recall

Activating concepts like crime and ghetto induces attentional biases toward African Americans [5]

BUT

For our "friendly, polite, young black male talker", the over-attribution of new stereotype items suggests ideologies attached to African American personae encoded in long term memory, and may override real experience.

Listeners more likely to believe that they heard things they didn't based solely on stereotype activation.

Implications for biases seen in settings such as classrooms, courtrooms, interviews, housing, etc.

Selected References

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