Are older adults less strategic in discourse processing?: Evidence from pitch accents
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INTRODUCTION
How does episodic memory (e.g., for a discourse) change over the lifespan?
- **Less** selective
- **More** selective (↓ resources, ↑ experience)

New test: Effect of **pitch accenting** on memory
- Indicator of discourse status / importance

DISCOURSE MEMORY TASK³

**STUDY:** Hear 48 stories with 2 **contrast sets**
"Both the British and the French biologists were searching Malaysia and Indonesia for the endangered monkeys. Finally, the British spotted one of the monkeys in Malaysia and planted a radio tag on it."

Orthogonally vary pitch accent on each referent: Presentational (H+ in ToBI) or contrastive (L+H+)

**TEST:** (30 min later)
See **entire** story presented visually with critical words missing:
Both the British and the French biologists were searching Malaysia and Indonesia for the endangered monkeys. Finally, the ___(A)___ spotted one of the monkeys in ___(B)___ and planted a radio tag on it.

Make forced choice memory response:
(A) BRITISH or FRENCH?
(B) MALAYSIA or INDONESIA?

ANALYSIS
Analyze age differences in two main effects on memory:
- **Accent on this** contrast set
  » Accent **Benefit** to memory
- **Accent on other** set in story
  » Other Accent **Cost** to memory

ACKNOWLEDGEMENTS & REFERENCES
See back
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EXPERIMENT 1: YOUNG VS. OLDER ADULTS

**Size of Accent Benefit**

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<th>OLDER</th>
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**Size of Other Accent Cost**

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Groups show **equal memory benefit** from **contrastive accent** on **target**
Only older adults show **memory cost** if **contrastive accent elsewhere**

Older adults sensitive to pitch accents!
- Similar benefits from accented target
- Cost when other information accented

EXPERIMENT 2: YOUNG ADULTS

Why do older adults show **Other Accent Cost**?
- ↓ resources, only remember important info.? → **Predict cost** in limited-resource young adults
- ↑ **linguistic knowledge**, more strategic? → No such cost in limited-resource young adults

Test young adults with:
- Discourse memory task
- 4 complex span tasks (see back)

**MULTI-LEVEL MODEL:** Effect of span score on:

Low-span young adults resemble older adults:
- **No change** in **Accent Benefit** to memory
- **Show the Other Accent Cost** in memory
Supports ↓ processing resource account

CONCLUSION
- Older adults may only remember most important details due to limited resources
- But at least as sensitive to pitch accents as young adults!
Are older adults less strategic in discourse processing?: Evidence from pitch accents

Additional Information

PARTICIPANTS

EXPERIMENT 1
48 young adults (age 18 to 22)
48 older adults (age 60 to 80)

EXPERIMENT 2
56 young adults

SPAN TASKS

Loaded reading span
• Span length: 2 to 7

Loaded listening span
• Span length: 2 to 7

Alphabet span
• Recall words in alphabetical order
• Span length: 2 to 7

Subtract 2 span
• Recall digits while subtracting 2 from each
• Span length: 2 to 8

2 trials of each span length, in random order

Score: Number of trials correctly completed (partial credit included)

EXPERIMENT 1: RAW PERFORMANCE

Groups show equal memory benefit from contrastive accent on target

Only older adults show memory cost if contrastive accent elsewhere

Older adults sensitive to pitch accents!
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REFERENCES


ACKNOWLEDGEMENTS

This research was supported by National Institutes of Health grants R01DC008774 to Duane Watson and R01 AG026263 to Aaron Benjamin. Scott H. Fraundorf was supported by National Foundation Graduate Research Fellowship 200705322.

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