How the Amplitude of Sound Affects Memory in a Virtual Escape Room

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- Sound is essential to life as we know it - playing a crucial role in everyones life, whether for learning or entertainment, potentially influencing our memory

- **Does the loudness of sounds improve or harm memory?**

Procedure Schematic

Participants: Groups of 5, 30
Groups total (9 Groups analyzed)

Virtual Game (using zoom)

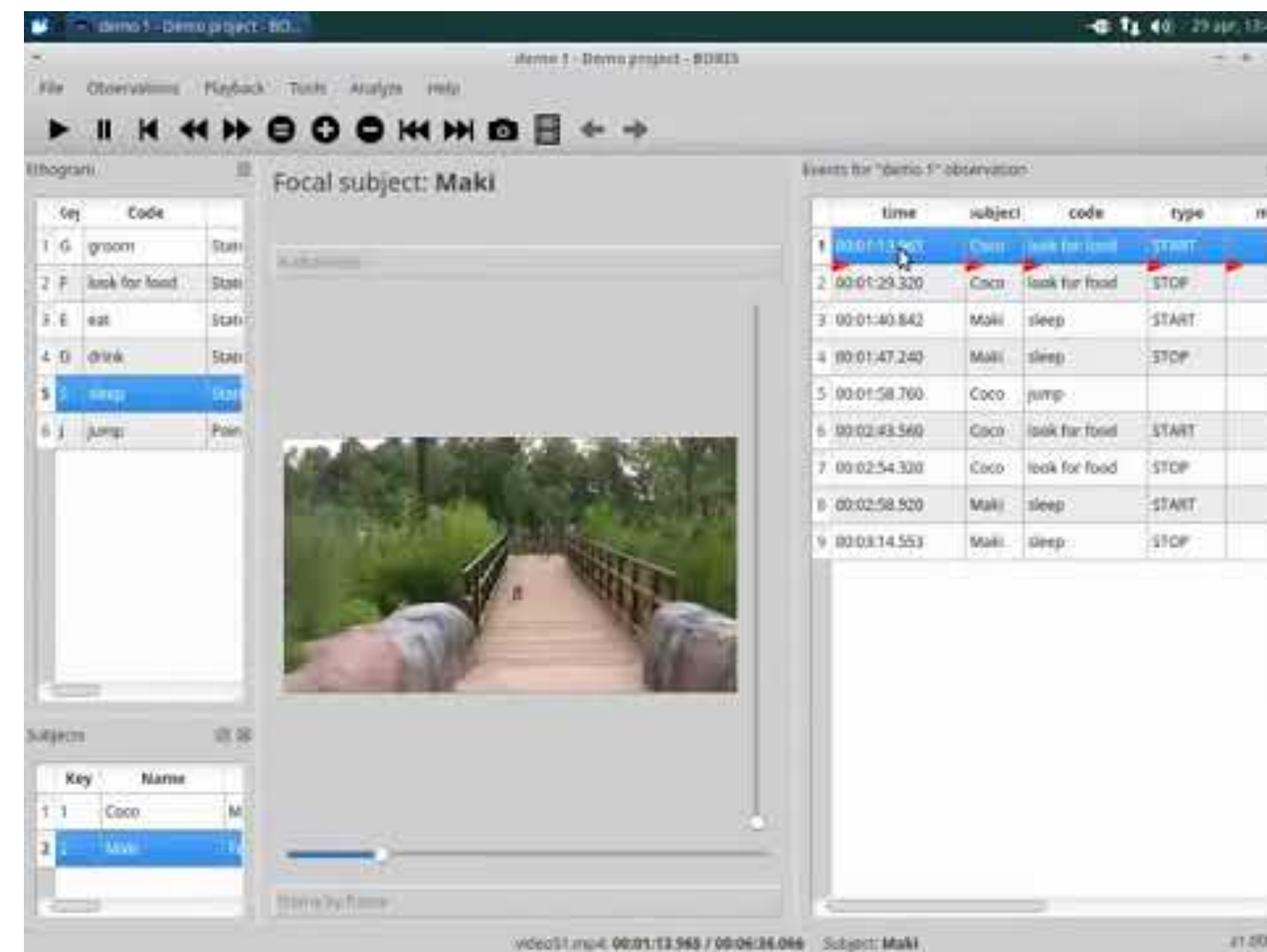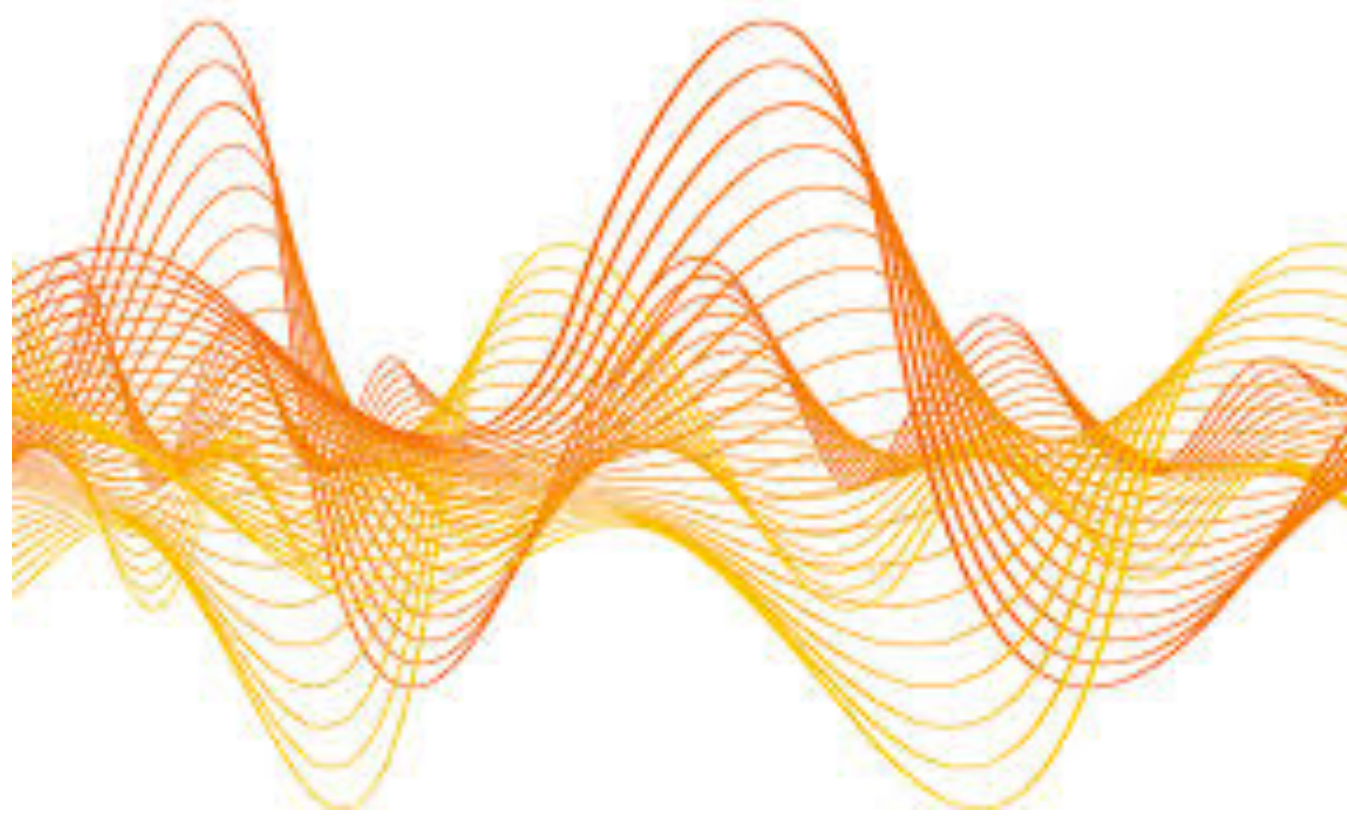Recorded screen sharing

| event1 | → | event2 | → | event3 | ... |

What was Hughey Neube's first job?

A: Newspaper delivery
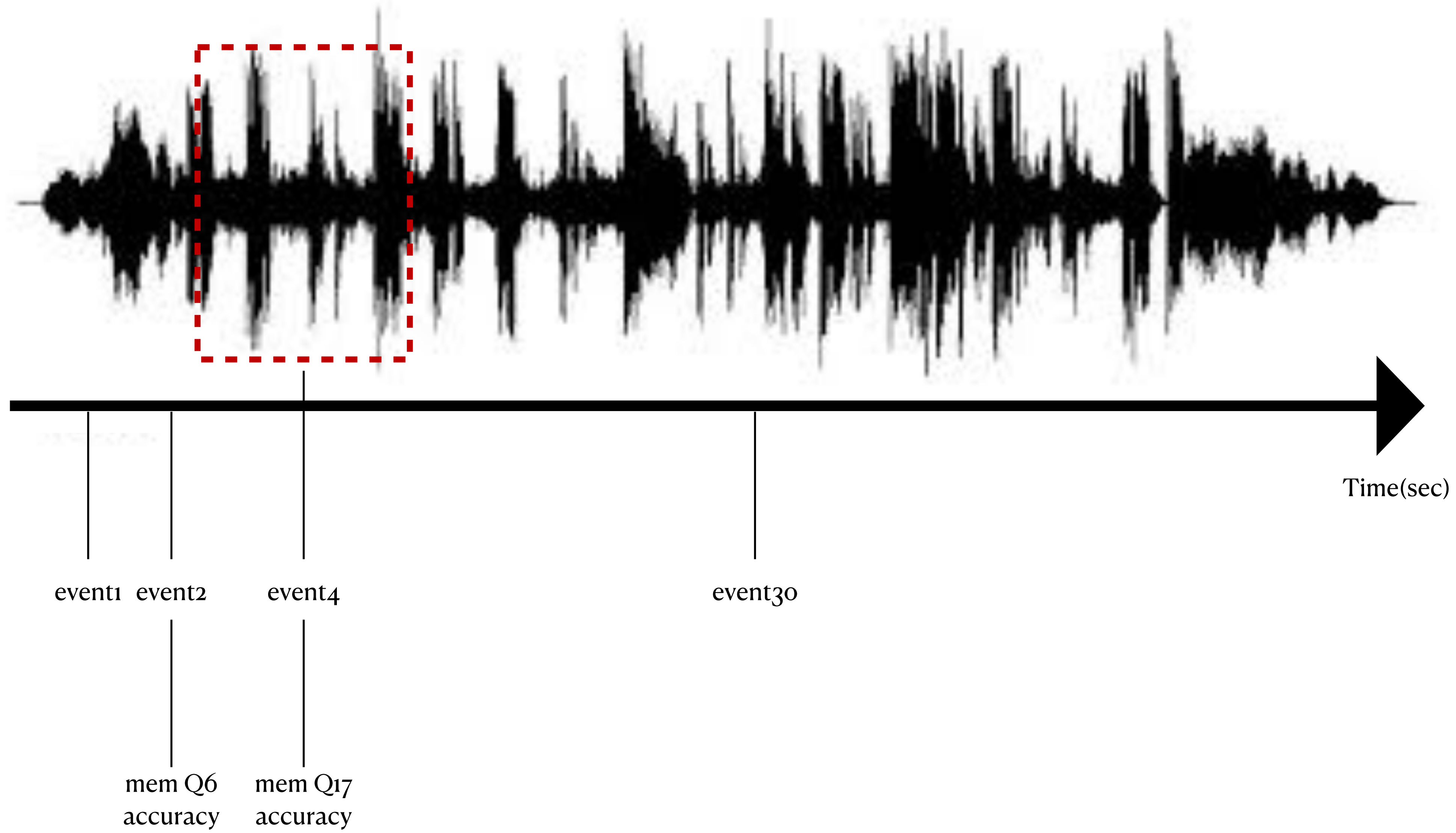B: Package delivery
C: Milk delivery

Memory Question

Data

- Sound wave data - volume of sound within each group

- Event timing data - time points of each key event during the game

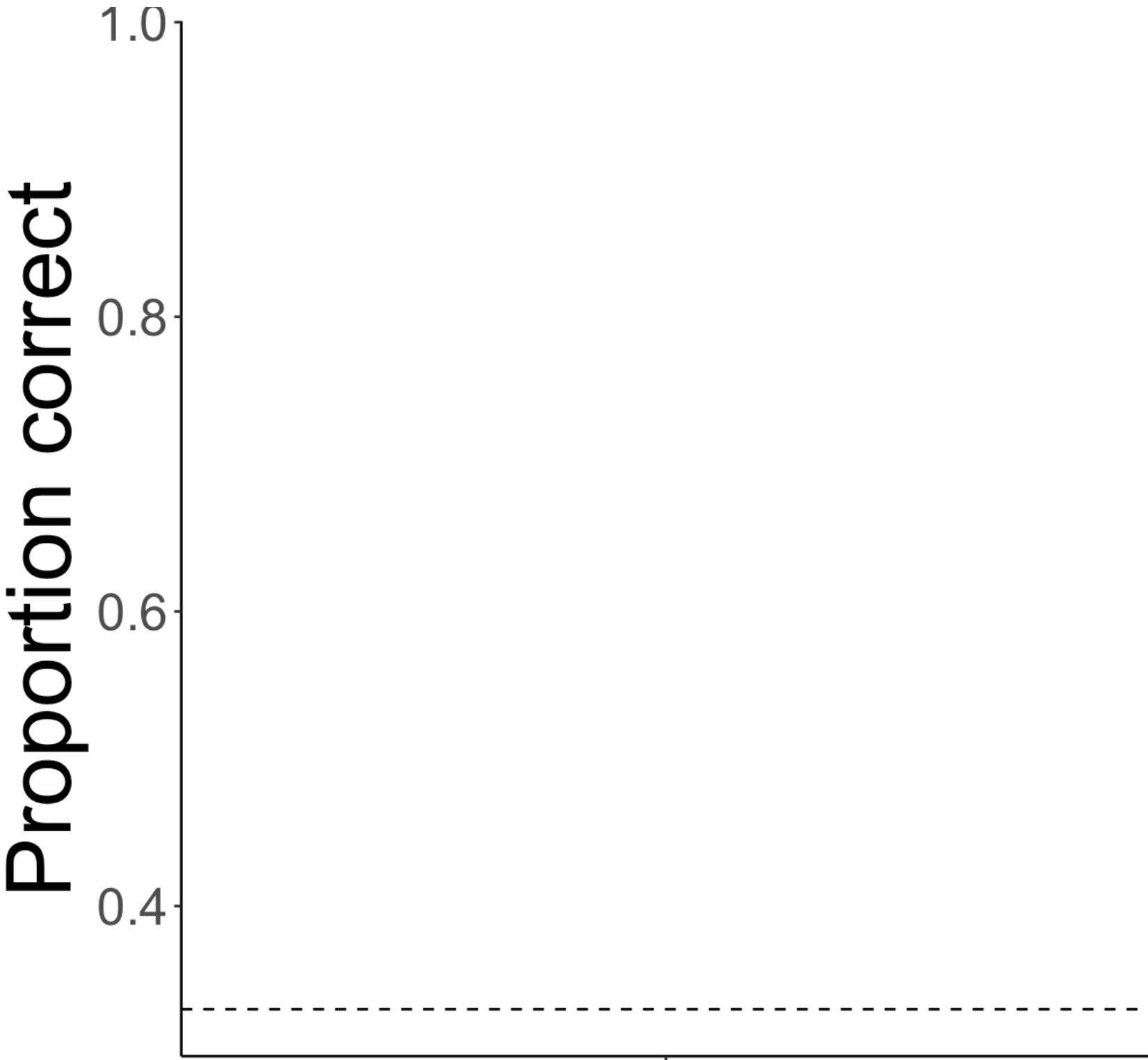- Memory data - episodic memory associated with the key events
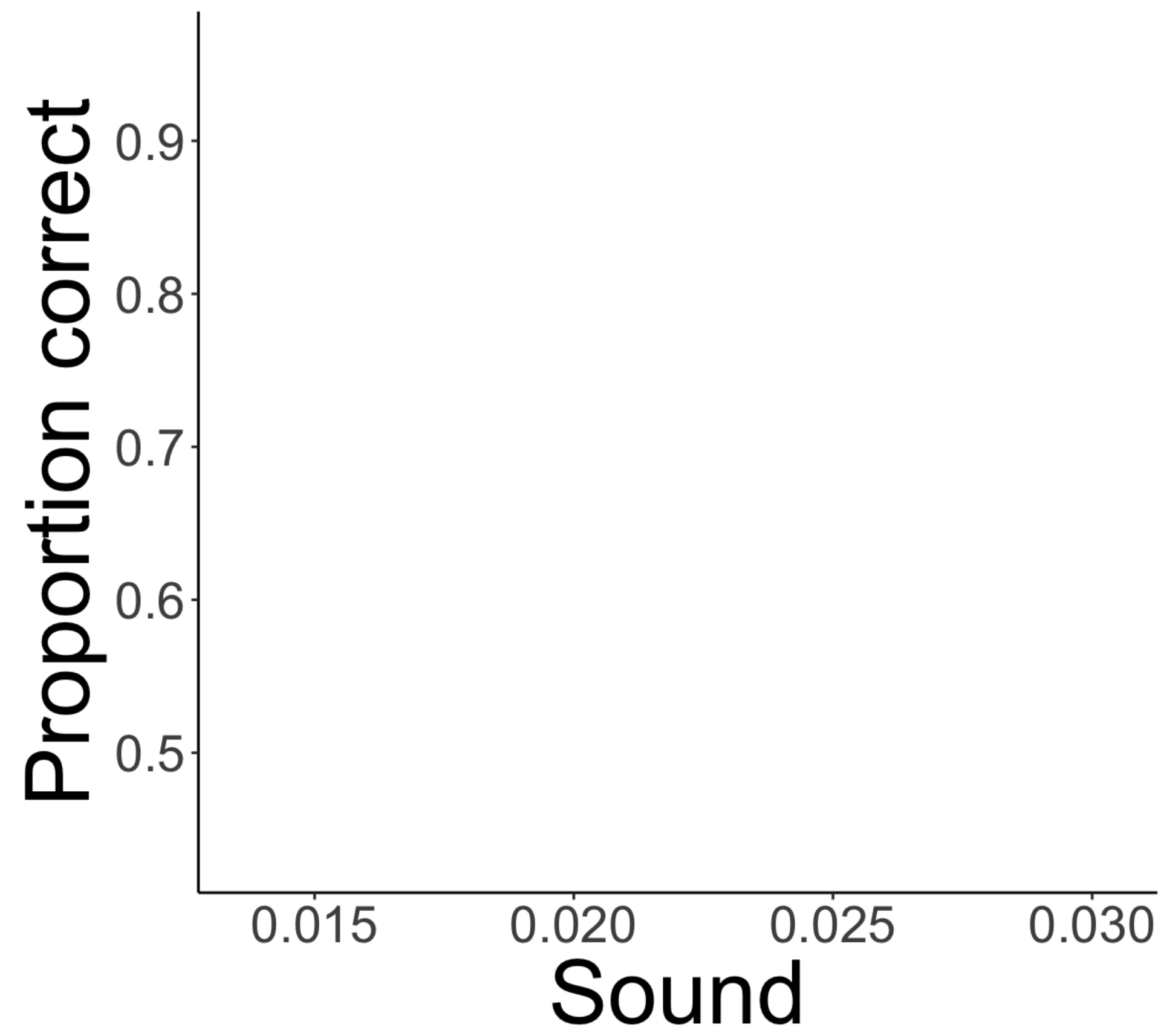

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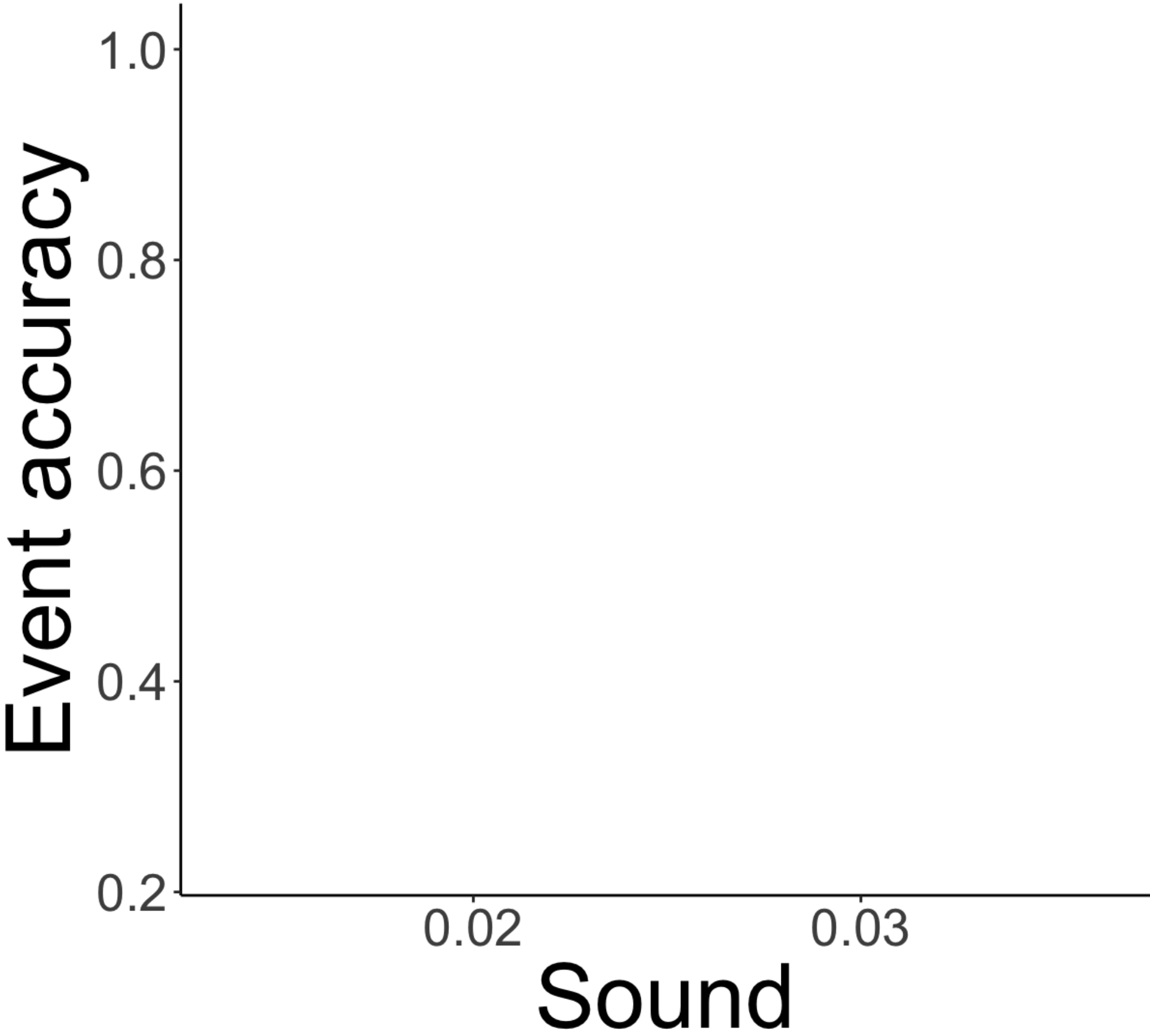
A: Newspaper delivery
B: Package delivery
C: Milk delivery

event1 event2 event4 event30

mem Q6
accuracy

mem Q17
accuracy

Time(sec)

Accuracy on Memory Detail Questions

How Does Sound Affect Memory Across Participants

How Loudness Across Events Affects Memory for the Events

Summary

- Throughout the game hearing louder sounds overall is not associated with remembering more events

- People remember events better when they are associated with louder sound

  - Importance of the event

  - Salience of sound

Acknowledgments

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