

# Does the Relationship Between Joint and Separate Evaluation Change With Age?

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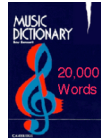
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## Introduction

### Joint-Separate Evaluation Reversals

- Preferences are different when options are evaluated jointly vs. separately
- Consider the dictionary problem (Hsee, 1996)

You are looking for a used music dictionary and find two options:  
**A: Perfect Cover; 10,000 entries**    **B: Torn cover; 20,000 entries**



In Joint Evaluation (JE) Both options are seen, in Separate Evaluation (SE) only one is seen (one condition for each option)

- Produces a JE-SE Reversal: Dictionary B is preferred in JE, but Dictionary A is preferred in SE

### Aging & Decision Making

- Research shows that decision making sometimes improves (e.g., Kim & Hasher 2005) and sometimes declines (Kim et al., 2005) with age
- Many things that are central to decision making change with age
  - e.g., Experience making decisions
- Older individuals may show a different pattern of results on JE-SE Reversal problems

## Experiment 1

### Aim:

- To determine if JE-SE Reversals occur across the lifespan

### Method:

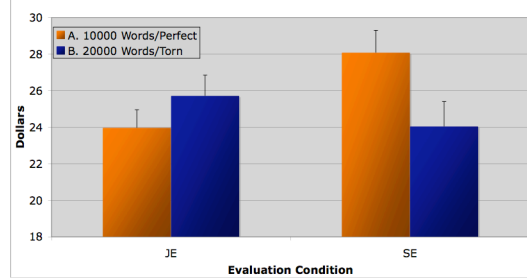
- Used the dictionary problem described above
- Participants in JE and 2 SE conditions asked: "How much would you be willing to pay for dictionary A(B)?"
- 504 participants (aged 8-59)

### Acknowledgments

- This research was supported by a grant R37 AGO4306 from the National Institute on Aging
- We thank the Ontario Science Centre for allowing us to run the studies at their facility

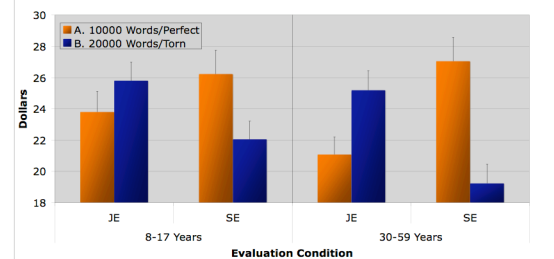
## Results:

### 1. Willingness to Pay for 18-29 Year Olds



1. The JE-SE Reversal was significant for 18-29 year olds ( $t = 2.69$ ,  $p < .05$ )

### 2. Willingness to Pay for 8-17 Year Olds & 30-59 Year Olds



2. JE-SE Reversals were also observed in individuals younger ( $t = 2.41$ ,  $p < .05$ ) and older ( $t = 5.19$ ,  $p < .05$ ) than the standard university student sample.

## Experiment 2

### Aim:

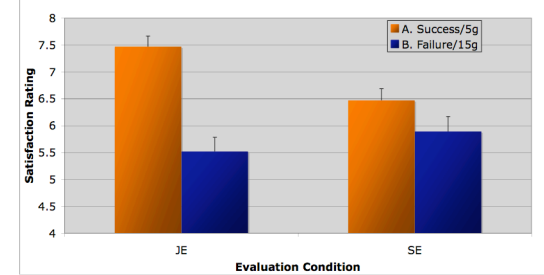
- To determine if the pattern found in Experiment 1 generalizes to other materials

### Method:

- Presented Hsee & Zhang's (2004) chocolate bar problem:
  - **Option A:** Recall a **success** in your life and get a **5g bar**
  - **Option B:** Recall a **failure** in your life and get a **15g bar**
    - Found that JE participants preferred Option B but SE participants preferred Option A
- The same 508 participants from experiment 2 rated how satisfied they would be with the the option(s)

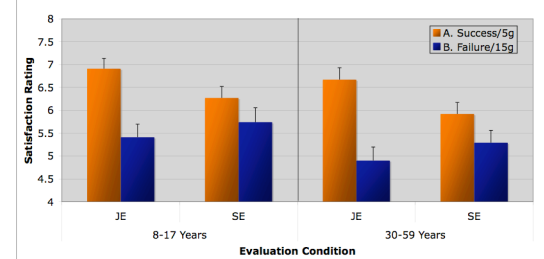
## Results:

### 3. Satisfaction Ratings for 18-29 Year Olds



3. No Reversal was observed within the 18-29 age group, the preference for Option A was stronger, not weaker in the JE condition ( $t = 2.75$ ,  $p < .05$ )

### 4. Satisfaction Ratings for 8-17 Year Olds & 30-59 Year Olds



4. Similarly, no reversal occurred in either the youngest or oldest sample with the preference being strongest in the JE condition ( $t = 1.76$ ,  $p < .05$ , &  $t = 2.16$ ,  $p < .05$ )

- A 3<sup>rd</sup> experiment using interesting/uninteresting stories as options compared undergraduates and individuals over 60 and again, no reversal was found within any age group

## Conclusions

1. Across 3 experiments, the pattern of results was the same across the lifespan
  - For the dictionary problem, all age groups showed a reversal
  - For the chocolate bar problem, no age group showed a reversal
2. What accounts for our failure to replicate Hsee & Zhang's findings?
  - Cultural differences?
3. Unlike some other decision making tasks, performance on JE-SE Reversal problems does not change with age