Effects of Attention at Encoding and Retrieval on Short and Long-term False Memories for Emotional Stimuli Elizabeth M. Marsh & Grace M. Shine, Faculty Advisor: Dawn McBride Department of Psychology, Illinois State University

Introduction

- False memories (FM) are remembering things that ne happened (Radvansky, 2017).
- The Deese/Roediger-McDermott paradigm (DRM; De 1959; Roediger & McDermott, 1995) has been used research effects of attention and emotion on false memories.
 - Lists of related words are studied, participants re recall a non-presented word (critical item, or CI)
- Divided attention at encoding produces higher rates false memory for negative than positive or neutral still (Knott et al., 2018).
 - Suggests negative stimuli rely on automatic processing whereas positive and non-valanced rely on controlled processing
- Negative false memories increase over time when attention at encoding is divided (Knott & Shah, 2019)
- Divided attention at retrieval increases false memory across stimuli types but is greater for negative than n stimuli (Shah & Knott, 2018).
- Previous studies have assessed these effects over the long-term but not in short-term memory.

Current Study

Purpose: Examine effects of attention on false memorie (FM) for emotional stimuli over short-term and long-term delays

Experiment 1: attention at encoding for STM & LTM

H1: Divided attention at encoding will reduce FM for positive and neutral lists on both STM and LTM tests, for negative lists will be comparable to the full attention condition for STM task and increase on LTM.

Experiment 2: attention at retrieval for STM & LTM

H2: Divided attention at retrieval will increase FM for a types compared to full attention, with greater FM for negative lists than positive or neutral.

General Method

Participants: Approximately 100 will be recruited for each Design: A 2 (Attention: Full vs. Divided) X 3 (List Type: Positive vs. Negative vs. Neutral) X 2 (Test delay: Immed vs delayed) mixed design

Materials:

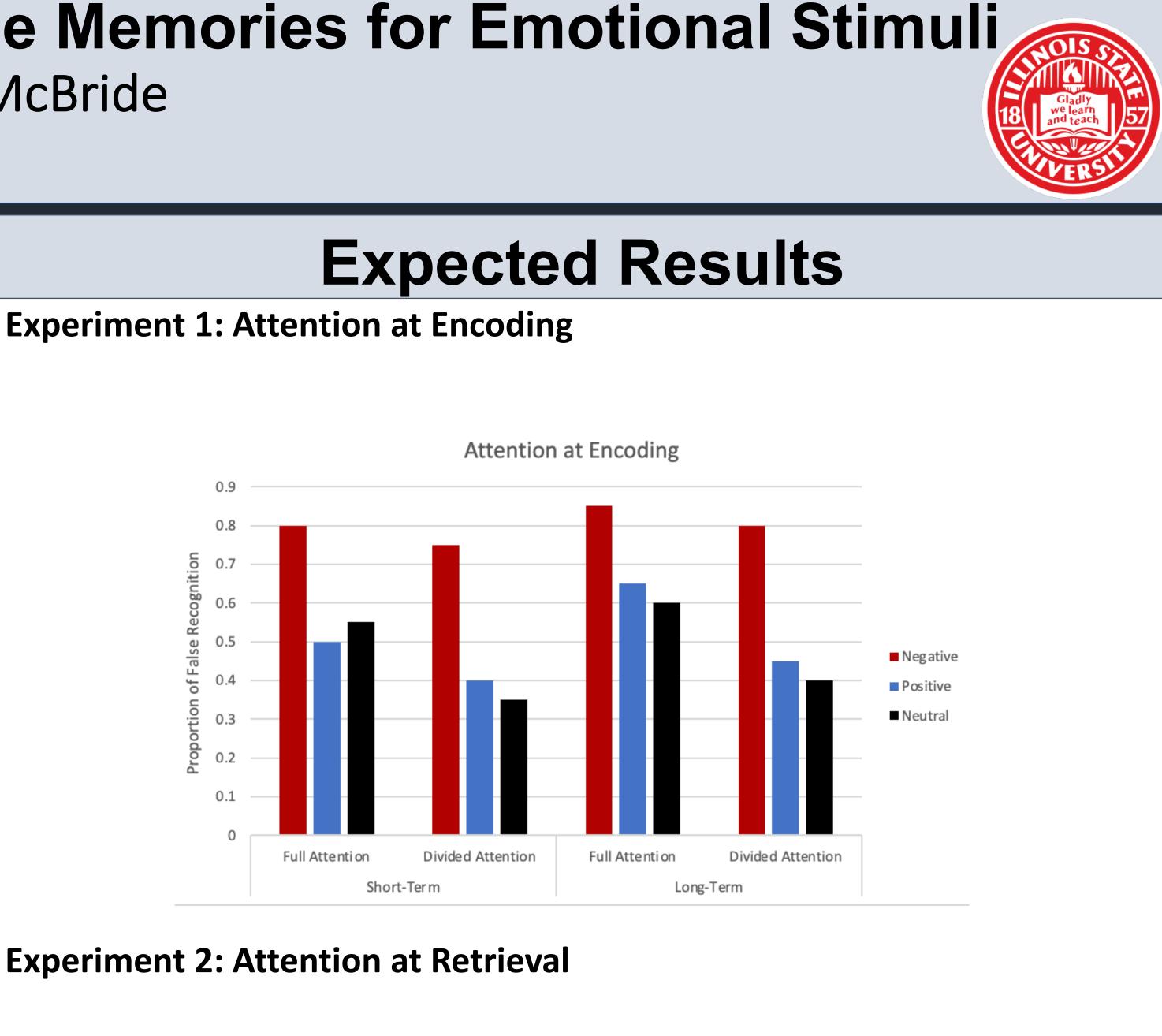
- 12 DRM word lists (Zhang et al., 2017): 4 positive, 4 negative, 4 neutral
- Attention: manipulated with a concurrent random num generation task (RNG)

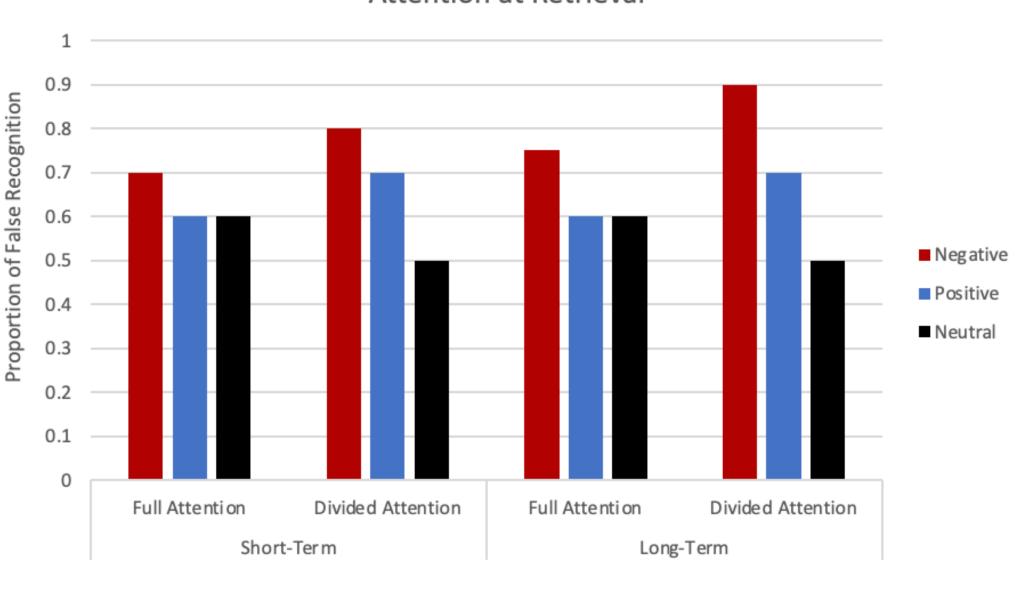
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stimuli	12 Lists (4 per valence)			
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	12 Lists (4 per valence)	[RNG Recall]		
nber	* RNG Recall for STM task: three numbers between 0-9 are presented * RNG Recall for LTM task: three numbers between 0-9 are presented of			

Method ING Long – Term Memory Task **Recognition Phase** 36 Words 1-min Studied, Probed x 4 break after Studied, Non-probed x 8 Drive lists Non-studied, Non-probed x 12 Car Cl x 12 be recalled at the start of the test phase Long – Term Memory Task **Recognition Phase** 36 Words 1-min Studied, Probed x 4 break after Studied, Non-probed x 8 lists Non-studied, Non-probed x 12 Cl x 12

RIEVAL Long – Term Memory Task **Recognition Phase** RNG x 3 36 Words 1-min break Studied, Probed x 4 after all lists Studied, Non-probed x 8 Non-studied, Non-probed x 12 Cl x 12 [RNG Recall] judgement on the one-word test for each list

e end of the recognition phase





Results are expected to support and extend previous findings. **Attention divided at encoding:** FM reduced for positive and neutral lists but increased for negative lists

- - attentional resources leading to FM
 - reducing FM

negative lists

- and positive remain relatively unchanged
- increase for negative lists

Attention at Retrieval

Discussion

Supports use of different processing styles

Automatic processing used for negative stimuli, allows for items to be encoded and related items to be activated with minimal

Controlled processing used for positive and neutral stimuli, is

disrupted by divided attention, encoding and activation is limited

Attention divided at retrieval: FM increases for all list types, greatest for

Due to reduced availability of controlled source-monitoring processes and over reliance on automatic source-monitoring

Short-Term vs Long-Term: negative FM increase over time whereas neutral

FM will for increase on LTM task compared to STM task, greatest