The Effects of Arousal on the Recall of Individuals Involved in Violent or Disgusting Events Jordy B. Yarnell, Julie L. Earles, Ph.D., & Alan W. Kersten, Ph.D.



Harriet L. Wilkes Honors College
Florida Atlantic University



Introduction

- This study investigated memory for actors who participated in disgusting and violent events.
- *It previously has been demonstrated that emotional content in viewed scenes improved memory for some aspects of the event, and decreased memory for aspects of the event not related to the event's center (Burke, Heuer, & Reisberg, 1992).
- Prior research has shown that the degree of emotionality within a viewed event has an impact on the frequency of source misattribution and monitoring errors (Onuma, Hakoda, & Oue, 2002).
- Drivdahl, Zaragoza, and Learned (2009) discovered that emotional elaboration has a greater impact on false memory development than other meaningful forms of elaboration. This finding raises the question as to whether rehearsal and emotional elaboration occur following the encoding of emotional events.

Method

Participants

Six undergraduate students participated in this pilot study. The participant sample was 60% female and ranged in age from 21 - 23 years old.







Filming

All of the films contained four female actresses. Ten target scenario stimuli were selected to be incorporated into the films . Five disgusting events (i.e., discovery of insect in food, being handed a tarantula, stepping in dog feces, vomiting, being sneezed upon) and five violent events (i.e., pushing, mugging, drowning, hair pulling, and choking) were depicted in the study. Each episode contained either three neutral actions and a target action, or two neutral actions and a criminal / victim pair. Similar neutral versions of each episode with the same actresses were also recorded as controls. Each actress participated in only one episode.

Encoding

During encoding participants were assigned to one of five conditions. In each condition six emotionally loaded events were shown, and participants were shown neutral versions of the other four. Participants also viewed several distracter films and completed demographics and vocabulary questionnaires.

Retrieval

Participants returned following one week later in order to test their memory of the actresses. Participants were shown images of pairs of women and were asked which of the two shown (right, left, or neither) had performed a particular action during encoding. Pairs always depicted one new actress in conjunction with either the correct actress, an actress who preformed another event within the episode, or an actress from an alternate episode.





Results and Discussion

- For neutral events, participants chose the correct actor paired with the proposed event 40.9% of the time.
- In neutral events, participants chose an individual who was at least seen within the same episode as the reported event 67% of the time.
- Overall, participants chose familiar individuals seen during encoding in neutral events 63% of the time.
- Within the disgust or violence versions participants chose the correct target individual 65.5% of the time.
- Participants chose an individual within the same episode as the target stimuli 86% of the time.
- Overall, participants chose familiar individuals seen during encoding in target events 78.9% of the time.

References

- Burke, A., Heuer, F., & Reisberg, D. (1992). Remembering emotional events. Memory & Cognition, 20(3), 277-290.
- Cahill, L., & McGaugh, J. L. (1998). Mechanisms of emotional arousal and lasting declarative memory. Trends in Neurosciences, 21(7), 294-299.
- Drivdahl, S. B., Zaragoza, M. S., & Learned, D. M. (2009). The role of emotional elaboration in the creation of false memories. *Applied Cognitive Psychology*, 23(1), 13-35.
- Guy, S. C., & Cahill, L. (1999). The role of overt rehearsal in enhanced conscious memory for emotional events. *Consciousness and Cognition: An International Journal*, 8(1), 114-122.
- Onuma, N., & Hakoda, Y. (2005). The effect of postevent information on eyewitness memory of emotionally stressful events. *Japanese Psychological Review*, 48(3), 321-337.

