**Learning Outcome:** Evaluate one theory of how emotion may affect one cognitive process.

Command term: Evaluate-*Make an appraisal by weighing up the strengths and weaknesses*

Key points: The one theory is Flashbulb memory, Brown and Kulik (1977). The cognitive process is memory (obviously).

The theory of flashbulb memory, Brown and Kulik (1977).

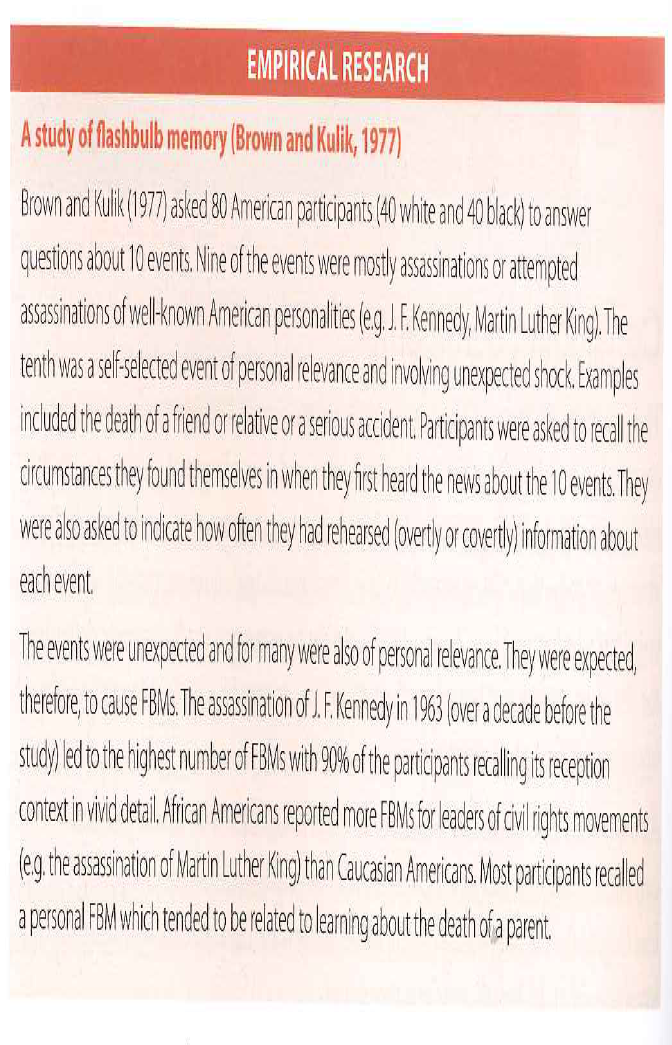
Definitions of Flashbulb memory (FBM)

* “memories of the circumstances in which one first learned of a very surprising and consequential (or emotionally arousing) event” Brown and Kulik (1977)
* This is a special kind of emotional memory, that appears to be recorded in the brain as though with the help of camera’s flash.

According to Brown and Kulik’s theory, Flashbulb memories:

* Form in situations where we encounter surprising and highly emotional information.
* Are maintained by means of overt rehearsal (involving discussion with others) and covert rehearsal (private rehearsing or ruminating).
* Differ from other memories in that they are more vivid, last longer, and are more consistent and accurate.
* Require for their formation the involvement of a specialized neural mechanism which stores information permanently in a unique memory system.

Supporting Evidence:



Questions:

1. What research method was used in Brown and Kulik’s study?
2. Why were African Americans more likely to report a FBM for an assassination of a civil rights leader compared to white Americans?
3. What are the strengths of this study?
4. What criticisms would you apply to this study?

Additional Supporting evidence:

Conway et al (1994). This research used both UK and non-UK citizens to study FBM’s caused by the unexpected resignation of the British Prime Minister Margaret Thatcher in 1990. There were several collection points in this study including a few days after the resignation and after 11 months. Participant’s memories of the event were assessed for accuracy and detail. Conway et al found that 86% of UK citizens had a consistent flashbulb memory after 11 months compared to 29% of non-UK citizens. This suggests that events that have more meaning and consequence for individuals are more likely to be remembered more accurately, vividly and in more detail.

Questions:

1. In what way do Conway et al’s finding support Brown and Kulik’s theory?
2. Provide one criticism of this study.

Contradictory evidence

Despite numerous studies supporting Brown and Kulik’ theory, most of its claims have been criticized. **Several studies suggest that FBM may not be as accurate or permanent as the theory states.**

A study done in 1992 when Neisser & Harsch challenged the prevailing belief in Flashbulb memory and argued that they were also prone to significant distortion. In order to do this, he had students recall their reactions to the Challenger disaster – an accident on January 28, 1986 in which a space shuttle exploded in space, live on television. The event was being watched around the world. One of the most celebrated members of the crew was a school--‐teacher named Christa McAuliffe. Participants reported on this event twice. The first time was one day after the disaster and the second two and a half years later. One day after the disaster, 21% of the participants reported that they had heard about the disaster on TV. However, two and a half years later, this rose to 45%. Clearly, their memories about how they heard the news deteriorated significantly during the subsequent two and a half years. This suggests that FBM’s are not very reliable. Neisser and Harsch claimed that such findings suggest FBM’s may be ordinary memories.

Questions:

1. What are the strengths of this study?
2. What are the weaknesses of this study?

**All of the studies discussed so far suffer from the methodological issue: the lack of a control condition.** There was nothing to compare normal memories to flashbulb memories.

Much recent research has focused on the events of September 11th. Talarico & Rubin (2003) recorded 54 Duke University students’ memory of first hearing about the terrorist attacks of September 11 and a recent everyday event. They tested again either 1, 7, 42 and 224 days later. Both the Flashbulb and everyday memories declined over time. However, ratings of vividness and belief in accuracy declined only for the everyday memories. The power of the emotion related to the event correlated with belief in accuracy, but not actual accuracy of the memory. This led the researchers to conclude that Flashbulb memories are not special in their accuracy, but only in their perceived accuracy.

Pezdak (2003) also carried out a study in which she compared memory of the September 11 terrorist attack seven weeks after the event. She looked at three samples– students from Manhattan, students from California, and students from Hawaii. She found that although event memory was most accurate in the Manhattan sample that was most distressed by the event, they also showed a significant amount of reconstructive memory. 73% of the respondents reported incorrectly that they had seen on television the first plane strike the World Trade Center.

What is the current status of Brown and Kulik’s theory?

The studies discussed above, and additional research, demonstrate that FBM’s:

* Are long lasting but not permanent
* May not be any longer lasting than important everyday memories
* Are more vivid than most ordinary memories
* Are recalled with a higher degree of confidence than other memories

According to Luminet and Curci, 2009, high importance/consequences and strong emotional feelings are the only two conditions that are required for the formation of an FBM. This was concluded after an analysis of data from US and non-US participants after the 9/11 attacks. The study was conducted to compare four theoretical models accounting for FBM formation.

Questions:

1. How do Luminet and Curci’s findings compare to Brown and Kulik’s original theory and evidence?
2. What areas of Brown and Kulik’s theory are disputed? Refer back to all of the contradictory studies

Conclusion:

What is certain is that Brown and Kulik’s pioneering work has generated a lot of research about the relation between emotion and cognition. But how does emotionality affect the formation and maintenance of FBM’s? There is little evidence that emotionality has much impact during initial encoding of the event. Rather, emotionality seems to exert its effects at a later stage by affecting rehearsal and social sharing.

