

DP IB Psychology: SL



Your notes

Emotion & Cognition

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Flashbulb Memory: The Effect of Emotion on Cognition

Flashbulb Memory: The Effect of Emotion on Cognition

What is a flashbulb memory?

- A **flashbulb memory (FBM)** was proposed by **Brown & Kulik (1977)** as a special sort of **emotional memory** that is triggered by events that stand out due to their shocking, unexpected, dramatic or unusual nature
- FBMs are thought to be more **vivid, detailed, long-lasting** and **meaningful** than everyday memories, though some research casts doubt as to their **reliability** and **accuracy**
- FBMs may be formed from **episodic memories** of moments in a person's life e.g. a winning a race or a **traumatic** experience such as being involved in an accident or disaster
- FBMs may also be formed when someone **witnesses** or hears about a significant **global event** such as an assassination or terrorist attack on TV or other media: the FBM is formed in the moment that you first learned about the event either directly or indirectly
- Brown & Kulik (1977) suggested that FBMs are so emotionally important to someone that they are captured like a photograph (hence the 'flashbulb' element) and laid down in the **long-term memory** for a very long time, possibly forever
- Brown & Kulik (1977) suggested that FBMs may be controlled by a specific **neural mechanism** located in the **limbic system** of the brain, a region which regulates emotional responses and which contains the **amygdala**
- FBM research uses **self-report** methods to collect data as this is the only way in which to obtain someone's first-hand account of where they were, what they were doing, who they were with etc. when they first learned of the event
- FBM researchers have to be ready to run their research at a moment's notice as they tend to use global, unexpected events as the basis for their study e.g. the sudden death of a prominent figure; a natural disaster; a terrorist attack: they need to obtain a **sample** quickly and collect their data within a short time-frame, while the memory is still fresh in their participants' minds

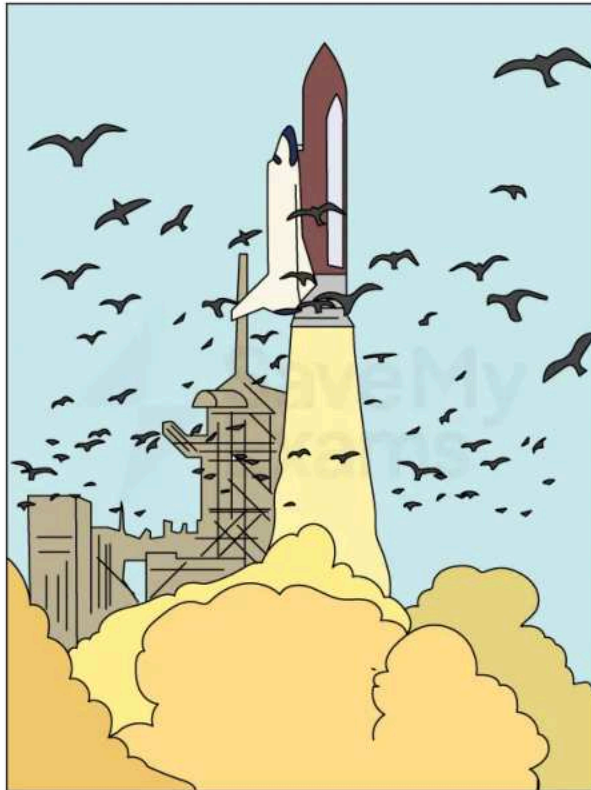
Why is there some disagreement as to the accuracy of flashbulb memories?

- Since Brown & Kulik's (1977) original research, there have been subsequent studies which highlight the lack of accuracy and reliability of FBMs
- Some notable studies have found that FBMs do not fare well over time: they become **distorted**, prone to **re-interpretation** and are affected by **information after the event** e.g. discussing the event with others, watching and reading media reports of the event

- Research into significant global events such as the death of Princess Diana, 9/11, the trial of O.J. Simpson and the Challenger space shuttle explosion have revealed that FBMs become **eroded** over time, with details being lost or false details inserted into the memory (the research compares memory of the event at different time points e.g. immediately after, 3 months after, 6 months after etc.)
- An interesting finding which is common to many FBM studies is that people's confidence in the accuracy of their FBMs is much higher than the accuracy of their FBMs which is probably due to the vivid and emotional nature of such memories



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The Challenger space shuttle tragedy was used in research which challenged the accuracy of flashbulb memories.

Which research studies investigate flashbulb memories?

- **Brown & Kulik (1977)** – FBMs are thought to be more vivid, accurate and long-lasting than everyday memories
- **Talarico & Rubin (2003)** – FBMs are not accurate over time but people's confidence in their accuracy is high

Brown & Kulik (1977) and Talarico & Rubin (2003) are available as separate Key Studies – just navigate the Emotion and Cognition section of this topic to find them (Two Key Studies of the Effect of Emotion on Cognition)



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Examiner Tips and Tricks

Brown & Kulik (1977) and Talarico & Rubin (2003) are available as separate Key Studies – just navigate the Emotion and Cognition section of this topic to find them (Two Key Studies of the Effect of Emotion on Cognition)



Worked Example

Extended Response Question (ERQ) – 22 marks

Discuss ethical considerations relevant research into emotion and cognition. [22]

Do remember that you could be asked 'generic' questions in an exam i.e. on research methods or ethical considerations. It is important to practise these questions as much as the content-based questions.

Here is an example of how to tackle this sort of question in the following paragraph taken from a longer essay:

Researchers who investigate emotion and cognition, should be particularly mindful to avoid causing psychological harm to their participants. Some flashback memories are by their nature distressing, being based on shocking, often violent events, and therefore asking participants to recall their memory of these events could lead to psychological harm. For example, just one day after the 9/11 terrorist attacks, Talarico & Rubin (2003) interviewed university students and recorded their memory of first hearing about the tragedy. They were then interviewed again 1, 6, or 32 weeks later. This means that the participants were interviewed about this shocking event the day after it happened and again about a week later when the event would have been still very much on their minds.

Even though these participants had given informed consent to the interviews, they would not have been able to predict their own emotional responses to the memories therefore the researchers would have to consider this and to put in place appropriate strategies to protect them from harm.



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Two Key Studies of the Effect of Emotion on Cognition: Brown & Kulik (1977) & Talarico & Rubin (2003)

Key Study: Brown & Kulik (1977)

Aim: To investigate the nature and quality of **flashbulb memories**

Participants: A **self-selecting (volunteer) sample** from Harvard University which consisted of 40 Caucasian (white European) Americans and 40 African Americans with an age range of 20–60 years old

Procedure:

- The participants answered **questionnaires** that asked them about their memories (e.g. Where were you? What were you doing? Who were you with?) of when they first learned about the death of eight famous people including John F. Kennedy and Martin Luther King
- They were also asked to recall an incident from their own lives in which they had experienced a sudden, unexpected shock e.g. the death of someone close to them, a serious medical diagnosis etc.
- They were then asked to give a **free recall** of this personal event in writing using any form, in any order, making the account as long or as short as they desired. They were also asked to rate how important this personal event was to them

Results:

- The strongest FBMs were about the assassination of John F. Kennedy with 39/40 of the Caucasian Americans and 40/40 of the African Americans reporting it as a very strong FBM
- 69 out of the 80 participants reported FBMs linked to personal shock
- **Race** was a factor, with more African Americans having FBMs connected to the deaths of important black figures e.g. Malcolm X and more Caucasian Americans having FBMs for white leaders e.g. Gerald Ford

Conclusion: FBMs are **vivid** memories which are easily recalled; they vary in strength according to the significance of the event to the person recalling it. FBMs depend on the 'shock' factor of the event and are linked to powerful emotional responses

Evaluation of Brown & Kulik (1977)

Strengths

- Using both Caucasian and African American participants enabled the researchers to determine that FBMs are formed when events of personal relevance pertaining to individual **characteristics** (e.g. race) are recalled, also making the study somewhat **less culturally bias**



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- Using a **standardised procedure**, with all participants experiencing the same stimuli and the same questions means that the study is **replicable** which increases its **reliability**

Weaknesses

- Relying purely on **self-reported** recall of both global and personal events lacks reliability as participants may have misremembered details, inserted details or invented details which would impair the **validity** of the findings
- The use of such a small sample makes the findings difficult to **generalise**

Key terms:

- **Flashbulb memory**
- **Questionnaire**
- **Replicable**

Key Study: Talarico & Rubin (2003)

Aim: To investigate the **consistency** and **accuracy** of FBMs over time

Participants: 54 undergraduate students from Duke University in New York (40 female; 14 male; mean age = 18.32 years old)

Procedure: The participants were contacted one day after the 9/11 terrorist attacks on the USA and asked a series of questions about the circumstances they were in when they first learned of the attacks. They were asked questions such as:

- *Who or what first gave you the information?*
- *When did you first hear the news?*
- *Were others present, if so, who?*
- *What were you doing immediately before you heard the news?*

The participants were also asked to recall an everyday event from a few days prior to 9/11. The participants were then split into three groups:

1. Group 1 were asked the same questions again **one week later**
2. Group 2 were asked the same questions again **6 weeks later**
3. Group 3 were asked the same questions again **32 weeks later**

Results:

- There were no differences in consistency between the FBMs and the everyday memories: both memories became **eroded** over time and lost accuracy

- The participants, however, claimed that their FBMs were just as vivid and accurate as they were the first time they recalled them (which for all participants was at the initial one-day-after questionnaire)
- The more vivid and shocking the FBM, the more participants insisted that they were accurate (even though the data showed this not to be the case)

Conclusion: FBMs do not appear to be accurate but people's **perception** of them is that they are accurate over time.

Evaluation of Talarico & Rubin (2003)

Strengths

- Being able to access the sample so quickly after the event had taken place means that the initial memory was less likely to have suffered from interference from multiple sources of information
- The data was scored by two independent **raters** which helps to ensure the **inter-rater** (and therefore overall) **reliability** of the findings

Weaknesses

- As each group was tested only once, and at different time intervals to the other two groups it is difficult to compare the findings across all of the groups
- The sample was **gender-biased** as females outnumbered males 3 to 1 which means that it is not **representative** of a wider population

Key terms:

- **Perception**
- **Rater**
- **Reliability**



Examiner Tips and Tricks

Don't try to use FBM studies or the theory itself for a question on models of memory (which students, for some reason, often try to do). Even though FBMS are stored in LTM there is nothing about the theory that supports the Multi-Store Model of Memory or the Working Memory Model, no matter how hard you might try to make it fit them!



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