

APPLIED PSYCHOLOGY

Lecture 9: Eyewitnesses and Cognitive Theory

Stacey Coleman

EYEWITNESSES

- Eyewitnesses are important in describing what happened during a crime, and the people who were involved in that crime, in order to help the police identify a suspect
- The police may then put the suspect into a line-up

Suspect: in criminology, a person suspected of committing a crime

Line-up: the arrangement in a line of the suspect and at least 8 other individuals for the purposes of the eyewitness ID'ing the suspect

EYEWITNESSES

- The police may also use the description to try and locate the offender using computer searches or previously convicted people
- If the suspect cannot otherwise be ID'd, eyewitnesses may construct a facial composite

Facial composite: a visual likeness of an offenders face

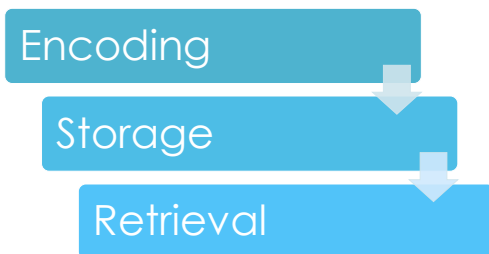
A facial composite may be circulated, by the police, in newspapers, on television or on wanted posters to aid their search for the suspect.

EYEWITNESSES

EYEWITNESS TESTIMONY

- Eyewitnesses record a massive amount of information when they observe a crime
- Not all of this information is correctly recalled...
- EWT relies on storing and recalling information – and storing memories requires several steps including attention, encoding, STM and LTM
 - Not all memories pass successfully through these stages and problems may occur at each stage

RECAP: STAGES OF MEMORY



TYPES OF EYEWITNESS MEMORY AND INFORMATION ECALL

- There are two types of memory retrieval that eyewitnesses perform:
 1. **Recall memory**
 - Reporting details or remembering thing previously witnessed, learned or experienced
 2. **Recognition memory**
 - Reporting/identifying whether what is currently being viewed/heard if the same as the previously witnessed person/event of interest
 - Has something been known or experienced before

THE ACCURACY OF RECALL

- Yuille and Cutshall (2986): EWR of a real-life event (robbery)
- Overall accuracy was approx. 80% correct in each area
 - Actions
 - People
 - Objects
- Errors were infrequent and were mostly concerned with:
 - Actions of people
 - Descriptions of people' height, weight, age, hair and colour of clothing
 - Descriptions of objects

THE ACCURACY OF RECALL

- People are fairly accurate in recalling physical qualities **in general.**
- However, there is a tendency to give lower estimates for taller and heavier, but higher estimates for short and light targets
- Taller participants tended not to underestimate taller targets

(Flin & Shepherd, 1986)

THE ACCURACY OF RECALL

(Sporer, 1996)

- Estimates of age reported as being effected by the clothing that a target individual wears.

- E.g., younger looking clothes results in lower estimate of age and vice versa

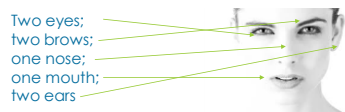


THE ACCURACY OF RECALL

- Using **photographs** of faces has found that we can estimate a person's age correctly (on average) within about 5 years
- Therefore, in summary, our estimates of age, height and weight are fairly accurate and sufficient to aid police investigations

DESCRIBING FACES

- Human faces all follow the same 'basic design'
- All have individual facial features that are generally, and roughly, in the same position on peoples faces





DESCRIBING FACES

- Descriptions of *distinctive features* should make offender identification easier
- E.g., scars, tattoos, a blemish or unusual facial feature such as very bushy eyebrows

FALSE MEMORIES





FALSE MEMORIES

- Important to consider the effect of **context**

Context = a visual scene which can influence the decision processes of eyewitnesses.

- The responses we give can be influenced by the wording of a question...

FALSE MEMORIES

Loftus and Palmer (1974)

- Showed participants a film of a road traffic accident
- Asked p's to describe what happened afterwards and asked them to answer questions about the film
- The manipulation was in the wording of the question...

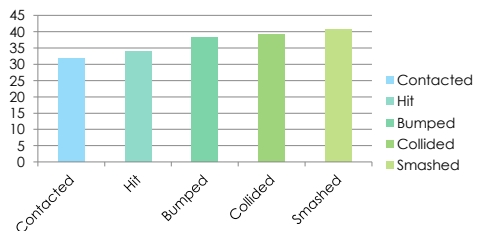
FALSE MEMORIES

Loftus and Palmer (1974)

- The questions were worded slightly differently for different participants
- Variations of the word 'contacted' in the question

"about how fast were the cars travelling when they (CONTACTED / HIT / BUMPED / COLLIDED / SMASHED) each other?"

LOFTUS AND PALMER (1974)



Average estimates of speed increased from 31.8mph (contacted) to 40.5mph (smashed)



FALSE MEMORIES

- This study is one that has demonstrated how false memories can be created

False memory: a memory that is not real or may be inaccurate due to having been affected or created by the way in which a question is asked, e.g., during investigative interviewing



FALSE MEMORIES

- This study is also an example of the **misinformation effect**
- Occurs when a witness is provided with inaccurate information about an event after it is witnessed and incorporates the 'misinformation' in their later recall (see also Loftus, 1975)

<https://www.youtube.com/watch?v=RLvSGYxDIs&feature=fvww>



MISINFORMATION EFFECT

Examples of misinformation manipulations

Explicit

- Did the person carrying the hammer walk or run out of the store?
 - When a screwdriver was present instead of a hammer

Implicit

- Did you see the hammer?
 - When no hammer was present

MISINFORMATION EFFECT

Designing a study

- Two groups of participants watch a videotape of a staged crime
- Erroneous information about the crime is presented to one group
- Participants are asked a set of neutral questions and must respond based on what they saw in the original video

MISINFORMATION EFFECT RESULTS

- Participants who are given misinformation provide different reports from those who receive no misleading information
- Subtle differences in phrasing of questions (e.g., using 'smashed' instead of 'hit') may bias witness reports

Conclusion?

- There is debate as to WHY the misinformation effect occurs – but we do know that it DOES occur
- Misinformation effect could be used to explain some 'recovered' memories of childhood sexual abuse
- Raises serious questions about the reliability of EWT

EWT

- Eyewitness testimony can be affected by many psychological factors:

1. Stress or anxiety

- Generally, people tend to recall less information and with lower accuracy when they have observed an event under physiological stress
- A stressful event is also noted to affect memory retrospectively

Deffenbacher (1983); Loftus and Burns (1982) Yuille and Cutshall (1986)



EWT

- Eyewitness testimony can be affected by many psychological factors:

2. Weapon focus

- The presence of a weapon also has an impact on recall
- Attention drawn to a weapon and away from other objects which reduces information available for recall
- Not unusual for the witness to be able to describe the weapon in much more detail than the person holding it

Loftus et al. (1987)



EWT

- Eyewitness testimony can be affected by many psychological factors:

3. Reconstructive memory

- This theory is crucial to understanding the reliability of EWT – suggests that recall is subject to personal interpretation that depends on our cultural norms and values (the way we make sense of our world)
- Memory does not work like a videotape – we don't store information exactly how it is presented

Bartlett (1932)

COGNITIVE INTERVIEWING



COGNITIVE INTERVIEWING

- Until the 1980's the police followed a standard interviewing procedure
 - A police question-and-answer style interview
- This has been replaced by an interviewing 'system' that is based on sound psychological principles (Geiselman et al., 1985)
 - The cognitive interview

An interview used to help a person recall information about a face to locate subsets of features within a composite system for presentation to eyewitnesses

COGNITIVE INTERVIEWING

- Cognitive interviewing is based on the idea that memory trace of a crime has components:

Central components:

- Important details e.g., who did what and when

Peripheral components:

- e.g., what people were wearing, other objects present, lighting conditions, etc

COGNITIVE INTERVIEWING

- Theoretically, best recall is achieved when as many components are activated as possible.
- To achieve this, eyewitnesses are asked to do a number of things:
 1. **Reinstate the context**
 - Witness is asked to think about an event they have witnessed and attempt to recreate it in his/her mind

COGNITIVE INTERVIEWING

2. *Report everything*

- Simple instruction given to eyewitnesses

3. *Engage in free recall*

- Memories called to mind unprompted by direct questions beyond the request that the individual reports everything he/she can remember

COGNITIVE INTERVIEWING

Why??

- People tend to describe what is EXPECTED to have happened rather than what ACTUALLY happened
- This can, to an extent, be counteracted by recalling from a different perspective... for example, by asking "what did the cashier see happen?"

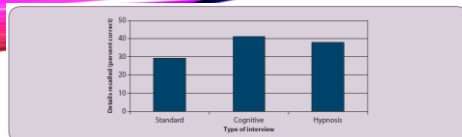


FIGURE 14.3 The influence of interviewing on information recall.

The figure illustrates the influence of interviewing on information recall. Correct information recalled was found to be best for the cognitive interview and worst for the standard interview.
Source: Table 1, Geiselman et al. (1985).

- Cognitive interviewing has been shown to outperform the standard interview and was also better than hypnosis
 - NB: hypnosis can be used to facilitate retrieval of memories, however these memories may not be accurate. Information obtained under hypnosis is also not usually admissible in court

COGNITIVE INTERVIEWING

The **enhanced cognitive interview** (Fisher et al., 1987)

1. Rapport building
2. Describe the aims of the interview
3. Context reinstatement and free recall
4. Open questions (cued recall)
5. Repeated recall (different orders and perspectives)
6. Summary
7. Close

UK INTERVIEWING TECHNIQUES

- PEACE interviewing is used by UK police, and this includes components of the enhanced cognitive interview.

Planning and preparation
Engage and explain
Account
Closure
Evaluation

UK INTERVIEWING TECHNIQUES

- UK police also use conversational management
 - Listening skills;
 - Portrayal of being interested
 - Minimal responses
 - Transferring skills at points
 - Before and after free recall
- Based on the principle that an interview is a complex conversation between interviewer and eyewitness, and that a behaviour effects another behaviour



ANY QUESTIONS