The purpose of this essay is to discuss whether eye-witness testimony draws upon the same kinds of memory representations as are used for recalling other scenes or events?

In addressing the relevant points it will be necessary to firstly look at what is meant by "Eye Witness Testimony" and understand the different issues such as events witnessed versus expectations. An understanding of representations is then necessary in order to link the two components. It is also necessary to understand schemas and their contribution to memory, plus the different levels of processing involved in memory and issues such as repression which may also have a bearing. Different studies of Eye-witness testimony, memory and schemas will help broaden the discussion and enable a summary to be made which addresses the question as to whether eye-witness testimony draws upon the same kinds of memory representations as are used for recalling other scenes or events?

Our legal system assumes, until proven otherwise, that an eye-witnesses memory of events such as an accident, will not be distorted. But any such report of events can be influenced significantly by the manner in which questioning takes place. Talented Barristers for example ask leading questions suggesting a particular version of events. Certain words like "smashed" when used in the context of a car accident, carries the connotation of high speed. Substituting the word "bumped" implies an entirely different version of events. The use of different words within the context of leading questions could affect what the witness says he or she saw, but they would probably believe that their memory of events would remain unchanged. However studies by Loftus et al challenge this belief.

Studies by Loftus et al (1974-1979) questioned participants who had watched a short video of two cars colliding head-on. Participants were split into two groups, both asked to judge the speed on the two cars. One group were asked "when they smashed into each other", the other group "when they hit each other". One week later they were asked whether they had seen any broken glass – when in fact there was no broken glass visible in the video they had watched. Nevertheless 32% of participants in the 'smashed' condition reported seeing glass, compared to 14% of participants in the 'hit' condition. Other similar studies by Loftus highlighted that leading questions not only produce biased answers but they also may distort memory. Loftus (1975) also looked at testing the theory that new information is integrated with pre-stored memory representations. Specifically testing whether people's memory of an event they have witnessed can be influenced (falsified) if they are later given misleading information about the event.

In terms of defining eye-witness testimony, it would seem natural to suggest that it refers to an event which is witnessed by a third party – although not necessary in a visual way – it could for example be by sound alone – but nevertheless witnessed in one form or another. But on that theme we are all witnesses to some or many events in our daily lives whether they be at home, work or as we go about our daily business – although in the vast majority of times we do not consider ourselves as eye-witnesses. Perhaps then, memory does not become defined as 'eye witness' until someone starts to cross-examine the rememberer or when it becomes important that events are recalled – such as in a legal or court situation.

It is now necessary to gain an understanding of different memory functionality plus schemas and representations.

Schemas or representations are integrated packages of information about the worlds events, people and actions. Bartlett (1932) put forward the notion that what we remember from stories and events is also determined by our store of relevant prior knowledge in the form of schemas. This is also very much relevant when comparing different cultures with their different experiences.

These differences have a bearing on memory recall since memory representations of unusual or never-seen-before events would have a high impact on recall ability – whether it be in a negative or positive way. Theories of memory generally consider both the structure of the memory system and the processes operating within that structure.

Craik & Lockhart (1972) investigated levels of processing together with rehearsal and looked at their influence on memory. Their findings showed that deeper and more semantic analysis of learning material improved long term memory retrieval. Unfortunately though, witnessing events does not provide this luxury, as an event is very soon passed and we are only afforded a quick snapshot in time.

Eye-witness studies have highlighted that upto 5% of witnesses over-estimate the duration of events. And 27% of witnesses are affected by how questions are worded. Also, confirmation bias comes into being, where an observer's expectations have an influence on memory recall. Loftus & Burns (1982) investigated memory impairing effects where violence caused pre-violence memory to be impaired. The dangers or shock during witnessing cannot be ignored.

Also, when witnessing an event first hand, a witness will not necessarily be in full attendance and perhaps not initially aware that a crime has taken place. Studies in areas such as verbal versus visual, face recognition, confidence, bias, weapons and schema have all helped highlight the influencing characteristics.

Research into eye-witness testimony has helped build understanding of the fragility of human memory and how it can be distorted. Freud for example put forward a view that repression has a part to play in memory recall where some things are kept out of consciousness and therefore not recalled.

While post-event information does distort memory recall, it is debatable as to whether the original information is destroyed. Dobson & Reisberg (1991) highlighted that misinformation makes the original memories inaccessible. Other studies have shown that a memory probe or question, activates memory traces having informational overlap with it, and so memories from different sources and events are activated. Therefore if the memories from different sources resemble one another then there is increased likelihood of misattribution, where misinformation can be recalled and associated to a different events.

According to Bartlett (1932), retrieval involves a process of reconstruction, where all available information for an event is used to reconstruct details of the event. New information can therefore affect recall of original events because the basis for reconstruction has changed.

In terms of structures or representations of the world, pictures and diagrams represent a closer relationship and therefore aids recall. Word representations being abstract offers a different structure. When recalling events such as in eye-witness testimony, perhaps people compose a picture in their mind to help them 'see' the event and thus making it more visible and vivid to them. However, representations of other events such as memorising for examinations tend to be by different methods such as acronyms and are using words and abstract methods to aid recall. The reason for recall and the events themselves give reason to draw upon different representations. For example, events of importance or those involving family or happy memories draw upon different schemas and representations than other less visual and vivid memories. Our organised structures of knowledge are obviously available to us and help us to construct our answers or replies as with eye-witness testimony.

In terms of problem solving, our memories work better when problems are broken down into sub-sections which make problems easier to manage. Searching is active and constructive and helps us move closer to the required goal. It is difficult to say whether an eye-witness event is broken down in such a way or whether retrieval is handled in a different way. Problem solving generally offers more time to think and construct answers, where eye-witness is generally a more pressure situation which probably has a part to play when eye-witness testimony draws upon the memory representations required.

It is now necessary to summarise.

Studies of long term memory and the retrieval process presents evidence supporting a model of memory in which meaning plays a central role. Just as we actively interpret information that produces perceptions, we also actively construct and reconstruct information in memory. Memories are not just inscribed on a static microchip in the mind, but rather they are units within an integrated knowledge system that is constantly undergoing transformation and change.

According to the schema-plus-tag model (Graesser & Nakamura (1982)), the memory representation for a specific event includes both the general schema and distinctive markers or labels which help to 'flag' highlights or unexpected aspects of the event. This could certainly be true for eye-witness testimony. Schank (1981) also proposed *Memory Organisation Packets (MOP's)* which makes provision for storing memories for specific episodes in addition to the general schemas. This also helps account for everyday memory representations. Together such proposals help to maximise the number of possible retrieval routes.

Our schema enables us to associate incoming information with existing information. When people remember a particular scene they are influenced by the appropriate schema for such a scene. Generally people remember things that fit the schema and forget things which do not fit.

Given that most of our experiences involve familiar objects and events, remembering is partly a matter of updating previously established memories. For example new information regarding one of our friends or colleagues results in an update of our previously stored knowledge. Eye-witness testimony has to fit within existing framework of our experiences and therefore does draw upon the same kinds of memory representations as are used for recalling other scenes or events, although different characteristics and features of memory come into being as previously highlighted and described above.

References

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