

Chapter 16

Eyewitness Testimony

One of the earliest attempts to step outside the narrow confines of the laboratory in the pursuit of psychological knowledge was made shortly before the turn of the century by a leading German psychologist called Hugo Munsterberg. He was interested in the relevance of psychology to the presentation of evidence in court and it was his work which first revealed that eyewitness testimony is often very unreliable. Munsterberg was worried that innocent people might be being imprisoned solely on the basis of what one or more witnesses said they remembered, but might have remembered wrong.

Several cases of apparently mistaken identity were considered by the recent British television series *Rough Justice*. In some of these cases it was possible to demonstrate beyond a shadow of a doubt that innocent individuals had been put behind bars because of inaccurate eyewitness testimony.

Somewhat surprisingly in view of the valuable work that has been done, the fruits of psychologists' endeavours to unravel the complexities of eyewitness testimony and its reliability have had very little impact on the admissibility of evidence. We believe that psychologists have a valuable contribution to make. Nevertheless, the 1976 Devlin Report on Evidence of Identification in Criminal Cases, which considered whether studies in psychology throw any light on such problems, said: 'It has been represented to us that a gap exists between academic research into the powers of the human mind and the practical requirements of courts of law and the

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stage seems not yet to have been reached at which the conclusions of psychological research are sufficiently widely accepted or tailored to the needs of the judicial process to become the basis for procedural change.' Even today the legal system continues to endorse the sentiments expressed in the Devlin Report.

The active memory

Let us consider the nature of the processes of perception and memory which are the basis for eyewitness testimony. It is commonly thought that perception and memory are copying processes, in other words that the human brain handles the wealth of sensory information reaching it from the external world in a similar way to tape-recorders and cine cameras, which provide semi-permanent records of sounds and visual events. So failure on the part of a witness to remember what happened can be put down to a lack of effort or to unwillingness. It is probably not an exaggeration to say that that is the view of many, if not most, of those in the legal profession.

However, most psychologists feel that it is very misleading to regard perception and memory as being straightforward copies of the world outside. They prefer to regard perception as an active and constructive process, depending not only on information arriving from the external world but also on personal attitudes, beliefs and motives.

The most obvious implication of this theory is that there will often be systematic, though unconscious, distortions in perception. At an informal level, the notion that people see what they want to see rather than what actually happens can be confirmed any Saturday afternoon at a football game. The award of a penalty to one team is seen as fair and reasonable by that team's supporters, but as outrageous by the other team's supporters. The referee is either seen as an excellent judge of

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the game or as someone of dubious parentage in urgent need of a white stick!

Key experiment: distorting the evidence

Elizabeth Loftus and John Palmer¹ of the University of Washington wondered whether the memory of eyewitnesses might be similarly susceptible to distortion by information encountered after an accident or crime. To explore whether this was in fact the case, they carried out two experiments. In the first, participants were shown seven different films, each showing a traffic accident, and were then asked to answer a series of questions about each accident. Those who were asked the question 'About how fast were the cars going when they smashed into each other?' consistently gave higher estimates of their speed than those asked to answer the same question, only with the word 'smashed' replaced by 'collided', 'bumped', 'contacted' or 'hit'. Indeed, the average estimated speed was almost 10 mph higher when 'smashed' was used than when 'contacted' was used. The *actual* speed at which the cars were travelling was almost irrelevant to estimates of speed. The average estimate was 38 mph when the cars collided at 40 mph, and 38 mph when they collided at 20 mph!

These findings clearly suggest that our memory for events is relatively fragile and fairly susceptible to distortion. Even stronger evidence was obtained in the second experiment, in which participants watched a short film of a multiple car accident. In this film, the first car made a right hand turn to enter the main stream of traffic, causing cars in the oncoming lane to stop suddenly with the result that five cars were involved in bumper-to-bumper collisions. At the end of the film the participants answered a series of questions about the accident. One of the questions was either 'About how fast were the cars going when they smashed into each other?' or 'About how fast were the cars going when they hit each other?' As in the

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previous experiment, the average estimate of speed was greater for those interrogated with 'smashed' than for those questioned with 'hit'.

One week later, all the participants returned and answered a series of questions about the same accident, but without viewing the film again. One of the questions asked was 'Did you see any broken glass?' Of those who had answered the question about cars 'smashing' into each other the week before, 32 per cent said they had seen broken glass; only 14 per cent of those who had answered the question about cars merely 'hitting' each other said they saw broken glass. Since there was, in fact, no broken glass in the accident, it appears that fairly subtle wording of questions can lead eyewitnesses to 'remember' details that did not actually occur.

Information overlay

How did Loftus and Palmer account for their findings? Basically, they argued, two kinds of information go into our memory when we witness a complex event like an accident or a crime. The first is information obtained from perception of the original event, and the second is external information supplied subsequently. As time passes, information from these two sources is integrated in such a way that it is not possible to say from which source any specific detail is recalled. All we have is one homogeneous 'memory'.

Of course, those involved in the legal process are aware of some of the difficulties inherent in the way in which questions to eyewitnesses are worded. Questions which either by their form or their content suggest to the witness what answer is desired, or 'lead' him to that desired answer, are called 'leading questions' in the courtroom. Most countries have rules designed to exclude such questions. In the United States, for example, these are enshrined in the Supreme Court Reporter of 1973.

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But in spite of such precautions, there is still the obvious danger that a witness's fragile memories of an event will be systematically distorted either by conversations with other witnesses or by police interrogation long before the start of court proceedings. Apparently trivial changes in the wording of questions can exert considerable influence. Take, for example, another memory experiment conducted by Elizabeth Loftus and Guido Zanni. This time the film showed a minor collision between a man backing out of a narrow space in a supermarket car park and a woman pedestrian carrying a large bag of groceries. The observers were then asked questions about items that were not in the film. Those who were asked questions which included the definite article ('Did you see the bottle?') were more than three times as likely to say they saw the item as observers asked the same questions with the indefinite article ('Did you see a bottle?')

Transferring one memory to another

In further research, Elizabeth Loftus studied what is known as 'unconscious transference'. This occurs when a person seen committing one act is confused with a person seen committing another act. In one real-life case, a ticket clerk at a railway station was robbed at gun-point. He subsequently identified a sailor in a line-up as the criminal, but the sailor had a watertight alibi. It turned out later that the sailor had bought tickets from the man on three separate occasions prior to the robbery. In other words, the ticket clerk mistakenly assumed that the familiarity of the sailor's face related back to the robbery, when in fact it related back to the three ticket-purchasing occasions.

In one particular experiment on unconscious transference, Loftus presented participants with a tape-recorded narrative about six college students, each student being introduced by a slide at the appropriate point in the story. The

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narrative went like this: 'Steve Kent picked up a heavy paperweight and threw it at Fisher, hitting him on the back of the head; one of the onlookers was Robert Dirks.' Dirks was shown wearing a small brown hat. Approximately one hour later, the participants in the experiment were either asked 'After the guy with the hat threw the paperweight at Fisher, did he run away?' or the same question with the words 'with the hat' omitted.

Three days later, the participants tried to pick out the culprit from among the slides of the six students. Fifty-eight per cent of those who had been asked the leading question (implying that the person with the hat committed the deed) chose the real culprit (Steve Kent); 24 per cent chose the man with the hat. Eighty per cent of those who had been asked the straightforward question made a correct identification, and only 6 per cent chose the man with the hat. The implication of this experiment is alarming: suggestive questions can quite easily induce a witness to accuse an innocent person of something he or she didn't do.

At the scene of the crime

The fact that perception of a complex event such as a crime can be affected by the past knowledge and experience of witnesses, as well as their attitudes, needs, beliefs and expectations, was clearly demonstrated in the 1920s by Gordon Allport of Harvard University. All he did was to ask a number of people to take a brief look at a drawing of several people on an underground train. The drawing included a black man and a white man standing close to each other. In spite of the fact that it was the white man who was holding the cut-throat razor, almost 50 per cent of Allport's observers said they saw the black man holding the razor. At the time the razor was regarded by many white Americans as a stereotyped symbol of black violence. Presumably it was this common prejudice

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which caused the distorted recollection of the event.

The clear message from the Allport Study was that people tend to see what they expect to see. This has now been demonstrated many times. Two prominent American researchers, Jerome S. Bruner and Leo Postman of Harvard University, showed observers a display of playing cards for a few seconds, and then asked them to report the number of aces of spades they thought they had seen. Most people said they saw three aces of spades. In fact, there were five, but two of them were coloured red. Once again, past experience distorted the process of perception.

Apart from the biasing effects of past knowledge and prejudice, are there any other reasons for assuming that eyewitnesses often misperceive events? At first glance, it would appear not. After all, people with amazingly good memories for visual information often turn up in laboratory studies. In one American study, it was found that observers were able to recognize 90 per cent of a huge set of 2,500 photographs of unfamiliar paintings, scenes and events presented for a few seconds each. Even when 10,000 photographs were presented, there was still correct identification 86 per cent of the time.

But in contrast to these laboratory studies, recollection of staged events in which actors pretend to steal purses, attack each other and so on, is sometimes extremely poor. Why is there such a large difference in the two sets of findings? The answer is that the circumstances are entirely different. Observers in a laboratory know what to look for, they know where the visual information will be presented, and they know when it will be presented. Eyewitnesses to a crime are taken by surprise, are exposed to a complicated series of events, and are often quite naturally more concerned about their own safety than about memorizing the number-plate of the robbers' getaway vehicle.

A point that is often overlooked is that people tend to pay more attention to those aspects of an event or another person

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which they find interesting. In everyday life, women always notice if another woman is wearing clothes which do not match or if she is wearing false eyelashes, whereas men notice that Mr Smith along the road has bought himself a new car or a lawn-mower. Peter Powers of the University of Washington investigated this phenomenon. Observers watched slides showing a man and a woman walking through a car park and spotting two people apparently fighting each other. The man rushes in to stop the fight while the woman goes off to telephone for help. Female observers were more accurate than male observers in recalling the description and actions of the female main character, whereas male observers were more accurate in recalling information about the main male character and about a nearby car.

The effect of fear on memory has been researched by examining eyewitness reports noted down by policemen within minutes of their arrival on the scene. The typical report conveys a general impression of the assailant, but lacks specific features such as colour of hair or eyes. In general terms, less complete descriptions are obtained in connection with the more fear-provoking crimes (rape, assault) than with other crimes (robbery). Irrespective of the type of crime, uninjured victims give more complete descriptions of their assailant(s) than injured victims.

It is often said that the members of a different race 'all look the same', and there is partial support for this assertion. White witnesses show much greater accuracy in identifying white faces than black faces. However, black witnesses show equal accuracy whether identifying black faces or white faces. It is also true, of course, that some races are easy to remember because they are distinctive. Indeed, it is the unusual features of a face that we remember best.

It is plausible to assume that witnesses will pay less attention to trivial crimes than to those which are more serious. In one experiment witnesses saw an object being stolen; some

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believed it was worth about £1, others that it was worth about £25. Fifty-six per cent of the witnesses who believed the object was worth £25 picked out the correct person from a six-person photo spread, compared with only 19 per cent of those who believed the object to be relatively cheap. However, witnesses who saw an expensive item being stolen showed worse recall of the various physical characteristics of the thief than people who thought they were witnessing the theft of the cheap item. When eyewitnesses believe that a serious crime is being committed, they pay attention to just one crucial visual aspect of the scene (i.e. the facial features of the criminal). Thus, an attempt to devalue all the testimony of a witness during cross-examination by demonstrating the fallibility of some of his recollections may be unfair.

Mugshots and line-ups

The crucial test of eyewitness testimony is when the witness is confronted with the suspect, either 'live' in an identity parade or among a set of photographs or mugshots. It is important that the other people included in the line-up or set of photos should be broadly similar in appearance to the suspect. If it is generally agreed that the person who committed a crime was very tall and white, there is little point in having a line-up comprising a hugh white man and several short black men.

These are some real-life examples of such bias. Consider the case of the militant black activist Angela Davis in the 1960s. A set of nine photographs used to check identification included three pictures of the defendant taken at an outdoor rally, two police mugshots of other women with their names displayed, a picture of a 55-year-old woman, and so on. Any witness could immediately rule out most of the nine pictures as ridiculous choices. The chances of selecting one of the pictures of Angela Davis was therefore at least 75 per cent!

Robert Buckhout was claimed that one kind of bias in the

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use of mugshots is the implicit assumption that the witness ought to be able to pick out the suspect. In other words there is social pressure to 'co-operate' with the police. Buckhout staged an assault on the California State University campus in which a distraught student 'attacked' a professor in front of 141 witnesses. Another person of the same age as the distraught student was present as a bystander. After the incident, the witnesses were asked to pick out the assailant from a set of six photographs; the unbiased photo spread used equivalent photos of all the suspects, whereas the biased photo spread had the assailant's photo at an angle to the others and with a different expression. The instructions to the witnesses were either unbiased ('Do you recognize any of the people in these photos?') or biased ('The culprit is among this set of photos').

Identification performance was affected by both kinds of bias. More witnesses picked out the culprit under biased than under unbiased conditions, and they were also more confident that they had selected the right person. The combination of biased photo spread and biased instructions led to over 60 per cent of the witnesses selecting the perpetrator. Only 40 per cent were correct in their identification under unbiased conditions.

It is obviously worrying that the way in which suspect identification is carried out can produce such large effects on the apparent accuracy with which eyewitnesses remember events. It is also worrying that 25 per cent of all the witnesses (including the attacked professor) mistakenly identified the innocent bystander whose picture was also included in the photo spread (Suspect No. 2) as the attacker.

In further research, Buckhout very clearly showed that witnesses are usually prepared to identify *someone*, perhaps because they feel they would be wasting everyone's time unless they did. Fifty-two students witnessed a live purse-snatching incident in a classroom and were then exposed to two different identity parades with five people in each. One line-up included

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the purse-snatcher and the other line-up included someone who looked like the purse-snatcher. Eighty per cent of the witnesses picked out a suspect, even though most of them were mistaken. Fourteen witnesses correctly identified the culprit in one line-up, but half of them rather spoiled things by going on to identify the person who merely resembled the culprit in the other line-up. Seven more witnesses only picked the look-alike, 18 selected an innocent person who didn't even look like the culprit, and three went so far as to pick out two innocent people, neither of whom resembled the culprit.

One of the difficulties with mugshot identification is that we tend to remember some kinds of information better than others. For example, all of us know what it is like to recognize someone but not be able to 'place' him or her. This typically happens when we normally see someone in just one setting, and then see him or her in a different setting. The TV star buying groceries or the company chairman prowling the red-light district of town provide examples of this phenomenon. In one experiment, students were presented with 25 photos of faces in one room, and with 25 more two hours later in another room radically different from the first. In a subsequent test, the faces were correctly recognized 96 per cent of the time, but most observers could not remember at better than chance level in which room they had seen the faces. This inability to remember the circumstances in which a face has been seen can be especially troublesome if the eyewitnesses to a crime have encountered any of the suspects in other circumstances.²

The accuracy of mugshot identification is also affected if suspects look the way they looked at the time of the crime, in one British study, 91 per cent of faces were correctly recognized when there was no alteration between initial viewing and the identification test. However, correct recognitions dropped to 82 per cent when the pose and facial expression were changed, with a drastic decline to only 45 per cent correct when the faces were disguised by adding or removing beards or

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glasses or changing the hair style. Those criminals who invest in false beards and dark glasses obviously have an intuitive appreciation of some of the principles of psychology.

The police often use an identity parade in addition to mugshots to try to secure an identification. Very confusing things can happen when this is done. In one study, a staged crime was followed by the witnesses being shown a number of mugshots and then a 'live' line-up suspects. The key finding was that anyone seen in a mugshot was more likely to be picked out at the line-up as the guilty party! The 'criminals' were selected by 65 per cent of the witnesses when seen in mugshots, but by only 51 per cent when seen only at the identity parade. Innocent people previously seen in mugshots were unjustly picked out 20 per cent of the time at the line-up, compared to 8 per cent of the time when not previously seen in mugshots. Obviously, a false identification rate of 20 per cent is far greater than ought to be allowed by any reasonable system of criminal justice.

A final potential problem is that of unintentional (or even intentional) bias caused by the actions of the police officer organizing the identity parade or mugshot identification procedure. If the policeman knows which person is the prime suspect, then he may communicate this knowledge by subtle changes in facial expression when the witness is looking at that person. This kind of bias has even been found to influence the behaviour of rats. Students who are told they have been given clever rats find their rats running mazes more rapidly than students who are told they have been given dull rats, even though the rats are allocated on an entirely random basis. It may well be that people are even more sensitive than rats to the cues provided by a human experimenter.

Eyewitness testimony: fragile but indispensable

Many psychologists who have investigated eyewitness

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testimony and discovered its fallibility have said how dangerous it is for the courts to place much reliance on the recollections of witnesses. However, if we were to discount all eyewitness testimony, it would be impossible for an innocent defendant to prove an alibi.

Psychologists also tend to think—without having provided much evidence—that judges and jurors believe witnesses to be more reliable than they actually are. But in fact there are grounds for supposing that eyewitnesses are less fallible than psychologists believe them to be. In a number of ways, staged crimes differ importantly from real-life crimes. Participants in experiments nearly always know that the 'crime' was staged by the time they are given an identification test, and so may be relatively unconcerned about pointing the finger of suspicion at an innocent person. In real life, criminals often have distinctive characteristics, but in experimental studies researchers often go to great lengths to ensure that the 'criminal' has no outstanding features. Finally, while the police usually focus their attention on those witnesses who indicate that they might be able to make a positive identification, researchers nearly always ask *all* the eyewitnesses to attempt identification. All of these differences may mean that real-life witnesses are not quite so prone to make mistakes as has sometimes been thought.

While there is probably no way of making eyewitnesses pay more attention to important details at the time of criminal events, it may be possible to improve their ability to recall vital information by means of hypnosis. On one occasion the California Police Department used hypnosis on the 55-year-old driver of a school bus with 26 children on board which was hijacked. Interviewed by the police shortly after the crime, he remembered very little about the vans the three criminals had used to transport the children from the bus to an underground hideout. However, under hypnosis he managed to provide a vital clue in the form of the last five letters and digits of the

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licence-plate of one of the abduction vans.

Hypnosis has been used fairly extensively by the Israeli police. In one year they made 17 arrests on evidence obtained under hypnosis. It is not yet entirely clear why hypnosis should be so successful. However, under normal conditions we always devote some attention (known as 'spare processing capacity') to monitoring the environment for possible sources of important information. In contrast, under hypnosis people stop monitoring the environment, leaving their attention entirely free to concentrate on the task in hand (e.g. recollecting a criminal event).

The main focus of attempts to improve the value of eyewitness testimony ought to be to prevent recollections of the details of a crime being systematically contaminated by subsequent occurrences. Police questioning should be entirely neutral, and should not suggest, directly or indirectly, that certain events actually occurred. When attempts are made at identification, whether by mugshots or by identity parade, the person directing proceedings should have no knowledge at all of the case; this will help to eliminate any bias. Witnesses should be told emphatically that they are only expected to identify someone provided they are confident that they have picked the right person; failure to identify anyone is entirely acceptable. Finally, either a videotape of the line-up or a set of the mugshots used should be made available to the defence lawyers so that checks for bias can be carried out.

Conclusions

The main reason for psychological investigation of eyewitness testimony is to clarify the conditions under which such testimony can be relied on. While many psychologists are inclined to discount the value of witnesses's recollections altogether, they may have overstated the case. Eyewitness testimony *can* provide extremely useful information, but it is vital

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to recognize the fragile nature of the memory of a criminal event. Simple questioning of a witness, unless handled with extreme care, can produce profound distortions of memory and thus render his or her testimony almost valueless. Similarly, identification procedures must be conducted in an entirely unbiased way if further distortions of memory are not to occur. If the judicial system would listen to psychologists, and if all reasonable attempts were made to prevent distortions of memory, then eyewitness testimony could become a much more reliable source of evidence in court.