Eyewitness Identification: Psychological Aspects

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Eyewitness Identification: Psychological Aspects

Abstract
Eyewitness identification refers to a type of evidence in which an eyewitness to a crime claims to recognize a suspect as the one who committed the crime. In cases where the eyewitness knew the suspect before the crime, issues of the reliability of memory are usually not contested. In cases where the perpetrator of the crime was a stranger to the eyewitness, however, the reliability of the identification is often at issue. Researchers in various areas of experimental psychology, especially cognitive and social psychology, have been conducting scientific studies of eyewitness identification evidence since the mid-1970s. Today, there exists a large body of published experimental research showing that eyewitness identification evidence can be highly unreliable under certain conditions. In recent years, wrongful convictions of innocent people have been discovered through post-conviction DNA testing; these cases show that more than 80 percent of these innocent people were convicted using mistaken eyewitness identification evidence (Scheck, Neufeld, and Dwyer; Wells et al., 1998). These DNA exoneration cases, along with previous analyses of wrongful convictions, point to mistaken eyewitness identification as the primary cause of the conviction of innocent people.

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 attentión under the Fourth Amendment, as described above. The resulting identification may be deemed inadmissible “fruit” of the detention, but a subsequent in-court identification will usually be admissible if the judge finds it is based on an independent recollection of the criminal event (United States v. Crews, 445 U.S. 463 (1980)). Because an illegal arrest is not a bar to subsequent prosecution (Frisbie v. Collins, 342 U.S. 519 (1952)), the defendant’s presence in court and any untainted identification that occurs there is not unconstitutional.

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See also Confessions; Counsel: Right to Counsel; Criminal Procedure: Constitutional Aspects; Eyewitness Identification: Psychological Aspects; Police: Police Officer Behavior.

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the factors that affect the encoding. Problems in acquisition include the effects of expectations, attention, lighting, distance, arousal, and related factors that control the types, amount, and accuracy of the encoded information. Eyewitnesses to crimes often witness the event under poor conditions because the event happens unexpectedly and rapidly. Attention may be focused on elements that are of little use for later recognition of the perpetrator, such as focusing on a weapon.

The second phase is retention. Information that is acquired must be retained for later use. Memory generally declines rapidly in the initial time periods and more slowly later in what psychologists describe as a negatively decelerating curve. Importantly, new information can be acquired during this slower phase and mixed together with what was previously observed to create confusion regarding what was actually seen by the eyewitness and what was perhaps overheard later. Loftus's well-known experiments on misinformation, for example, show that witnesses will use false information contained in misleading questions to create what appears to be new memories that are often dramatically different from what was actually observed.

The final phase is the retrieval phase. Two primary types of retrieval are recall and recognition. In a recall task, the witness is provided with some context (e.g., the time frame) and asked to provide a verbal report of what was observed. In a recognition task, the witness is shown some objects (or persons) and asked to indicate whether any of them were involved in the crime event. Retrieval failures can be either errors of omission (e.g., failing to recall some detail or failing to recognize the perpetrator) or errors of commission (e.g., recalling things that were not present or picking an innocent person from a lineup). Problems at any of the three phases of memory lead to unreliability.

The distinction between estimator variables and system variables

The scientific eyewitness identification literature has tended to rely on a distinction between estimator variables and system variables (Wells, 1978). Estimator variables are those that affect the accuracy of eyewitness identifications, but cannot be controlled by the criminal justice system. System variables also affect the accuracy of eyewitness identifications, but the criminal justice system can control those variables. Estimator variables tend to revolve around factors involved in the acquisition phase, such as lighting conditions, distance, arousal, the presence of weapons, and so on. System variables tend to revolve around factors involved in the retrieval phase, such as the structure of a lineup, instructions given to witnesses prior to viewing a lineup, and so on.

The methods used in the scientific eyewitness identification evidence typically involve staging live crimes or showing video events to people. Because the events are created by the researchers, it is known with certainty who the actual “perpetrator” was and the performance of eyewitnesses in picking him/her from a lineup can be scored systematically. These eyewitnesses can also be asked to indicate their confidence in the identification decision, thereby permitting analyses of the relation between confidence and accuracy. Systematic manipulations to key variables (e.g., structure of lineup) allows for a causal analysis of variables that affect identification accuracy, eyewitness confidence, and the relation between the two.

Estimator variables. One of the estimator variables that has received considerable attention is the race of the perpetrator relative to the race of the eyewitness (Bothwell, Brigham, and Malpass). A consensus now exists that it is more difficult to identify the face of a stranger from another race than to identify the face of a strang-er from one’s own race (Messner and Brigham). There appears to be an element of symmetry to this effect. For instance, white Americans have more difficulty identifying the faces of black Americans than they do of other white Americans, and black Americans have more difficulty identifying the faces of white Americans than this effect. For instance, white Americans have more difficulty identifying the faces of black Americans than they do of other white Americans, and black Americans have more difficulty identifying the faces of white Americans than they do of other white Americans. The precise mechanisms underlying this problem are not fully understood, although most evidence suggests that it is largely a matter of experience rather than prejudice. Another estimator variable that is frequently cited is weapon focus. Experiments suggest that the presence of a weapon draws attention toward the weapon and away from the weapon-holder’s face, resulting in less reliable identification performance by eyewitnesses (Stelkay, 1992). Stress, fear, and arousal have rarely been studied with regard to identification evidence (as opposed to recall) and the problems with studying these variables in an ecologically valid manner are complex. Gender, intelligence, and personality factors appear to be weakly, if at
all, related to the tendency to make correct or mistaken identifications (Cutler and Penrod).

System variables. Scientific understanding of system variables has progressed more rapidly than it has for estimator variables. A primary reason for this is that the “payoff” for understanding system variables may be higher than it is for estimator variables, leading researchers to invest more in system variable research than in estimator variable research. This difference in payoff owes to the fact that an understanding of system variables can inform the criminal justice system about ways to improve the accuracy of eyewitness identification evidence.

System variable research has focused primarily on four factors, namely the instructions to eyewitnesses, the content of a lineup, the presentation procedures used during the lineup, and the behaviors of the lineup administrator. In attempting to understand the importance of these system factors, it is useful to describe briefly the process through which mistaken identifications seem to occur. A dominant account of the process of eyewitness identification that has emerged is the relative judgment process. According to this account, eyewitnesses tend to select the person from the lineup who most closely resembles the perpetrator relative to the other members of the lineup. This process works reasonably well for eyewitnesses as long as the actual perpetrator is in the lineup. When the actual perpetrator is not in the lineup, however, there is still someone who looks more like the perpetrator than the remaining members of the lineup, thereby luring eyewitnesses to pick that person with surprising frequency.

The relative judgment process leads to a rapid understanding of why it is critical to instruct eyewitnesses that the actual perpetrator might or might not be present in the lineup before showing the lineup to eyewitnesses. Experiments show that failure to instruct eyewitnesses in this manner leads to a very high rate of choosing, even when the actual perpetrator is not present (Malpass and Devine, 1981a). Proper instructions warning the eyewitness that the perpetrator might not be present do not eliminate the relative judgment tendency altogether, but they do reduce the magnitude of the problem. Importantly, proper instructions lead eyewitnesses to less often mistakenly pick someone when the perpetrator is not in the lineup, but have little effect on their ability to pick the perpetrator when the perpetrator is in the lineup. The result of proper instructions is a net improvement in eyewitness identification performance (Steblay, 1997).

The relative judgment process also has implications for how investigators should select lineup fillers. A lineup filler is a known-innocent member of a lineup. Normally, a lineup will have one suspect and several (five or more) fillers whose primary purpose is to prevent the eyewitness from simply guessing. If an eyewitness is merely guessing, then odds against selecting the suspect are $N:1$ (where $N$ is the number of fillers). However, if investigators use fillers who do not fit the general description of the suspect (as provided previously by the eyewitness) whereas the suspect does fit that description, then the lineup is said to be biased against the suspect. As predicted by the relative-judgment process, lineups in which the fillers do not fit the description of the perpetrator lead eyewitnesses toward picking the suspect, even if the suspect is innocent, because the suspect most closely resembles the perpetrator relative to the other lineup members. Making sure that each lineup member fits the general verbal description of the perpetrator does not lead eyewitnesses to fail to recognize the perpetrator when he is in the lineup, but it does help prevent mistaken identifications of the innocent suspect when the actual perpetrator is not in the lineup (Wells, Rydell, and Seelau, 1993).

Procedures for lineups

Eyewitness researchers have called the usual procedure for lineups the simultaneous procedure because all members of the lineup are presented at one time. Simultaneous procedures tend to encourage eyewitnesses to compare one lineup member to another lineup member and hone in on the one who looks most like the perpetrator.

An alternative procedure, based on sequential presentation methods, was developed and tested in 1985 (Lindsay and Wells). The sequential procedure presents the eyewitness with one lineup member at a time and requires the eyewitness to make a yes/no decision as to which lineup member looks most like the perpetrator. Although eyewitnesses can compare the person being viewed at any given time to one viewed previously, they cannot be sure what the next lineup member will look like. Hence, eyewitnesses must largely abandon the strategy of simply picking the person who looks most like the per-

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petrator and instead compare each lineup member to their memory of the perpetrator. The sequential procedure has proven itself superior to the simultaneous procedure. When the actual perpetrator is in the lineup, the chances of selecting that person are nearly identical with the simultaneous and sequential procedures. When the actual perpetrator is not in the lineup, on the other hand, the simultaneous procedure produces a considerably higher rate of mistaken identifications than does the sequential procedure. As with proper instructions and proper selection of fillers, the sequential procedure results in a net improvement in eyewitness identification performance. This result is one of the most replicated findings in the eyewitness identification literature and appears to be quite robust.

A major concern of eyewitness researchers has been the behavior of the lineup administrator (Wells et al., 1998). This concern has been especially stressed with regard to photographic lineups, which constitute the majority of initial identifications of criminal suspects. In the United States, courts have held that the suspect has no right to have counsel present for photographic identification procedures. Accordingly, photographic identification procedures are almost always administered by the case detectives with no other observers present. The case detectives are well aware of which lineup member is the suspect because they are the ones who developed the suspect in the first place and put the lineup together. The experimenter expectancy effect, well known in psychology, occurs when the person (e.g., an experimenter) is aware of the desired response and unintentionally (even without awareness) influences the subject to give the desired response. In a lineup situation, verbal and nonverbal interactions between the witness and the investigator should be of great concern because the eyewitness is supposed to use only his or her memory, free from external influences, to make the decision. Recent research indicates that the knowledge of the person administering the lineup can influence the eyewitness to pick the wrong person when the lineup administrator has the wrong person as the suspect (Phillips, McAuliff, Kovera, and Cutler). For this reason, eyewitness researchers have argued strongly that the person who administers the lineup should not be aware of which person in the lineup is the suspect. This solution is known in science as double-blind testing and researchers have been trying to get the criminal justice system to adopt this simple but effective technique for improving the integrity of the identification process.

**Eyewitness confidence**

Throughout the eyewitness identification literature, there has been a great deal of interest in the issue of eyewitness confidence. Research has shown that the confidence of an eyewitness is the principal determinant of whether or not jurors will believe that an eyewitness made an accurate identification (Lindsay, Wells, and, Rumpel). Early research suggested that there was no relation between the confidence with which eyewitnesses made identifications and the accuracy of those identifications. Later research has shown that there is a relation between eyewitness identification confidence and accuracy, although it is not a strong relation. Research also shows that current procedures by law enforcement are probably harming the already-modest relation between eyewitness identification confidence and accuracy. Specifically, eyewitnesses are commonly given confirming feedback after they identify a suspect. This feedback takes many forms, such as “Good thought it was” or “You got him!” Research shows that feedback of this sort to eyewitnesses who are in fact mistaken leads the eyewitnesses to recall that they were highly confident at the time of the identification (Wells and Bradfield). This confidence inflation effect is stronger for eyewitnesses who were in fact mistaken than for eyewitnesses who identified the actual perpetrator, leading to a diminution of the confidence-accuracy relation. This feedback problem is another factor leading eyewitness researchers to strongly advocate double-blind testing with lineups. Repeated questioning of eyewitnesses tends to have similar confidence-inflating properties such that eyewitnesses tend to become more confident in their incorrect reports with repeated questioning (Shaw and McClure).
Cooperation between eyewitness researchers and the criminal justice system

Some of the battle between eyewitness research findings and the criminal justice system is fought out in the courtroom via issues concerning expert testimony by psychologists on these issues. Beginning in the late 1990s, however, elements of cooperation between eyewitness researchers and the criminal justice system yielded some success (Wells et al., 2000). A project initiated by the U.S. Department of Justice under the auspices of the National Institute of Justice convened a panel and working group of eyewitness researchers, prosecutors, police, and defense lawyers to develop national guidelines for law enforcement. These guidelines, informed by eyewitness research findings, were published in 1999 (Technical Working Group for Eyewitness Evidence). The guidelines include descriptions of how eyewitnesses should be instructed prior to viewing a lineup, how fillers should be selected for lineups, how to conduct a sequential lineup procedure, and warnings against giving feedback to eyewitnesses following their identification decisions. The process of including eyewitness researchers in the development of these guidelines was unique and might hold great promise for the future of the interface between the criminal justice system and social science.

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See also Eyewitness Identification: Constitutional Aspects, Scientific Evidence.

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