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Critical Thinking Questions

1. What are the two fundamental types of errors in remembering?

2. Describe the word list procedure that researchers have used to create illusory memories.

3. How robust is the false memory effect? What evidence is there that some individuals are more susceptible to it than others?

4. What is the activation-monitoring theory of the false memory effect, and what evidence is there to support it?

The Confidence of Eyewitnesses in Their Identifications From Lineups

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Abstract

The confidence that eyewitnesses express in their lineup identifications of criminal suspects has a large impact on criminal proceedings. Many convictions of innocent people can be attributed in large part to confident but mistaken eyewitnesses. Although reasonable correlations between confidence and accuracy can be obtained under certain conditions, confidence is governed by some factors that are unrelated to accuracy. An understanding of these confidence factors helps establish the conditions under which confidence and accuracy are related and leads to important practical recommendations for criminal justice proceedings.

Mistaken identification by eyewitnesses was the primary evidence used to convict innocent people whose convictions were later overturned by forensic DNA tests (Scheck, Neufeld, & Dwyer, 2000; Wells et al., 1998). The eyewitnesses in these cases were very persuasive because on the witness stand they expressed extremely high confidence that they had identified the actual perpetrator. Long before DNA exoneration cases began unfolding in the 1990s, however, eyewitness researchers in psychology were finding that confidence is not a reliable indicator of accuracy and warning the justice system that heavy reliance on eyewitness's confidence in their identifications might lead to the conviction of innocent people.

Studies have consistently demonstrated that the confidence an eyewitness expresses in an identification is the major factor determining whether people will believe that the eyewitness made an accurate identification. The confidence an eyewitness expresses is also enshrined in the criteria that the U.S. Supreme Court used 30 years ago (and that now guide lower courts) for deciding the accuracy of an eyewitness's identification in a landmark case. Traditionally, much of the experimental work examining the relation between confidence and accuracy in eyewitness identification tended to frame the question as "What is the correlation between confidence and accuracy?" as though there were some single, true correlation value. Today, eyewitness researchers regard the confidence-accuracy relation as something that varies across circumstances. Some of these circumstances are outside the control of the criminal justice system, but some are determined by the procedures that criminal justice personnel control.

A GENERAL FRAMEWORK FOR CONFIDENCE-ACCURACY RELATIONS

It has been fruitful to think about eyewitness accuracy and eyewitness confidence as variables that are influenced by numerous factors, some of which are the same and some of which are different. We expect confidence and accuracy to be more closely related when the variables that are influencing accuracy are also influencing confidence than when the variables influencing accuracy are different from those influencing confidence. Consider, for instance, the variable of exposure duration (i.e., how long the eyewitness viewed the culprit while the crime was committed). An eyewitness who viewed the culprit for a long time during the crime should be more accurate than one who had only a brief view. Furthermore, the longer view could be a foundation for the eyewitness to feel more confident in the identification, either because the witness has a more vivid and fluent memory from the longer duration or because the witness infers his or her accuracy from the long exposure duration. Hence, the correlation between confidence and accuracy should be higher the more variation there is in the exposure duration across witnesses (Read, Vokey, & Hammersley, 1990). Suppose, however, that some eyewitnesses were reinforced after their identification decision (e.g., "Good job. You are a good witness."), whereas others were given no such reinforcement. Such postidentification reinforcement does nothing to make witnesses more accurate, but dramatically inflates their confidence (Wells & Bradfield, 1999).

Eyewitness confidence can be construed simply as the eyewitness's belief, which varies in degree, about whether the identification was accurate or not. This belief can have various sources, both internal and external, that need not be related to accuracy. Shaw and his colleagues, for example, have shown that repeated questioning of eyewitnesses about mistaken memories does not make the memories more accurate but does inflate the eyewitnesses' confidence in those memories (Shaw, 1996; Shaw & McLure, 1996). Although the precise mechanisms for the repeated-questioning effect are not clear (e.g., increased commitment to the mistaken memory vs. increased fluidity of the response), these results illustrate a dissociation between variables affecting confidence and variables affecting accuracy.

It is useful to think about broad classes of variables that could be expected to drive confidence and not accuracy, or to drive accuracy and not confidence, or to drive both variables. It is even possible to think about variables that could decrease accuracy while increasing confidence. Consider, for instance, coincidental resemblance. Mistaken identifications from lineups occur primarily when the actual culprit is not in the lineup. Suppose there are two such lineups, one in which the innocent suspect does not highly resemble the real culprit and a second in which the innocent suspect is a near clone (coincidental resemblance) of the real culprit. The second lineup will result not only in an increased rate of mistaken identification compared with the first lineup, but also in higher confidence in that mistake. In this case, a variable that decreases accuracy (resemblance of an innocent suspect to the actual culprit) serves to increase confidence.

THE CORRELATION, CALIBRATION, AND INFLATION OF CONFIDENCE

Although many individual studies have reported little or no relation between eyewitnesses' confidence in their identifications and the accuracy of their identifications, an analysis that statistically combined individual studies indicates that the confidence-accuracy correlation might be as high as +.40 when the analysis is restricted to individuals who make an identification (vs. all witnesses; see Sporer, Penrod, Read, & Cutler, 1995). How useful is this correlation for predicting accuracy from confidence? In some ways, a correlation of .40 could be considered strong. For instance, when overall accuracy is 50%, a .40 correlation would translate into 70% of the witnesses with high confidence being accurate and only 30% of the witnesses with low confidence being accurate. As accuracy deviates from 50%, however, differences in accuracy rates between witnesses with high and low confidence will diminish even though the correlation remains .40.

Another way to think about a .40 correlation is to compare it with something that people experience in daily life, namely the correlation between a person's height and a person's gender. Extrapolating from males' and females' average height and standard deviation (69.1, 63.7, and 5.4 in., respectively; Department of Health and Human Services, n.d.) yields a correlation between height and gender of +.43. Notice that the correlation between height and gender is quite similar to the correlation between eyewitnesses' identification confidence and accuracy. Thus, if eyewitnesses' identifications are accurate 50% of the time, we would expect to encounter a highly confident mistaken eyewitness (or a nonconfident accurate eyewitness) about as often as we would encounter a tall female (or a short male).

Although the eyewitness-identification literature has generally used correlation methods to express the statistical association between confidence and accuracy, it is probably more forensically valid to use calibration and overconfidence/underconfidence measures rather than correlations (Brewer, Keast, & Rishworth, 2002; Juslin, Olson, & Winman, 1996). In effect, the correlation method (specifically, point-biserial correlation) expresses the degree of statistical association by calculating the difference in confidence (expressed in terms of the standard deviation) between accurate and inaccurate witnesses. Calibration, on the other hand, assesses the extent to which an eyewitness's confidence, expressed as a percentage, matches the probability that the eyewitness is correct. Overconfidence reflects the extent to which the percentage confidence exceeds the probability that the eyewitness is correct (e.g., 80% confidence and 60% probability correct), and underconfidence reflects the extent to which the percentage confidence underestimates the probability that the eyewitness is correct (e.g., 40% confidence and 60% probability correct). Juslin et al. pointed out that the confidence-accuracy correlation can be quite low even when calibration is high.

Work by Juslin et al. (1996) indicates that eyewitnesses can be well calibrated at times, but recent experiments (Wells & Bradfield, 1999) illustrate a problem that can arise when trying to use percentage confidence expressed by witnesses to infer the probability that their identifications are accurate. In a

series of experiments, eyewitnesses were induced to make mistaken identifications from lineups in which the culprit was absent and were then randomly assigned to receive confirming "feedback" telling them that they identified the actual suspect or to receive no feedback at all. Later, these witnesses were asked how certain they were at the time of their identification (i.e., how certain they were before the feedback). Those who did not receive confirming feedback gave average confidence ratings of less than 50%, but those receiving confirming feedback gave average confidence ratings of over 70%. Because all of these eyewitnesses had made mistaken identifications, even the no-feedback witnesses were overconfident, but the confirming-feedback witnesses were especially overconfident. Confidence inflation is a difficult problem in actual criminal cases because eyewitnesses are commonly given feedback about whether their identification decisions agree with the investigator's theory of the case. In these cases, it is the detective, rather than the eyewitness, who determines the confidence of the eyewitness.

Confirming feedback not only inflates confidence, thereby inducing overconfidence, but also harms the confidence-accuracy correlation. When eyewitnesses are given confirming feedback following their identification decisions, the confidence of inaccurate eyewitnesses is inflated more than is the confidence of confidence of accurate eyewitnesses, and the net result is a reduction in the confidence-accuracy correlation (Bradfield, Wells, & Olson, 2002). Hence, although the confidence of an eyewitness can have utility if it is assessed independently of external influences (e.g., comments from the detective, learning about what other eyewitnesses have said), the legal system rarely assesses confidence in this way.

IMPACT ON POLICIES AND PRACTICES

What impact has research on the confidence-accuracy problem had on the legal system? Until relatively recently, the impact has been almost nil. However, when system? Until relatively recently, the impact has been almost nil. However, when DNA exoneration cases began unfolding in the mid-1990s, U.S. Attorney General Janet Reno initiated a study of the causes of these miscarriages of justice. More than three fourths of these convictions of innocent persons involved mistaken eyewitness identifications, and, in every case, the mistaken eyewitnesses 'were extremely confident and, therefore, persuasive at trial (Wells et al., 1998). A Department of Justice panel used the psychological literature to issue the first set of national guidelines on collecting eyewitness identification evidence (Technical Working Group for Eyewitness Evidence, 1999). One of the major recommendations was that the confidence of the eyewitness be assessed at the time of the identification, before there is any chance for it to be influenced by external factors.

The state of New Jersey has gone even further in adopting the recommendations of eyewitness researchers. Based on findings from the psychological literature, guidelines from the attorney general of New Jersey now call for double-blind testing with lineups. Double-blind lineup testing means that the person who administers the lineup does not know which person in the lineup is the suspect and which ones are merely fillers. Under the New Jersey procedures, the confidence expressed by the eyewitness will be based primarily on the eyewitness's memory, not on the expectations of or feedback from the lineup administrator.

There is growing evidence that the legal system is now beginning to read and use the psychological literature on eyewitnesses to formulate policies and procedures. The 2002 report of Illinois Governor George Ryan's Commission on Capital Punishment is the latest example of this new reliance on the psychological literature. The commission specifically cited the literature on the problem with confidence inflation and recommended double-blind testing and explicit recording of confidence statements at the time of the identification to prevent or detect confidence inflation (Illinois Commission on Capital Punishment, 2002).

NEW DIRECTIONS

Although the psychological literature on eyewitness identification has done much to clarify the confidence-accuracy issue and specify some conditions under which confidence might be predictive of accuracy, research has started to turn to other indicators that might prove even more predictive of accuracy. One of the most promising examples is the relation between the amount of time an eyewitness takes to make an identification and the accuracy of the identification. Eyewitnesses who make their identification decision quickly (in 10 s or less) are considerably more likely to be accurate than are eyewitnesses who take longer (e.g., Dunning & Perretta, in press). Confidence is a self-report that is subject to distortion (e.g., from postidentification feedback), whereas decision time is a behavior that can be directly observed. Hence, decision time might prove more reliable than confidence as an indicator of eyewitness accuracy. Yet another new direction in eyewitness identification research concerns cases in which there are multiple eyewitnesses. Recent analyses show that the behaviors of eyewitnesses who do not identify the suspect from a lineup can be used to assess the likely accuracy of the eyewitnesses who do identify the suspect from a lineup (Wells & Olson, in press). The future of eyewitness identification research is a bright one, and the legal system now seems to be paying attention.

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Critical Thinking Questions

1. Why is an eyewitness's confidence an important variable?

2. What is the correlation between eyewitness accuracy and confidence? Is it more or less than you would have anticipated?

3. What do the authors mean when they say that sometimes the detective rather than the eyewitness determines the eyewitness's level of confidence?

Human Motivation and Emotion

While cognitive psychologists portray human beings as computerlike processors of information, other researchers study the ways in which we passionate, warm-blooded creatures are driven by various motives (such as the need for food, sleep, sex, affiliation, achievement, and self-esteem) and emotions (such as joy, sadness, fear, anger, surprise, and disgust).

In the opening article of this section, Arne Öhman and Susan Mineka (2003) speculate on the evolutionary origins of an intense fear of snakes that is prevalent and readily learned among humans and other primates. Martin Covington (2000) describes the distinction between intrinsic and extrinsic motivation and reviews research on the question of whether or when grades and other tangible inducements undermine the love of learning in school children. Addressing different aspects of human sexual moti-vation, Letitia Anne Peplau (2003) describes pervasive gender differences in sexuality—ways in which men and women differ regardless of whether they are straight or gay. Moving from motivation in the bedroom to the workplace, Christina Maslach (2003) reviews recent research on "job burnout," a social problem that plagues teachers, nurses, and others who work in human services. Focusing on unconscious emotion, Piotr Winkiel-man and Kent Berridge (2004) describe how positive and negative emo-tional states can be triggered in us by subliminal stimuli, and can even influence our preferences and actions, without awareness.