Social Influences on Eyewitness Confidence: The Social Psychology of Memory Self-Certainty

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Self-certainty is a potent force in the realm of eyewitness identification. An expression of certainty in an assertion of “that’s the guy” encourages police investigators and prosecutors to pursue a criminal case on the basis of a single identification, and compels juries to trust the veracity of the condemning assertion. Indeed, when people are asked to watch and judge the identification or other testimony of eyewitnesses to staged crimes and other events, their ratings of the witnesses’ certainty are invariably highly positively correlated with their perceptions of the witnesses’ accuracy (Leippe, Manion, & Romanzcyzk, 1992; Wells & Murray, 1984). Mock-jurors more readily believe prosecution eyewitnesses who express high (vs. low) confidence, and are more likely to convict defendants who are accused by highly certain eyewitnesses (Brewer & Burke, 2002; Whitley & Greenberg, 1986). And the United States Supreme Court explicitly recognizes eyewitness certainty as diagnostic of likely accuracy (Neil v. Biggers, 1972). To be sure, any uncertainty on the part of factfinders is at least partly ameliorated by the certainty of the memory reporter asserting the facts.

Of course, it would seem entirely reasonable to believe eyewitnesses who seem certain of what they report. The problem, however, is that eyewitness certainty—or confidence, as it is more commonly referred to—has an iffy connection to eyewitness accuracy. One of the major issues studied over more than 30 years of modern eyewitness research has been the confidence–accuracy (CA) relationship (Leippe & Eisenstadt, 2007; Penrod & Cutler, 1995; Wells & Murray, 1984). Attention was drawn to it by early studies in which observers in laboratories and field settings witnessed a crime staged for their benefit or presented on film, and were asked later to try to identify the criminal from a lineup or photospread and to rate (e.g., on a 10-point scale) their confidence in their identification decision (e.g., Leippe, Wells, & Ostrom, 1978; see Deffenbacher, 1980, for a review). A common finding was that inaccurate witnesses, on average, were almost or just as certain as accurate witnesses. More generally, the point-biserial CA correlation was, at best, weakly positive and commonly nil (Bothwell, Deffenbacher, & Brigham, 1987; Deffenbacher, 1980; Penrod & Cutler, 1995).

As research has accumulated, the dismal conclusion of only a very minimal CA relationship has given way to an understanding that confidence can be diagnostic of accuracy under some circumstances. The CA correlation tends to be about .40 when the analysis is
restricted only to witnesses who actually choose someone from the lineup (Sporer, Penrod, Read, & Cutler, 1995), and a bit higher than that (e.g., .50-.55) when differences in accuracy are a function of variable encoding conditions (Lindsay, Read, & Sharma, 1998). Importantly, this diagnostic value of self-certainty in a memory judgment is mainly evident when facial memory is not probed in any suggestive manner before the identification and when confidence is assessed immediately following the identification decision (cf. Leippe & Eisenstadt, 2007). Violations of these guidelines drop any diagnosticity of confidence assertions back toward zero.

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Confidence as a Belief

Given this background about the role and status of eyewitness confidence, let us define eyewitness confidence more explicitly, in terms of self-certainty. Just as attitude certainty can be defined as “a subjective sense of conviction or validity about one’s attitude or opinion” (Gross, Holtz, & Miller, 1995, p. 215), eyewitness confidence involves essentially a belief about the validity of one’s memory (Leippe & Eisenstadt, 2007; Wells, Olson, & Charmin, 2002). Confidence can be additionally described as a judgment of the validity of a belief about oneself (“My memory tells me that number two is the person who did it”). The confidence assertion, in turn, attaches a level of self-certainty to this self-belief (“I am sure that my memory is correct”). In this fashion, eyewitness confidence can be viewed in analogous terms to self-certainty about self-beliefs. Just as a person can be more or less certain that she or he is generous or curious, the person can be more or less certain that he or she has accurate memory for a face.

An advantage of framing eyewitness confidence in this way is that it allows one to understand confidence as, indeed, self-certainty—as connected to broader self-conceptions, including self-esteem. In turn, this sheds light on why, as we shall see, eyewitness confidence is susceptible to social influences that involve challenges to how the self is perceived by oneself and others.

The Uncertainty of Certainty

Eyewitnesses who make inaccurate identification decisions commonly rate their confidence in their identifications (and other memory reports) both (1) close to or as highly as do accurate witnesses and (2) at least somewhat above the midpoint of the provided confidence scale. Are eyewitnesses, then, a tad overconfident about their facial memories? If, by overconfident, we mean that the subjective probability witnesses assign to their accuracy exceeds the objective odds of accuracy, it is indeed fairly typical for eyewitnesses to be overconfident. This is particularly so when the witnessing and testing situations include cues that suggest (but do not facilitate) accuracy (e.g., Semmler, Brewer, & Wells, 2004) and when the identification task is difficult (e.g., Olsson, 2000), because eyewitnesses either do not notice or underadjust for cues and the challenge of the task. This is evident in a number of eyewitness “calibration studies” in which large numbers of individuals witness a criminal act (usually videotaped), attempt an identification, and then indicate their confidence that their identification decision was correct in percentage terms, typically in 10% increments (e.g., “I am 80% confident in my identification choice”). Witnesses are grouped according to their confidence level (i.e., all witnesses who indicated 10% confidence, all who indicated 20% confidence, and so on), and the percentage of witnesses who made an
accurate identification choice in each grouping is discerned. Calibration is assessed by examining the extent to which the percentage of accurate individuals in each grouping is similar to the group’s confidence level (e.g., 80% of the witnesses in the 80% confidence group made the correct decision). As Wells, Olson, and Charmin (2002) have summarized, this research shows that “eyewitnesses can be well-calibrated at times” (p. 152)). But of more immediate interest, data from a number of calibration studies show that, on average, accuracy rates in a confidence percentage group—especially the higher, more confident group where most witnesses reside—are lower than the confidence percentage (Brewer & Wells, 2006; Granhag, 1997; Olsson & Justlin, 1999; Semmler et al., 2004).

Overconfidence also is evident in assessments of eyewitnesses’ beliefs before they attempt an identification or even see a lineup. Although utterly unpredictive of identification accuracy (Penrod & Cutler, 1995), pre-identification confidence in ability to later pick the culprit out of a lineup is commonly quite high, and higher than post-identification confidence (Cutler & Penrod, 1988; O’Rourke, Penrod, Cutler, & Stuve, 1989). In a study to be discussed in a later section, Leippe et al. (2006) asked individuals who, 20 minutes previously, had seen a video of a theft to rate their certainty that they would later correctly pick out the thief from a lineup on an 11-point scale. The average rating was close to 9, yet fewer than half of the participants subsequently made a correct identification. This high sight-unseen confidence may reflect a general tendency to overestimate eyewitness accuracy (e.g., Brigham & Bothwell, 1983).

There are several possible reasons for overconfidence. One possibility is that people tend to believe that facial recognition is a skill at which people are generally pretty good. The ready believability of eyewitness evidence that has been found in some jury decision-making studies would seem to bear this out (cf. Leippe, 1995; Loftus, 1974). Relatedly, individuals may mistakenly generalize the once-seen-stranger recognition task to their own success experiences at recognizing more familiar faces. But, of course, recognizing briefly seen strangers—the task of most criminal investigations—is not the same as recognizing even familiar faces from long ago (Wells, Lindsay, & Ferguson, 1979); it’s much harder. Wells et al. (1979) conjectured that everyday experiences with face recognition provide little information about the likely accuracy of a face recognition and may even promote false confidence. Once we decide that someone looks familiar, feedback that would disconfirm this decision is unlikely. Owing to rules of propriety and the subtleties of the social interactions that follow such queries as “You look very familiar, don’t I know you?” and “Have you two met?”, the “overall nature of daily experience is that if one believes he or she recognizes a person, it is practically nondisconfirmable” (Wells et al., 1979, p. 447).

One reason why people may wrongly generalize their positive belief about good familiar-face recognition to once-seen-stranger recognition is that they have little or no experience making an actual eyewitness identification. Based on the finding in two studies that self-rated eyewitness ability predicted identification confidence but did not moderate the CA relationship, Perfect (2004) concluded that “people literally do not know how good (or bad) they are” (p.162). Consistent with the lack-of-experience explanation of overconfidence, feedback about performance on a couple of prior lineup recognition attempts has been found to increase the CA relationship (Perfect, Hollins, & Hunt, 2000). This enhancement of the relationship involves, in part, a tempering of self-certainty about incorrect identifications.

Yet there would seem to be other, more social-psychological reasons for overconfidence, given that the experience of examining a lineup and (unknowingly) making an incorrect lineup identification has minimal influence on confidence. First, a lineup identification is a largely irrevocable decision. Decades of research on post-decisional dissonance and other thought processes demonstrates that people tend to become more convinced of the
correctness of their decisions and more positive in their attitudes toward the outcomes those decisions may have yielded (Brehm, 1956; Shultz & Lepper, 1996; Steele, Spencer, & Lynch, 1993). These effects reflect the need to justify a decision that may have been effortful or controversial, self-attribution of internal causes for the outward behavior of making a choice, or both. Lineup identifications have all the ingredients of decisions that require justification, and witnesses should therefore be expected to report reasonably high confidence about any freely made identification. These decisions are important, involve commitment, and, to the extent that one’s memory credibility is linked to one’s overall self-concept, implicate the self. In fact, overconfidence in decisions similar to identifications has been linked empirically to cognitive dissonance reduction associated with self-esteem maintenance (Blanton, Pelham, DeHart, & Carvallo, 2001).

Second, self-uncertainty in general is an uncomfortable psychological state that people seek to avoid and, if they cannot, are motivated to escape (see, e.g., Festinger, 1954; Reid & Hogg, 2005; Van den Bos & Lind, 2002; Weary, Jacobson, Edwards, & Tobin, 2001; see also Marigold, McGregor, & Zanna, Chapter 13). It is not surprising, therefore, that witnesses would tend to feel certain enough of their lineup decisions to avoid the discomfort of tentativeness. Moreover, an eyewitness identification can carry great social and cultural importance (e.g., a correct identification serves the cultural value of justice, a mistaken identification violates the cultural value of fairness), and consequently reflect on the self-concept. As a result, powerful intrapsychic defensive motives elaborated in other chapters of this volume may be aroused that drive eyewitnesses to maintain high self-certainty, especially when the identification involves a real crime and has real consequences. Feelings of uncertainty about a false accusation, for example, may be sufficiently threatening to self-esteem that remaining uncertain leaves the witness vulnerable to the existential terror discussed by Landau, Greenberg, and Kosloff (Chapter 11). Witnesses may also be motivated to avoid disturbing causal uncertainty (Weary, Tobin, & Edwards, Chapter 5). A sense of familiarity with a face needs a cause, and the most readily suggested one may be that, indeed, one has seen the face before.

As noted previously, a few studies have found that witnesses’ pre-identification certainty that they will be able to make an accurate identification exceeds their post-identification certainty in the identification they actually make. Superficially, this seems to run counter to the idea that post-decisional motivational pressures work unilaterally to increase certainty. The apparent discrepancy can be understood, however, in terms of the likely initial countervailing reality check entailed in confronting an actual lineup. Given that individuals overestimate human memory for once-seen faces, the lineup is apt to seem more challenging and difficult than expected—which may at least momentarily reduce certainty. The motivational pressures to “own” decisions with some certainty that we have just reviewed probably work to keep certainty from plummeting further than it does, and over time and repeated commitments restore certainty to a high place. Relatedly, a drop in certainty may be akin to what dissonance theorists refer to as post-decisional regret—a period of concern that one’s decision had some negative features that is ultimately eliminated by dissonance reduction processes (Jones & Gerard, 1967). The essential point is that witnesses are motivated to remain decidedly on the positive side of the self-certainty ledger, and, in fact, do so.

Accurate and inaccurate eyewitnesses alike, then, tend to be confident in their identifications, and, arguably, this constitutes overconfidence. But here’s a kicker: It also is arguable that this sense of confidence often lacks firmness, so much so that it appears as if it masks more than a bit of self-uncertainty. As high as explicit self-reports of identification certainty might be, implicit levels of certainty seem lower, at least judging by the easy malleability of confidence. A variety of conditions and stimuli that occur before, during, and
especially after an identification—many of which are social influences to be described in subsequent sections of this chapter—can cause dramatic alterations in confidence, both up and down. Just as attitude and belief certainty is related to but not redundant with attitude strength or resistance (Gross, Holtz, & Miller, 1995), so, too, does eyewitness confidence display the same independence from strength. Confidence judgments may be high on average, but they are seemingly not generally strong or resistant—unless, of course, they already have been hardened by intrapsychic processes of commitment and polarization that are often triggered by social influence.

This chapter essentially is about what might be dubbed the self-uncertainty of confidence in memory. We will describe the susceptibility to change in the confidence that eyewitnesses express in their memory reports, especially their lineup identifications. In particular, we will focus on vulnerability to social influences. We start by considering where self-certainty about memory may come from in the first place.

Sources of Self-Certainty and Uncertainty about Memory

Eyewitness confidence may be informed by direct access to the memory trace (Clark, 1997; Hintzman, 1988). However, direct assessment of the qualities of the memory cannot be the only source of eyewitness confidence. If it were, CA correspondence would be much greater than it is. Rather, like other beliefs and certainty about them, eyewitness confidence is additionally informed, shaped, and influenced by extra-memorial internal and external factors. To the extent that these factors influence confidence, but not actual memory, CA correspondence may be weakened. Similarly, the CA relationship may be weakened by changes that occur to the memory but go undetected by the witness and have no impact on confidence.

We are concerned here with social influences on confidence that work via intrinsic, extrinsic, and self-credibility meta-memory cues about likely memory accuracy. These cues affect self-certainty about memory because they are associated with witnesses’ meta-memory—their beliefs and assumptions about how memory works. Intrinsic cues include experiences that co-occur with processes of remembering, such as speed of retrieval (e.g., how quickly a sense of recognition emerges during a lineup identification test; e.g., Robinson, Johnson, & Herndon, 1997; Sporer, 1992) and spontaneous quantity of retrieval (i.e., how much about the stimulus comes readily to mind; e.g., Kelley & Lindsay, 1993). Memory retrieval that is experienced as faster, easier, or richer is assumed to be more accurate, and confidence is accordingly heightened. In the witnessing or testing situation, extrinsic cues may be present that suggest the likely level of memory accuracy (Busey, Tunnicliff, Loftus, & Loftus, 2000; Koriat, 1997). For example, confidence may be higher the longer witnesses believe they looked at a culprit, because of an assumption that duration of visual exposure to a target is positively associated with accuracy of memory for it (Read, 1995). Finally, self-credibility cues involve the meta-memory assumption of correlated memories (Leippe, Eisenstadt, Rauch, & Stambush, 2006; Wells & Leippe, 1981). People seem to believe that a given level (e.g., good or bad) of memory in one domain or for one aspect of a to-be-remembered event is associated with the same level for another domain or aspect. As a result, their confidence in a specific memory report regarding a specific event (e.g., a lineup identification) should be influenced by self-beliefs about their memory skill in general (Olsson & Juslin, 1999) as well as by any evidence available about the quality of their other memory reports for the specific event (Leippe, Eisenstadt, Rauch, & Stambush, 2006).

An interesting parallel to the idea that intrinsic, extrinsic, and self-credibility cues inform memory self-certainty may be seen in Briñol, DeMarree, and Petty’s (Chapter 2;
Briñol & Petty, 2003) self-validation hypothesis involving meta-cognitive processes in the realms of attitudes and persuasion. The self-validation hypothesis posits that attitudinal responses to persuasive messages and other sources of attitude change are largely determined by attitude-relevant thoughts evoked by the message, and that the mediating influence of these thoughts depends on the confidence or certainty with which the attitude or the thoughts about the attitude are held. The determinants of validating or non-validating self-certainty in the thoughts can be cues in one’s own behavior and thought processes, just as intrinsic and extrinsic cues to accuracy inform memory self-certainty. For example, Briñol et al. (Chapter 2) report studies in which individuals’ own motor behavior (e.g., head nodding and head shaking) as they contemplate a persuasive message serves as essentially an internal cue (i.e., the behavior is internal to the individual) to the confidence they should have in their reactions to the message, and thus influences the extent to which they are persuaded. Similarly, analogous to our analysis of self-credibility cues, Petty, Briñol, and Tormala (2002) observed that having people describe personal experiences of confidence or doubt affected the extent to which they were persuaded by a message, by influencing their confidence in the thoughts the message evoked from them. For example, recipients were less influenced by a strong message that evoked positive thoughts if they had previously recalled occasions when they were doubtful and uncertain, and more influenced by the same strong message if they had recalled experiences of self-certainty. Data supportive of the self-validation analysis are also supportive of our basic contention that self-certainty about memory responses, like self-certainty of attitudinal responses, involves sensitivity to meta-cognitive cues to accuracy and validity, and suggest some cues (e.g., overt body movements) that may be relevant to both attitude and memory certainty.

**EYEWITNESS CONFIDENCE AND SOCIAL INFLUENCE**

In the remainder of this chapter, we will review research that documents social influences on eyewitness confidence that occur via activation of meta-memory cues and that are akin to familiar processes and mechanisms of influence, including conformity, social comparison, nonverbal communication, and self-perception/attribution. We will divide social influences into three categories: social and social-comparative feedback about memory, questioning effects via implicit messages, and questioning effects via triggering of self-perception processes associated with meta-memory.

**Social Feedback about Memory**

The effects of level of certainty about one’s opinions and attitudes on susceptibility to social influence are well-established. For example, making people feel less knowledgeable about an opinion object, and therefore more uncertain, increases conformity, whereas making them feel more knowledgeable decreases conformity (e.g., Campbell, Tesser, & Fairey, 1986). This is no less true when the opinion object is an eyewitness memory. Witnesses more readily agree with the incorrect identification and cued-recall choices of other witnesses when they are uncertain owing to the difficulty of the memory task at encoding or retrieval (Baron, Vandello, & Brunsman, 1996; Betz, Skowronski, & Ostrom, 1996; Schneider & Watkins, 1996). Witnesses are also more likely to incorporate the overheard mistaken recall of co-witnesses into their own later recall when poor (vs. better) viewing conditions make them more doubtful about what they saw (Roediger, Meade, & Bergman, 2001).
Post-Identification Feedback  But what about social influences on self-certainty or confidence? There is clear reciprocity in the uncertainty–influence relationship in the eyewitness realm. Social influence causes changes in certainty. This is clearly demonstrated in research on “confidence malleation” by post-identification feedback. In one study (Luus & Wells, 1994), after witnessing a staged crime, college students were induced through suggestive instructions and lineup photo arrangement to make a false identification. Before providing a confidence rating of their identification, however, some participants were informed that the co-witness with whom they had watched the crime had identified either the same person (confirming social comparison) or a different person (disconfirming social comparison). Compared to a no-social-information control condition, confidence was raised an average of 2 points from about 6 on a 10-point scale in the confirming condition, and lowered an average of 2 points in the disconfirming condition. Moreover, once this impact on certainty was etched in writing on a confidence scale, it proved resistant to change. Recipients of confirming information remained more certain, and recipients of disconfirming information remained less certain than no-information witnesses even after learning that the feedback about the co-witness’s choice was a mistake. This belief perseverance, similar to that obtained in other belief domains (e.g., Anderson, Lepper, & Ross, 1980), suggests that social comparison information influences thoughts about memory quality that become internalized.

Subsequent research has replicated the confidence malleation effect using a different form of social feedback. Wells and Bradfield (1998) found that certainty in a false identification was dramatically boosted if, upon hearing the witness’s lineup choice, the lineup administrator asserted “Good, you identified the suspect.” Conversely, certainty was decreased a similar amount if the administrator asserted “Actually, the suspect is number [a numbered choice the witness did not make].” Focusing on feedback that confirms the accuracy of a lineup decision, researchers also have ascertained that this feedback (involving either an administrator’s authoritative assertions or consensus information regarding other witnesses) inflates certainty regarding correct and incorrect identifications, as well as lineup rejections (i.e., “none of the above” choices), and does so whether the lineup instructions are unbiased or biased (i.e., do or do not explicitly offer the possibility that the culprit is not present in the lineup and the option of choosing no one; Bradfield, Wells, & Olson, 2002; Semmler, Brewer, & Wells, 2004).

The ready malleability of identification confidence, of course, is consistent with our contention that eyewitnesses’ relatively high self-certainty about their identification decisions may be something of a false bravado. The level of belief in one’s asserted memory changes dramatically in response to essentially overheard confirming or disconfirming evidence. One of the factors that we argued might contribute to overconfidence on the surface is lack of familiarity with stranger recognition, which creates the void that can be filled with the assumption that such recognition resembles the normally good recognition of familiar faces. Ironically, this factor may also contribute to susceptibility of identification certainty to social influence. People more readily succumb to social influence to the extent that they lack knowledge about and familiarity with the object of influence (e.g., Chaiken & Baldwin, 1981; Wood, 1982). Without a knowledge base, counterarguments to persuasive messages are difficult to generate, and without familiarity with an attitude object or domain, personal experiences that might be recruited as evidence of the veracity of one’s feelings are unavailable to access (cf. Zimbardo & Leippe, 1991). Unfamiliarity with the eyewitness experience similarly should leave a contested sense of confidence in one’s identification decision difficult to defend. If they do not know why they have a given sense of certainty, witnesses may find themselves in no position to argue that they should not be more uncertain (if the co-witness chose someone else) or even more certain (if the co-witness made the same choice).
Indeed, eyewitness confidence may be analogous to cultural truisms. Cultural truisms are beliefs that, within a culture or society, are subscribed to universally; they are acquired through socialization and seldom questioned, and hence tend to be bereft of a supportive knowledge base. Although people tend to have high self-certainty about these beliefs, a classic finding is that the beliefs can be quite easily overturned when a persuasive message is directed at them (McGuire, 1964). Without developed defenses or thoughts to support them, the beliefs are relatively defenseless. Similarly, witnesses frequently appear to have high superficial self-certainty about their identification decisions, but little more to back up the self-certainty than perhaps a sense of familiarity that, critically, is not grounded in comparative experience.

Partly owing to unfamiliarity, social influence can result in witnesses making certainty-related inferences about their memory that comport with meta-memory. Another finding in the malleation studies (e.g., Bradfield et al., 2002; Wells & Bradfield, 1998) points clearly to the operation of meta-memory assumptions, including beliefs about what determines good memories (e.g., accurate recognition of a face is associated with longer exposure to the face) and the belief noted previously that performance on a test of a slice of a to-be-remembered stimulus or event is indicative of the quality of other aspects of memory for the same event and of the total memory package. After receiving memory feedback and expressing their level of certainty, witnesses were asked to rate the conditions in play during the formation and testing of their memory for the culprit. These retrospective reports were reliably affected by the feedback. Compared to no-feedback controls, for example, witnesses who received confirming feedback reported they had a better look at and paid greater attention to the culprit, and that they found it easier to make an identification. In contrast, witnesses who received disconfirming feedback reported less attention and greater difficulty making an identification. Wells and Bradfield (1999) have argued that rather than evaluating their memory-relevant experiences or, indeed, their confidence “online” during memory formation and testing, witnesses evaluate their memories only when asked to report their confidence and the basis for it, and use the information contained in the feedback to infer how good a memory they formed. If such a self-perception process (Bem, 1972) is taking place, and so little has been judged and encoded about the memory experience beforehand, it is no wonder that social influences on eyewitness confidence can be substantial.

Pre-Identification Social-Comparative Feedback All of the malleation studies mentioned so far have involved post-identification social feedback about the identification choice. In our recent work, we have explored the influence of social-comparative memory feedback that precedes a lineup identification attempt. In the course of examining social influence on self-certainty about memory in general, this research has tested and explored the meta-cognitive assumption of correlated memories and its implication that social influence can extend deeply and broadly into the memory system and people’s confidence in their memory.

In one experiment (Leippe, Eisenstadt, Rauch, & Stambush, 2006, Experiment 1), participants first watched, along with one other co-witness, a video of a social interaction during which a laptop computer was stolen. Later, after being separated from the co-witness, the participants were asked to recount what they saw to another participant who ostensibly had not watched the video and had been asked by the experimenter to learn as much as he could about the depicted criminal event. After participants provided a free recall report of “what happened,” this listener-interviewer delivered a double dose of feedback that involved a comparison with the co-witness’s apparent report. In the positive feedback condition, the listener gushed with confirming approval: “Okay, so you’re pretty sure about
this? You should be. I had to listen to the other person first. Your account is really similar...you agree on practically everything.” Moments later, the listener could be heard telling the experimenter that “the two reports were almost exactly the same.” The feedback was decidedly different in the negative feedback condition. Here, the listener, seemingly mystified, asked, “Are you sure about this?” and explained that “I had to listen to the other person first. I’m kind of confused because your account is different...on several things. Maybe his/her memory was fresher, since he/she gave his/her memory report before you.” And then the listener informed the experimenter that “the reports were quite a bit different.” In a no-feedback condition, the listener’s only word to participants and experimenter was “Okay.”

After receiving (or not receiving) feedback about level of co-witness agreement, participants were questioned further by the experimenter about the crime they witnessed and then attempted to identify the thief from a thief-present photospread lineup. Feedback had several prospective effects on these memory reports. First, participants who received negative feedback expressed reliably less identification certainty than did participants who received no or positive feedback. Second, participants who received positive feedback, although not more certain of their identification decision, nonetheless made their identifications faster than did no- or negative-feedback participants. Identification decision-time has been found to be correlated with certainty, such that faster decisions tend to be associated with higher confidence ratings (Smith, Lindsay, & Pryke, 2000; Sporer, 1992).

Finally, the most dramatic effect of both positive and negative feedback was on a measure of suggestion modeled on the classic misinformation studies of Loftus and her colleagues (Loftus, Miller, & Burns, 1978; Weingardt, Toland, & Loftus, 1994). Following the provision of the false co-witness memory feedback, the experimenter asked about 30 open-ended questions. For some participants, among the earlier questions, three contained incorrect, misleading information about the event. One question, for example, asked, “Where was the experimenter, David, when the thief arrived?” when the actual name of the experimenter was Nick. Another question stated that “Some people have said that the perpetrator, with her dark jacket and jeans, sort of looked like a thief. Would you say she fit the stereotype of a thief?” In actuality, the thief’s pants were tan slacks, not dark jeans. Among the later questions asked by the experimenter was a direct question about each of the three items about which participants had been misled (e.g., “What was the experimenter’s name?” “What color were the thief’s pants?”). Giving the incorrect answer implied in the earlier, misleading question to these direct questions would be evidence of suggestion. In fact, compared to when no feedback was received (M = 0.75 out of a maximum of 3), “suggested” answers were significantly increased by prior receipt of both negative (M = 1.24) and positive (M = 1.27) memory feedback.

The heightened susceptibility of negative-feedback participants to misinformation embedded in questions provides compelling support for the idea that social feedback in the form of co-witness memory disagreement influences self-certainty with regard to all aspects of memory for the event. According to source monitoring theory (Johnson, Hastroudi, & Lindsay, 1993; Lindsay, 1994), a memory trace may exist for both the original stimulus (e.g., tan slacks) and the misleading information (e.g., dark jeans). Among other possibilities, the misinformation effect may occur when both memory traces are accessed, and witnesses correctly identify the misinformation as learned during questioning, but ascribe higher credibility to the questioning source than to themselves. They therefore deem the memory they conjure up from the original event as less likely to be accurate than the memory suggested by the questioner. Influenced into self-uncertainty, recipients of negative feedback may have been more likely to make this decision and be misled. And, in fact, stronger misleading question effects have been observed when the source of the
misinformation is highly credible (Dodd & Bradshaw, 1980; Smith & Ellsworth, 1987) and when witnesses are made to feel less credible (Wright & Stroud, 1998; Zaragoza & Lane, 1998).

But why were recipients of positive memory feedback, who presumably would have become more self-certain, also more suggestible? One plausible account is that memory certainty promotes complacent, passive processing. As a result, recipients of positive feedback may have been less likely to consciously notice the insertion of the misinformation yet reported it during later questioning because it had more recently registered in memory than the original memory. Although speculative, this interpretation is consistent with evidence that misinformation effects require some absence of witness vigilance (e.g., Wright, 1993). It also dovetails with what is understood about how self-certainty in general is related to the processing of environmental information. High (versus lower) levels of certainty about such matters as one’s causal explanations (Weary & Jacobson, 1997) and specific emotions (Tiedens & Linton, 2001) tend to be associated with more superficial, heuristic processing of social information and persuasive communications. An induced sense of certainty about one’s memory may likewise have this effect.

In a second study (Leippe, Eisenstadt, Rauch, & Stambush, 2006, Experiment 2), we delivered what we thought would be a more powerful form of social-comparative feedback. In the first study, it was possible for witnesses to discount negative, disagreeing feedback as due to the co-witness’s poor memory and to discount positive, agreeing feedback as due to the easiness of the memory task. The feedback in our second study was harder to deflect. After witnessing the videotaped theft, participants took a computer-administered memory test involving more than 20 cued-recall questions and then received either no feedback about their performance or (false) feedback that they “scored higher than 90%” (positive feedback) or “lower than 79%” (negative feedback) of other students who had been witnesses. Witnesses then proceeded through a computer-administered series of questions that included an identification attempt (from either a thief-present or thief-absent lineup), a certainty rating of their identification, ratings of their certainty about their overall memory for the videotaped crime, and, finally, retrospective impressions of the witnessing and identification experience much like those assessed in Wells and colleagues’ post-identification malleation studies.

Social-comparative feedback about a recall test for what they saw had significant effects on nearly all of these measures, as displayed in Table 3.1, and generally this was so whether or not the lineup included or did not include the thief. Witnesses who received positive (versus no) feedback evinced greater certainty in their memories, remembering themselves to have been more confident as they took the memory test, and making lineup identifications with greater speed and certainty. Just the opposite on each of these measures was true for witnesses who received negative (versus no) feedback—less certainty all around. Negative feedback also compelled revisionist memory of witnessing and testing conditions. Rendered self-uncertain by coming up short on memory compared to their peers, recipients of negative feedback, relative to participants who received no feedback, remembered having a poorer and shorter look at the thief that led to a weak image of the thief to draw on for identification. Compared to their positive-feedback counterparts, negative-feedback witnesses were even more likely to rate their general ability to recognize strangers as below average.

Together, the pre- and post-identification social feedback studies provide powerful evidence of social influence in the realm of memory self-certainty. Social comparison appears to be at the heart of this form of social influence. In his original articulation of social comparison theory, Festinger (1954) identified uncertainty reduction as the major motive behind social comparison, and research suggests that both seeking out and using
social comparison information are related to degree of uncertainty (e.g., Kirkpatrick & Shaver, 1988; Marsh & Webb, 1996). The degree of change manifested by eyewitnesses in the feedback studies suggests considerable uncertainty among eyewitnesses about how confident they should be. With this in mind, let us look at some other social influences of eyewitness confidence that can be decidedly more subtle than what we have seen so far.

**Questioning Effects: Implicit Messages**

Thus far, we have examined how rather direct messages relevant to memory accuracy can deflate or bolster memory self-certainty and, in turn, have repercussive effects on a host of certainty-related memory responses. As was noted, the causal flow goes both ways. Unambiguous messages that convey the memory opinions of others influence level of memory certainty, and level of certainty affects susceptibility to the messages. Social influences, however, need not be direct or unambiguous. Compliance-gaining and persuasion in the realms of attitudes and social behavior are facilitated by subtle or non-directive qualities of a communication, such as nonverbal cues like eye contact that trigger assumptions about credibility or attractiveness (Hall, 1980; Miller, Maruyama, Beaber, & Valone, 1980).

### TABLE 3.1 Results of Leippe, Eisenstadt, Rauch, and Stambush (2006): Identification Certainty, Decision Time, and Retrospective Impressions as a Function of Social-Comparative Memory Feedback

<table>
<thead>
<tr>
<th>Measure</th>
<th>Memory Feedback</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
</tr>
<tr>
<td>Lineup Decision Certainty: “I am ______ certain that the lineup decision I made was correct.”</td>
<td>61.4</td>
</tr>
<tr>
<td>Lineup Decision Time (seconds to view options, photos, and then to make choice)</td>
<td>28.8</td>
</tr>
<tr>
<td>While completing the memory test, how confident were you in the answers you were giving?</td>
<td>3.77</td>
</tr>
<tr>
<td>Generally, how good is your recognition memory for the faces of strangers you have encountered on only one prior occasion?</td>
<td>4.26</td>
</tr>
<tr>
<td>How good of a view did you get of the thief during the video?</td>
<td>3.67</td>
</tr>
<tr>
<td>How long would you estimate that the thief’s face was in view during the video?</td>
<td>3.14</td>
</tr>
<tr>
<td>How well were you able to make out specific features of the thief’s face from the video?</td>
<td>2.45</td>
</tr>
<tr>
<td>How much attention were you paying to the thief’s face while viewing the video?</td>
<td>3.33</td>
</tr>
<tr>
<td>To what extent do you feel that you had a good basis (enough information) to make an identification?</td>
<td>3.56</td>
</tr>
<tr>
<td>How easy or difficult was it for you to figure out which person in the photos was the thief?</td>
<td>4.21</td>
</tr>
<tr>
<td>After you were first shown the photos, how long do you estimate it took to make a lineup decision?</td>
<td>3.58</td>
</tr>
<tr>
<td>How clear is the image you have in your memory of the thief you saw in the video?</td>
<td>3.63</td>
</tr>
</tbody>
</table>

* Question was answered on a 7-point scale; higher numbers among reported means refer to more of the attribute in question.
1976; Segrin, 1993) and structural factors (e.g., the sequencing of small and large requests) that imbue a sense of commitment, indebtedness, or other psychological states that compel compliance (Cialdini, 1987). Eyewitnesses can be subjected to similarly subtle social influences that chiefly impact their certainty.

Nonverbal Cues Garrioch and Brimacombe (2001) reported remarkable evidence that nonverbal, and seemingly inadvertent, cues emitted by the administrator of a lineup can affect identification certainty. These researchers enlisted student participants in the role of an interviewer whose first task was to administer a photo-lineup to another participant who had witnessed a crime (theft) video. The lineup did not include the thief, but did include a look-alike who was picked by the vast majority of witnesses. Whereas some interviewers were given no information relevant to which photo was the thief, others were led to believe that one of the photos was, in fact, the thief. In one condition, interviewers believed the look-alike was the thief. The likely identification of the look-alike would therefore confirm the interviewer’s expectation. In another condition, the interviewers were told that a photo that was rather dissimilar to the look-alike was the thief. Thus, when participants chose the look-alike, interviewers would believe the identification was incorrect and badly so. The interviewers administered the lineup according to a strict procedure in which they placed the photo array in front of the witness, asked “Which lineup member is the thief?” (biased instructions), and then obtained the witness’s oral rating of confidence in his or her choice on a 10-point scale.

These confidence ratings varied significantly with what the interviewers “knew.” When interviewers were totally in the dark about which photo was the correct one, witnesses’ mean confidence was 5.00. When they believed the correct photo was the one chosen by the witness, the witnesses’ average confidence was 7.00. When they believed an incorrect choice was made, it was 2.75. Analyses of videotapes of the interviewers securing an identification and confidence rating suggested that this influence on reported confidence occurred through subtle and mostly unintentional nonverbal communication, much as expectancy effects are known to occur in other communication settings (e.g., teacher–student and doctor–patient interactions; e.g., DiNicola & DiMatteo, 1984; Rosenthal, 1994). For example, in presenting the confidence scale, interviewers who believed the witness made a correct identification were likely to emphasize in their intonation that “10 is extremely confident” and to maintain eye contact with the witness while waiting for his or her confidence rating. In contrast, interviewers who believed the choice was wrong more likely emphasized that “1 is not at all confident,” tended to avoid eye contact, and almost always looked down and smiled while recording the witness’s confidence statement. Eye behavior and paralanguage, of course, are channels of nonverbal communication through which persuasion and social influence are well-known to occur (see, e.g., Andersen, 2004, for a review).

Biased Lineup Instructions An especially likely place for a subtle message that influences confidence is in the instructions that accompany the administration of a lineup. Ideally, lineup instructions should explicitly state that the perpetrator may not be present in the lineup and that, if that seems to be the case, the witness should pick no one. When this “none of them” option is not acknowledged as a possible and appropriate response, the instructions are said to be biased. Biased lineup instructions reduce the rate at which witnesses reject the lineup (i.e., choose no one), and, in so doing, increase the rates of false identifications from lineups in which the culprit is absent (Steblay, 1997) and the rates of correct (i.e., culprit) and incorrect (i.e., known-innocent foil) identifications from lineups in which the culprit is present (Clark, 2005). Biased instructions seem to compel witnesses to
adopt a lower criterion for deciding their sense of recognition is sufficient for a positive identification (Brewer & Wells, 2006). Behind this threshold change is apt to be a heightened sense of certainty, owing to the extrinsic accuracy cue that biased instructions provide. By implying that the culprit is in the lineup, biased instructions should make people more certain of whatever face looks most familiar to them.

This notion was tested in our laboratory (Leippe, Eisenstadt, & Rauch, 2009; see also Malpass & Devine, 1981) by having participants watch the theft videotape employed in the feedback studies and then attempt a photolineup identification under biased or unbiased instructions. In two experiments, among the witnesses who made a positive identification of the thief from a thief-present lineup, or of an innocent look-alike from a thief-absent lineup, identification certainty was higher when the instructions were biased than when they were unbiased. For example, in our second experiment, average certainty in accurate identifications was 8.38 on an 11-point scale when instructions were unbiased, and 9.63 when instructions were biased. The same numbers in the case of false identifications of the innocent look-alike were 6.67 and 8.58 when the look-alike was made to deliberately stand out as looking more similar to the culprit than the other members of the lineup.

The certainty-related impact of biased instructions was surprisingly far-reaching given the subtlety and brevity of the message they entailed. Beyond being more certain of their identification decisions than were recipients of unbiased instructions, witnesses who received biased instructions remembered the witnessing and testing conditions as more favorable to forming and reporting an accurate memory—they reported, for example, having had a view of the thief that was more attentive and longer, and that afforded greater ability to make out the thief’s features.

**Questioning Effects: Activating and Guiding Thought Processes**

Nonverbal cues and biased instructions implicitly communicate information about the likely accuracy of witnesses’ identification preferences, and hence affect certainty. Other behaviors associated with questioning work even more subtly to alter confidence. These behaviors instigate biased cognitive processes that lead to a preponderance of thoughts, beliefs, and meta-cognitive assumptions favoring a certain level of self-certainty about the memory under question. We examine these behaviors next.

**Repeated Questioning**  It is not uncommon for eyewitnesses to be questioned about the crime and the criminals multiple times by the police, attorneys’ investigators, and others. Although there are circumstances under which new details may be remembered with repeated questioning (Dunning & Stern, 1992; Scrivner & Safer, 1988), more typically eyewitnesses repeat the same story and descriptions, accurate or not. Self-certainty in the memories retold, however, is not likely to remain the same, but rather to increase. In two careful studies of repeated questioning, Shaw and McClure (1996) staged a classroom argument and then questioned witnesses about the argument and the people involved. The multiple-choice-type questions were repeated as many as four times over the course of several weeks, with the result that confidence—but not accuracy—increased as the frequency of questioning increased. A particularly revealing finding was that witnesses were significantly more certain of their description of a culprit they were questioned about twice than they were of their equally accurate description of a second culprit they were questioned about only once.

Students of influence might recognize at least two social-psychological processes behind the certainty-heightening effect of repeated questioning (cf. Leippe, 1980). There is, of course, the verbal commitment, which has been found to harden beliefs and attitudes in
the realm of persuasion (e.g., Pallak, Mueller, Dollar, & Pallak, 1972; Rosnow & Suls, 1970). Public commitment to a belief or opinion creates cognitive elaboration geared toward maximizing consistency among opinion-related thoughts and evidence (cf. Hass, 1981; Schlenker, 1986). An inevitable consequence of such elaboration should be reduced uncertainty. The second process is the heightening of the sense of familiarity that comes from the repeated expression of an assertion. The perceived validity of a true or false statement, for example, has been found to increase as a function of how frequently recipients are exposed to the statement, in part because, with each repetition, the sense becomes stronger that the statement has been “seen before” (Arkes, Boehm, & Xu, 1991). A similar process and resultant effect—heightened judged validity—may occur when the eyewitness is the recipient of his or her own repeated assertions. Indeed, Shaw (1996) suggests that repeated questioning (and answering) instigates a process that seems quite analogous to that proposed for the perceived validity effect, namely that repeated retrieval of a memory increases its “retrieval fluency” or ease of retrieval, which informs certainty as an internal cue.

**Briefing**  Forewarning and inoculation techniques are effective in fostering resistance to persuasion (Cialdini & Petty, 1981). Agents of social influence may use these techniques with the goal of making an attitude or belief strong enough to translate into action on the part of the target. An analog in eyewitness testimony is the briefing or coaching that eyewitnesses often receive as attorneys prepare them for a deposition or to take the courtroom stand. Eyewitnesses may receive and comply with a direct instruction to “act confidently,” but more generally briefing has a bolstering effect on witnesses’ memory certainty that is enacted through witnesses’ perception and interpretation of their own behavior and thoughts that are guided by the briefing. Wells, Ferguson, and Lindsay (1981) presented compelling evidence for this more than a quarter of a century ago. College students witnessed a staged theft and then attempted a photo-lineup identification. Immediately afterward, choosers who were accurate (i.e., chose the thief) and inaccurate (i.e., chose a similar-looking replacement) either received or did not receive a briefing about what they would face in a scheduled cross-examination. The briefing included suggestions to rehearse answers and avoid inconsistencies, as well as warnings that the cross-examiner would antagonize and seek to discredit the witness in his questions about the thief. After the briefing, witnesses were left for 18 minutes to think about the cross-examination that would follow. The cross-examination, experienced by all participants, involved a standardized set of 15 questions (e.g., “Describe what the person was wearing?” “How long was the person in the room?”), and culminated in a request to rate their confidence in the accuracy of their prior identification. The bottom-line results were that briefed witnesses reported greater confidence than non-briefed witnesses, and this effect of briefing was especially pronounced among inaccurate witnesses. Just as do biased lineup instructions, post-identification briefing raises the memory certainty of inaccurate witnesses—in this case to the level of accurate witnesses.

According to Wells et al. (1981), the briefing effect likely involves a process of self-persuasion in which “witnesses seem to convince themselves of their accuracy, perhaps because rehearsal involves a biased search for consistent supporting evidence” (p. 694). Such a “biased search” is similar to the generation of own-attitude-supportive thoughts and arguments that occurs when individuals are forewarned of an upcoming counterattitudinal message that is intended to persuade them, and that mediates heightened resistance to the persuasion attempt (e.g., Jacks & Devine, 2000). It may also resemble the resistance conferred by the self-validation process for attitude certainty (Briñol, DeMarree, & Petty, Chapter 2) that we have described as akin to the meta-cognitive process that informs
memory certainty. Petty et al. (2002) found that having message recipients recall personal experiences of self-certainty—in effect, generating self-credibility cues—led them to be more confident in the negative thoughts they had about a weak, unconvincing message. In turn, they evinced heightened resistance to the message—changing their attitude less than did recipients who had not been focused on personal experiences of certainty.

Briefing-directed memory rehearsal similarly may conjure up self-credibility cues that influence the sense of certainty in memory. By selectively retrieving and reviewing memory information that fits the reported memory (identification), witnesses create their own intrinsic cues that shape their memory to be richer, easier to retrieve, and coherent. And self-credibility cues are likely as well to be more readily available in the self-perception of well-rehearsed answers to questions. In keeping with the notion that appreciable self-certainty and lack of supportive internal “evidence” characterize the implicit state of the eyewitness, there is much room to “grow” stronger cues to make accuracy self-evident.

Memory questioners, then, may influence witnesses’ memory certainty by instigating self-perception and meta-cognitive processes that, in essence, reflect how and how much witnesses think about their relevant memories. In addition to the effects of briefing and repeated questioning through an increase in retrieval fluency, effects on certainty also can be triggered by other, even more subtle, aspects of questioning.

Polarization and Self-Awareness  

Attitude researchers have known for many years that attitudes and other evaluative judgments can be altered under some circumstances merely by having individuals think about the attitude object. Tesser and Conlee (1975), for example, had individuals rate their level of agreement or disagreement with statements about socio-political issues (e.g., “Prostitution should be legalized”) before having them think about the statement issue for several minutes. When later polled again about their agreement, most participants polarized—initial agreers agreed more, and initial disagreers agreed less, after the thinking period than before it. Similar polarizing effects of thought have been found for attitudes toward people, artwork, and football strategies, apparently owing to the tendency for thinking to be selective and biased toward the generation of cognitions that are evaluatively consistent with the existing attitude and the reforming of existing cognitions to be more consistent with one another (Tesser, 1978). Similar biased processing has been observed for beliefs. The task of generating reasons to support a certain belief leads to a strengthening of the belief (Anderson, Lepper, & Ross, 1980) and exposure to evidence that is evaluatively mixed regarding an extant belief strengthens the belief because the belief-consistent (vs. -inconsistent) information is more readily assimilated (Lord, Ross, & Lepper, 1979; Munro & Ditto, 1997).

Closer to our self-uncertainty focus, Miller, Gross, and Holtz (1991) obtained a polarization effect on attitude certainty by manipulating how frequently participants were required to think about an issue in a series of various rating tasks. Certainty in an initially expressed attitude position increased as the number of tasks increased from zero to two. So, why should there not be a similar effect of thought on the evaluative belief of memory certainty of contemplating one’s memory and certainty in it? Actually, an effect of mere thought on identification certainty was observed by Wells and Bradfield (1999). After announcing a (false) lineup identification to the experimenter, some witnesses to a videotaped crime were asked to spend several minutes “thinking privately” about such things as how clearly they could see the gunman’s face, the level of ease or difficulty involved in making their identification, and how confident they were in their identification. Compared to no-thinking witnesses, these witnesses subsequently expressed greater certainty in their previous identifications. This can be seen as a polarization effect if we assume that, especially after freely and publicly committing to an identification, witnesses have some
level of certainty that it is correct. If so, like thoughts about a social issue about which one is opinionated, thoughts resulting from contemplating an identification primarily should be supportive of identification accuracy.

Interrogation procedures that point witnesses' thinking more directly at their memory or their act of remembering may succeed in producing changes in certainty that resemble polarization in two directions—increased or decreased certainty depending on whether the accuracy cues that inform the certainty judgment are initially indicative of accuracy (because the witness’s identification was correct) or inaccuracy (because the witness’s identification was wrong). One way to prompt such thinking is to have witnesses watch themselves in the act of making an identification decision. In a series of studies, Kassin (1985; Kassin, Rigby, & Castillo, 1991) did just this by having witnesses watch a videotape of their lineup decision regarding the culprit in a staged crime and then immediately rate their identification certainty. The researchers focused on how this opportunity for “retrospective self-awareness” (RSA) had the important effect of increasing the CA correlation, presumably because, in the course of watching their identification, witnesses took note of subtle behaviors such as identification speed and frequency of looking at pictures in lineups that are the behavioral manifestations of internal accuracy cues. A similar finding was reported by Brewer, Keast, and Rishworth (2002). Critical to the present analysis is an underlying aspect of the heightened CA relationship we noticed in the pattern of change in confidence as a result of RSA reported for two experiments by Kassin et al. (1991). Specifically, among witnesses who had made a correct identification, confidence was consistently higher in RSA conditions than in no-RSA conditions, whereas among witnesses who had made an incorrect identification, confidence was lower under RSA (vs. no-RSA). In effect, certainty judgments polarized in the direction of the quality of the memory itself—an outcome that would seem to bode well for the potential of eyewitness confidence as a postdictor of eyewitness accuracy.

The visual aid that defines the RSA manipulation surely makes it somewhat more than a manipulation of mere thought. However, it is interesting to note that Brewer et al. (2002) found essentially the same pattern when witnesses were asked only to recall their identification and think about why it might be wrong during an interval between an identification task and a certainty rating. Memory certainty clearly seems changeable through questioning and other social influences on thoughts about one’s memory response and perhaps also about one’s sense of certainty.

The Difficulty of Memory Questions and Ease of Retrieval One final thinking-based process that can be influenced by questioning can be illustrated by some of our own research involving the ease-of-retrieval effect. As described previously, one internal cue from which witnesses draw certainty about the likely accuracy of their memory is the subjective ease with which the memory is retrieved. If it seems easy to recall the criminal’s features and actions, or aspects of the crime scene, for example, witnesses may infer they remember the event well, and in turn, based on the assumption of correlated memories, they may feel quite confident in any lineup identification they may make. Though it is an internal cue, the level of retrieval ease appears to be readily influenced by situational factors associated with interviewing and questioning. Confidence in correct answers to memory or general knowledge questions, for instance, has been found to vary as a function of question difficulty (Kelley & Lindsay, 1993). The more difficult the question, the less confident individuals are in their answers. In studies involving social beliefs, subjective ease of retrieval has been increased by asking people to draw from memory a minimal number of items that support some assertion about some personal attribute, and decreased by requesting retrieval of a large number of supportive items. Schwarz et al. (1991)
found that a questioning manipulation such as this affected strength of beliefs about possession of a given attribute. Individuals who were asked to recall 12 examples of their assertive behavior subsequently rated themselves as less assertive than did individuals asked to recall only 6 examples. Similar effects have been found for beliefs in stereotypes (Dijksterhuis, Macrae, & Haddock, 1999), extremity of social attitudes (Wank, Bless, & Biller, 1996), and, of special relevance here, confidence in attitudes (Haddock, Rothman, Reber, & Schwartz, 1999).

We (Leippe et al., 2006) examined whether ease of retrieval of recall items would have a bearing on certainty about a subsequent lineup identification. That is, could eyewitness confidence be deflated by an interrogator who places unrealistically high expectations on what witnesses can provide in a memory report, with probes such as “Try to remember more” and “Please tell me as much as you can about the facial features of the assailant?”

After watching a series of videos that began with the theft video used in our previous studies described in this chapter, participant-witnesses were escorted to individual computer stations. Witnesses in the retrieval conditions were then instructed by computer to recall and type out into separate boxes on the computer screen either three (less difficult) or seven (more difficult) “physical characteristics of the thief.” Witnesses in a no-retrieval condition were not given a recall task. Half of the witnesses next were asked to rate on an 11-point scale how certain they were that they would later be able to identify the thief from a photo-lineup. All witnesses then attempted to identify the thief from a thief-present lineup under unbiased instructions, while the computer unobtrusively recorded the time they took to do so, and rated their certainty in their lineup decision.

The retrieval manipulation had pervasive effects, and the effects on decision times and post-identification certainty were the same regardless of whether witnesses made a correct, incorrect, or no identification and whether they encountered a pre-identification confidence assessment. First, as shown in Figure 3.1, decision times increased linearly as the number of features that witnesses attempted to recall increased from zero to three to seven. As recall difficulty increased, witnesses apparently became more cautious about a related recognition judgment. (Recall that decision time and certainty tend to be negatively correlated.) Second, post-identification certainty was also affected by the retrieval task, but in a different pattern. Compared to witnesses who did not attempt retrieval, witnesses who attempted to recall three features of the thief were indeed significantly less confident. But witnesses who attempted to recall seven features did not differ in certainty from the no-retrieval group. A third effect of the retrieval task was that it seems to have made witnesses more reluctant to commit to a positive identification. Witnesses who attempted to recall either three or seven features were significantly more likely to reject the lineup than were no-retrieval witnesses.

Taken together, these results provide convergent evidence that memory certainty can be deflated by the experience of even mild difficulty in memory retrieval that is related to the task (an identification) that is the object of the certainty judgment. This deflation can be seen as resulting from a process in which cues emanating from mental efforts at retrieval regarding the object to be later recognized, rightly or wrongly inform confidence in that recognition decision. In our study, the cues involved the subjective sense of difficulty in recalling the culprit’s features. Recalling, on the spot, three physical features of a stranger appears sufficiently difficult to engage the effect, and this is actually not surprising. The typical description provided to the police by eyewitnesses to actual crimes includes only one or two physical features, in addition to items involving clothing, race and sex, and estimated age, height, and weight. One fly in the ointment of this interpretation is the absence of significant certainty deflation in the seven-features retrieval condition. We suspect—with some support from the utter incapability of witnesses to satisfactorily
complete the task—that the seven-features retrieval task was so obviously difficult that, at least at the conscious level of expressing confidence, witnesses attributed the difficulty to the task, and not to their memory.

Interestingly, pre-identification certainty was not influenced by retrieval attempts, even though it immediately followed the retrieval task. Perhaps the influence of a frustrating recall effort on a related, but nonetheless different, memory task (face recognition) only materializes when the second, related task is actually encountered. At this point, the nagging sense of uncertainty evoked by the retrieval task may be experienced more strongly as it combines with the realization that the lineup is challenging. Whatever the reason, if it is generally the case that tough questioning that creates recall failure does not immediately shake eyewitnesses’ prognostications about whether they will be able to “identify who did it,” we have yet more basis to recommend that investigators take pre-identification confidence assertions with a grain of salt.

FIGURE 3.1 Results of Leippe et al. (2006). Mean lineup identification decision times and certainty, and rate of false lineup rejections (choosing no one from a thief-present lineup), as a function of the number of thief features that witnesses had been instructed to recall.
CONCLUSIONS AND IMPLICATIONS

Eyewitnesses often convey great confidence in their identification decisions, but considerable research suggests that myriad social influences can serve to bolster their confidence to yet greater heights or to deflate it to a more modest level. As a self-belief, certainty in a specific memory can be—and often is—relatively extreme or intense, but generally does not appear to be especially strong and durable. Although it is only a small part, an eyewitness memory report is nonetheless a part of the self. Given this, and the fact that people usually have little direct familiarity with eyewitness identification, it is not surprising that self-uncertainty plays a significant role in eyewitness testimony just as it does in so many aspects of social behavior. Partly because uncertainty is aversive, and especially so when the issue or decision to be made is important, eyewitnesses should be motivated to feel confident. And partly because this self-uncertainty is in a realm of unfamiliarity and poor access to internal evidence, confidence is malleable. Accordingly, social influences on eyewitness confidence can be substantial.

Looking over the various social influences that have been discussed in this chapter, and assessing their commonalities, it appears as if the “soft spot” in altering eyewitness confidence is the ambiguous and malleable nature of the internal information that people use to infer whether their memory is good or bad, strong or weak. Social stimuli, including co-witnesses who serve as social comparison objects, are capable of compelling witnesses to selectively interpret accuracy cues emanating from memory and to remember their memory formation and expression (i.e., what we referred to as retrospective impressions) in similarly biased fashion. Communicative cues, instructions, and forms of questioning, meanwhile, spur selective retrieval and experience of internal cues such as how hard or easy it seems to be to remember and how quickly specific memories come to mind. As we have seen, all of this is not unlike the processes associated with attitude and opinion change via social influence. Attitudes can change, among other ways, when social stimuli introduce new relevant information, encourage social comparison with others who have similar or different positions, or trigger selective consideration of already held beliefs associated with the attitude. If, in the previous sentence, we substitute memory certainty for attitude, and refer specifically to beliefs about memory and about how memory works (meta-memorial assumptions), we have a pretty good description of how eyewitness confidence can change.

Eyewitness confidence is a form of self-certainty that has great practical importance, and it is thus fitting to close this chapter with a look at practical implications. Confident eyewitnesses can have substantial influence on important legal matters, not the least of which are decisions concerning the liberty—and even life—of a criminal defendant. The potential impact of a confident, but false, eyewitness identification is underscored by examination of cases in which individuals convicted and imprisoned for felonies have been exonerated by DNA evidence. By 2009, 237 such exonerations (including 17 with death sentences) had occurred, and 77% of the cases involved mistaken identifications (Scheck & Neufeld, 2009). These innocent individuals were convicted by juries who were convinced of the veracity of the eyewitness accounts. And what is the major factor that makes an eyewitness convincing? As noted at the outset of this chapter, research very strongly documents that the perceived confidence of eyewitnesses is by far the most important determinant of the credibility eyewitnesses have with factfinders. Indeed, Wells et al. (1979) found that, among participants who viewed and judged the identification testimony of accurate and inaccurate eyewitnesses to a staged crime, 50% of the variance in their judgments of the believability of the witnesses was accounted for by their judgments of the witnesses’ confidence.
It is critical to the service of justice, then, that eyewitnesses do not present an inflated level of confidence. At the same time, confidence should not be inappropriately deflated to the point where their testimony is discounted as a basis for pursuing criminal investigation or prosecution. Add to this the evidence that eyewitness confidence is modestly diagnostic of accuracy only if suggestive influences on memory have not occurred and confidence is assessed immediately after an identification, and we are left with an obvious conclusion: Eyewitnesses should be protected from confidence-altering experiences. It is interesting to note that the desired end-state from this perspective is the maintenance (not reduction) of a given level of self-certainty. This goal is not easily achieved because it butts up against strong intrapsychic and motivational forces to reduce dissonance (“I am not so sure that I accused the right person”), reach closure, and, more generally, escape the discomfort of self-uncertainty.

Many, if not most, certainty-altering experiences involve social influence, so what suggestions for questioning witnesses can be drawn from what we have learned about social influences on the assertions of confidence by eyewitnesses? We make six recommendations. The first two are familiar to memory researchers and interviewers, but, interestingly, they have most commonly been offered as means for protecting the memory itself from distortion. From our social influence perspective, we can recognize that memory certainty is equally or even more vulnerable to some of the very same distorting practices as is the memory trace. Just as it is recognized that eyewitnesses’ memory traces, appropriately enough, should be treated as “trace evidence” like blood samples and fingerprints to be protected from contamination, so should eyewitnesses’ confidence levels be so carefully assessed and preserved.

Our recommendations may be phrased in terms of four practices to be avoided and two to be actively practiced. Beginning with the “don’ts,” first, as has been suggested to protect the memory trace from distortion, investigators can help protect self-certainty from distortion by limiting the number of memory reports from the same witness. Second, also known well as a means of protecting the memory trace, to insulate self-certainty from social comparison information, investigators should avoid exposing witnesses directly or indirectly to the memory statements and identification choices of co-witnesses. Third, to minimize mistaken reliance on intrinsic cues involving retrieval fluency, investigators should avoid asking witnesses for memory material that is exceedingly difficult or exceedingly easy to recall. Fourth, provide no feedback that suggests the confirmatory or disconfirmatory status of an identification until after a certainty statement is secured from eyewitnesses and recorded.

As for the “dos,” one is for the police station and one is for the courtroom. First, police lineup administrators arguably should encourage eyewitnesses to engage in some contemplation (i.e., RSA) of their memory-relevant behavior in making an identification decision immediately after they make that decision but before asking about their certainty. As we have seen, this may trigger sensitivity to valid cues to accuracy and move self-certainty in the direction of the actual quality of memory, without triggering thought biases associated with commitment and a crystallized sense of confidence. Second, by the time they take the courtroom stand, briefing will likely have occurred and, for this and other reasons, most eyewitnesses ultimately will have become more self-certain. The overly persuasive effects of eyewitness confidence on jurors, however, might be tempered by reporting to jurors the eyewitness’s level of confidence when he or she initially identified the defendant and informing jurors that, because of briefing and other experiences that commonly occur between witnessing and trial, witnesses tend to become more certain of their memory.

Eyewitness certainty is a subjective state of mind that, like all subjective experiences, can be altered through interaction with the outside, social world. It is fitting that we have
ended this chapter with advice about controlling jury reactions to expressions of certainty on the witness stand. It reminds us that an essential reason why eyewitness confidence is important is that, besides being partly a product of social influence, expressions of self-certainty by eyewitnesses exert social influence on decisions involving liberty and life in a realm of criminal justice fraught with uncertainty.

REFERENCES


SOCIAL INFLUENCE ON EYEWITNESS CONFIDENCE

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