

# Effects of Postidentification Feedback on Eyewitness Identification and Nonidentification Confidence

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Two experiments investigated new dimensions of the effect of confirming feedback on eyewitness identification confidence using target-absent and target-present lineups and (previously unused) unbiased witness instructions (i.e., “offender not present” option highlighted). In Experiment 1, participants viewed a crime video and were later asked to try to identify the thief from an 8-person target-absent photo array. Feedback inflated witness confidence for both mistaken identifications and correct lineup rejections. With target-present lineups in Experiment 2, feedback inflated confidence for correct and mistaken identifications and lineup rejections. Although feedback had no influence on the confidence–accuracy correlation, it produced clear overconfidence. Confidence inflation varied with the confidence measure reference point (i.e., retrospective vs. current confidence) and identification response latency.

The confidence that eyewitnesses express in their testimony has been considered by the courts to be an important criterion for assessing eyewitness accuracy (*Neil v. Biggers*, 1972). It has also been shown to exert an important influence on jurors’ evaluations of witnesses and judgments, with more confident witnesses generally regarded as being more believable witnesses (e.g., Brewer & Burke, 2002; Cutler, Penrod, & Stuve, 1988). Given that experimental studies (Cutler & Penrod, 1995) and forensic exoneration cases (Wells et al., 1998) consistently highlight that mistaken eyewitness identifications constitute an important problem, research has focused on finding independent markers of identification accuracy.

Within the criminal justice system, an eyewitness’s confidence in his or her identification has long been regarded as a useful independent marker of identification accuracy (Brigham & Wolf-Skeil, 1983; Potter & Brewer, 1999; Rahaim & Brodsky, 1982). Psychologists have, however, been much less impressed with confidence as an accuracy marker, with the balance of evidence from empirical studies, reviews, and meta-analyses suggesting a small to moderate confidence–accuracy relation (e.g., Bothwell, Deffenbacher, & Brigham, 1987; Cutler, Penrod, & Martens, 1987; Sporer, Penrod, Read, & Cutler, 1995). Yet, three lines of recent evidence have been encouraging for the future of confidence as a marker of identification accuracy. First, recent studies by Lindsay, Nilsen, and Read (2000) and Lindsay, Read, and Sharma (1998) produced more substantial confidence–accuracy correlations (.55 and .59, respectively) by varying the encoding conditions across

participants so as to increase the variance in the distribution of confidence scores. Second, a study by Juslin, Olsson, and Winman (1996) demonstrated that witnesses’ confidence and accuracy can be well calibrated (i.e., confidence levels match the objective probabilities of being correct) without this being reflected in the overall confidence–accuracy correlation. Finally, recent research by Brewer, Keast, and Rishworth (2002) demonstrated that even under conditions where confidence and accuracy were not well calibrated, simple manipulations designed to improve witnesses’ scaling of confidence produced impressive confidence–accuracy calibration.

Given these results, and the known influence of witness confidence within the criminal justice system, it is crucial that we understand how witness confidence is influenced by environmental variables. Recent work (Bradfield, Wells, & Olson, 2002; Garrioch & Brimacombe, 2001; Luus & Wells, 1994; Wells & Bradfield, 1998, 1999) has shown that eyewitness confidence is malleable. When eyewitnesses are given explicit feedback, or even subtle cues, regarding the accuracy of their response, they are likely to adjust their confidence estimates to reflect their belief that they were in fact accurate (confirming feedback) or inaccurate (disconfirming feedback) in their identification response. The effect of postidentification feedback on eyewitness confidence has been replicated in several studies, with confirming feedback leading witnesses to report significantly greater confidence in their identifications than witnesses who received no feedback. Confirming feedback has included informing witnesses that they had identified the suspect (Bradfield et al., 2002; Wells & Bradfield, 1998, 1999) and informing witnesses that other witnesses have made the same identification (Luus & Wells, 1994). Confidence inflation effects have also been detected in the absence of such explicit feedback. Garrioch and Brimacombe found inflation when the lineup administrator simply believed the person identified was the offender, with the lineup administrator’s intentions and nonverbal behaviors apparently conveying feedback information.

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The postidentification feedback effect has important practical implications. Witnesses may be asked about their confidence in an identification at various stages during an investigation or the trial proceedings. If postidentification feedback influences witnesses' subsequent reports of their identification confidence (e.g., when questioned about it in the courtroom), their reported confidence is clearly not a valid index of their actual confidence at the time at which they made the identification. The problem is further exacerbated by the fact that the effects of postidentification feedback have been shown to extend beyond witnesses' confidence assessment, influencing their subsequent recollections of the witnessed event. For example, confirming feedback has been shown to influence witnesses' accounts of how much attention they paid to the face of a perpetrator, how good their view was, and how well they thought they made out the details of the perpetrator's face (Wells & Bradfield, 1998). If criminal investigators uniformly adopted eyewitness researchers' recommendations to use blind testing procedures (i.e., involving a lineup administrator who has no knowledge of the suspect's identity) and to record the eyewitness's confidence immediately after the identification, the postidentification feedback effect for identification confidence would no longer be an issue. Unfortunately, however, such recommendations have not been widely adopted in the United States or in other jurisdictions. Further, recent cases have seen eyewitness identification evidence upheld despite obvious departures from recommended procedures and a strong likelihood that postidentification feedback had influenced the witness's confidence (cf. *Turner v. State*, 2002). Thus, until confidence assessments are routinely collected at the time of the identification by blind lineup administrators, it is imperative that we continue to explore the boundary conditions of the postidentification feedback effect and, in turn, attempt to refine our understanding of the origins of the effect.

As already indicated, confidence inflation has been demonstrated in a number of postidentification feedback studies. It is clear that leading eyewitness researchers consider the effect to be extremely robust. It is not uncommon for researchers reporting confidence data from identification studies to include warnings about the malleability of confidence estimates (e.g., Olsson, 2000; Phillips, McAuliff, Kovera, & Cutler, 1999; Smith, Lindsay, & Pryke, 2000) or the importance of obtaining confidence estimates from witnesses at the time of the identification before any external influences can come into play (e.g., Wells, 1993; Wells & Luus, 1990; Wells, Olson, & Charman, 2002). Further, the research findings have been sufficiently convincing for published guidelines on the collection of eyewitness evidence to include a clear warning about these two issues (Technical Working Group for Eyewitness Evidence, 1999; Wells, Malpass, et al., 2000; Wells, Small, et al., 1998).

Despite the widespread acceptance of the inevitability of postidentification feedback effects on eyewitness confidence, there are several striking methodological features of the existing studies that could possibly have shaped the effects reported in these laboratory studies and reduced the generalizability of the results to the forensic setting. To establish some of the boundary conditions for the postidentification feedback effect, the present studies focus more heavily on these methodological issues than on more theory-driven concerns that ultimately must be addressed to understand the mechanism(s) underlying the effect. Should the postidentification feedback effect not prove to be resistant to fundamental method-

ological variations such as those outlined in subsequent sections, we would have good grounds for querying the applied significance of the phenomenon. One feature of all of the feedback studies conducted to date is that they used biased witness instructions, that is, instructions that failed to warn the witness that the perpetrator might not be present in the lineup. Biased instructions have been shown to increase the likelihood that a witness will make a mistaken identification (Malpass & Devine, 1981), and indeed, the rationale behind the use of biased instructions in previous postidentification feedback studies was to maximize the number of mistaken identification data points. Although it is widely acknowledged that the postidentification feedback effect is robust under the biased instruction conditions used in previous studies, it now remains to be seen whether the effect is also detected given unbiased lineup instructions. This methodological test is especially important because eyewitness researchers strongly advocate the use of unbiased lineup instructions (Technical Working Group for Eyewitness Evidence, 1999).

Do theoretical perspectives on the mechanisms underlying the postidentification feedback provide any grounds for believing that the effect should extend to unbiased lineup instruction conditions? Bradfield et al. (2002) have argued that the occurrence of the postidentification feedback effect is dependent on the strength of internal cues to accuracy relative to that of external cues, such as those provided by feedback. They have noted that theories such as Festinger's (1954) social comparison theory suggest that people evaluate their opinions and abilities through comparison with others' opinions and abilities when objective, nonsocial cues are unavailable. Similarly, Bem's (1972) self-perception theory states that individuals come to know their own internal states at least in part by inferring them from observations of their own overt behavior and/or the circumstances in which this behavior occurs. To the extent that internal cues to accuracy are weak, ambiguous or uninterpretable, the individual must rely on external cues to infer their own internal states (see also Strack & Bless, 1994). One important example of a relevant internal cue suggested by Bradfield et al. (2002) and Wells and Bradfield (1998) is the degree of *ecphoric similarity*—that is, the degree of perceived similarity between a stimulus and a person's memory (Tulving, 1981)—which can direct one's decision as to which of several stimuli were observed previously. Whether the key internal cues are in the form of a memory trace, feelings of familiarity, or both has not been canvassed in this research (Mäntylä, 1997; Yonelinas, Kroll, Dobbins, & Soltani, 1999). Weak internal cues could indeed derive from either source. What is clear, however, is the proposition that individuals will rely on external sources of information (e.g., feedback) when the internal cues are impoverished or weak, regardless of the precise nature of the deficiency.

Although no data on the postidentification feedback effect exist for unbiased lineup instructions, these theoretical perspectives suggest that the effect will still be detected under such conditions. We know that unbiased instructions produce lower rates of choosing from target-absent lineups (Stebly, 1997), suggesting that witnesses may adopt a stricter criterion (i.e., require stronger evidence) for a positive identification under such conditions. Likewise, there is also evidence, albeit less clear-cut, of altered (i.e., lower) rates of positive identifications from target-present lineups with unbiased instructions (Stebly, 1997), again suggesting the possibility that witnesses may adopt stricter criteria for an identi-

fication under such instructional conditions. Although the presence or absence of instructional bias may be expected to influence the pattern of identification responses for both target-absent and target-present lineups, we have no strong grounds for believing that the internal cues to accuracy that derive from the encoding and identification test in either target-present or target-absent lineups will be affected in a substantial way (either rendered of impeccable quality or completely degraded) by the specific instructions (biased vs. unbiased) given at the identification test. However, given that unbiased instructions are widely advocated as the appropriate lineup procedure, we must examine whether confidence inflation effects are detected under such conditions. Consequently, a major focus of the current studies was on whether, using unbiased lineup instructions, we could duplicate the well-established feedback inflation effects found with biased instructions in target-absent (Experiment 1) and target-present (Experiment 2) lineups. If confidence inflation was not observed when witnesses were clearly advised that the culprit might not be present in the lineup, this would indicate that the potentially damaging effects of postidentification feedback were somewhat less pervasive than generally assumed to be the case in the literature.

Another key issue that needs to be clarified before we accept the ubiquitous nature of confidence inflation effects is whether we should expect feedback inflation effects for all possible responses that a witness can give when presented with a lineup (target-absent lineups: mistaken identifications, correct rejections; target-present lineups: correct identifications, incorrect or filler identifications, incorrect rejections). This is an issue not addressed in any of the previous research. Yet not only might the feedback inflation effects differ across these response categories but the forensic implications of those effects might also differ. Let us consider the case of a target-absent lineup. We know for certain from the forensic DNA exoneration cases (Wells et al., 1998) that target-absent lineups occur in the real world. We may not know what the exact proportion is, but we have unequivocal evidence from high-profile cases demonstrating that this is a major issue for the criminal justice system. How does this happen? The police have a suspect (who may or may not be the guilty party) or several suspects. They put the suspect(s) in a photospread or live lineup, and if the suspect looks most like the witness's memory of the offender, the witness identifies that person (quite likely a person with some other criminal offense history). All the suspicions of the police investigators are confirmed. They now have a case, and in their enthusiasm, they provide some kind of confirming feedback (either explicit or subtle) to the witness. As a result of this feedback, the witness—who may have chosen confidently or may have been undecided around but felt pressure to choose—suddenly becomes more confident and goes into court exuding confidence. This in turn makes a big impression on the jury. Yet, all the time, if the wrong person(s) was in the lineup, the person chosen is innocent. Thus, for target-absent lineups, the presence of an inflation effect in association with the identification of the suspect is clearly the most critical issue.

It is tempting to then argue that the selection of any lineup member other than the target would not be met with confirming feedback from the police. But it is also possible that police will use a lineup as an investigative tool to eliminate a person from consideration, perhaps because as long as the person is a suspect, they are in effect shielding the real offender. Under these circum-

stances, regardless of precisely why the police are trying to rule a particular person out, the police may well provide confirming feedback if a filler, rather than the person they are trying to rule out, is selected. This might happen, for example, if the witness chose one of the fillers who was another known offender or chose someone who looked very much like an alternative suspect. In turn, the witness may subsequently exude confidence in their filler identification, with this confidence being persuasive in ensuing investigatory and decision-making processes.

Similarly, feedback inflation effects for positive identifications need to be distinguished from those for “not present” responses (i.e., lineup rejections). Police investigators usually have a clear hypothesis about the offender's identity (namely, the suspect in the lineup) and thus are unlikely to provide confirming feedback to a witness who rejects the lineup (unless of course they are trying to eliminate a suspect from their inquiries). Moreover, inflation effects arising from confirming feedback for “not present” responses are likely to be of little practical significance. This is not to say, however, that any police reaction to a witness who rejects the lineup is not forensically relevant. For example, disconfirming feedback for a lineup rejection may well be important if it leads witnesses to subsequently report lower confidence in their lineup rejection than they might otherwise have done. Indeed, recent research looking at the amount of information gain obtained from “not present” responses suggests that police should pay as much attention to these responses as they do to identification of the suspect because these responses are saying something important about the likely innocence of the police suspect (Wells & Olson, 2002). So whereas the focus in this article is on effects of confirming (rather than disconfirming) feedback, any suggestion that feedback effects might also apply to nonidentification responses points to an obviously important issue for future research.

As already indicated, previous research has focused on target-absent lineups and has not distinguished between the alternative response categories of mistaken identifications and correct rejections. Yet there are grounds for expecting confidence inflation to differ for these two response categories. In line with the theoretical perspective outlined earlier, we would expect that, on average, incorrect responses (i.e., mistaken identifications) would be the outcome of a relatively noisy trial, characterized by weaker internal cues to accuracy (e.g., a weaker memory trace or lower familiarity) and, in turn, greater reliance would be placed on alternative, external cues. Thus, greater confidence inflation would be expected for incorrect identifications than for correct lineup rejections.

To date, there has also been no attempt to elucidate the specific effects of postidentification feedback for target-present lineups. Previous studies by Luus and Wells (1994), Wells and Bradfield (1998, 1999), and Garrioch and Brimacombe (2001) used target-absent photo arrays only. The combination of target-absent arrays and biased lineup instructions produced exceptionally high rates (apparently 96–100%) of mistaken identifications. Such conditions almost certainly provide a poor approximation to real-world conditions. Although we cannot know the proportion of target-absent lineups conducted in the real world, or the proportion of mistaken identifications from such lineups, it seems most unlikely that either would even approach the values produced in the experiments in this area, particularly given field studies with substantial databases indicating that only around 50% of lineup procedures

resulted in a positive identification of the suspect (Pike, Brace, & Kynan, 2002).

Further, only one postidentification study (Bradfield et al., 2002) has even included a target-present lineup condition. Actually, Bradfield et al. found that accurate witnesses were not influenced by confirming feedback, whereas inaccurate witnesses were. Unfortunately, however, Bradfield et al.'s categorization of accurate and inaccurate witnesses failed to make the important distinction between target-present and target-absent lineup responses. Specifically, the *accurate witness* category combined the data of those who correctly identified the suspect in the target-present lineup with data from those who correctly rejected the target-absent lineup; the *inaccurate witness* category combined those who made a positive identification in the target-absent lineup with those who chose incorrectly in the target-present lineup. This failure to distinguish between target-present and target-absent conditions severely limits our understanding of the broad range of feedback effects that may occur in the real world. As already indicated, police are likely to react differently to these different types of identification response. Whether feedback produces confidence inflation for correct identifications from a target-present lineup is clearly of great forensic relevance given the well-documented effects of witness confidence effects on juror judgments. As a consequence of receiving feedback, witnesses could end up communicating, either in subsequent investigative interviews or in the courtroom, a level of confidence in their identification that far outstripped their confidence when they made their identification. Thus, contrary to what was done in Bradfield et al., it is crucial to establish whether feedback inflation effects occur for correct identifications and to distinguish these from effects on filler identifications and lineup rejections. When police have a suspect in mind and go to the effort of conducting a lineup, they would be unlikely to consider a rejection of the lineup as a positive response and then to give confirming feedback. Rather, such a response is more likely to be met with disappointment (or disconfirming feedback), with the witness's response and testimony most likely disregarded. Nevertheless, as we outlined earlier, there are again good reasons for wanting to clarify likely feedback effects in all of the possible scenarios. As with target-absent lineups, we hypothesized that the feedback inflation effect would vary across identification response categories. Specifically, we expected internal cues to accuracy to be weaker, and the influence of feedback greater, for the incorrect identification responses (i.e., incorrect-filler identifications and incorrect rejections).

We also conducted a preliminary examination of an issue that has yet to receive any consideration in research: the influence of the reference point for a witness's confidence assessment on the size of the feedback inflation effect. In the real world, the way in which a confidence assessment is requested from a witness is quite likely to vary depending on the aims of the questions and the time at which the question is being asked. For example, the questioner may request confidence at the time the identification was made (retrospective confidence) versus confidence at the present time (current confidence). In previous research, the reference point has varied, although certainly not in any controlled way, and its impact has not been examined. Luus and Wells (1994) asked about current confidence 10–15 min after the identification. Wells and Bradfield (1998, 1999) asked about retrospective confidence at least 6 min after the identification. Bradfield et al. (2002) and Garrioch and

Brimacombe (2001) asked about retrospective confidence immediately after the identification. Here we contrasted asking witnesses about (i.e., to recall) their confidence at the time of the identification (retrospective) with asking about their confidence at the present time (current). The pattern of findings for retrospective and current confidence has profound forensic relevance. If the reference point for the confidence assessment does indeed make a difference, this has important implications for the degree of feedback inflation that might be expected in the real world where, at any stage in the investigation or trial process, confidence assessments could be solicited from witnesses with reference to their state at either the present time or at the time of the identification.

Finally, the recent study by Bradfield et al. (2002) also examined the effects of confirming feedback on the confidence–accuracy relation. They created conditions that ensured a strong confidence–accuracy correlation, specifically, (a) good viewing conditions; (b) in the target-absent lineup, the target's replacement did not closely resemble the target; and (c) in the target-present lineup, the target's appearance closely resembled that in the video. Under these conditions, postidentification feedback reduced the confidence–accuracy correlation (significantly) from .58 to .37, thereby undermining the value of reported confidence for assessing accuracy. We also examined the confidence–accuracy relation here, although not under conditions designed to maximize the relationship. Because detecting differences between correlation coefficients would be problematic if the typically low confidence–accuracy correlation coefficients were obtained, we examined the effects of feedback on the degree of over-/underconfidence (O/U) displayed by the witnesses. An O/U statistic (see Lichtenstein, Fischhoff, & Phillips, 1982, for detailed descriptions of the measures) can vary from  $-1$  to  $1$ , with a negative score denoting underconfidence and a positive score denoting overconfidence. Because the identification test paradigm yields only one data point per participant, the O/U statistic is calculated across participants by comparing the mean subjective probability (i.e., mean confidence) of a correct identification with the overall proportion of correct identifications. To the extent that feedback inflates confidence to unrealistic levels (i.e., where average confidence clearly exceeds proportion correct), we would expect participants to display more marked overconfidence in the feedback than in the no-feedback condition.

In summary, the two experiments reported here addressed several issues not yet examined in the existing research on postidentification feedback effects. It is well established that postidentification feedback inflates eyewitness confidence for mistaken identifications from target-absent lineups given biased instructions. It is not known, however, whether the effect extends beyond these conditions. This then was the first issue targeted in Experiments 1 (target-absent lineups only) and 2 (target-present lineups only). Specifically, we hypothesized that postidentification feedback would inflate eyewitness confidence when witnesses received clear instructions regarding the possibility that the offender may not be present in the lineup (i.e., unbiased instructions). We did not include conditions using biased instructions because there already exists ample evidence that the postidentification feedback effect is robustly obtained with biased instructions. The purpose of this study was not to see if the postidentification feedback effect was stronger or weaker with unbiased instructions, but rather to see if the postidentification feedback effect occurred at all with unbiased

instructions. The second issue investigated was whether confidence inflation occurred for all of the possible identification response categories in target-absent (Experiment 1) and target-present (Experiment 2) lineups. Was confidence inflation detected for the most obviously crucial identification responses: mistaken identifications (target-absent lineups) and correct identifications (target-present lineups)? Did it also extend to other identification response categories that might appear less likely to attract confirming feedback and yet, under circumstances such as we outlined, might still be vulnerable to social influence? For target-absent lineups, we hypothesized greater confidence inflation for mistaken identifications than for correct lineup rejections; for target-present lineups, we predicted more marked confidence inflation for incorrect (filler) identifications and incorrect lineup rejections than for correct identifications. Third, we conducted an exploratory investigation of the confidence inflation effect for measures of retrospective and current confidence. Fourth, we explored the effects of feedback on the relationship between confidence and accuracy (across Experiments 1 and 2), hypothesizing that confidence inflation induced by confirming feedback would be reflected in a confidence–accuracy relation characterized by more pronounced overconfidence than found in the absence of such feedback. This issue was examined using the combined data of Experiments 1 and 2.

### Experiment 1

This experiment focused on the presence of the postidentification feedback effect in a target-absent lineup under unbiased lineup instruction conditions. It also examined whether the effect was more pronounced for mistaken identifications than for correct lineup rejections and distinguished between confidence inflation effects for current and retrospective confidence. A no-feedback control condition was contrasted with a condition in which witnesses received confirming feedback in the form of information about the majority of identification decisions made by other participants in the study (cf. Luus & Wells, 1994).

#### Method

##### Participants and Design

Participants were 208 individuals (82 men and 125 women) recruited from the student employment service and paid for their participation. Ages ranged from 21 to 76 years ( $M = 29.3$ ,  $SD = 12.2$ ). A single-factor between-groups design was used with participants randomly assigned to feedback or no-feedback conditions. Dependent measures included the identification test response (mistaken identification, correct rejection) and confidence (retrospective and current) in the identification decision.

##### Materials

**Stimulus event.** A 140-s video showed a thief entering a restaurant and stealing a credit card that a waiter had left on a counter. The thief was in view for 70 s and was visible from a number of different angles, with full or partial views of his face for 23.1 s. Two other people appeared in the video: the person who left the credit card with the waiter and the waiter. Although both were young men, neither was of similar appearance to the thief.

**The lineup.** The lineup consisted of eight color pictures showing a front view of the person from the chest up (4 cm × 5.75 cm), presented

simultaneously in two rows of four on a 15-in. (381-mm) computer screen (resolution of 1,024 × 768 pixels). Below each was a number (1–8); on the lower center of the screen was a button marked Not Present. The original photos were scanned with a resolution of 100 × 144 pixels. An identification response was made by clicking the mouse button on one of the photos or on the Not Present button. Identification latency (accuracy to 1/100 s), from the appearance of the lineup to the identification response, was recorded by the computer.

Three observers watched the crime video and then provided a written description of the thief. The lineup members for Experiment 1 were chosen from an assortment of 12 photos that shared a similar description with the culprit: specifically, male, 20–30 years, olive skin, probably Asian background, and medium-length black hair. Thirty observers viewed the crime video and then rated the lineup version of the photos in terms of their similarity to the thief in the video. Each participant was asked to arrange a randomly ordered set of lineup photographs along a 1-m line. At one end, there was an anchor point indicating that the photo was identical to the thief in the video; at the other end, the anchor indicated that it was completely different. Participants were instructed to use the distance that they placed the photo from the anchor points to indicate the similarity (or dissimilarity) of the photo to their memory of the thief. They were also asked to use the distance between each of the fillers to indicate their similarity relative to one another. Average distances from the *identical* anchor were 45.8–89.8 cm ( $M = 70.2$ ) for the members of the target-absent lineup.

##### Procedure

Before viewing the robbery video, participants were informed that they would watch a short film and that they should pay close attention to the people in the film because they would be asked questions about them afterward. After viewing the film, the participants were seated in individual cubicles and worked on a set of picture puzzles for 15 min. Once this time had elapsed, they were told to read the instructions on the computer monitor carefully. The first screen of the program told the participants to “Please follow the prompts on the screen. Responses can be made by clicking the left mouse button.” They then viewed the instructions,

We would like you to try and identify the thief. He may or may not be present in the lineup. Please indicate your choice by clicking the button underneath the corresponding face. If you think the thief is not in the lineup, click the “Not Present” button.

After responding, participants in the feedback condition read a screen that told them, “This study has now had a total of 87 participants, 84 of them made the same decision as you!”<sup>1</sup> Participants in the no-feedback condition viewed a screen that read, “Please wait while the next screen loads,” for the same amount of time as the feedback screen was shown (10 s). They then proceeded to the next two screens that (respectively) asked them to rate their confidence in their identification decision “at the very moment that you made your decision” (retrospective confidence) and “right now (not when you viewed the lineup, but now)” (current confidence) on an 11-point scale ranging from 0 (0% *confident that my decision was correct*) to 100 (100% *confident that my decision was correct*). The order of these questions was counterbalanced within each condition. Finally, participants completed the feedback manipulation check, which

<sup>1</sup> Because participants attended the laboratory in groups ( $n_s = 4–8$ ) and the task was conducted on a computer, this feedback format was chosen to maximize the likelihood that participants would believe the feedback to be genuine. A cowitness manipulation would not have been credible given the variable number of participants attending each session. Similarly, an indication from the computer that they had made the right choice might not have been credible if participants thought it was a preprogrammed response.

asked them to indicate whether the computer had provided information about whether other participants had made the same decision.

*Results and Discussion*

*Feedback Manipulation Check*

Eight participants in the feedback condition reported not receiving feedback. In the no-feedback control condition, 4 participants said they had been given feedback. Excluding these participants from the analyses made no difference to the patterns or significance of results reported. Consequently, the analyses reported are for the full data set.

*Accuracy*

As shown in Table 1, a high proportion of participants correctly rejected the target-absent lineup; there was no difference in identification rates in the feedback and no-feedback conditions,  $\chi^2(1, N = 208) = 2.32, ns.^2$

*Retrospective confidence.* A 2 (feedback)  $\times$  2 (identification response) between-groups analysis of variance (ANOVA) on retrospective confidence ratings produced a significant feedback main effect,  $F(1, 204) = 4.12, p < .05, f = .10$  (Cohen, 1988), with confidence higher after feedback (see Table 2). Small, medium, and large values of  $f$  are .10, .25, and .40, respectively. The Feedback  $\times$  Identification Response interaction was not, however, significant,  $F(1, 204) < 1, f = .11$ . A significant identification response main effect,  $F(1, 204) = 11.57, p = .001, f = .30$ , reflected lower confidence levels for mistaken identifications than for correct rejections.

*Current confidence.* An identical ANOVA on current confidence ratings produced a significant feedback effect,  $F(1, 204) = 9.66, p < .01, f = .16$  (see Table 2). Although the feedback inflation effect appeared more marked for mistaken identifications than for correct rejections, the Feedback  $\times$  Identification Response interaction did not reach significance,  $F(1, 204) = 2.92, ns, f = .19$ . As was found for retrospective confidence, current confidence was lower for mistaken identifications than for lineup rejections,  $F(1, 204) = 9.66, p < .01, f = .24$ .

In line with previous research (Bradfield et al., 2002; Garrioch & Brimacombe, 2001; Luus & Wells, 1994; Wells & Bradfield, 1998, 1999), we detected significant postidentification feedback effects with a target-absent lineup. This occurred on both confidence measures, for both identification response categories, and despite our use of unbiased (cf. biased) witness instructions.

Table 1  
*Frequency and Percentage of Identification Responses in Each Condition for Target-Absent Lineups*

Feedback condition	Identification response				Total <i>n</i>
	Mistaken identification		Correct rejection		
	<i>n</i>	%	<i>n</i>	%	
Feedback	28	26.4	78	73.6	106
No feedback	18	17.6	84	82.4	102
Overall	46	22.1	162	77.9	208

Table 2  
*Means, Standard Deviations, and 95% Confidence Intervals (CIs) for Retrospective and Current Confidence of Different Identification Responses in Each Condition for Target-Absent Lineups*

Feedback condition	Mistaken identification	Correct rejection	Overall
Retrospective confidence			
Feedback			
<i>M</i>	66.07	74.87	72.54
<i>SD</i>	18.12	19.26	19.28
95% CI	58.29–73.85	70.21–79.53	68.83–76.26
No feedback			
<i>M</i>	55.55	70.95	68.23
<i>SD</i>	22.55	22.74	23.35
95% CI	45.85–65.26	66.46–75.45	63.65–72.82
Overall			
<i>M</i>	61.96	72.84	70.43
<i>SD</i>	20.40	21.16	21.42
95% CI	55.90–68.01	69.56–76.12	67.50–73.36
Current confidence			
Feedback			
<i>M</i>	70.71	75.77	74.43
<i>SD</i>	19.98	19.64	19.76
95% CI	62.96–78.46	71.34–80.20	70.63–78.24
No feedback			
<i>M</i>	53.33	70.71	67.64
<i>SD</i>	24.00	22.32	23.47
95% CI	41.39–65.27	65.87–75.56	63.04–72.26
Overall			
<i>M</i>	63.91	73.15	71.11
<i>SD</i>	23.04	21.16	21.87
95% CI	57.07–70.76	69.86–76.43	68.12–74.10

To examine differences between current and retrospective confidence inflation, we conducted a 2 (feedback)  $\times$  2 (confidence measure) ANOVA on confidence ratings, with confidence measure a within-groups factor. Neither the confidence measure main effect,  $F(1, 206) < 1, f = .00$ , nor the Feedback  $\times$  Confidence Measure interaction,  $F(1, 206) = 1.98, ns, f = .06$ , was significant, and there was a close correspondence between the two confidence measures,  $r(208) = .83, p < .001$ .

Experiment 2

Experiment 2 explored a number of additional issues. Specifically, we examined whether the expected postidentification feedback effect was detected with target-present lineups and unbiased instructions. We also tested whether confidence inflation effects were more marked for incorrect (filler) identifications and incor-

<sup>2</sup> In a real-world lineup, all but one of the lineup members are known to be innocent (unless multiple suspects are placed in the lineup), and positive identifications of the suspect are the major interest. In the experimental paradigm, identification of any of the fillers in a match-to-description lineup can be considered equivalent to a mistaken identification of an innocent suspect. In this experiment, mistaken identifications included seven different fillers, with the percentage of choices per filler ranging from 2.2% to 37.0%.

rect lineup rejections than for correct identifications. We were uncertain about whether confidence inflation would be detected for correct identifications. Only one study (Bradfield et al., 2002) examined feedback inflation in target-present lineups, but it used biased instructions, did not provide a “not present” response option, and, most important, did not distinguish between target-present and target-absent conditions (instead combining accurate and inaccurate responses from the two target conditions). Experiment 2 also again contrasted inflation effects for retrospective and current confidence. Finally, we pooled positive identification response data from Experiments 1 and 2 to establish whether confirming feedback resulted in a confidence–accuracy relationship characterized by overconfidence. These issues were examined following similar procedures to Experiment 1, except here a target-present lineup was used.

### Method

#### Participants and Design

Participants were another 208 individuals (80 men and 128 women) recruited from the student employment service. Ages ranged from 16 to 57 years ( $M = 22.6$ ,  $SD = 8.0$ ). A single-factor between-groups design was used, with participants randomly assigned to feedback or no-feedback conditions. Dependent measures included the identification test response (correct identification, incorrect or foil identification, incorrect rejection) and confidence (retrospective and current) in the identification decision.

#### Materials and Procedure

Materials were the same as those used in Experiment 1, except that one of the lineup members (the one rated as most like the thief) was replaced with a picture of the thief. The thief was wearing different clothes from those he wore in the film, and his hair was ruffled. All procedural details were as in Experiment 1. The 30 observers who rated the similarity of the lineup photo of the thief to what they had seen in the video placed the target, on average, 15.7 cm ( $SD = 18.1$ ) from the *identical* anchor position on the scale (i.e., closer than the lineup fillers).

### Results and Discussion

#### Accuracy

All participants in the feedback condition reported feedback delivery. Although 9 of the control participants reported feedback, analyses reported are for the full data set because outcomes were the same regardless of whether these participants were included. Table 3 shows the number (and proportion) of participants for the different identification response categories. The response patterns did not differ across feedback conditions,  $\chi^2(2, N = 208) = 2.81$ , *ns*.

#### Retrospective Confidence

A 2 (feedback)  $\times$  3 (identification response) between-groups ANOVA on retrospective confidence ratings again found a main effect for feedback,  $F(1, 202) = 11.13$ ,  $p = .001$ ,  $f = .27$ , that was clearly evident across response categories (see Table 4). However, the Feedback  $\times$  Identification Response interaction was not significant,  $F(2, 202) < 1$ ,  $f = .06$ . There was also a main effect of identification response on confidence,  $F(2, 202) = 3.37$ ,  $p < .05$ ,  $f = .24$ , with participants who chose the thief correctly being more

Table 3  
*Frequency and Percentage of Identification Responses in Each Condition for Target-Present Lineups*

Feedback condition	Identification response						Total <i>n</i>
	Mistaken identification		Incorrect rejection		Correct identification		
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	
Feedback	19	18.1	47	44.8	39	37.1	105
No feedback	14	13.6	58	56.3	31	30.1	103
Overall	33	15.9	105	50.4	70	33.7	208

confident than those who incorrectly selected an innocent filler (Tukey *a*;  $\alpha = .05$ ).

#### Current Confidence

An identical ANOVA on current confidence also produced a main effect for feedback,  $F(1, 202) = 22.64$ ,  $p < .001$ ,  $f = .37$ , with confidence inflation evident for all identification response categories (see Table 4). Again, the Feedback  $\times$  Identification Response interaction was not significant,  $F(2, 202) < 1$ ,  $f = .09$ . A significant main effect for identification response,  $F(2, 202) = 4.70$ ,  $p < .01$ ,  $f = .29$ , reflected lower confidence for incorrect identifications of innocent fillers than for correct identifications or incorrect lineup rejections (Tukey *a*;  $\alpha = .05$ ).

We again examined differences in retrospective and current confidence inflation with a 2 (feedback)  $\times$  2 (confidence measure) ANOVA. Although there was no confidence measure main effect,  $F(1, 206) < 1$ ,  $f = .02$ , the Feedback  $\times$  Confidence Measure interaction was significant,  $F(1, 206) = 7.04$ ,  $p < .01$ ,  $f = .06$ . Analysis of the simple effects indicated feedback inflation for both current confidence,  $F(1, 206) = 28.58$ ,  $p < .001$ ,  $f = .16$ , and retrospective confidence,  $F(1, 206) = 15.13$ ,  $p < .001$ ,  $f = .10$ . As in Experiment 1, there was a significant correlation between current and retrospective confidence measures,  $r(208) = .80$ ,  $p < .001$ . But the significant interaction effect, shown in Figure 1, coupled with the difference in effect sizes, established that there was more marked confidence inflation for current than for retrospective confidence.

#### Experiments 1 and 2: Effects on the Relationship Between Confidence and Accuracy

To examine feedback effects on the confidence–accuracy relationship, we combined data from Experiments 1 and 2. Table 5 contains (for retrospective and current confidence) mean confidence, proportion correct, and the confidence–accuracy correlation for witnesses who made positive identifications (i.e., mistaken identifications for target-absent condition and correct and mistaken identifications for target-present condition). Table 5 also contains the O/U statistic. The measure is derived by subtracting the overall proportion of correct identifications from the mean subjective probability of a correct identification. Overestimation of the probability of correctly identifying the culprit (i.e., overconfidence) produces a positive O/U statistic; in contrast, underestimation (i.e., underconfidence) produces a negative O/U statistic.

Table 4  
Means, Standard Deviations, and 95% Confidence Intervals (CIs) for Retrospective and Current Confidence of Different Identification Responses in Each Condition for Target-Present Lineups

Feedback condition	Mistaken identification	Incorrect rejection	Correct identification	Overall
Retrospective confidence				
Feedback				
<i>M</i>	63.16	72.98	74.10	71.62
<i>SD</i>	14.16	19.99	14.82	17.55
95% CI	53.67–72.65	66.94–79.01	67.48–80.73	68.22–75.02
No feedback				
<i>M</i>	52.86	59.31	65.16	60.19
<i>SD</i>	19.38	24.56	25.54	24.33
95% CI	41.98–63.35	53.88–64.74	55.79–74.53	55.44–64.95
Overall				
<i>M</i>	58.79	65.43	70.14	65.96
<i>SD</i>	17.09	23.54	20.61	21.89
95% CI	52.73–64.85	60.87–69.98	65.23–75.06	62.97–68.95
Current confidence				
Feedback				
<i>M</i>	63.68	77.23	76.15	74.38
<i>SD</i>	19.49	20.29	16.80	19.41
95% CI	53.61–73.76	70.83–83.64	69.12–83.19	70.62–78.14
No feedback				
<i>M</i>	47.14	57.07	63.23	57.57
<i>SD</i>	21.28	25.27	27.00	25.57
95% CI	35.33–58.00	51.34–62.83	53.32–73.13	52.57–62.57
Overall				
<i>M</i>	56.67	66.10	70.43	66.05
<i>SD</i>	21.60	25.17	22.67	24.13
95% CI	49.01–64.33	61.22–70.97	65.02–75.84	62.76–69.36

The typically modest confidence–accuracy correlations were obtained, with feedback not having any obvious effect on the relation. However, although the O/U statistic indicated some overconfidence (for both retrospective and current) in the no-feedback condition, overconfidence was more marked in the feedback condition.

*Post Hoc Exploration of Latency Evidence for a Cues Account*

Previous research has proposed that the postidentification feedback effect is related to the strength of internal cues to accuracy (and confidence) but has been vague about the precise nature of these cues (Bradfield et al., 2002). Nevertheless, the recognition memory and eyewitness identification literatures do offer some suggestions about possible cues. First, for example, recognition latency has long been considered to be a useful indicator of memory trace strength (e.g., Kahana & Loftus, 1999; Murdock, 1985) and, hence, a source of information about likely accuracy. Second, in the eyewitness identification context, we know that identification latency and accuracy are correlated, with fast identifications more likely to be correct than slow identifications (Dunning & Perretta, 2002; Sporer, 1994). Third, there is also evidence that eyewitnesses use identification latency as a cue when determining confidence, with the confidence–identification latency relationship undermined by experimental conditions that reduce the apparent utility of latency cues (Shaw, McLure, & Wilkens,

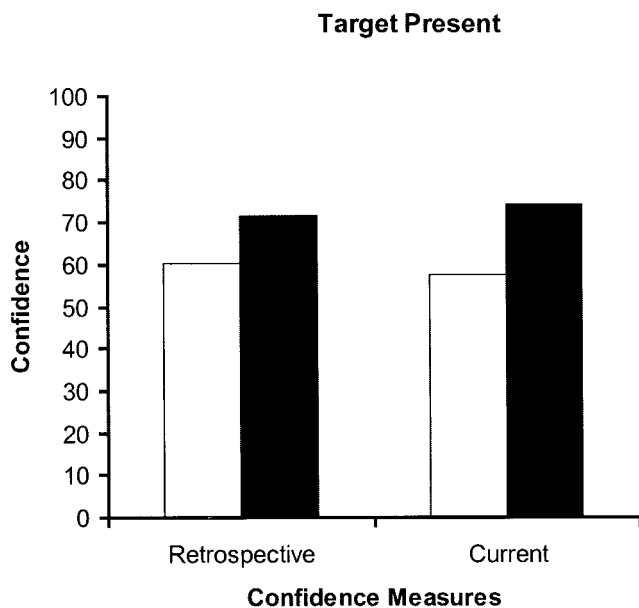


Figure 1. Retrospective and current confidence for each feedback condition in Experiment 2. A white bar indicates no feedback; a black bar indicates feedback.

Table 5  
*Mean Confidence, Proportion Correct, Over-/Underconfidence (O/U) and Confidence–Accuracy Correlations for Retrospective and Current Confidence for Choosers*

Confidence measure	Measure			
	Mean confidence	Proportion correct	O/U	Correlation
Retrospective				
Feedback	.69	.45	.24	.28*
No feedback	.56	.49	.07	.24**
Current				
Feedback	.71	.45	.26	.22*
No feedback	.57	.49	.08	.27*

*Note.* Includes correct and incorrect identifications (target present) and mistaken identifications (target absent).

\*  $p < .05$ . \*\*  $p = .056$ .

2001). Together, these findings suggest the possibility that witnesses who made relatively fast identifications (a) should have access to latency-related cues that are much more likely to suggest to them that their identification was accurate and, therefore, (b) should be less likely to rely on externally provided feedback when assessing their own confidence.

Although we did not experimentally manipulate variables designed to target latency cues, we were able to conduct a post hoc exploration of this possibility by pooling participants across Experiments 1 and 2. Participants who made positive identifications (i.e., choosers) were partitioned into two categories: fast responders (i.e., the fastest third, with latencies up to 16 s) and slow responders (i.e., the rest).<sup>3</sup> We then examined the effects of feedback on both retrospective and current confidence for each group. A 2 (feedback)  $\times$  2 (identification latency) ANOVA on retrospective confidence revealed the expected main effects for feedback,  $F(1, 145) = 6.06, p < .05, f = .24$ ; identification latency,  $F(1, 145) = 19.70, p < .001, f = .35$ ; and, most important, a Feedback  $\times$  Identification Latency interaction,  $F(1, 145) = 4.12, p < .05, f = .18$ . As shown in Figure 2, confidence inflation was, as predicted, larger for slow than for fast responders. Exactly the same pattern of results was in evidence for current confidence, with main effects for feedback,  $F(1, 145) = 12.34, p = .001, f = .34$ ; identification latency,  $F(1, 145) = 9.42, p < .01, f = .22$ ; and a Feedback  $\times$  Identification Latency interaction,  $F(1, 145) = 3.86, p = .05, f = .20$ . For both retrospective and current confidence, post hoc tests (Tukey  $\alpha; \alpha = .05$ ) revealed feedback/no-feedback differences for slow but not for fast identifiers.

### General Discussion

The two experiments reported here advance our knowledge about the effects of postidentification feedback on eyewitness confidence in four key ways. First, using unbiased witness instructions (i.e., a clear warning that the offender might not be present in the lineup), we detected a clear postidentification feedback effect with target-absent lineups. Previous research had only used biased witness instructions, a procedure not advocated by eyewitness researchers. Second, in contrast with previous research, we distinguished between inflation effects for the two target-absent identification response categories: mistaken identifications and correct rejections. Although confidence inflation effects were detected for both of these response categories, this finding was important for

two reasons. It clearly showed, for the first time, confidence inflation for the forensically significant mistaken identification from a target-absent lineup when conditions were not loaded toward producing a high proportion of mistaken identifications. This finding also indicated that the postidentification feedback effect worked just as well for nonidentifiers as it did for identifiers, demonstrating that there was nothing special about identifications that made them uniquely well suited to postidentification feedback effects. Witness confidence in nonidentifications is also malleable, and as we have already indicated, this too can have important forensic consequences.

Third, we also detected confidence inflation, again with unbiased witness instructions, in a target-present lineup condition. Moreover, the inflation effect occurred for all identification response categories: correct or target identifications, mistaken or innocent filler identifications, and (incorrect) lineup rejections. The inflation effect for the correct or target identification is of forensic significance because such postidentification feedback may lead witnesses to report greater confidence for target identifications than they would have in the absence of feedback. Further, this finding appears to be at odds with conclusions from the one previous study that included target-present lineups. Bradfield et al. (2002) found no effect of confirming feedback for accurate witnesses, although they did not distinguish correct or target identifications from correct lineup rejections, and argued that confidence inflation effects were less likely for these accurate responses because witnesses would have relatively good internal cues to accuracy. However, the apparent discrepancy between the results of the two studies did not necessarily invalidate Bradfield et al.'s interpretation. The proportion of witnesses who made positive identifications in our target-present condition was much lower than in Bradfield et al.'s study (49.5% vs.  $\geq 91\%$ ). This suggested that some features of our encoding and identification test conditions made the witnesses' task more difficult, perhaps ensured relatively weak internal cues to confidence, and thus increased the likelihood of confidence inflation effects. Furthermore, although the inflation effect for accurate identifications did not reach statistical significance in the Bradfield et al. study, there was a clear directional

<sup>3</sup> Previous research has consistently failed to detect latency–accuracy relationships for nonchoosers.

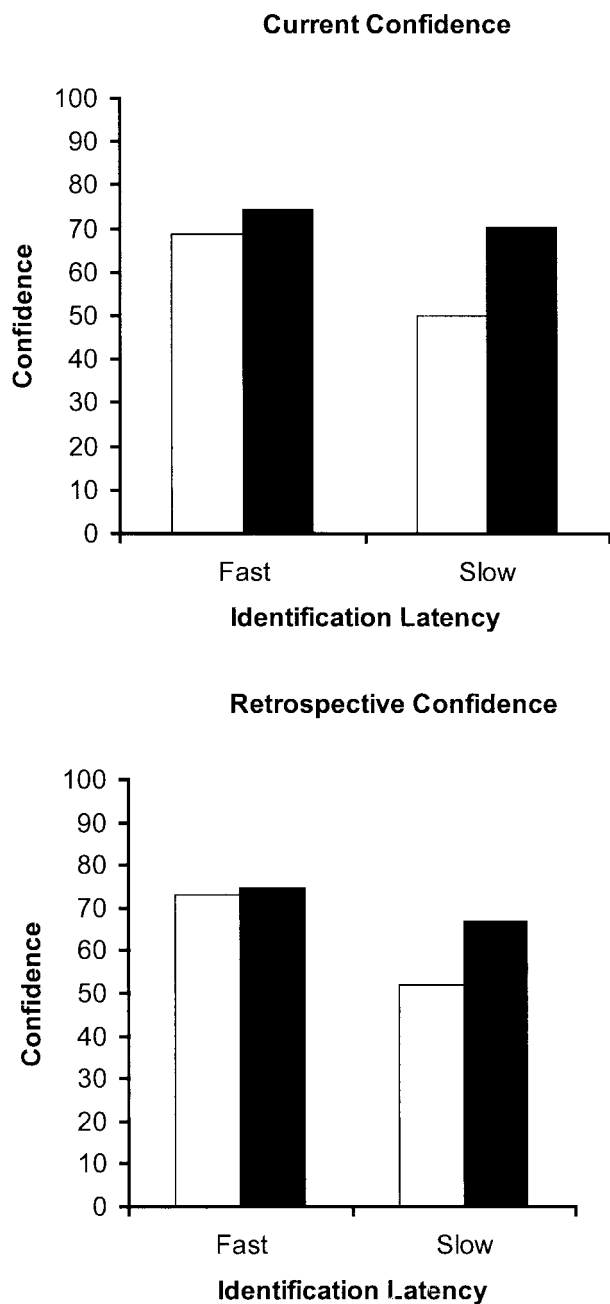


Figure 2. Retrospective and current confidence for fast and slow participants (choosers) in each feedback condition, collapsed across Experiments 1 and 2. A white bar indicates no feedback; a black bar indicates feedback.

indication in the means suggesting that their study might have found the effect if there had been more power.

The inflation effects detected for innocent filler identifications and (incorrect) lineup rejections are also of forensic interest. The malleability of filler identification confidence is important because, as we indicated earlier, there will be some investigative circumstances in which police may well be particularly interested in such responses. Further, the fact that confidence for both filler identifications and lineup rejections is malleable reinforces the

need for future work designed to explore much more carefully how these responses are affected by disconfirming feedback (which is, of course, a likely reaction to their occurrence).

Fourth, our data suggest that the confidence inflation effect may vary depending on the specific confidence assessment that witnesses are asked to make. This finding is important because, as indicated earlier, previous research in this area has not been consistent with respect to the reference point for confidence measurement. We observed that at least for target present lineups, the degree of confidence inflation was more marked when witnesses were asked to report how confident they were "right now" compared with at the time of the identification. This difference occurred even though the interval between delivery of the two confidence assessments was probably seldom more than 40 s (i.e., 10 s for feedback or feedback control screens, plus an average latency for finalizing confidence assessments of about 15 s,  $SD = 7.5$ ). Although the inconsistent patterns across the two experiments prevent us from making too much of this interaction at this stage, the fact that it was detected with such a small difference between the reference points certainly suggests that the reference point for the confidence assessment is a potentially important variable, the understanding of the influence of which is likely to inform theorizing about the cues that drive confidence judgments. Future investigations should examine the impact of a more marked separation between the two measures. Given the present findings, we might expect this to produce more pronounced differences between the two measures.

Finally, although the confidence-accuracy correlation was unaffected by feedback condition, the examination of the confidence-accuracy relation using the O/U statistic clearly indicated a pronounced increase in overconfidence (for both current and retrospective confidence) in the feedback condition. This finding highlights how postidentification feedback can seriously undermine any value that identification confidence may have for evaluating the reliability of eyewitness identification.

In sum, our findings make a major contribution in terms of demonstrating the generalizability of postidentification feedback effects on eyewitness confidence. We found confidence inflation (a) for stimulus materials and lineups that produced markedly different identification response patterns to those reported in previous studies, (b) with unbiased witness instructions, (c) using both target-absent and target-present lineups, and (d) for all identification response categories. With respect to d, the most important finding was that inflation occurred for the two identification responses of most obvious forensic relevance.

We also found that the reference point for confidence assessments, an issue ignored in previous research, may well shape the magnitude of the inflation effect. Further, the inflation effects have now been demonstrated across studies with feedback that tells the witness directly that they made the right decision (Wells & Bradfield, 1998, 1999) and with feedback (as used here) that indicates cowitness agreement (see also Luus & Wells, 1994). Note, of course, that we are unable to offer a perspective on whether lineup instructions (biased vs. unbiased) moderate the effects of feedback. To probe the moderating effects of lineup instructions would clearly require a comparison of feedback effects under each of the two lineup instruction conditions.

Note also that a convincing and detailed theoretical account of this phenomenon is not yet available. As indicated earlier, Brad-

field et al. (2002) and Wells & Bradfield (1998, 1999) have advanced a perspective based on Festinger's (1954) social comparison theory and Bem's (1972) self-perception theory: Witnesses will be most likely to use externally provided feedback to guide confidence assessments when internal cues are weak. In keeping with this suggestion were their findings that (a) confidence inflation was more pronounced for inaccurate (weaker internal cues) than for accurate (stronger internal cues) identification responses and (b) confidence inflation was moderated by witnesses thinking about the identification, and hence presumably bolstering internal cues, before receiving feedback. Unlike previous studies, we found clear confidence inflation for correct as well as for mistaken identifications. Nevertheless, we have already drawn attention to several features of our results that were consistent with the perspective advanced by Wells and colleagues.

Moreover, our post hoc examination of feedback inflation effects for fast versus slow identifiers demonstrated a much more pronounced feedback inflation effect for participants expected to have poorer internal cues to accuracy (i.e., slow responders) than for those considered likely to have a stronger internal base for their confidence (i.e., fast responders). We have to bear in mind that we did not experimentally manipulate variables that would shape identification latency. Thus, it is clearly possible that the outcomes of these analyses reflect individual differences in either the tendency to respond rapidly (cf. slowly) or to resist the influence of postidentification feedback (or both). Should, however, future research that experimentally targets variables that affect latency produce findings in keeping with those reported here, we would have strong support for a cues-based account of confidence inflation such as that outlined here.

Future research needs to probe these issues further. The preceding discussion of possible latency relationships reinforces the importance of addressing the precise nature of internal cues that might determine the extent of the feedback inflation effect, cues such as the strength of the memory trace or those provided by feelings of familiarity (e.g., fluency, ease or automaticity of the identification decision), or perhaps by both recollection and familiarity (cf. Quamme, Frederick, Kroll, Yonelinas, & Dobbins, 2002; Yonelinas et al., 1999). As argued by Bradfield et al. (2002) and Wells and Bradfield (1998), for example, the ephoric similarity (cf. Tulving, 1981) of the lineup target and the offender may be important. Presumably this would influence feelings of familiarity and may also reflect qualities of the memory trace. The functional size of the lineup is also likely to influence these cues. For example, a lineup target that closely matches the offender and stands out from the other lineup fillers will lead to rapid, automatic identifications, providing relatively strong internal cues to accuracy that need no buttressing from external feedback. Yet, at present, we have little in the way of systematic examination of the relationship between the cues that witnesses use to make confidence judgments, the features of the witnessed event and the subsequent identification, and the extent of the postidentification feedback effect. Thus, an assessment of the viability of this type of theoretical account must await the outcomes of much needed empirical work. What we can say at this stage is that it appears that as long as cues are sufficiently degraded to ensure that confidence levels are not at or close to the ceiling, opportunities for social influence via feedback exist (cf. Werth, Strack, & Förster, 2001).

Several issues of applied significance that arise from this research should be highlighted. The fact that confidence inflation, that resulted in more marked witness overconfidence, occurred even when witnesses were clearly warned about the possibility that the offender may not be in the lineup and occurred for all identification response categories, coupled with our knowledge that confidence exerts a major influence on judicial decision makers, highlights the potential impact of postidentification feedback on decision making by police, lawyers, jurors, and judges. As Wells and Bradfield (1998) argued, it seems likely that in real cases, the influential witness will be one who reports a high absolute level of confidence. When we separated out witnesses who reported confidence levels of 80% or higher, we found clear differences between the feedback and no-feedback conditions, with highly confident witnesses more prevalent in the feedback conditions. In Experiment 1 (target absent), the proportions of witnesses reporting confidence levels of 80% or higher in the feedback condition were 54.7% (current) and 49.1% (retrospective); the corresponding proportions for the no-feedback condition were 40.2% (current) and 43.1% (retrospective). In Experiment 2 (target present), the feedback-condition proportions were 59.0% (current) and 43.8% (retrospective); the corresponding proportions for the no-feedback condition were 23.3% (current) and 29.1% (retrospective). Taken together, our findings provide a much stronger foundation for recommendations regarding double-blind lineup administration (Wells, 1993) and the soliciting (and recording) of certainty statements from witnesses before they receive any feedback (Technical Working Group for Eyewitness Evidence, 1999).

Further, the existence of inflation effects when witnesses selected innocent fillers or incorrectly rejected a lineup signals another possible problem. Although lineup administrators are unlikely to provide confirming feedback to witnesses who fail to identify their suspect (unless, as we pointed out earlier, they are using the lineup to eliminate a suspect), they may well provide either subtle or explicit disconfirming feedback. If the deflating effect of disconfirming feedback is similar in magnitude to the confidence inflation effect, as seems possible from previous research (Luus & Wells, 1994; Wells & Bradfield, 1998), two potentially negative outcomes are suggested. First, witnesses who have selected an innocent filler, a response that recent research (Wells & Olson, 2002) suggests has important diagnostic value for investigators, will be less confident than they should be about the possibility that someone other than the lineup target may be the offender. Second, witnesses who have rejected the lineup, again a response that may suggest that the lineup target is not the offender, may also subsequently report less confidence about their rejections than they should.

Finally, these experiments indicate that the precise confidence question asked is likely to influence confidence inflation. No previous research has identified this as a relevant issue. Yet, there is certainly no standard way of asking these questions (e.g., probing retrospective vs. current confidence) in the real world. The findings of our experiments suggest that this issue warrants close scrutiny in future research.

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