



Investigating Investigators: Examining Witnesses' Influence on Investigators 1 2

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This research examined the influence of eyewitness identification decisions on participants in the role of police investigators. Undergraduate “investigators” interviewed confederate “witnesses” and then searched a computer database of potential suspects. The database included information on each suspect’s physical description, prior criminal record, alibi, and fingerprints. Participants selected a suspect and estimated the probability that the suspect was guilty. Investigators subsequently administered a photo lineup to the witness and re-estimated the suspect’s guilt. If the witness identified the suspect probability estimates increased dramatically. If the witness identified an innocent lineup member or rejected the lineup, investigators’ probability estimates dropped significantly, even when pre-lineup objective evidence (e.g., fingerprints) was strong. Performance of participants acting as witnesses in two baseline studies was at chance. Therefore, participant-investigators greatly overestimated the amount of information gain provided by eyewitness identifications. 4
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KEY WORDS: .

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Time and again, research has demonstrated the immense impact of eyewitness identifications on jurors (e.g., Cutler, Penrod, & Stuve, 1988; Deffenbacher & Loftus, 1982; Leippe, Manion, & Romanczyk, 1992; McAllister & Bregman, 1986; Wells & Leippe, 1981; Wells, Lindsay, & Ferguson, 1979). Furthermore, an analysis of DNA exonerations in the United States indicated that the vast majority of them involved mistaken eyewitness identifications (Wells et al., 1998). Mistaken positive identifications can have life or death consequences for the falsely accused. Although less emphasized in the literature, false negative identification decisions may also have profoundly undesirable consequences. 17
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The indisputable importance of identification evidence has fueled a long tradition of scientific research exploring the influence of such evidence (Wells & Olson, 2003). Virtually all of that research has focused on its impact on jurors (or simulated jurors). Yet jurors see only a small (and likely non-representative) subset of 27
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A2

31 the eyewitnesses who give identification evidence, and they see them long after that
32 evidence was initially collected. In contrast, police investigators see every witness
33 who performs an identification test, typically relatively soon after the incident in
34 question.

35 Investigators' perceptions of the credibility of eyewitnesses' decisions may
36 dramatically affect subsequent events. Investigators make significant decisions re-
37 garding the evaluation of eyewitnesses in the process of gathering, weighing, in-
38 terpreting, and integrating evidence. Evidence must be evaluated to incriminate or
39 exonerate a suspect and the police must use this incriminating and exculpating infor-
40 mation to determine the relative likelihood that the suspect is the culprit. Part of this
41 procedure includes deciding whether an eyewitness's lineup identification decision
42 is reliable and credible enough to pursue investigating and arresting the suspect. Or,
43 in cases where the witness rejects the lineup or identifies an innocent foil, investiga-
44 tors must decide whether to trust that decision as exculpatory evidence.

45 As hinted above, there are numerous differences between jurors and investiga-
46 tors with regard to eyewitness ID evidence. Those differences may limit the gener-
47 alizability of extant research on jurors to investigators. For example, investigators
48 interact with witnesses during the actual lineup procedure, before rehearsal, social
49 commitment, and coaching can influence eyewitness behavior. On the one hand,
50 given that investigators see all witnesses from whom ID evidence is collected (not
51 just those who made positive identifications with a modicum of confidence) and
52 that they see the witnesses shortly after the crime (before any rehearsal or training
53 can take place), one might expect investigators to be more discerning of eyewit-
54 nesses than jurors. On the other hand, the lineup is often administered by the same
55 investigator who is working up a case against a suspect, which might bias perceptions
56 of the witness's behavior (e.g., Phillips, McAuliff, Kovera, & Cutler, 1999). Our aim
57 in the current work is to explore such issues.

58 In the only previously published study of participant-investigators' perceptions
59 of eyewitnesses' identification evidence, Lindsay, Nilsen, and Read (2000) tested 144
60 pairs of undergraduate students with one of the students assigned the role of an eye-
61 witness and the other assigned the role of investigator. The witnesses viewed either
62 a good (3 min long, taken from a variety of perspectives) or poor (10 s long, taken
63 from one perspective) version of a video depicting a target person. The witnesses
64 then viewed either a target present or target absent photo lineup administered by
65 their co-participant investigator. Following the lineup, the witnesses and investiga-
66 tors independently rated their confidence in the accuracy of the witness's lineup
67 decision. Investigators' confidence in the witness's decision was higher in the good
68 witnessing condition than in the poor condition. In the good condition, the investiga-
69 tors' confidence was significantly correlated with witnesses' accuracy but in the poor
70 condition investigators tended to overestimate the witnesses' accuracy. In addition,
71 logistical analyses revealed that investigators' confidence made no contribution to
72 the prediction of eyewitness accuracy beyond the eyewitnesses' own confidence.

73 The participant-investigators in the Lindsay et al. (2000) study had very limited
74 interaction with the participant-witnesses. Given that their only interaction with
75 the witness was during the administration of the lineup they had very little infor-
76 mation on which to base their reliability judgments. In contrast, in the real world

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investigators often have significant contact with witnesses (e.g., interviewing them at the crime scene and subsequently, interacting with them during mug shot viewings, etc.) and this might give them greater insight into how well the witness attended to and remembers the culprit. In turn, this experience with the witness might lead them to be better able to discern the reliability of the witness's decision.

In addition, the participant-investigators in the Lindsay et al. (2000) study were blind to the identity of the target shown in the video and were not informed whether the target was present or who the correct target was in the photo-lineups. One might expect that an investigator's knowledge about the lineup suspect or evidence against that suspect would influence his or her interpretation of the eyewitness's decision (cf. Garrioch & Brimacombe, 2001). For example, an investigator who has put a lot of time and effort into gathering evidence against a suspect might have high expectations that the eyewitness will identify that suspect. How is such an investigator affected by an eyewitness misidentification or rejection of the lineup? Will the investigator believe that his or her own choice of suspect was flawed or decide that the eyewitness is mistaken and continue to pursue the suspect?

Outside the eyewitness realm there has been substantial work on how people integrate information to form impressions of one another (e.g., Anderson, 1965; Asch, 1946) and on how medical doctors, psychotherapists, and other professionals make decisions based on a variety of kinds information (e.g., Dawes, Faust, & Meehl, 2002; Toomela, 2005). Noting the substantial research on decision-making in these other fields, as well as within psychology and law when looking at juries and judges, it is surprising that to date there has been so little research on how forensic investigators integrate and evaluate identification evidence, especially given the important decision-making role they play in the criminal justice system.

The current research examined how participant-investigators who had developed expectations regarding the guilt of a member of the photo lineup interpret eyewitness decisions. The central question of interest is, given the other evidence they have already encountered, how do investigators' estimates of the suspect's guilt vary depending on the eyewitness identification decision? For example, do estimates of probable guilt go up when the eyewitness identifies the suspect? Conversely, do they go down if the eyewitness fails to identify the suspect? Moreover, if such changes occur, are they of appropriate magnitude given eyewitnesses' performance under the conditions of the investigation? In addition, how is the investigator's opinion of the eyewitness affected by the eyewitness's decision? Specifically, will the investigator perceive the eyewitness as more accurate if the witness chooses the investigator's suspect and less accurate if he/she does not choose the suspect? Finally, investigators play a large role in deciding whether to arrest a suspect and how much evidence is enough to arrest a suspect. How is this arrest decision influenced by eyewitness identification decisions?

Ultimately, there is a need for research along these lines testing experienced police officers, but forensically relevant insights may also be gleaned by exploring how role-playing investigators evaluate eyewitness identification evidence. For example, if undergraduates are neither over- nor under-influenced by identification evidence, that would encourage optimism regarding the ability of police officers to weigh identification evidence appropriately. Moreover, findings of experimental

123 manipulations that affect the weight role-playing investigators give to identification
124 evidence provide a basis for hypothesizing that the same variables may also affect
125 police. One might hope that police officers' extensive experience would make them
126 qualitatively different from, and superior to, naïve undergraduates in such matters,
127 but evidence pertaining to lie detection suggests that this may not be so (e.g., Kassin,
128 Meissner, & Norwick, 2005). In any case, these studies have value as basic-science
129 explorations of what might be termed "interpersonal metamemory," the processes
130 by which one individual assesses the reliability of another's memory reports. This
131 has been examined in the domain of co-witness research (e.g., Luus & Wells, 1994;
132 Shaw, Garven, & Wood, 1997), however, to our knowledge this is the first study to
133 examine it from an investigator's point of view.

134 **EXPERIMENT 1A**

135 **Method**

136 *Participants*

137 Twenty-Four University of Victoria undergraduate students participated indi-
138 vidually in return for optional extra credit in an introductory psychology course.
139 Participants were randomly divided into three conditions: ID Suspect, ID Foil, and
140 Not Present (did not make an identification).

141 *Materials and Procedure*

142 Participants were informed that they would be participating in pairs and the
143 sign-up website was rigged to make it appear that this was true. In fact, only one
144 participant signed up for each session, as the other person was a confederate. A
145 confederate eyewitness was used to maintain consistency in behavior and confidence
146 and to manipulate the identification decision. When participants arrived they were
147 informed that they would be taking on the role of a police officer in the experiment
148 and were told that another participant (the confederate) would take on the role of
149 an eyewitness.

150 A 3 min video was used that depicted a robbery committed by three men. At
151 the end of the video one of the men is caught and handcuffed. The description of
152 the crime and culprit given by the confederate was based on this video. Participants
153 first interviewed the witness regarding the video. They were not given a script for
154 the interview but were given a list of suggested question categories (e.g., description
155 of crime, culprit, car, etc.). During the interview, the confederate responded in a
156 fairly confident manner with predetermined answers. If a question was asked that
157 was unrelated to the predetermined answers, the confederate answered honestly.³
158 After the interview was completed, the confederate went to another room.

³Although participants were told that they could ask whatever questions they wanted, they rarely asked questions unrelated to the suggested categories. When they did ask such questions, the questions always referred to information that was unrelated to the computer database (e.g., the description of the outside of the building broken into). Therefore, these participants were no more knowledgeable than those who did not ask additional questions.

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The participants were then given instructions for using a computer database to search for a suspect. Participants were to imagine that they were in a small town and as part of their investigation they would examine a database containing information on people in the town who had previous arrests or convictions. Participants were told to use the information obtained in the interview to attempt to find a suspect in the database. To start the program, participants clicked on a potential suspect's name (out of 13 possibilities) to view information regarding the suspect's physical description, prior criminal record, alibi, current employment, and registered vehicles (see Appendix for an example of database information). Participants were instructed to imagine that all of the information was up to date. Consequently, if a suspect's physical description did not match that given during the interview then he could not have committed the crime. In addition, participants were told to imagine that a partial fingerprint was found at the scene of the crime; for some of the suspects, the database contained information on the probability that their fingerprint matched the partial print. Participants had to click on each suspect's name at least once before they could indicate their decision as to which (if any) of those in the database they suspected committed the crime. Once they had made their decision they were shown a page containing their suspect's photo (the perpetrator in the video) and were instructed to look closely at their suspect's picture. The program was designed so that the same picture appeared regardless of which suspect was chosen.⁴ Participants then saw their suspect's photo in a 6-member photo lineup. (The match-description lineup was created by J. D. Read and has been used in many other experiments, e.g., Lindsay, Read, & Sharma, 1998). This photo lineup was used during the eyewitness identification portion of the experiment.

After viewing the photo lineup, participant-investigators were given the Pre-Identification questionnaire. The Pre-Identification questionnaire asked participants to estimate the probability that their suspect was the culprit on a scale from 0 to 100%. Participants were also asked if they would arrest the suspect based on the information that they had obtained so far and, if not, what evidence they would need to arrest the suspect. Participants then indicated how confident they felt in their arrest decision on a scale from 1 to 10. Finally, participants were asked to rate various types of evidence according to how important each one was when choosing the suspect. Participants rated each piece of evidence as "not at all important," "somewhat important," or "very important."

Following the questionnaire, participants were given instructions about the lineup procedure. Participants were told to try not to influence the witness toward choosing their suspect. They were also informed that they must instruct the witness that the culprit might not be present in the lineup and, if not, that the witness should not make an identification. The participants were instructed that the lineup consisted of one person who could have committed the crime (their chosen suspect) and five innocent people (foils).

Participants then administered the lineup to the confederate. The confederate looked over the lineup and then responded in one of three ways: "It's number

⁴However, all participants in this study chose the same suspect as the database was designed to suggest the guilt of that suspect.

202 three” (ID Suspect condition), “It’s number six” (ID Foil condition), or “He’s
 203 not there” (Not Present condition). After the confederate made his decision, the
 204 participant was informed that he/she could ask any additional questions that he/she
 205 thought would be helpful. The majority of participants did not ask any further ques-
 206 tions, but some participants subsequently asked how confident the witness was in
 207 his decision. If this was the case, the witness responded “fairly confident” in all
 208 conditions.⁵

209 Following the lineup, the witness left the room and the participant com-
 210 pleted the Post-Identification questionnaire, which was almost identical to the Pre-
 211 Identification questionnaire. It first asked participants to indicate what lineup mem-
 212 ber (if any) the eyewitness chose. Participants then rated how confident they were in
 213 the accuracy of the witness’s decision on a scale from 1 to 10. Participants again es-
 214 timated the probability that the suspect they chose had committed the crime. They
 215 also indicated again whether they would arrest the suspect and how confident they
 216 were in that decision. Afterward, participants were fully debriefed regarding the
 217 purposes of the experiment and the use of the confederate.

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Results

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Pre-Identification Questionnaire

220 Participants were asked to rate the probability (on a scale from 0 to 100%) that
 221 their suspect was the culprit. The overall mean was 77.08% ($SD = 9.08$). Slightly less
 222 than half of the participants ($N = 11$) reported that they would arrest the suspect.
 223 Those who said that they would not arrest the suspect ($N = 13$) were asked what
 224 information they would need to arrest the suspect. The most common answer was
 225 that they would need more material evidence (e.g., car license plate, stolen goods).
 226 When asked how confident they were in their arrest decision, the mean confidence
 227 across arrest decisions (yes or no) was 7.17 ($SD = 1.63$). There was not a significant
 228 difference in confidence between those who indicated they would (7.82, $SD = 1.08$)
 229 versus would not (6.62, $SD = 1.85$) arrest the suspect, $F(1, 22) = 3.60$, $MSE = 2.40$,
 230 $p = .07$, partial $\eta^2 = .14$.

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Ratings of the Evidence

232 Participants rated how important physical description, prior record, fingerprint
 233 evidence, alibi, and other evidence were in their choice of suspect (see Fig. 1).
 234 Participants did not comparatively rate each piece of evidence but rather indepen-
 235 dently rated each category as not at all, somewhat, or very important. A repeated
 236 measures ANOVA indicated that there were significant differences in rated impor-
 237 tance between the evidence factors, $F(2.73, 55.68) = 16.09$, $MSE = .46$, $p < .001$, par-
 238 tial $\eta^2 = .41$. Physical description and fingerprints were rated as the most important
 239 pieces of evidence.

⁵No records were kept of these questions.

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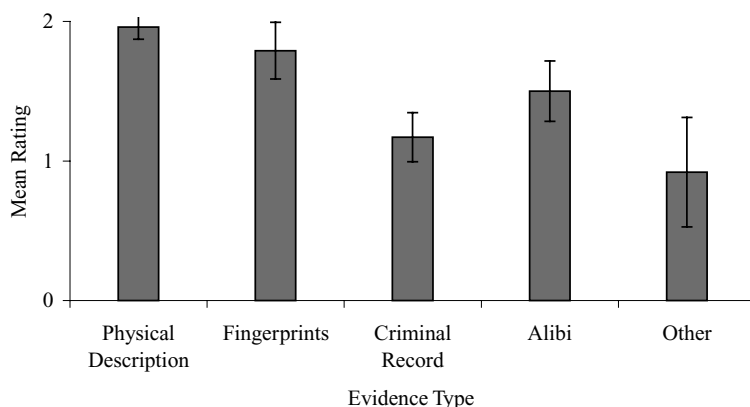


Fig. 1. Experiment 1A ratings of evidence pre-lineup. Error bars represent the 95% confidence intervals of the marginal means.

Post-Identification Probability Suspect Committed Crime

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After participants had administered the photo-lineup they re-rated the probability that their suspect had committed the crime. A 2 (time: Pre-ID, Post-ID) × 3 (condition: ID Suspect, ID Foil, Not Present) repeated measures mixed model ANOVA was used to investigate whether there were significant differences in participants' estimates of the probability that the suspect was the culprit. The interaction was significant, $F(2, 21) = 34.96$, $MSE = 151.79$, $p < .001$, partial $\eta^2 = .77$. All post-lineup condition probabilities differed significantly from the pre-lineup probabilities (all p 's $< .01$) (see Fig. 2). In the ID Suspect condition, post-lineup probabilities were significantly higher than pre-lineup probabilities whereas in the ID Foil

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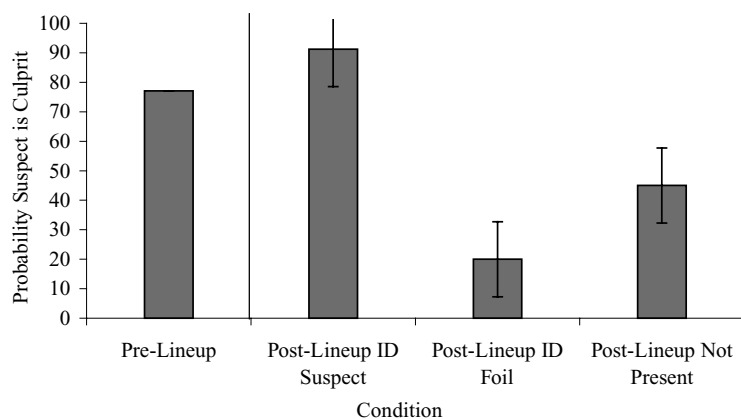


Fig. 2. Experiment 1A probability ratings that the investigator's suspect is the culprit. Error bars represent the 95% confidence intervals of the marginal means.

250 and Not Present conditions the post-lineup probabilities were significantly lower
 251 than the pre-lineup probabilities.

252 There was a main effect of condition, $F(2, 21) = 21.86$, $MSE = 236.31$, $p < .001$,
 253 partial $\eta^2 = .68$. Because the eyewitness decision only impacted post-ID probabili-
 254 ties (as expected, there was no effect of condition on the pre-ID probability esti-
 255 mates, $F < 1$), post hoc tests were only conducted on the post-ID probability ratings.
 256 Participants who believed that the witness had identified their suspect were signifi-
 257 cantly more likely to think that their suspect was the culprit than participants in both
 258 the ID Foil and Not Present conditions, $t(14) = 9.03$, $p < .001$, Cohen's $d = 4.51$ and
 259 $t(14) = 6.44$, $p < .001$, Cohen's $d = 3.22$, respectively. The ratings in the ID Foil and
 260 Not Present conditions were not significantly different (using the Bonferroni α of
 261 .017) in their beliefs that the suspect was the culprit, $t(14) = 2.38$, $p = .032$, Cohen's
 262 $d = 1.19$ (see Fig. 2).

263 *Confidence in the Witness*

264 Participants were asked to rate their confidence in the witness's decision. There
 265 was a nonsignificant tendency for participants to be more confident in a witness who
 266 identified their suspect ($M = 8.63$, $SD = .52$) than in a witness who identified a foil
 267 lineup member ($M = 6.75$, $SD = 3.11$) or rejected the lineup ($M = 6.25$, $SD = 2.38$),
 268 $F(2, 21) = 2.42$, $MSE = 5.19$, $p = .11$, partial $\eta^2 = .19$ (see Fig. 3).

269 *Arrest Decision*

270 Participants were asked whether they would arrest the suspect. Compared to
 271 the pre-ID reports of arrest decision, the frequency of arrest decisions increased in
 272 the ID Suspect condition and decreased in the ID Foil and Not Present conditions.
 273 A Chi-square test was significant, $\chi^2(2) = 16.13$, $p < .01$, Cramer's $V = .82$. Small cell

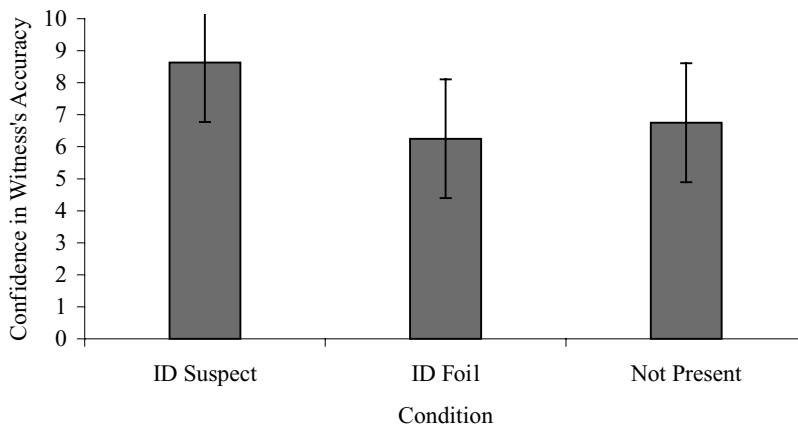


Fig. 3. Experiment 1A ratings of confidence in the witness's accuracy. Error bars represent the 95% confidence intervals of the marginal means.

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frequencies prohibited the further use of Chi-square analyses to assess the statistical significance of this overall pattern, therefore, Fisher exact probability tests were used instead. Participants in the ID Suspect condition were significantly more likely to arrest the suspect than those in the ID Foil or Not Present conditions (p 's < .05). There was not a significant difference between the ID Foil and Not Present conditions ($p > .05$).⁶

Discussion 280

Participant-investigators were heavily influenced by eyewitness decisions. When the witness agreed with the investigator's decision, probability estimates of the suspect's guilt rose significantly from pre-lineup estimates. But when the eyewitness identified a foil lineup member or rejected the lineup, probability estimates plummeted. It is somewhat surprising that participants were so affected by the eyewitness decisions in the ID Foil and Not Present conditions. The pre-lineup ratings suggested that the evidence (e.g., fingerprints, car ownership, etc.), was quite strong, and that the participant had made some commitment to the hypothesis that his/her suspect was guilty. Considerable research on the confirmation bias (e.g., Jones, Schulz-Hardt, Frey, & Thelen, 2001; Nickerson, 1998) would suggest that hypothesis-disconfirming identification evidence would be given little weight but that is not what we found.

EXPERIMENT 1B 293

Experiment 1A demonstrated that the eyewitness's decision had a large impact on participant-investigators. But was that impact really more than it should have been? One way to examine whether investigators placed too much influence on the eyewitness is to study the performance of actual participant-witnesses on the materials that we used in the first experiment. If the majority of participant-eyewitnesses are able to identify the culprit from the video and lineup used in the first study and correctly reject a target absent lineup, then the large influence of the eyewitness decision makes sense; participant-investigators should put a large emphasis on the eyewitness decision. If, however, participants have difficulty identifying the culprit and commonly make mistaken ID's or mistakenly reject the lineup, then the influence of these decisions on participant-investigators is troublesome.

Method 305

Participants 306

Fifty University of Victoria undergraduate students participated individually in return for optional extra credit in an introductory psychology course.

⁶No significant effects were obtained for confidence in arrest decisions, so those data will not be reported here; they are available from the first author.

310 Participants were told that they would watch a short video and that they would
 311 be asked about their impressions of the video. The video that the confederate-
 312 witness described in the first experiment was used here. Following the video, the
 313 experimenter informed participants that they were taking part in an eyewitness ex-
 314 periment. Participants were told that they would be asked to identify the person
 315 who was arrested at the end of the video.

316 Following this debriefing, participants completed the interview questionnaire.
 317 The interview categories suggested to the investigators in the first experiment (e.g.,
 318 description of crime, culprit, car, etc.) were given to the participant-witnesses in the
 319 form of a written questionnaire. Participants were told to answer the questions in as
 320 much detail as possible and to imagine that the questions were coming from a police
 321 officer pursuing the culprit, hence it was very important that they answered all of
 322 the questions as accurately and thoroughly as possible.

323 To replicate the timing of the investigator study, participants performed an un-
 324 related filler task that took approximately 15 min between the interview question-
 325 naire and the lineup (i.e., the amount of time that it typically took the participant-
 326 investigator to go through the computer database and choose a suspect).

327 Following the filler task, the participant-witnesses were shown either a target
 328 present or target absent photo-lineup on the computer. The target present lineup
 329 was identical to that used in Experiment 1A. The target absent lineup was identical
 330 except that an additional foil who fit a description of the culprit replaced the culprit's
 331 photo. Participants were informed that they could either choose a lineup member
 332 or say "Not Present."

333 After the lineup, participants indicated their confidence in the lineup decision,
 334 from 1% (almost no chance that their answer was correct) to 100% (complete cer-
 335 tainty that their answer was correct). Participants were then fully debriefed and
 336 dismissed.

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Results

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Lineup Accuracy

339 See Table 1 for a breakdown of the ID decisions. The distribution of responses
 340 across the categories of ID suspect, ID foil, and Not Present did not significantly dif-
 341 fer as a function of lineup type, $\chi^2(1) = .77, p = .68$. Confidence was not significantly
 342 related to accuracy or lineup type (all F s < 1) (see Figs. 4 and 5 for histograms of
 343 the confidence judgments for the target present and target absent lineups.)

Table 1. Experiment 1B Participant-Witnesses' Identification Decisions

	Condition						
	Foil 1	Foil 2	Suspect 3	Foil 4	Foil 5	Foil 6	Not present
Target absent	6	2	2	0	2	0	13
Target present	2	7	3	0	3	0	10

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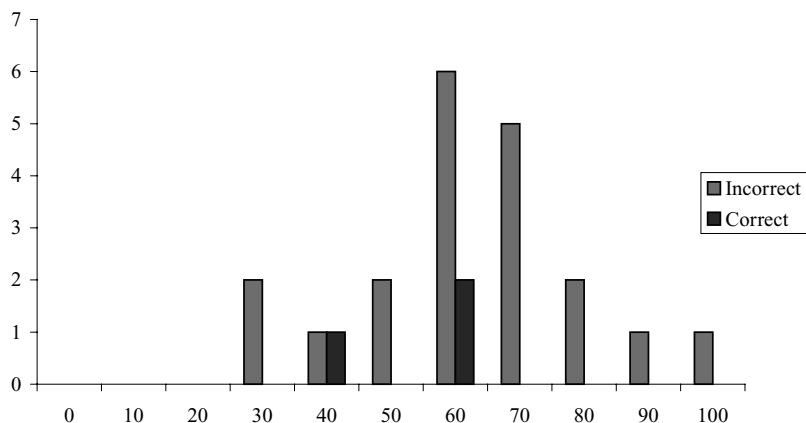


Fig. 4. Experiment 1B histogram expressing participant-witnesses' confidence judgments regarding their identification decision for the target present lineup.

Discussion

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The amount of detail in participant-witnesses' responses to the questionnaire was similar to that given by the confederate in the previous experiment. For example, of the 15 categories of information that witnesses were asked to describe, 100% of the witnesses provided information for 13 of those categories. In the other two categories (height and hair style), 94 and 86%, respectively, provided descriptions. Yet their performance on the lineup identification task was abysmal. Only 3 out of 25 of the participant-witnesses correctly identified the thief in the target present condition. This poor performance of witnesses on the lineup task suggests that the participant-investigators in Experiment 1A were greatly

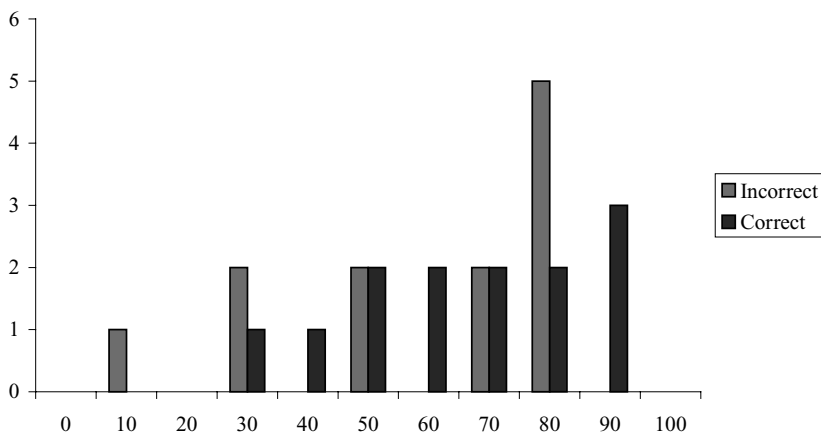


Fig. 5. Experiment 1B histogram expressing participant-witnesses' confidence judgments regarding their identification decision for the target absent lineup.

354 over-influenced by the confederate-witness. That is, given that real participant-
355 witnesses performed at chance, our participant-investigators put far too much trust
356 in the similar confederate-witnesses tested on the same lineup and under similar
357 conditions.

358 **EXPERIMENT 2A**

359 One unexpected result of Experiment 1B was that twice as many participants
360 mistakenly identified #2 as the culprit than correctly identified #3 as the culprit.
361 This suggests that our target present lineup was biased, with a foil lineup member's
362 picture being a better match to the culprit in the video. Consequently, a second set
363 of experiments was conducted to replicate the findings of Experiments 1A and B
364 with a lineup that no longer included the problematic foil #2.

365 **Method**

366 *Participants*

367 Thirty-six University of Victoria undergraduate students participated individu-
368 ally in return for optional extra credit in an introductory psychology course. Partic-
369 ipants were randomly divided into three conditions: ID Suspect, ID Foil, and Not
370 Present.

371 *Materials and Procedure*

372 Other than the replacement of the troublesome foil #2 with a new foil who fit
373 a description of the culprit, the materials in Experiment 2A were virtually identi-
374 cal to those in Experiment 1A. There were a few minor changes to the instructions
375 for using the database and the instructions for the lineup. The instructions for us-
376 ing the database were changed to emphasize that the culprit might not be among
377 the suspects listed. In addition, a link was added to the decision page that allowed
378 participant-investigators to reject all of the suspects.

379 The instructions for the lineup were also changed to ensure that participants
380 understood that the only lineup member who could have committed the crime was
381 their suspect. After participants chose their suspect and saw their suspect's photo,
382 they were taken to a page containing the lineup. This lineup labeled the lineup mem-
383 bers as being either the participant's suspect or in jail. Once they had viewed this
384 page and were given the lineup instructions, they were shown an identical lineup
385 sans labels for use during the lineup administration. All of the other information in
386 the database was identical to that in Experiment 1A.

387 The questionnaires were also changed slightly to allow for the possibility
388 of not choosing a suspect. The wording of the probability question on the Pre-
389 Identification questionnaire was revised and participants were asked to make their
390 decision using a scale from 1 to 100%. Note that 1% was the smallest rating partic-
391 ipants could give as the fact that they chose a suspect necessitated that they must
392 have believed that there was some chance that their suspect committed the crime.

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The rating of evidence question was also revised so that participants were asked to rate the evidence comparatively giving each piece of evidence a rating of relative importance.

The same changes were made on the Post-Identification questionnaire except that the probability of suspect's guilt question was changed to include a 0% chance that the suspect was the culprit. The rating of evidence question was included on the Post-Identification questionnaire and was also changed to include the eyewitness's decision as a source of evidence. This allowed for a better examination of how participant-investigators felt the witness's decision influenced their own decisions. Otherwise, the questionnaires remained identical to those used in Experiment 1A.

Results

Pre-Identification Questionnaire

The overall mean probability that the suspect was the culprit was 78.00% ($SD = 10.98$). Just over half of the participants (55.56%) reported that they would arrest the suspect. Reasons to not arrest the suspect included finding other evidence and getting the witness to identify the suspect. There was a significant difference in confidence in the arrest decision between those who would not arrest the suspect ($M = 6.00$, $SD = 1.10$) and those who would arrest the suspect ($M = 7.90$, $SD = .97$), $F(1, 34) = 30.475$, $MSE = 1.05$, $p < .01$, partial $\eta^2 = .47$.

Post-Identification Probability Suspect Committed Crime

A 2 (time: Pre-ID, Post-ID) \times 3 (condition: ID Suspect, ID Foil, Not Present) repeated measures mixed model ANOVA was conducted on participants' pre-lineup versus post-lineup estimates of the probability that the suspect was the culprit. There was a significant interaction, $F(2, 33) = 29.53$, $MSE = 94.06$, $p < .01$, partial $\eta^2 = .64$. For the ID Suspect group, the pre-lineup probability was significantly lower than the post-lineup probability, $t(11) = 6.75$, $p < .01$, Cohen's $d = .76$ (see Fig. 4). For both the ID Foil condition and the Not Present condition, the post-lineup probabilities were significantly lower than the pre-lineup probabilities, all p 's $< .01$.

There was a main effect of condition on estimates of the probability that the suspect was the culprit, $F(2, 33) = 13.11$, $MSE = 292.95$, $p < .01$, partial $\eta^2 = .44$. The three groups were equivalent in their pre-lineup ratings ($F < 1$), therefore, independent samples t -tests were conducted on only the post-ID probability ratings. The analyses revealed that participants in the ID Suspect condition rated the probability that their suspect was the culprit significantly higher than participants in both the ID Foil and Not Present conditions (all p 's $< .01$). Participants in the ID Foil and Not Present conditions did not differ significantly in their estimates that the suspect was the culprit ($p = .21$) (see Fig. 6).

⁷Analyses of the ratings of the evidence question revealed that participants rated physical description and fingerprints higher than all other sources of evidence. Contact the first author for further details.

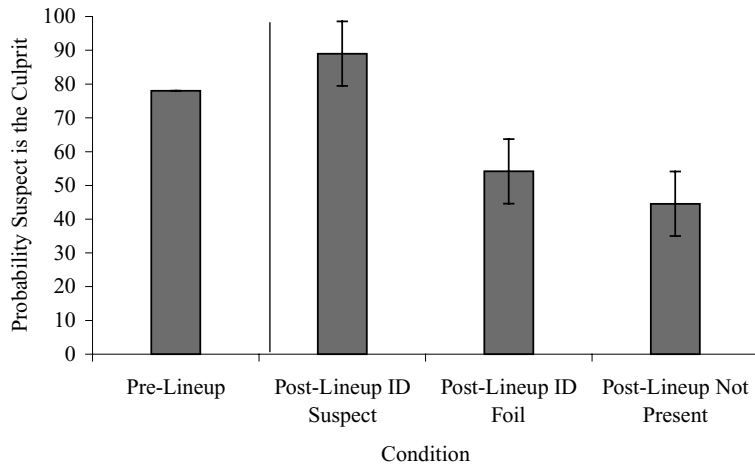


Fig. 6. Experiment 2A probability ratings that the investigator's suspect is the culprit. Error bars represent the 95% confidence intervals of the marginal means.

432

Confidence in the Witness

433 There were significant differences between the ID conditions on ratings of
 434 confidence in the witness's decision, $F(2, 33) = 25.43$, $MSE = 2.61$, $p < .01$, partial
 435 $\eta^2 = .61$ (see Fig. 7). In the ID Suspect condition, participants were more confident
 436 in the witness than in the ID Foil condition, $t(22) = 7.75$, $p < .01$, Cohen's $d = 3.18$.
 437 ID Suspect condition participants were also more confident in the witness than those
 438 in the Not Present condition, $t(22) = 4.74$, $p < .01$, Cohen's $d = 2.02$. Participants in
 439 the ID Foil and Not Present conditions also differed significantly in their ratings of
 440 confidence in the witness, $t(22) = 2.39$, $p < .05$, Cohen's $d = 1.02$.

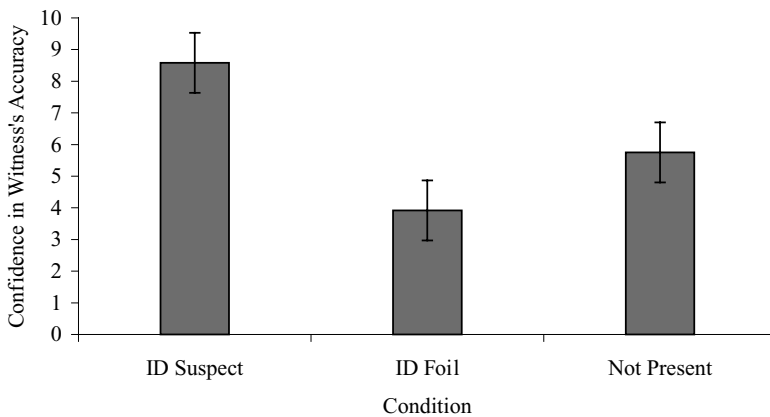


Fig. 7. Experiment 2A ratings of confidence in the witness's accuracy. Error bars represent the 95% confidence intervals of the marginal means.

Arrest Decision 441

When participants were asked whether they would arrest their suspect after the identification procedure, 83.3% in the ID Suspect condition reported that they would arrest the suspect, compared to 33% in the ID Foil condition and 25% in the Not Present condition. The Chi-square was significant, $\chi^2(2) = 9.59$, $p < .05$, Cramer's $V = .52$. Subsequent Chi-square tests revealed that participants were significantly more likely to arrest the suspect in the ID Suspect condition than in the ID Foil ($\chi^2(1) = 4.29$, $p < .05$, Cramer's $V = .51$) or Not Present conditions ($\chi^2(1) = 6.04$, $p < .05$, Cramer's $V = .59$). A Fisher exact probability test was conducted between the ID Foil and Not Present condition due to small cell frequencies and found no significant difference between the conditions ($p > .5$).

Discussion 452

Replicating Experiment 1A, Experiment 2A revealed that participant-investigators were greatly influenced by eyewitness decisions. If the witness identified the investigator's suspect probability ratings increased dramatically. On the other hand, if the witness identified another lineup member or made no identification, probability ratings dropped.

Unlike Experiment 1A, Experiment 2A did not reveal significant differences in probability ratings between the ID Foil and Not Present conditions. It is possible that the trend found in Experiment 1A was a Type I error, as the larger sample sizes in Experiment 2A provided ample power for examining the differences between conditions.

In the current experiment, participant-investigators in the ID Suspect condition were significantly more confident in the witness than were those in the other conditions. Participants were also more confident in the witness in the Not Present condition than in the ID Foil condition. This implies that the investigators understood that the witness in the ID Foil condition made an error by identifying another lineup member. What is particularly interesting about these results is that even though the investigators reported low confidence in the witness's decision in the ID Foil condition, they nonetheless allowed that identification decision to affect them greatly when rating the probability that the suspect they chose was the culprit (as evidenced by the dramatic drop in their probability ratings of their suspect's guilt). Therefore, even though they knew that the eyewitness was mistaken and reported low confidence in the witness's decision, investigators still treated that decision as strong evidence that their choice of suspect was incorrect.

EXPERIMENT 2B 476

Experiment 2B replicated Experiment 1B with a larger sample size and the new photo lineup. The lineup used in Experiment 2A was used as the target present lineup for this experiment. The target absent lineup was also modified to remove the problematic lineup member.

481

Method

482

Participants

483 One hundred and two University of Victoria undergraduate students partici-
 484 pated in groups of 10 or less in return for optional extra credit in an introductory
 485 psychology course.

486

Materials and Procedure

487 The procedure and materials in this experiment were identical to those used
 488 in Experiment 1B except that (a) the problematic Foil was replaced and (b) par-
 489 ticipants were tested in groups of 10 or less with the crime video and photo lineup
 490 projected onto a screen at the front of the testing room.

491

Results

492

Lineup Accuracy

493 See Table 2 for the breakdown of ID decisions. The distribution of responses
 494 across the categories of ID suspect, ID other, and Not Present did not significantly
 495 differ as a function of whether the suspect was or was not the culprit, $\chi^2(1) = 1.81$,
 496 $p = .41$. Confidence was not significantly related to accuracy (all F s < 1) (see Figs. 8
 497 and 9 for histograms of the confidence judgments for the target present and target
 498 absent lineups).

499

Discussion

500 Experiment 2B replicated the results of Experiment 1B, finding that even with
 501 the problematic lineup member's picture removed, participants' ID performance
 502 was still very poor.

503

EXPERIMENT 3

504 Experiments 1A and 2A showed that participant-investigators were highly in-
 505 fluenced by witnesses' decisions even though those decisions were very likely to
 506 be incorrect. Both experiments showed a large drop in probability ratings that the
 507 suspect committed the crime in the ID Foil condition, even though these partic-
 508 ipants knew that the witness had made an error. When asked during debriefing
 509 why their probability ratings dropped so dramatically, participants reported that the

Table 2. Experiment 2B Participant-Witnesses' Identification Decisions

	Condition						
	Foil 1	Foil 2	Suspect 3	Foil 4	Foil 5	Foil 6	Not present
Target absent	6	15	5	4	8	0	13
Target present	8	9	12	4	4	1	13

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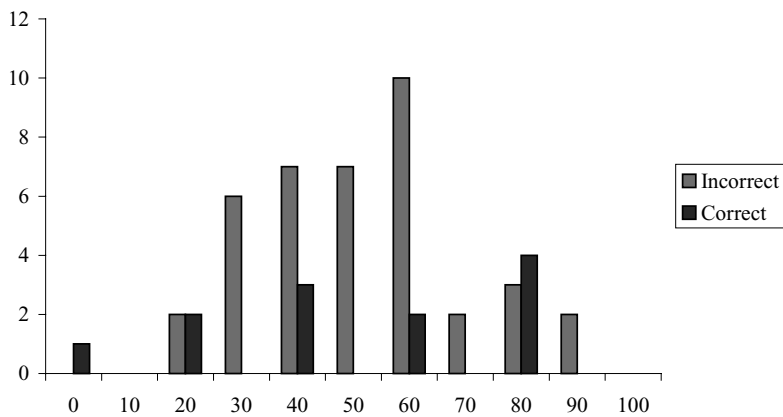


Fig. 8. Experiment 2B histogram expressing participant-witnesses' confidence judgments regarding their identification decision for the target present lineup.

lineup member chosen by the witness looked quite dissimilar from their own chosen 510
 suspect. As such, participants reported that even though they understood that the 511
 lineup member identified could not have committed the crime, they believed that 512
 the real culprit must look more like the identified lineup member than their own 513
 chosen suspect. Given this and the high proportion of participant-witnesses who 514
 identified an innocent foil over the culprit in Experiment 1B, we were interested in 515
 examining what role lineup member similarity plays in investigators' assessments of 516
 witnesses' decisions. If participant-investigators compare the physical similarity of 517
 foil lineup members to their chosen suspect, similar-looking or dissimilar-looking 518
 lineup members might have differential influences on ratings of the suspect's guilt 519
 and confidence in the witness. If identification of a dissimilar-looking lineup member 520
 results in participants discrediting their own choice of suspect as too dissimilar to the 521

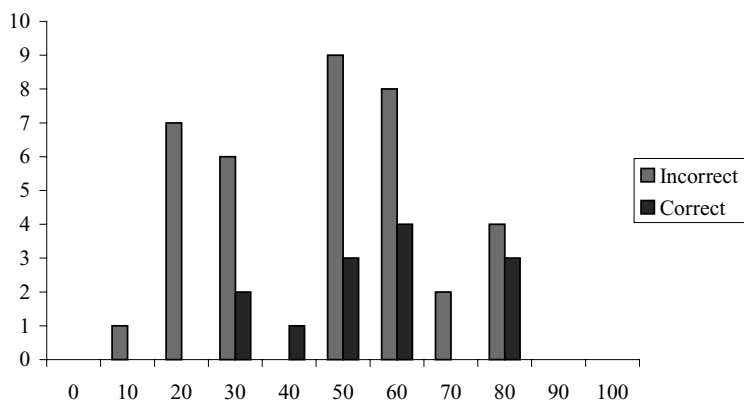


Fig. 9. Experiment 2B histogram expressing participant-witnesses' confidence judgments regarding their identification decision for the target absent lineup.

522 real culprit, how would the identification of a similar-looking lineup member influ-
523 ence investigators? If the identified innocent foil looks quite similar to the suspect,
524 participants might be less likely to reject their suspect and more likely to assume
525 that the witness made a mistake. Thus, identification of a similar lineup member
526 might be seen as less exonerating than the identification of a dissimilar-looking foil.
527 Experiment 3 was designed to examine the influence of an identification of a lineup
528 member who was either physically similar or dissimilar to the investigator's chosen
529 suspect.

530 **Method**

531 *Participants*

532 Forty-five male and female University of Victoria undergraduate students partic-
533 ipated individually in return for optional extra credit in an introductory psychol-
534 ogy course. Participants were randomly divided into three conditions: ID Suspect,
535 ID Similar Foil, and ID Dissimilar Foil.

536 *Materials and Procedure*

537 The procedure and materials in this experiment were identical to those used
538 in Experiment 2A except that (a) the Not Present condition was removed and (b)
539 the original target present lineup from Experiment 1 was used for this experiment.
540 In the ID Similar Foil condition, the witness identified the lineup member who the
541 majority of participant-witnesses mistakenly identified in Experiment 1B. In the ID
542 Dissimilar Foil condition, the witness chose the same foil chosen in the previous
543 ID Foil conditions. A pilot test of similarity ratings found that lineup member to
544 be rated least similar to the culprit. Further, in the participant-witness experiments,
545 only one participant (out of 152) identified that lineup member as the culprit.

546 **Results**

547 *Pre-Identification Questionnaire*

548 The overall mean estimate of the probability that the suspect was the culprit
549 was 78.32% ($SD = 11.28$). The majority of participants (68.9%) reported that they
550 would arrest the suspect. There was a significant difference in confidence in arrest
551 decision between those who would not arrest the suspect ($M = 6.43$, $SD = 1.60$)
552 and those who would arrest the suspect ($M = 7.61$, $SD = 1.15$), $F(1, 43) = 7.99$,
553 $MSE = 1.69$, $p < .05$, partial $\eta^2 = .16$.

554 *Post-Identification Probability Suspect Committed Crime*

555 A 2 (time: Pre-ID, Post-ID) \times 3 (condition: ID Suspect, ID Similar Foil,
556 ID Dissimilar Foil) repeated measures mixed model ANOVA was conducted.
557 There was a significant interaction, $F(2, 42) = 44.12$, $MSE = 88.41$, $p < .01$, par-
558 tial $\eta^2 = .68$. Paired samples t -tests revealed that the difference between pre- and

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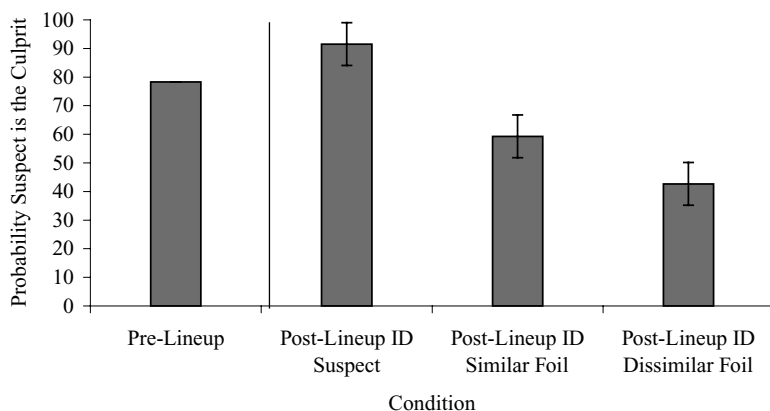


Fig. 10. Experiment 3 probability ratings that the investigator's suspect is the culprit. Error bars represent the 95% confidence intervals of the marginal means.

post-lineup estimates of probability was significantly different within each group. 559 For the ID Suspect group, the post-lineup probability was significantly higher 560 at 91.53% ($SD = 6.94$) than the pre-lineup probability at 80.40% ($SD = 9.88$), 561 $t(14) = 5.50$, $p < .01$, Cohen's $d = 1.30$. In the ID Dissimilar Foil group, the 562 post-lineup probability was significantly lower ($M = 42.67\%$, $SD = 20.86$) than the pre- 563 lineup probability ($M = 76.23\%$, $SD = 13.94$), $t(14) = 6.96$, $p < .01$, Cohen's $d = 1.89$. 564 The same was true for the ID Similar Foil condition, (post-lineup: $M = 59.27\%$, 565 $SD = 11.63$; pre-lineup: $M = 78.33\%$, $SD = 9.94$), $t(14) = 6.76$, $p < .01$, Cohen's 566 $d = 1.76$ (see Fig. 10). 567

There was a main effect of condition on ratings of probability that the sus- 568 pect was the culprit, $F(2, 42) = 21.88$, $MSE = 247.98$, $p < .01$, partial $\eta^2 = .51$. There 569 was no effect of condition on pre-ID probabilities ($F < 1$), therefore, independent 570 samples t -tests were conducted on only the post-ID probability ratings. The anal- 571 yses revealed that participants in the ID Suspect condition rated the probability 572 that their suspect was the culprit significantly higher than participants in the other 573 conditions (all p 's $< .01$). Participants in the ID Dissimilar Foil, and ID Similar Foil 574 conditions also differed significantly from each other, $t(28) = 2.69$, $p < .05$, Cohen's 575 $d = 1.02$. 576

Confidence in the Witness

577

There were significant differences between the identification conditions, $F(2, 578 42) = 39.10$, $MSE = 4.11$, $p < .01$, partial $\eta^2 = .65$ (see Fig. 11). In the ID Suspect 579 condition ($M = 9.00$, $SD = .93$), participants were more confident in the witness 580 than in the other conditions (all p 's $< .01$). Participants in the ID Dissimilar Foil 581 ($M = 3.40$, $SD = 2.13$), and ID Similar Foil ($M = 3.27$, $SD = 2.63$), conditions did not 582 differ significantly in their confidence in the witness, $t(28) = .15$, $p < .05$, Cohen's 583 $d = .06$. 584

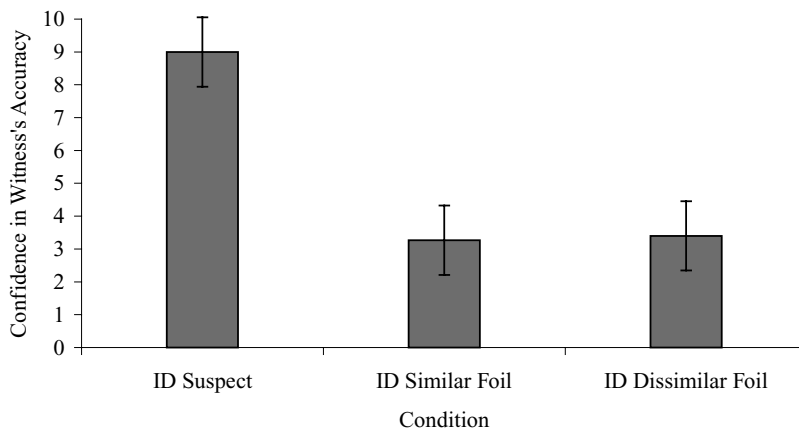


Fig. 11. Experiment 3 ratings of confidence in the witness's accuracy. Error bars represent the 95% confidence intervals of the marginal means.

585

Arrest Decision

586 When participants were again asked whether they would arrest their suspect,
 587 a 2 (arrest: Arrest or Not Arrest) \times 3 (condition: ID Suspect, ID Similar Foil, ID
 588 Dissimilar Foil) Chi-square analysis was significant, $\chi^2(2) = 17.67, p < .01$, Cramer's
 589 $V = .63$. All of the participants in the ID Suspect condition reported that they would
 590 arrest the suspect post-lineup. Subsequent Chi-square tests revealed that partici-
 591 pants were significantly more likely to arrest the suspect in the ID Suspect condi-
 592 tion than in either the ID Dissimilar ($\chi^2(1) = 14.35, p < .01$, Cramer's $V = .76$) or
 593 ID Similar Foil conditions ($\chi^2(1) = 8.35, p < .05$, Cramer's $V = .60$). In the ID Dis-
 594 similar Foil, only 26.70% were willing to arrest and in the ID Similar Foil 46.70%
 595 would still arrest their suspect. These two conditions did not differ significantly in
 596 their willingness to arrest the suspect, $\chi^2(1) = .57, p > .05$, Cramer's $V = .21$.

597

Discussion

598 As in Experiments 1A and 2A, Experiment 3 revealed that participant-
 599 investigators were greatly influenced by eyewitness decisions. If the witness iden-
 600 tified the investigator's suspect, probability ratings increased dramatically and if the
 601 witness identified a known innocent foil probability ratings dropped significantly.

602 The similarity of the foil lineup member to the investigators' suspect, influenced
 603 investigators' probability ratings of suspect's guilt. Just as predicted, participants in
 604 the condition in which the witness identified a similar-looking lineup member were
 605 more likely to think that their suspect still could have committed the crime than
 606 those whose witness identified a dissimilar-looking foil.

607 Confidence in the accuracy of the witness's decisions differed between the ID
 608 Suspect and ID Foil conditions. However, there were no differences in confidence
 609 ratings between the two ID Foil conditions. In both the conditions, participant-
 610 investigators reported that they were not very confident in the witness's accuracy,

Investigating Investigators

suggesting that they understood that the witness had made a mistake. Importantly, even though the investigators reported low confidence in the witness's decision, they were nonetheless greatly affected by those decisions when rating the probability that the suspect they chose was the culprit. Even though they knew in the ID Foil conditions that the witness was mistaken, investigators still treated those decisions as strong evidence that their chosen suspect was innocent.

When asked whether they would arrest their suspect after the lineup, participants in the ID Suspect condition were significantly more willing to arrest their suspect than participants in the other two conditions, which did not differ. As with the probability ratings, the expected trend was found (although not significant) that participants would be more willing to arrest their suspect in the ID Similar condition. If the investigators were treating the ID Similar decision as a mistake but a mistake that somewhat confirmed their choice of suspect (choosing someone who looks quite similar to the suspect) then it makes sense to continue to pursue that suspect.

GENERAL DISCUSSION

Estimating Suspect's Guilt

The goal of this research was to switch focus from the traditional examination of eyewitnesses and their influence on jurors to the examination of those in the role of investigators. These studies were conducted to examine the influence of eyewitness decisions on participant-investigators who had been actively involved in developing suspicions of a suspect.

Three experiments examining the influence of eyewitness decisions on participant-investigators revealed that investigators were heavily influenced by eyewitness decisions, regardless of what that decision was. When the eyewitness decision corroborated the investigator's choice of suspect, the investigator's probability estimate that the suspect was the culprit increased dramatically to near-ceiling levels. Contrary to expectations of a confirmation bias, if the eyewitness identified an innocent lineup member or reported that the culprit was not present, probability estimates plummeted even though the pre-lineup physical evidence was strong and their reported confidence in the witness's decision was low.

Experiments 1B and 2B examined participant-witnesses identification decisions given the materials used in the investigator studies. These experiments revealed that participant-witnesses found it extremely difficult to correctly identify the suspect. As such, it appears that our participant-investigators were vastly over-influenced by the confederate-witness's decision.

Although participant-investigators were more influenced by the witness identification decision than they should have been given participant-witnesses' performance levels, that does not necessarily imply that they were irrational in their thinking. For example, it is possible that naïve participant-investigators truly believed that if the culprit were in the lineup then the witness would almost certainly identify him (and hence that the witness would identify an innocent foil or reject the lineup only

653 if the culprit was not in the lineup). That is, if participant-investigators believed the
654 witness was almost certainly accurate, then there would be nothing irrational with
655 being greatly influenced by the identification response.

656 In addition, design aspects of our procedure may have also influenced investi-
657 gators to overly rely on the witness. To ensure that our investigators were picking
658 the same suspect from the database, they were instructed that the suspect's physical
659 description should match what they were told by the witness. Obviously this does
660 not represent what occurs in the majority of cases in the real world where witnesses
661 are not able to correctly describe the culprit or time leads to changes in the culprit's
662 description. Our investigators might have taken this instruction as an indication that
663 the witness gave a perfectly accurate description and therefore is also a very strong
664 witness who should have a large impact on their decisions. Even so, participant-
665 investigators' ratings of confidence in the witness did not always parallel the extent
666 to which the witness influenced them.

667 Given our findings that participant-investigators are greatly over-influenced
668 by eyewitness identification decisions, it is interesting to make a comparison be-
669 tween the results of this study and those of Bregman and McAllister (1987) and
670 Skolnick and Shaw (2001). Both of these studies examined the influence of physical
671 and eyewitness evidence on mock-jurors. Bregman and McAllister examined how
672 participant-jurors treated contradictory fingerprint and eyewitness evidence and
673 found that the jurors tended to be more swayed by the eyewitness than the finger-
674 prints. Similar to the current studies, they found that when the fingerprints indicted
675 the defendant but the witness did not identify that person, conviction rates dropped
676 significantly. The Skolnick and Shaw study, which used other forms of physical evi-
677 dence rather than fingerprints, found that jurors were more strongly influenced by
678 the physical evidence than by the eyewitness testimony. Therefore, although the re-
679 ported studies differ greatly in both materials and procedure from these two jury
680 studies, it appears that our participant-investigators were also more greatly influ-
681 enced by the eyewitness's decision than by other evidence as in the Bregman and
682 McAllister study.

683 **Evaluating the Witness**

684 In all three participant-investigator experiments, the investigators were asked
685 to rate how confident they were in the witness's decision. Although Experiment 1A
686 did not find any significant differences between groups, most likely due to small sam-
687 ple sizes, Experiment 2A found that investigators were more confident in the witness
688 when the eyewitness identified their chosen suspect. Confidence ratings were fairly
689 low in the ID Foil condition, suggesting that participants understood that the eye-
690 witness was making a mistake by identifying an innocent lineup member. Likewise,
691 confidence ratings were not significantly higher in the condition where the eyewit-
692 ness rejected the lineup. The same pattern of results was found in Experiment 3
693 where participant-investigators were less confident in their eyewitness when the wit-
694 ness identified an innocent foil (regardless of the foil's similarity to the suspect) than
695 when the witness identified the suspect.

Investigating Investigators

Therefore, in the conditions where the eyewitness identified an innocent lineup member there appears to be a dissociation between investigators' ratings of confidence in the witnesses' decision and the degree to which they let that decision influence them. Participant-investigators had strong pre-lineup evidence to support their choice of suspect, they knew the eyewitness had chosen an innocent lineup member, and they rated that they had low confidence in the eyewitnesses' decision, yet they let that decision sway them greatly when estimating the probability that their suspect had committed the crime.

It is important to note that our confederate-witness's perceived confidence during the interview and lineup identification task was controlled such that the witness appeared quite confident while describing the crime and making the identification decision. Obviously in the real world, witnesses' apparent confidence will differ wildly and might have an effect on investigators probability judgments and confidence in the witness. However, in one unpublished study we manipulated the confederate-witness's confidence and found no difference in probability estimates between those investigators who had an extremely confident witness and those who had an unsure witness.

Recommendations for Eyewitness Identification Procedures

Wells et al. (1998) made a number of recommendations regarding lineup identification procedures to help prevent false eyewitness identifications. Although these recommendations were created with the eyewitnesses' behavior in mind, a number of the recommendations might influence investigators' behavior as well. One of these recommendations was that the lineup members should all fit the description of the culprit. Prior research found that when only one member of a target absent lineup fit the description of the target, misidentifications of that innocent lineup member increased substantially compared to lineups where all of the members fit the description (Lindsay & Wells, 1980). In all of the current experiments, the lineup members fit the eyewitness description. Even so, Experiment 3 suggests that if an eyewitness identifies an innocent lineup member, that decision might have a differential impact depending on whether that lineup member looks more or less similar to the investigators' suspect.

Wells et al. (1998) also recommend the use of sequential lineups where the eyewitness is only presented with one lineup member at a time and he/she must report whether that lineup member was the culprit or not. Eyewitnesses are not informed of how many lineup members they will be shown and are not able to make relative judgments. Given that the investigators in our studies seemed to also be comparing the similarity of lineup members relative to their suspect, sequential lineups might also prevent investigators from being affected by similarity judgments (at least at the time of lineup administration).

Finally, Wells et al. (1998) recommended that the person who conducts the lineup procedure not be involved in the actual investigation. That is, they recommend that the lineup administrator be blind to the identity of the suspect so that the investigator cannot subtly (or not so subtly) influence the eyewitness's decision. However, knowing the extent to which the eyewitness in these studies influenced

740 the participant-investigators, blind lineup administration might be just as beneficial
741 to the investigators as to the witnesses. Given the degree to which our investiga-
742 tors were swayed by eyewitness decisions above and beyond the other evidence
743 (e.g., fingerprints, alibi, etc.) perhaps investigators would be better able to integrate
744 eyewitness evidence with other forms of evidence if they were not present for the
745 identification decision.

746 **Participant-Investigators versus Police Investigators**

747 These experiments attempted to simulate some aspects of real world police
748 investigations. However, one aspect that could not be reproduced was police inves-
749 tigator expertise. Expertise with various kinds of evidence might lead real world
750 police investigators to interpret and integrate evidence differently from our inexpe-
751 rienced participants. As such, real world police investigators might not have been
752 as swayed by the eyewitness identification decision as the participant-investigators.
753 Participants' responses in the ID Foil lineup member conditions are particularly in-
754 triguing when speculating how an experienced police investigator would treat the
755 situation. Perhaps the act of putting together the lineup and knowing first-hand that
756 the foils are innocent would lead to a difference in investigators' responses. Police
757 investigators also have the added pressure when investigating the crime of being re-
758 sponsible for finding a real culprit and bringing that person to justice. That added
759 pressure and sense of responsibility might very well affect the way they interpret
760 and integrate eyewitness decisions.

761 **Conclusions**

762 This research takes some initial steps toward examining the decisions made by
763 a figure largely ignored by psychology and law researchers: The police investigator.
764 Operating under conditions of uncertainty, investigators must make decisions re-
765 garding the credibility of eyewitness decisions and whether the quantity of incrim-
766 inating evidence warrants arresting the suspect or whether exculpatory evidence is
767 sufficient to terminate investigation of a particular suspect. As such, it is impor-
768 tant to understand how investigators integrate the various sources of evidence and
769 what importance is given to each source of evidence. These studies focused on the
770 influence of eyewitnesses on participant-investigators. Previous research has shown
771 that eyewitnesses greatly influence juries and other triers of fact. The current studies
772 found that eyewitnesses powerfully influence participant-investigators as well. It ap-
773 pears that participant-investigators overestimate the informativeness and credibility
774 of eyewitness identification decisions, at least under the conditions tested here.

775 As the gatekeepers of the criminal justice system, police investigators have to
776 make incredibly difficult decisions often based on limited and potentially unreliable
777 evidence. It is therefore extremely important that we seek to understand how these
778 investigators judge the reliability of eyewitness decisions and integrate those deci-
779 sions into their knowledge of other evidence. We hope that this research provides
780 the groundwork for a fruitful analysis of this aspect of police investigative practices.

APPENDIX: EXAMPLE OF SUSPECT INFORMATION IN DATABASE

Table A1. Suspect John Gibbs Information

Physical description	DOB: Mar. 13, 1978 Height: 5'10" Build: Medium Eyes: Blue Hair: Short, curly, brown Caucasian
Criminal record	2 arrests—break and enter, 1996, 1998 1 conviction, break and enter, 1999 Paroled Dec. 2001
Additional investigation	Alibi for duration of crime: Unknown, suspect's most recent address was in neighborhood where the crime took place Current employment: Unemployed Vehicles registered: Registered owner of a white Volkswagon Rabbit

ACKNOWLEDGMENTS

781

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REFERENCES

788

Anderson, N. H. (1965). Adding versus averaging as a stimulus combination rule in impression formation. *Journal of Experimental Psychology, 70*, 394–400. 789

Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology, 41*, 258–290. 791

Bregman, N. J., & McAllister, H. A. (1987). Perceived innocence or guilt: Role of eyewitness identification and fingerprints. *The Southern Psychologist, 3*, 49–52. 793

Cutler, B. L., Penrod, S. D., & Stuve, T. E. (1988). Juror decision making in eyewitness identification cases. *Law and Human Behavior, 12*, 41–55. 795

Dawes, R. M., Faust, D., & Meehl, P. E. (2002). Clinical versus actuarial judgment. In T. Gilovich & D. Griffin (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 716–729). New York, NY: Cambridge University Press. 797

Deffenbacher, K. A., & Loftus, E. F. (1982). Do jurors share a common understanding concerning eyewitness behavior? *Law and Human Behavior, 6*, 15–30. 800

Garrioch, L., & Brimacombe, C. A. E. (2001). Lineup administrators' expectations: Their impact on eyewitness confidence. *Law and Human Behavior, 25*, 299–314. 802

Jones, E., Schulz-Hardt, S., Frey, D., & Thelen, N. (2001). Confirmation bias in sequential information search after preliminary decisions: An expansion of dissonance theoretical research on selective exposure to information. *Journal of Personality and Social Psychology, 80*, 557–581. 804

Leippe, M. R., Manion, A. P., & Romancyk, A. (1992). Eyewitness persuasion: How and how well do fact finders judge the accuracy of adults' and children's memory reports? *Journal of Personality and Social Psychology, 63*, 181–197. 805

Lindsay, D. S., Nilsen, E., & Read, J. D. (2000). Witnessing-condition heterogeneity and witnesses' versus investigators' confidence in the accuracy of witnesses' identification decisions. *Law and Human Behavior, 24*, 685–697. 806

811
812

- 813** Lindsay, D. S., Read, J. D., & Sharma, K. (1998). Accuracy and confidence in person identification: The
814 relationship is strong when witnessing conditions vary widely. *Psychological Science, 9*, 215–218.
- 815** Lindsay, R. C., & Wells, G. L. (1980). What price justice? Exploring the relationship between lineup
816 fairness and identification accuracy. *Law and Human Behavior, 4*, 303–314.
- 817** Luus, C. A. E., & Wells, G. L. (1994). The malleability of eyewitness confidence: Co-witness and perse-
818 verance effects. *Journal of Applied Psychology, 79*, 714–723.
- 819** Kassir, S. M., Meissner, C. A., & Norwick, R. J. (2005). “I’d know a false confession if I saw one”: A
820 comparative study of college students and police investigators. *Law and Human Behavior, 29*, 211–
821 227.
- 822** McAllister, H. A., & Bregman, N. J. (1986). Juror underutilization of eyewitness nonidentifications: The-
823oretical and practical implications. *Journal of Applied Psychology, 71*, 168–170.
- 824** Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General*
825 *Psychology, 2*, 175–220.
- 826** Phillips, M. R., McAuliff, B. D., Kovera, M. B., & Cutler, B. L. (1999). Double-blind photo array admin-
827 istration as a safeguard against investigator bias. *Journal of Applied Psychology, 84*, 940–951.
- 828** Shaw, J. S., III, Garven, S., & Wood, J. M. (1997). Co-witness information can have immediate effects on
829 eyewitness memory reports. *Law and Human Behavior, 21*, 503–523.
- 830** Skolnick, P., & Shaw, J. I. (2001). A comparison of eyewitness and physical evidence on mock-juror
831 decision making. *Criminal Justice and Behavior, 28*, 614–630.
- 832** Toomela, A. (2005). Decision making with incomplete information: Systemic and nonsystemic ways of
833 thinking in psychology and medicine. In R. Bibace & J. D. Laird (Eds.), *Science and medicine in*
834 *dialogue: Thinking through particulars and universals* (pp. 231–241). Westport, CT: Praeger Publish-
835 ers/Greenwood Publishing Group, Inc.
- 836** Wells, G. L., & Leippe, M. R. (1981). How do triers of fact infer the accuracy of eyewitness identifica-
837 tions? Using memory for peripheral detail can be misleading. *Journal of Applied Psychology, 66*,
838 682–687.
- 839** Wells, G. L., & Olson, E. A. (2003). Eyewitness testimony. *Annual Review of Psychology, 54*, 277–295.
- 840** Wells, G. L., Lindsay, R. C., & Ferguson, T. J. (1979). Accuracy, confidence, and juror perceptions in
841 eyewitness identification. *Journal of Applied Psychology, 64*, 440–448.
- 842** Wells, G. L., Small, M., Penrod, S., Malpass, R. S., Fulero, S. M., & Brimacombe, C. A. E. (1998). Eye-
843 witness identification procedures: Recommendations for lineups and photospreads. *Law and Human*
844 *Behavior, 22*, 603–647.

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