Volume 104 Number 1 | Spring 2020

Judicature
BOLCH JUDICIAL INSTITUTE

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JUDICATURE.DUKE.EDU

DISTINGUISHING BETWEEN RELIABLE AND UNRELIABLE EYEWITNESSES

BY CHAD S. DODSON

Increasing research shows that eyewitness confidence at the time of the initial identification can be a strong predictor of accuracy under appropriate lineup identification conditions.[1] In such conditions, police show an eyewitness a lineup of faces that consists of a single suspect who does not stand out (i.e., a fair lineup). In addition, the police officer administering the lineup should not know which face in the lineup is the suspect, and the officer should inform the eyewitness that the suspect may or may not be in the lineup. Under these lineup identification conditions, highly confident eyewitnesses tend to be more accurate than unsure eyewitnesses. This strong confidence-accuracy relationship has been documented in many laboratory studies using a variety of stimuli. Moreover, a field-based study shows that eyewitness confidence in an identification has great predictive value for identifying a suspect.[2]

Although confidence can be a strong predictor of accuracy, it does not tell the whole story: Eyewitnesses can, of course, make high-confidence misidentifications. At least three factors ▸

THE COMBINATION OF CONFIDENCE AND IDENTIFICATION SPEED *IS AN EVEN MORE POWERFUL PREDICTOR OF ACCURACY.*

systematically influence the accuracy of an eyewitness's identification, even when that identification is made by a highly confident witness.

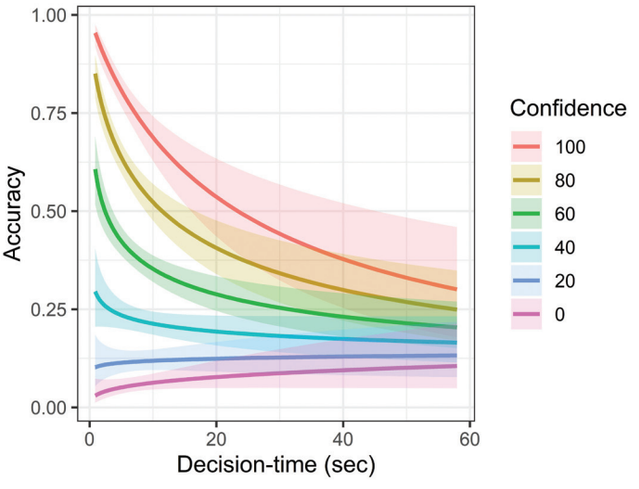
Factor 1: How long does it take an eyewitness to identify a suspect from a lineup?

The time that elapses — from when an eyewitness is shown the lineup to when the witness makes a decision by either correctly identifying the culprit or incorrectly identifying a foil — is strongly related to identification accuracy. Lineup identifications are more likely to be correct when the identification decision is made quickly.[3] For example, in a 2009 experiment by Melanie Sauerland and Siegfried Sporer, a target individual asked a participant for directions during an interaction that lasted between 15 and 60 seconds. A short while later, the participant attempted to identify the target individual from a lineup that either contained him (target-present lineup) or not (target-absent lineup). When participants chose someone from a lineup, they were nearly twice as accurate at identifying the target when their decision occurred within six seconds (72 percent accuracy) than when it took longer than six seconds (36 percent accuracy).

The combination of confidence and identification speed is an even more powerful predictor of accuracy. The same study found that participants were over 96 percent accurate at identifying the target when their identifications were both fast and highly confident.

Even highly confident identifications can vary dramatically in accuracy, depending on identification speed. For example, Figure 1 from a 2019 study by Jesse Grabman and colleagues presents results from an experiment evaluating the accuracy of identifications that were made with different levels of confidence and with different speeds. The top line in Figure 1 shows that participants who expressed the highest level of confidence in an identification of a face from a lineup were nearly 95 percent accurate when the identification occurred within a few seconds. However, the accuracy of these highly confident identifications dropped to nearly 75 percent when decision times took roughly 10 seconds. Accuracy approached 50 percent for even longer decision times. (See Figure 1 at left — identification accuracy as a function of confidence-level and decision-time. Error shading represents 95 percent confidence intervals.[4])

FIGURE 1



The combination of an eyewitness's level of confidence and how long it takes to make an identification appears to be a powerful predictor of accuracy — with the combination more powerful than either confidence level or decision time by itself.

Factor 2: How well does an eyewitness generally recognize faces?

Identification accuracy is related to an eyewitness's ability to recognize faces. Many of us have had the embarrassing experience of either mistaking a stranger for an acquaintance or failing to recognize someone we just met the day before. Face-recognition ability varies greatly from person to person — from super-recognizers to individuals who are face-blind.[5] The Cambridge Face Memory Test (CFMT)[6] is likely the most widely used test of face-recogni-

tion ability because it is highly reliable psychometrically[7] and is well-validated.[8] The CFMT involves memorizing six unfamiliar faces that are presented in different orientations. Over the course of 72 progressively more difficult trials, participants attempt to recognize the correct face from three similar-looking alternative faces. The overall sum of correct responses on this task is a highly reliable measure of face-recognition ability.[9] A 2012 study administered the CFMT to more than 40,000 individuals ranging from ages 10 to 70. It found extensive variability across individuals and also noted that face-recognition performance peaks at around the age of 30.[10]

With respect to eyewitness-identification performance, stronger face-recognizers tend to be more accurate than weaker face-recognizers.[11] In addition, face-recognition ability is related to the susceptibility of misidentifying someone of a different race. Cross-race identifications are disproportionately related to false convictions.[12] Consistent with this conclusion, research generally finds that the average person is less accurate at making cross-race than same-race identifications.[13] What are the consequences of individual differences in face-recognition ability on cross-race identifications? By using Caucasian-face and Asian-face versions of the CFMT, Lulu Wan and colleagues showed that the cross-race recognition impairment effect greatly depends on face-recognition ability. The cross-race effect is nearly nonexistent in stronger face-recognizers, but it is substantial in weaker face-recognizers.

Factor 3: How does face-recognition ability affect the relationship between identification accuracy and confidence?

Are high-confidence identifications more accurate when they are made by stronger rather than weaker face-recognizers? This is a question that my lab has been examining for the past few years. In 2019, we initially showed participants a series of photos of faces.[14] After a delay, participants were shown lineups that either contained or did not contain a mugshot of a previously seen individual — the mugshot was a different photo of the person seen earlier in the first series of faces. The participant's task was either to identify one of the faces in the lineup as one he or she saw earlier or to respond "Not Present." What was particularly novel in this study is that after responding to the lineups, participants completed the CFMT to measure their face-recognition ability.

FIGURE 2

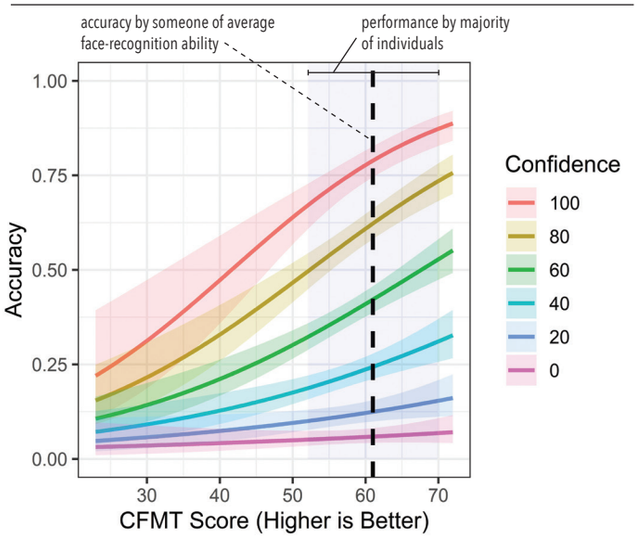


Figure 2 shows how identification accuracy is influenced by an individual's confidence in their identification as well as their face-recognition ability (i.e., the CFMT score). (See Figure 2, below left — identification accuracy changes with face-recognition ability (CFMT score) and confidence.[15]) Generally, confidence and accuracy tend to be correlated — the more confident the eyewitness, the more accurate the eyewitness. This is especially true for excellent face-recognizers (the right side of the figure), who tend to be highly accurate when they are 100 percent confident in the identification and highly inaccurate when they are zero percent confident in the identification. For excellent face-recognizers, the level of confidence in an identification is strongly related to its likely accuracy. There is a different story for weaker face-recognizers (the left side of the figure). For them, confidence in an identification is less meaningfully predictive of its accuracy. When weak face-recognizers are 100 percent confident, identification accuracy is not much higher than their accuracy when they are zero percent confident.

One alarming aspect of these results involves identification performance by individuals with *typical* face-recognition ability. The dashed line in Figure 2 shows identification accuracy by someone with average face-recognition ability. The blue shading shows performance by the majority of individuals, with those to the right and left of the dashed line having slightly above- and below-average face-recognition ability. When individuals are 100 percent confident, identification accuracy drops sharply with declining face- ▸

recognition ability. For example, individuals who are 100 percent confident and have a slightly above-average face-recognition ability are likely to be roughly 90 percent accurate in their identification. By contrast, when individuals have a slightly below-average face-recognition ability, the level of accuracy drops to nearly 60 percent.

One critical and unanswered question is whether these findings will hold in more realistic settings. Initial results suggest the answer is yes — when participants are shown a video of a mock robbery, there are similar patterns on the subsequent lineup identification test: Poor face-recognizers are more likely than strong face-recognizers to make high-confidence misidentifications. Our current and future research investigates how face-recognition ability moderates the relationship between confidence and lineup identification accuracy in different forensically relevant situations.

Conclusion

Existing research on eyewitness identification has shown that a participant's level of confidence can be a strong predictor of identification accuracy. But high-confidence misidentifications do occur, even under the best of circumstances. Decision time and face-recognition ability can help predict the value of a high-confidence identification.

Specifically, there is a sufficient body of research documenting that identification speed is related to accuracy to recommend that law enforcement should routinely record the time it takes an eyewitness to make an identification from a lineup. And our research shows that face-recognition ability — as measured by the CFMT — also influences the relationship between confidence and identification accuracy. High-confidence identifications are more predictive of accuracy in individuals with average to above-average face-recognition ability than they are for individuals with below-average face-recognition ability. By focusing on individual differences in face recognition, we can come to a richer understanding of factors that affect eyewitness-identification performance.

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8 *See, e.g.*, Wilmer, *supra* note 5, at 225–30.

9 *See, e.g.*, Cho et al., *supra* note 7, at 552–66.

10 Germine et al., *supra* note 7, at 847–57.

11 *See, e.g.*, S.M. Anderson et al., *Individual Differences Predict Eyewitness Identification Performance*, 60 Personality & Individual Differences 36–40 (2014); Markus Bindemann, Chennelle Brown, Tiffany Koyas & Andrew Russ, *Individual Differences in Face Identification Postdict Eyewitness Accuracy*, 1 J. Applied Res. in Memory & Cognition 96–103 (2012); Charles A. Morgan et al., *Accuracy of Eyewitness Identification Is Significantly Associated with Performance on a Standardized Test of Face Recognition*, 30 Int'l J. L. & Psychiatry 213–23(2007).

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15 *Id.*