Eyewitness Identification: Are We Asking the Right Questions?

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Abstract

As courts struggle with issues concerning the admissibility of eyewitness identification, reliability has emerged as a touchstone of due process analysis. Factors commonly considered by courts in assessing reliability include the witness's opportunity to view the criminal at the time of the crime, the witness's degree of attention to the crime, the accuracy of any prior description of the criminal, the level of certainty demonstrated at the confrontation, and the amount of time between the crime and the confrontation. Unfortunately, the empirical record, including the results of this study, indicates that these factors do not have a strong or consistent ability to discriminate between accurate, and thus reliable, identifications and those that are in error. The policy implications of the courts' continued reliance on an inadequate tool for assessing reliability are evaluated, and policy reforms are discussed.

Keywords

Eyewitness, identification, admissibility, courts, *Biggers*, *Manson*

Although eyewitness identification by a disinterested witness was once regarded as nearly dispositive, most criminal justice practitioners and even the general public have come to regard such evidence with some degree of skepticism. The Innocence Project, a well-known advocacy group, works to free the wrongly convicted and keeps a running total of the number of people it has helped to free. As of this writing, the Innocence project has used DNA to exonerate about 350 people, most of whom were wrongly convicted because, at least in part, of an incorrect eyewitness identification (Innocence Project, 2016).

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Similarly, the National Registry of Exonerations suggests that misidentification has played a role in at least 620 cases of wrongful conviction (National Registry, 2017).

Eyewitnesses can be wrong for any number of reasons. Occasionally, an eyewitness deliberately lies. These witnesses may be the actual perpetrators and are trying to throw suspicion on someone else, or they may hold a grudge of some kind against the defendant or another involved party. Unfortunately, there is not much the courts can do to stop deliberately dishonest witnesses from lying other than to rely on cross-examination to cast doubt on their account and hope that other actors within the criminal justice system will be able to gather sufficient evidence to refute their account, such that no honest prosecutor will want to use their testimony. Although deliberate deception is always a possibility, it seems to be comparatively rare, and most eyewitnesses who misidentify a suspect are probably doing so unintentionally.

Unintentional misidentification can also occur for a variety of reasons, but the vast body of research produced in recent years has shown that at least some unintentional misidentifications are caused by the way in which law enforcement handles identification procedures (National Academy of Sciences, 2014).¹ For example, presenting witnesses in a simultaneous rather than a serial fashion appears to increase the risk for misidentification, especially when the actual perpetrator is not present in the lineup (Steblay, Dysart, and Wells, 2011; Wells, Steblay, and Dysart, 2015). In simultaneous procedures, witnesses view several photos or people at the same time. While looking at the entire group, witnesses are asked to identify the perpetrator. When a witness is given a closed set of alternatives, as in this situation, a psychological process known as relative judgment makes it likely that the witness will feel “forced” to make a choice from among the options presented. As a consequence, witnesses tend to select the alternative that looks the most like their memory of the perpetrator, rather than to make no selection at all (Wells, 2006). With serial procedures, by contrast, witnesses view photographs or people one at a time and are asked whether that person is the perpetrator or not before another choice is presented. This process is meant to encourage individual assessment and to prevent the relative judgment process from tainting identifications.

Reusing the same witness with the same suspect in multiple identification procedures also enhances the chance that the witness will select that suspect, regardless of that suspect’s actual guilt (Steblay, 2011; Steblay, Dietrich, Ryan, Raczynski, and James, 2011). The person may look familiar, not from the crime but from the previous lineup, or the witness may recognize that all the fillers have changed and thus conclude that the correct choice is the repeated suspect. Having a detective who knows the identity of the suspect administer the lineup may also result in misidentification due to inadvertent cueing of the witness and is also not recommended (Garrioch and Brimacombe, 2001; Steblay, Wells, and Douglass, 2014).

Failing to warn witnesses explicitly that the perpetrator may be absent from the lineup or photo array is another practice that increases the odds of misidentification (Malpass and Devine, 1981). The National Institute of Justice (1999) recommends that witnesses be told explicitly that the perpetrator may be absent from the lineup, that it is just as important to clear the innocent as it is to identify the guilty, and that work on the case will continue even

¹ For a fuller discussion of how police can taint an identification through poor procedures please refer to McGuire, M. D., Kenny, T., and Grabic, A. (2015).

if no identification is made. Such warnings are beneficial and unlikely to affect identifications adversely in any way.

Police can also mitigate the risk for misidentification by obtaining a certainty statement. This is done by asking a witness immediately after an identification is made to state how certain he or she is about the identification. The administrator then records the verbatim response of the witness or, preferably, videotapes it. Research has shown that a witness's recollection of the circumstances of an identification changes and that certainty tends to harden over time (Stebay et al., 2014; Wells, 2006). Changes in a witness's level of certainty are important to jurors' assessments of credibility (Bradfield and McQuiston, 2004), but without a certainty statement, innocent defendants struggle to overcome an erroneous eyewitness identification through cross-examination or other means.

The Department of Justice (DOJ), attempting to address eyewitness identification problems, recently issued a memorandum establishing policies for DOJ employees. Chief among the reforms contained in the new policy are requirements that absent exceptional circumstances, DOJ employees use blind identification procedures, take immediate post-identification certainty statements, and record identification procedures by video or audio means or with a verbatim transcript (DOJ, 2017). This policy is, of course, not binding on the states.

The Courts and Eyewitness Identification

Although the above-referenced research suggests that various attributes of the identification process interact with psychological processes within the human mind to affect the accuracy of eyewitness identifications adversely, the courts have not really relied on this research in crafting legal rules that govern admissibility. Instead, the legal inquiry, the subject of this study, tends to focus on narrow aspects of a particular witness's view and recall in determining whether to admit an identification. In so doing, the courts have primarily relied on due process as their constitutional guidepost.

Early on, the Supreme Court concluded it was a violation of due process for the state to use unreliable eyewitness evidence against the accused. For example, in *Foster v. California* (1969), a case involving the late-night robbery of a Western Union office, the police placed the defendant in a lineup with two other men who were at least 6 inches shorter than he was. The defendant was also wearing a leather jacket similar to the one the manager said he had seen underneath the coveralls worn by the robber. After viewing the lineup, the manager opined that the defendant could be the robber, but he was not sure. The manager asked to speak to the defendant, and the police brought the defendant into an office and sat him across the table from the manager, who despite the proximity remained unsure.

The police asked the manager to participate in a second lineup a week or so later. In that lineup, the defendant was placed among five other men, none of whom had been in the first lineup. This process finally convinced the manager that the defendant was the man who had robbed his office. Recognizing that suggestive lineup procedures and repeated exposure might well induce an erroneous identification, the Supreme Court found that using this identification against Foster amounted to a denial of due process and reversed his conviction (*Foster v. California*, 1969).

Although the Court was clear that suggestive identification procedures could be sufficient to support a successful due process claim, they declined to find that suggestiveness per se was a basis for suppressing an identification. The Court revisited

the issue in *Neil v. Biggers* (1972), a case involving a woman who was abducted from her home and raped at knifepoint in nearby woods. "On several occasions over the course of the next seven months, she viewed suspects in her home or at the police station, some in lineups and others in showups, and was shown between 30 and 40 photographs. She told the police that a man pictured in one of the photographs had features similar to those of her assailant but identified none of the suspects" (*Neil v. Biggers*, 1972, pp. 194–195).

When she was later summoned to the police station to see if she could identify the defendant, who was being held on other charges, she walked past him and had the police officers tell him to say "shut up or I'll kill you." The victim was then able to identify the defendant as her attacker. Because showups, like the one at issue in this case, ask the witness to select from only one choice, such procedures are inherently suggestive. For the *Biggers* court, however, "the central question was whether under the totality of the circumstances the identification was reliable even though the confrontation procedure was suggestive" (*Neil v. Biggers*, 1972, p. 199). The Court determined that the victim's identification was reliable and therefore admissible, even though the showup procedure was suggestive. In making this determination, the Court relied heavily on the quality of the victim's prior description, the considerable amount of time she had been with her attacker, and her steadfast refusal to make an identification on prior occasions.

While these earlier cases laid the groundwork, the Court formalized an explicit test for determining the reliability of eyewitness identification in *Manson v. Brathwaite* (1977). *Manson* announced a balancing test based on *Biggers* that provides guidance to the lower courts for determining whether a particular identification procedure is so suggestive that it is a violation of due process to use the subsequent identification against the accused. Like *Biggers*, *Manson* involved a showup, but in this case the witness was an undercover narcotics officer. The undercover officer made a buy from a seller and then described the seller to fellow police officers, one of whom thought the seller might be the defendant based upon this description. This officer obtained a picture of the defendant and left it for the undercover officer at his office. After viewing the picture, the undercover officer identified the defendant as the seller. While the *Manson* court acknowledged that the identification procedure was inherently suggestive, it noted that reliability under the totality of the circumstances, not non-suggestiveness, was the linchpin for determining whether an identification was admissible.

In providing guidance for the lower courts, the *Manson* court affirmed that the factors identified in *Biggers* should be weighed against the corrupting effect of a suggestive procedure. The relevant factors included the witness's opportunity to view the criminal at the time of the crime, the witness's degree of attention to the crime, the accuracy of any prior description of the criminal, the level of certainty demonstrated at the confrontation, and the length of time between the crime and the confrontation. If, after weighing these factors against the suggestiveness of the procedure at issue, the court concludes, under the totality of the circumstances, that there exists a substantial likelihood of irreparable misidentification, then the court should suppress the identification.

More recently, the U.S. Supreme Court re-examined the issue of eyewitness identification in *Perry v. New Hampshire* (2012). In *Perry*, a neighbor called to report that someone was breaking into cars in the parking lot outside her window. When the police responded, they found Perry walking through the parking lot carrying stereo equipment. He was detained in the parking lot by one officer while another officer went to speak with the caller. When that officer asked the caller to describe the man she saw, she pointed through

her kitchen window at Perry and said he was the man she saw. Perry was arrested shortly thereafter. In *Perry*, the Court distinguished between cases in which the suggestiveness of the identification procedures was attributable to the police and those in which it was not. Henceforth, trial judges need not conduct preliminary due process reviews of the reliability of eyewitness identifications so long as the suggestiveness is not the fault of the police, but *Perry* did not otherwise alter the *Manson* test.

Prior Literature on the *Biggers/Manson* Factors

Although the balancing test announced in *Manson* has been the law of the land for nearly 40 years, its efficacy as a tool to identify reliable (accurate) eyewitness identifications has been in doubt for much of that time (Wells and Murray, 1983). Certainty is probably the *Biggers/Manson* factor that has been researched the most extensively. Much of this research, however, focuses on the effect of certainty on juror, judge, and prosecutor credibility assessments rather than on its reliability as a predictor of accuracy (Bradfield & McQuiston, 2004).

Existing research focusing on the correlation between certainty (or confidence, as it is sometimes called in the literature) and accuracy often finds an association (Fleet, Brigham, and Bothwell, 1987; Pickel, Klauser, and Bauer, 2014; Sauer, Brewer, Zweck, and Weber, 2010). Several researchers, however, have found that the association between the two is not very strong and, in some cases, not even statistically significant (Krug, 2007; Wells & Murray, 1983). Research on children and adolescents reports modest correlations between certainty/confidence and accuracy (Brewer and Day, 2005). Thus, certainty appears to predict accuracy, at least sometimes, but there is good reason to suspect it does not predict accuracy to as great an extent as the public or criminal justice professionals may think it does.

Although there is some debate about the strength of the association between confidence and accuracy, it should be emphasized that this refers to certainty at the time of the identification. Obtaining a certainty statement, as noted above, is best practice, but not all law enforcement agencies routinely collect immediate post-identification certainty statements (Police Executive Research Forum, 2013). When there is no contemporaneous certainty statement, in-court expressions of confidence may be all the jury has to consider. Such expressions of certainty are meaningless as indicators of accuracy (Brewer and Wells, 2006). Despite their lack of efficacy, however, nothing prohibits juries or judges from considering in-court expressions of certainty when evaluating the weight to accord a witness's identification. It should also be noted that extra-legal factors, such as being male, have been found to boost certainty/confidence (Yarmey, 1986).

Opportunity to view is obviously a critical component of encoding an experience, and without sufficient encoding subsequent retrieval is impossible (Narby, Cutler, and Penrod, 1996). Although the importance of opportunity to view is generally acknowledged, it is not always clear what courts mean by this term. Courts include a mix of factors under the rubric of opportunity to view, but time spent viewing the suspect, with more time regarded as better, often receives the most emphasis (Wells and Murray, 1983). Emphasis on time to view makes logical sense and has an empirical basis. One study based on actual lineups looked at several factors affecting opportunity to view, including lighting, obstruction, distance, and length of viewing during the crime to determine what predicted accuracy (Valentine, Pickering, and Darling, 2003). "The only significant effect was that witnesses who had more than one minute to view the culprit were more likely to identify the suspect

than witnesses who viewed the culprit for a minute or less" (Valentine et al., 2003, p. 978). More recent research has also found that exposure duration favorably affects accuracy (Palmer, Brewer, Weber, and Nagesh, 2013). Other researchers have found good lighting conditions (i.e., daylight) to be a significant factor in accurate identifications as well (Yarmey, 1986).

Attention has also received a fair amount of study. The empirical record suggests that distractions during the encoding process generally reduce the accuracy of a person's memory (Mulligan, 2008). For example, laboratory simulations asking subjects to make an identification while performing another task (divided attention) or not (full attention) suggest that distractions occurring while a subject is viewing a crime can have an adverse effect on the accuracy of identification under some circumstances (Palmer et al., 2013). Although this effect is logical and expected, it may not be as robust or universal as is sometimes assumed. Some studies, for example, suggest the effect may be contingent and depend on the type of recall being sought (Mulligan and Spataro, 2015; Sauer and Hope, 2016).

Moreover, not all forms of attention are equally conducive to later retrieval. Craik and Lockhart (1972) attribute this difference to levels of processing. Stimuli processed at a greater depth are more likely to remain in long-term memory and to be accessible later (Lockhart & Craik, 1990). Depth is determined by several factors, including a witness's purpose in attending to a crime (Wells and Murray, 1983). Thus, witnesses who are aware that a criminal event is occurring while they are observing it are likely to process that event at a deeper level than are witnesses who unwittingly pass crimes in progress on their way to work.

One of the most significant problems with the *Biggers/Manson* factors is that they are subject to manipulation and change. One of the major causes of certainty/confidence inflation is post-identification confirming feedback (Wells and Quinlivan, 2009). Evidence suggests that positive confirmation from law enforcement, suggesting that the witness has identified the correct suspect, given after the identification, greatly inflates that witness's reported certainty (Quinlivan, Neuschatz, Douglass, Wells, and Wetmore, 2012; Steblay et al., 2014; Wells and Bradfield, 1998). Witnesses also tend to become more certain over time, which can result in in-court testimony that is overly confident (Jones, Williams, and Brewer, 2008). In addition to affecting certainty, confirming feedback also causes witnesses to inflate their recollection of their opportunity to view and the degree of attention they paid to the crime as it unfolded (Quinlivan et al., 2012; Wells and Bradfield, 1998; Wells, Olson, and Charman, 2003).

Unlike certainty, opportunity to view, and attention, which usually depend upon a witness's subjective recall, the delay between a crime and the identification procedure (referred to as the retention interval in much of the literature) is usually a matter of record. Despite the objective nature of retention interval data, they are not without some problems as a tool for predicting accuracy. Although a significant body of research has found that the length of the retention interval can adversely affect the accuracy of subsequent identifications (Palmer et al., 2013; Sauer et al., 2010), some research fails to find a statistically significant association between the two (Valentine et al., 2003; Wetmore et al., 2015). Meta-analysis suggests that there is a small to medium effect size between retention interval and accuracy of identification, meaning that longer delays between a crime and the identification are usually deleterious in terms of accuracy, but length of delay alone cannot predict accuracy very well (Deffenbacher, Bornstein, McGorty, and Penrod, 2008). There is also substantial, although not universal, agreement among experts that the rate

of memory loss for an event is greatest right after the event and then decreases over time (Deffenbacher et al., 2008; Kassin, Tubb, Hosch, and Memon, 2001). In addition to time-related decay, the accuracy of subsequent recall depends on the strength of the initial memory (Deffenbacher et al., 2008).

The accuracy of the witness's prior description may logically be presumed to be an indicator of the strength of the initial memory. Research, however, does not always bear this out. Yarmey (1986), for example, found little support for the premise that a more accurate prior description predicted accurate identification of a perpetrator. Other researchers using actual lineups and counting as correct any identification of the police's suspect, however, found that witnesses who were able to give a highly detailed description were more likely to make an accurate identification than were those who gave either an average or small amount of detail (Valentine et al., 2003). In sum, the research record regarding the efficacy of the *Bigger/Manson* factors is far from conclusive. Further research and the identification of more reliable means of evaluating the accuracy of eyewitness identifications are urgently needed.

Data and Methods

The data for this article (N=593) are derived from a non-probability sample of undergraduate and graduate students at Saint Louis University. Data were collected during the fall semester of 2014. The researcher obtained permission from colleagues to attend regularly scheduled classes to solicit volunteers. Participation was voluntary, and subjects were required to watch a short video of a simulated purse snatching, look at a photo array presented in a serial fashion, and complete a short survey.

Subjects viewed a video shot in daylight conditions on an empty street and had an unobstructed view of the purse snatcher throughout the video. No people other than the purse snatcher and the victim and no distractions like animals or moving cars were visible in the video. Research on eyewitness identification is typically done with video, and this method is regarded as valid and reliable (Wells, Memon, and Penrod, 2006). After viewing the video, subjects were asked to view a photo array, either immediately or up to 21 days later.

The photo array consisted of six headshots against a plain background, similar to mug shots. All were in color and of the same size. The purse snatcher was a middle-aged white man known to the author. Fillers were selected from among those known to the author or through referrals. All the fillers were middle-aged white men with coloring and build similar to those of the purse snatcher. None of the video participants had any association with the university and were presumptively unknown to the subjects. Subjects were allowed to look at each picture for 1 minute before being shown the next picture. Subjects were not allowed to re-examine previously viewed photos, so that the taint of multiple laps was avoided (Stebly et al., 2011).

While subjects examined each photo, the researcher was seated behind a desk on which a computer was placed, shielding her from the view. The researcher looked at the computer screen in front of her and was silent while subjects were shown the pictures and made their selection (no feedback of any kind was given). The researcher could not see the subjects make their selections and had no way of determining subject selection until the surveys had been collected. This was done to simulate double-blind administration. After the subjects had made their identifications and completed their surveys, their

responses were collected without their choices being examined or their identifications commented on in any way. No identifying data were captured.

Measures

Independent variables. On the survey that the subjects completed, the question immediately following the question asking them to identify the “purse snatcher” asked them to estimate the chance, expressed as a percentage, that they had selected the actual snatcher from among the photos they viewed. This percentage measure was used to capture certainty. Attention was similarly captured with a question asking subjects to rate their own degree of attention while watching the video of the crime. Choices included the following:

I paid very close attention to the video and focused on it exclusively while it was being shown (coded 3).

I paid a medium degree of attention to the video; I watched it but was somewhat distracted by other things (coded 2).

I did not pay much attention to the video and was focusing on other things while it was being shown (coded 1).

Opportunity to view was captured by the length of the video they watched. Some subjects watched a 10-second video showing only the purse snatching (coded 0). The rest of the subjects watched the same video and also saw a 1-minute face-to-face confrontation in which the camera operator repeatedly accused the perpetrator of stealing the purse and the perpetrator repeatedly denied doing so while looking directly into the camera (coded 1).

The amount of elapsed time between the crime and the identification was captured by measuring the number of days that elapsed between viewing the video of the purse snatching and seeing the photo array (coded 1–21). Subjects answered survey questions about the purse snatcher’s appearance immediately before seeing the photo array to determine how good a description of the perpetrator they were able to give. Subjects were asked to report the perpetrator’s sex, race, age, height, weight and eye color. Demographic data were coded for sex (male=1, female=0) and race (white or European descent=1, other=0).

Subjects were asked to estimate the purse snatcher’s age. These raw data were re-coded to reflect the degree to which the estimate was in accord with the perpetrator’s actual age, which was 50 years at the time the video was made. The estimates were coded as follows: 4 for an estimate that was within +/- 2 years of the perpetrator’s actual age, 3 for an estimate within +/- 3 to 5 years, 2 for an estimate within +/- 6 to 10 years, and 1 for an estimate more than 10 years off. Weight data were similarly re-coded, with 4 for an estimate that was within +/- 10 pounds of the perpetrator’s actual weight, 3 for an estimate within +/- 11 to 25 pounds, 2 for an estimate within +/- 26 to 50 pounds, and 1 for an estimate more than 50 pounds off. Eye color was re-coded 1 if the eye color (blue) was correctly stated and 0 if it was not.

Dependent variable. The dependent variable of interest in this study is identification accuracy. Because this study involves a mock crime, the identity of the perpetrator was known. Subjects who correctly identified the perpetrator were coded 1. Those who selected a filler were coded 0.

Findings

Description of the Subjects

A total of 593 students agreed to participate, of whom 403 (68%) were female and the remaining 190 (32%) male. The gender disproportionality reflects gender disparities in class enrollments in the School of Social Work, the primary source of subjects. The subjects ranged in age from 18 to 61 years, with a mean age of 21.49 years. Most of the subjects self-identified as White/European descent (n=450); the rest of the subjects reported that they were Black/African-American (n=41), Asian/Pacific Islander (n=63), or Hispanic (n=21), with the remaining subjects identified as "other" (n=18).

Table 1: Accuracy of Prior Description

Height	N	%	Weight	N	%
6 or more inches off	46	7.8	More than 50 lbs. off	157	26.5
+/- 3-5 inches	245	41.3	+/- 26-50 lbs.	268	45.2
+/- 2 inches	302	50.8	+/- 11-25 lbs.	68	11.5
			+/- 10 lbs.	100	16.9
Total	593	99.9		593	100.1
Eye Color					
	N	%			
Incorrect	494	83.3			
Correct	99	16.7			
	593	100.0			

Descriptive Findings

Rates of self-reported certainty ranged from 0% to 100%, indicating that some subjects were positive that their identification was wrong whereas others were positive that their identification was correct. The mean degree of reported certainty was 65.26%. The vast majority of subjects reported that they had paid very close attention to the video (n=426); 162 reported that they had paid a medium degree of attention, and only 3 said they had not paid much attention to the video. In terms of opportunity to view, a slight majority of the students watched the short video (n=302), and the rest watched the longer video (n=291). The delay between the witnessed event and the identification ranged from same day (coded 0) to 3 weeks (coded 21), with a mean delay of 7.92 days.

The accuracy of prior description depends on several variables. All subjects were able to identify the perpetrator's sex correctly. As a result, sex was dropped from further analyses. Race also showed very little variability, with 98.5% (n=584) of the subjects correctly identifying the perpetrator's race (White/European descent). As a result, race was also dropped from further analyses. Estimations of the perpetrator's age ranged from 18 to 65 years, with a mean estimate of 42.66 years (actual age was 50 years). As Table 1 indicates, variability was also associated with the subjects' descriptions of height, weight, and eye color. More than half were able to pinpoint the perpetrator's height to within 2 inches. Estimations of weight were more evenly distributed across the range, with fewer than 20% of the subjects able to estimate weight within 10 pounds. A similarly small percentage were able to identify the perpetrator's eye color correctly. Most of the subjects were not able to identify the purse snatcher correctly. Only 165 of the subjects (28%) correctly identified the suspect.

Table 2: Bivariate Correlations Between the Variables

	V 1	V 2	V 3	V 4	V 5	V 6 ¹	V 7 ¹	V 8 ¹	V 9 ¹
V 1	-----								
V 2	.116**	-----							
V 3	.004	.111**	-----						
V 4	.083*	.168**	.013	-----					
V 5	-.075	-.126**	.010	-.384**	-----				
V 6 ¹	-.022	.098*	.038	.312**	.166**	-----			
V 7 ¹	-.103*	.011	.011	-.028	-.011	.089*	-----		
V 8 ¹	.054	.014	.060	.176**	-.057	.091*	.024	-----	
V 9 ¹	.054	-.075	.016	-.041	-.022	.078	.198**	.059	-----

NOTES: ** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).
¹ Measure is one of Accuracy of Prior Description

V 1: Was the ID correct? (1=Yes)	V 6: Perpetrator's age
V 2: Certainty	V 7: Perpetrator's weight
V 3: Attention	V 8: Perpetrator's eye color
V 4: Opportunity to view	V 9: Perpetrator's height
V 5: Delay	

Bivariate and Multivariate Analyses

Turning to bivariate analysis (Table 2), it is clear that not all of the factors articulated in *Mason* were actually predictive of accuracy among this sample. Certainty was correlated with accuracy in a statistically significant manner, but the association was weak. Opportunity to view, measured by the length of the video, was also a statistically significant predictor of accuracy, suggesting that those who had a longer observation period were more likely to identify the perpetrator correctly when asked to do so later. Only one variable, weight, capturing the accuracy of the subject's prior description was a statistically significant predictor of accurate identification, and the relationship was in an unexpected direction (negative). The remaining variables were not correlated with accuracy of the identification.

There were also some interesting correlations among the *Manson* factors. Certainty, for example, positively correlated with attention, suggesting that those who thought they had paid more attention tended to be more certain. Delay (retention interval) was negatively associated with certainty, suggesting that those who had waited longer were less certain of their choice. In addition, those who had watched the longer video (better opportunity to view) were more likely to describe the perpetrator's eye color and age accurately. Not surprisingly, some elements of the description, including eye color and weight, were positively associated with age, indicating that subjects who were correct on one of these attributes were more likely to be correct on another. Similarly, being correct on weight and height were positively associated.

Because the dependent variable is dichotomous, binary logistic regression was selected for further analyses (Table 3). Certainty, attention, opportunity to view, delay, and accuracy of prior identification were all used to predict accuracy of the identification. Consistent with the bivariate results above, certainty helped to predict accuracy, even when the other *Manson* factors were simultaneously accounted for, as did poor estimation of weight, which is a somewhat bizarre finding. Opportunity to view, however, lost its significance, suggesting that once the other factors are accounted for, opportunity to view no longer affects the likelihood of an accurate identification.

Whereas the coefficients produced in logistic regression are unstandardized and thus not directly comparable, Wald statistics allow the relative contributions of the *Manson*

factors to the outcome of interest to be evaluated (Bachman and Paternoster, 1997). As is apparent from Table 3, certainty is more important than an incorrect estimate of weight in predicting accuracy of the identification. Although the model has a statistically significant predictive value, its utility is quite limited. The Pseudo R^2 measure suggests that this model explains only about 5% of the variance in the dependent variable, accuracy of identification.

Table 3: Using the Manson Factors to Predict Accuracy of Identification

	Log Coefficient	Chi-Square (Model)	df
Certainty	.013*	648.753*	.036
Attention	-.075		
Opportunity to View	.238		
Delay	-.010		
Perp's Age ¹	-.124		
Perp's Weight ¹	-.234*		
Perp's Eye Color ¹	.320		
Perp's Height ¹	.285		

NOTES: * Significant at .05 level

¹ Measure is one of Accuracy of Prior Description

Discussion

Consistent with the existing literature, this test of the *Biggers/Manson* factors suggests that they are not reliable or robust predictors of accuracy, either alone or in concert. Although this model—in particular, certainty/confidence—accurately predicted a small amount of the variance in identifications, the effect is quite small. It is noteworthy that subjects subjectively felt more certain about their identifications (65%) than their actual performance (28% correct) warranted. Thus, although some of the *Manson* factors appear to be valid means of assessing accuracy, at least under some circumstances, they are far from sufficient to guarantee discrimination between correct and incorrect identifications. These results are quite troubling and suggest that *Manson* is not an adequate test for determining the reliability of an eyewitness's identification.

Certain limitations are inherent in studies of this nature. First, probability sampling was not feasible, making it difficult to generalize the results to the larger U.S. population. Also, variation in attention was limited, which is expected given that subjects were seated facing a large video screen and were directed to look at the screen before the start of the video of the purse snatching. The difference between viewing under these circumstances and happening upon a crime in one's daily life is obvious, and the circumstances may have limited the extent to which there was actual (as opposed to reported) variance in the amount of attention paid to the simulated criminal event. This may explain why attention was never significant in this model, despite its undisputed role in memory formation (encoding). Perhaps the distinctions between those who reported paying close attention and those who reported paying medium attention were not that great. Moreover, self-reported attention may suffer from an inflation effect, as many people may retrospectively think that they paid greater attention than they actually did. This limitation applies to crime victims in the real world as well.

Conclusion

The failure of the *Manston* factors to demonstrate a robust and consistent ability to discriminate between accurate, and thus reliable, identifications and those that are mistaken is, given the reliance of the courts on this test, quite troubling. Misidentification is the most salient factor in most documented wrongful conviction cases (Innocence Project, 2016). Those wrongfully convicted because of misidentification unjustly spend years behind bars, and a few have come close to being executed (Innocence Project, 2016). Even if the misidentified manage to escape conviction, being wrongfully accused of a crime is likely to cause significant harm and disruption for the individual involved. Just being accused of a crime is likely to cause loss of reputation and social standing, to say nothing of the financial hardship inflicted by legal bills and the untold mental and emotional anguish a public accusation is likely to engender (Bradfield and McQuiston, 2004; Gould, Garrano, Leo, and Hail-Jares, 2014).

Given the magnitude of the harm that misidentified suspects suffer, *Manston* should, at the very least, be broadened to include other relevant predictors, including the speed with which a witness makes an identification upon being presented with the suspect (referred to as latency in the literature). Research suggests that latency is more important than or at least as important as the factors articulated in *Manston* and currently relied on by the courts (Brewer, Caon, Todd, and Weber, 2006; Dodson and Dobolyi, 2016; Valentine et al., 2003). Therefore, police should be encouraged/required to record the amount of time the witness was confronted with the suspect before making an identification so that the court can be provided with some additional data from which to make a determination of reliability.

Furthermore, although taking an immediate certainty statement has become more common in recent years (Police Executive Research Forum, 2013; DOJ, 2017), police usually do not routinely collect and record immediate statements regarding opportunity to view and attention paid. Although such statements could be made part of the certainty statement process, it is probably better for the police to gather this information when they initially have contact with the witness. Such statements could be taken as part of the initial complaint or, if the witness is not the victim, recorded when the witness provides an initial description of the subject. Some investigators may do this, but it would be helpful if all investigators did it to guard against the demonstrated possibility of inflation in these factors.

These changes should enhance accuracy; however, they promise only incremental improvement. Perhaps, given the results of this study and others, which suggest that the *Manston* factors are not consistently sufficient to discriminate between accurate and inaccurate identifications, it is time for the courts to adopt stronger protections against misidentification. One approach could be for the U.S. Supreme Court to adopt a corroboration rule for eyewitness identifications as a matter of due process.

Historically, the corroboration rule was applied in rape cases to prevent a case from going to the jury solely on the basis of the victim's testimony. Most American jurisdictions no longer follow the corroboration rule, rejecting it as an obvious form of legal misogyny (McGuire, Callahan, and Donner, 2012). Although applying such a rule to only one class of victims of a highly gendered crime is inappropriate and has obvious equal protection implications, applying it to all eyewitness testimony in all criminal cases would be materially different and potentially efficacious in reducing wrongful convictions based upon faulty eyewitness identifications.

Corroboration of an eyewitness identification as a precondition to admissibility of the identification could take many forms. For example, fingerprints, fiber evidence, DNA, or a

surveillance video could all be used to corroborate an eyewitness identification, as could the testimony of other, independent witnesses. Such an approach would ensure that no case goes to a jury resting solely on a lone eyewitness identification. Such a rule is justified given the primary and decisive role eyewitness misidentification plays in wrongful convictions (Wechsler et al., 2015).

A corroboration rule for eyewitness cases should be limited to cases involving stranger-on-stranger crimes, as eye witness identification of known assailants is less likely to be inaccurate (Valentine et al., 2003). Thus, victims of domestic abuse, date rape, or other crimes in which the assailant is known to the victim would not be affected by this rule. This rule will probably result in some factually guilty people going free, but it will also protect innocent people from wrongful conviction. The danger of wrongful conviction is large enough that steps to protect the innocent are warranted, not just as a matter of fairness but possibly also as a matter of due process.

This policy will do more than protect the wrongfully accused; policies such as this, which enhance protections against wrongful conviction, also serve the interests of the public and law enforcement (McGuire et al., 2015). Wrongful convictions serve to shield actual offenders from apprehension, which affords them the opportunity to continue preying on the public. Ensnaring the innocent damages police–community relations when it comes to light and can result in civil liability for both the agency and the officers involved. Even if we could be certain that the trial process weeds out those who are actually innocent but misidentified, trying people on the basis of faulty eyewitness identification is a huge waste of resources. As such, it is in all stakeholders' interests to reduce misidentifications to the maximum extent possible. A corroboration rule would provide meaningful reform with the potential to reduce substantially the risk for a wrongful conviction based upon faulty identifications.

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