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Eyewitness Identification Reform: Data, Theory, and Due Process

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Abstract

Some commentators view my analyses (Clark, 2012, this issue) as an important step forward in assessing the costs and benefits of eyewitness identification reform. Others suggest that the trade-off between correct identifications lost and false identifications avoided is well-known; that the expected utility model is misspecified; and that the loss of correct identifications due to the use of reformed eyewitness identification procedures is irrelevant to policy decisions, as those correct identifications are the illegitimate product of suggestion and lucky guesses. Contrary to these criticisms, the loss of correct identifications has not been adequately considered in theoretical or policy matters, criticisms regarding the various utilities do not substantively change the nature of the trade-off, and the dismissal of lost correct identifications is based not on data but on an outdated theory of recognition memory.

Keywords

eyewitness identification, law enforcement, public policy

I am grateful for the opportunity to have my research commented upon by such luminary figures in the fields of psychology and law. In my response to the commentaries to my article in this issue, it is not surprising that I shall spend more ink responding to the criticism than the praise. Both are equally valuable.

My article had two goals. The first goal was to examine and quantify the trade-off between correct identifications of the guilty that are lost and false identifications of the innocent that are avoided with the use of reformed eyewitness identification procedures. The second goal was to consider the implications of that trade-off. The purpose of the article was not to argue for or against any particular procedure, but rather to shine a light on the pathway between social science data and public policy. Those goals carry forward here.

The Trade Off Between Correct Identifications Lost and False Identifications Avoided

The core issue I addressed was the extent to which reformed eyewitness identification procedures produce a trade-off between correct identifications that are lost and false identifications avoided. The existence of such a trade-off is contrary to a view that has been expressed repeatedly in the eyewitness identification literature: that reform procedures reduce the risk of false identification with little to no loss of correct identifications. I referred to this view as the no-cost view. Here, I refer more broadly to the little-or-no-cost view to illustrate that the

narrower no-cost view and the broader little-or-no-cost view are both unambiguously contradicted by data.

Wells, Steblay, and Dysart (2012) assert that evidence of the trade-off is old news, and that the loss of correct identifications is well-known and clearly articulated in the scientific literature. They suggest further that the “little or no cost presumption” exists “in some circles, especially within the media and secondary sources” (but again, *not* in the research literature; Wells, Steblay, & Dysart, 2012, p. 265). This argument implies that something got lost in translation; perhaps the media and secondary sources misunderstood the research literature. A more parsimonious view is that the media and secondary sources adopted the “little or no cost” view because it appeared repeatedly in the research literature. Consider Wells, Steblay, and Dysart’s (2011) recent statement that “decades of laboratory research [show] that the sequential procedure reduces mistaken identifications with *little or no* reduction in accurate identifications” (p. x, emphasis added).

Wells et al. (2012) further assert that the relevant data documenting the loss of correct identifications was available in the published literature, “nothing was hidden” (p. 265), and the “staple database shared with policy makers since the very first meta-analysis . . . clearly laid out the fact that lab data show” reductions in both correct and false identifications” (p. 267). The issue of whether researchers were appropriately

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forthcoming about the loss of correct identifications is a thorny one indeed. An appropriately thoughtful and complete response to this issue goes far beyond my 2,500 word limit. However, two things are clear: (a) We all agree that the research literature has expressed the little-or-no-cost view repeatedly, as evidenced by the quoted text documented in the Clark (2012) article, and (b) we all agree that there is no further debate about whether there is a loss of correct identifications.¹ Reformed eyewitness identification procedures reduce false identifications of the innocent and reduce correct identifications of the guilty. To the extent that the little-or-no-cost view has been perpetuated, it has been misleading to policy-makers and to the research community.

Misleading to researchers

The little-or-no-cost view is misleading to the research community, to the extent that it leads researchers to reject theories that do not account for the no cost pattern, and develop theories that do. Notably, Wells (1984) rejected the basic assumptions of signal detection theory and outlined an alternative theory based on the distinction between absolute and relative judgments in order to account for the no-cost pattern. However, to the extent that the theory does explain the no-cost pattern, it explains a result that does not occur, or at most occurs infrequently. One might argue that the no-cost view lead eyewitness identification researchers to abandon a theory that accounted for empirical results in favor of one that does not.

Misleading to policy-makers

The little-or-no-cost view suggests to policymakers that there is no downside to implementing recommended procedures. It is no wonder that much of the discussion concerning the recommended procedures has revolved around the financial implementation costs, given the prevailing view that other substantive costs (i.e., the loss of correct identifications) are minimal or nonexistent. However, the loss of correct identifications is comparable to the reduction in false identifications and thus is neither minimal nor nonexistent. To the extent that policymakers are fully aware of these costs, jurisdictions can be prepared or make adjustments in response to the loss of correct identifications they know will occur. However, policy-makers cannot make adjustments for a loss that they do not know exists.

The loss of correct identifications makes the assessment of reform procedures more nuanced and complicated. To illustrate this point, Wells et al. noted that, “there is a greater probability that an identification is accurate when reform procedures are used. [T]here is no debate that reforms not only likely reduce mistaken identifications, but also improve the proportion of accurate identifications likely to reach a jury (i.e., the probative value)” (p. 265). What is not clear, however, is the effect that the reforms may have on the denominator in these probability calculations. As Clark (2012) and Wixted and Mickes (2012) note, probative value can increase

by sharply reducing the overall identification rate (reflected in the denominator). One can increase the probative value of evidence to near certainty by allowing only cases with near-certain guilt to go forward. This reduction of the denominator speaks directly to Laudan’s (2012) point that there are no free lunches; more conservative procedures may reduce false convictions but increase false acquittals.

Expected Utility Analysis of the Trade-Off

Clark (2012) examined the trade-off through an expected utility model. The idea that costs and benefits can be weighed in such a model is referred to by Newman and Loftus (2012) and Wells et al. (2012) as Clarkian logic. Alas, I cannot take credit for the axioms of expected utility theory, but “von Neumann and Morgensternian logic” (von Neumann & Morgenstern, 1944) does not slip so easily off the tongue.² This is not to dodge responsibility for the analyses or to give them undeserved, inherited gravitas by attaching them to a classic text, but only to give credit where it is due. Many of the criticisms raised by Newman and Loftus and by Wells et al. are directed at expected utility theory and its application to eyewitness identification reform. These various criticisms are discussed below.

Underestimation of the disutility of false identifications

Newman and Loftus (2012) make their criticisms within the text of a hypothetical cross-examination of an expert witness: me. The expert appears to have not considered the suffering of the innocent defendant who must spend months in jail awaiting a correct acquittal. “That is one kind of cost I hadn’t thought of,” I am hypothesized to have said on cross-examination (p. 265). Actually, I did think of that. Following up on Newman and Loftus’s point, it is important to clarify that the utilities and disutilities associated with eyewitness identification outcomes are not to be confused with the utilities and disutilities of trial outcomes, and that correct acquittal of an innocent defendant does not imply that the cost of the false identification is zero.

Underestimation of the disutility of foil identifications

Wells et al. took “strong issue” with my analyses that consider lineup rejections (“the criminal isn’t in the lineup”) and foil identifications together within the same category as nonidentifications of the suspect. Certainly, the rejection of the lineup is conceptually quite different than the identification of a lineup foil, and the two responses may have very different consequences. Again, if Jennifer Thompson had identified the person standing next to Ronald Cotton, that person would not have been prosecuted, because foils are known to be innocent.³

Wells et al. argue for the disutility of foil identifications using an example in which a witness identifies a foil from an innocent suspect lineup. According to their argument, the

identification of the foil “spoils” the witness because if the true perpetrator is later apprehended by the police, they will not be able to go back to that witness for an identification because of the taint carried by the previous identification error. However, it is not clear that foil identifications are a bad thing, particularly when the suspect is innocent. Wells and Olson (2002) argued that foil identifications have probative value in determining the guilt or innocence of the suspect. Steblay et al. (2011) noted in their recent meta-analysis of simultaneous and sequential lineups that, “A reliable witness should be able to reject [foils] individually” (p. 125). Thus, the witness who identifies a foil is, according to this view, revealed to be unreliable. A foil identification may not spoil the witness, but rather may reveal that the witness is already spoiled. In other words, the identification procedure does not spoil the witness any more than my nose spoils the fish that has been in my refrigerator too long.

Overestimation of the disutility of false nonidentifications

Wells et al. suggest that the utility analysis overestimates the disutility of a false nonidentification because guilty suspects, even if they are not identified, may be prosecuted and convicted anyway. This point is discussed in my article along with the flip side of the issue that Wells et al. do not discuss: Not all innocent people who are falsely identified are wrongly convicted.

Overestimation of the utility of correct identifications

Newman and Loftus (2012) and Wells et al. (2012) suggest that the loss of correct identifications is irrelevant because those correct identifications are “crummy” and “illegitimate” guesses rather than “true” hits. In the framework of expected utility, these correct identifications would have a utility of zero. In this framework, one should not prefer a lineup procedure that has higher correct identifications and higher false identifications. However, Wells et al. adopt precisely this preference. Their preference for description-matched foil selection over suspect-matched foil selection is based on exactly such a pattern of results. As Clark and Godfrey (2009) and Clark, Rush, and Moreland (2012) have shown, description-matched lineups (which are preferred by Wells et al.) have higher correct identification rates and higher false identification rates than suspect-matched lineups. This increase in both correct and false identification rates is precisely the pattern they argue against as being illegitimate.

Theories of Eyewitness Identification

The distinction between true hits and illegitimate hits implies a theory of eyewitness memory that is problematic in several respects. First, it assumes that the boundary between memory and suggestiveness is clear—that an identification is based on

the witness’s memory or based on suggestiveness, such that the identification is either legitimate or illegitimate. Second, it assumes an all or nothing theory of memory, in which the witness makes a recognition decision based on a true memory, or he or she simply guesses (or follows the suggestiveness of the police). Such theories of recognition memory were ruled out 50 years ago (Egan, 1958). Third, it assumes that suggestiveness and bias contribute only to positive identifications, but not to nonidentifications. These problems are discussed below.

The memory or suggestion conceptualization implies that the mix of memorial and nonmemorial factors is all or nothing. However, there is strong evidence that recognition is based on the strength of the memories (Wixted, 2007) or the degree of match between lineup members and the witness’s memory (Clark, 2003; Clark & Gronlund, 1996), both of which are conceptualized as continuous variables, rather than an all-or-nothing contrast between true memory versus illegitimate suggestion. Given that eyewitness identification is based on a continuous underlying variable (degree of match), the receiver operating characteristic (ROC) curves are continuous and curvilinear (see Clark, Erickson, & Breneman, 2011; Mickes, Hwe, Carlisle, McElfresh, & Wixted, 2011; Wixted & Mickes, 2012). It is important to note that there is no bright line boundary on the ROC curve that separates legitimate from illegitimate hits.

Likewise, suggestiveness is not all or nothing. Clark (2012) and Wells et al. (2012) gave extreme hypothetical examples of suggestiveness, such as arrows that point at the suspect and police officers who simply instruct the witness to identify the suspect “or else.” Such extreme examples may be useful for illustrating a point, but they may be much less useful to policymakers who must confront difficult cases. Suggestion may be more subtle and delivered in much smaller doses. The graded nature of suggestiveness may be best illustrated in terms of the selection of foils. Consider two lineups (A and B) that are evaluated for the suggestiveness of how they are composed. Such evaluations are often conducted by having nonwitnesses attempt to pick out the suspect (Malpass & Lindsay, 1999). If the lineup is fair and unbiased, nonwitnesses should be able to pick out the suspect at a rate no greater than chance (.167 for a six-person lineup). However, to the extent that nonwitnesses can pick out the suspect, the lineup may be deemed to be suggestive. Assume that for Lineup A, 80 % of nonwitnesses pick out the suspect, whereas for Lineup B, 24% of nonwitnesses identify the suspect—a rate which, with 100 nonwitness participants, would be statistically greater than chance ($p = .03$, one-tailed). Should Lineup A and Lineup B be described with the same word (“suggestive” or “biased”), and should they be treated equivalently? More to the point, are the identifications from Lineup B illegitimate?

There is also an implicit assumption that witnesses who are more likely to make an identification do so because they are biased, whereas witnesses who are less likely to make an identification are unbiased. This assumption is deeply woven into the terminology attached to lineup instructions. Is it the case that instructions that imply the presence of the perpetrator bias

the witness toward making an identification, or is it the case that instructions noting the possible absence of the perpetrator bias the witness toward not making an identification? Consider a witness who is told by the police that the perpetrator may or may not be in the lineup, and it is just as important to free the innocent from suspicion as it is to identify the guilty. Could such instructions bias the witness to not make an identification because he or she interprets the instruction as a cue that “the police aren’t even sure they have the right guy?” The point here is not to advocate for “biased” instructions, but only to point out that criterion shifts are not tantamount to bias.

Data, Due Process, and Procedural Justice

Newman and Loftus (2012), Wells et al. (2012), and Clark (2012) share a common concern regarding the expected utility analysis. Correct identifications, and high expected utility, may be obtained with procedures that violate our sense of justice and due process. We are not trailblazers on this point, which was raised long ago by Tribe (1971; see also Clark, 2012) and is foundational for theories of procedural justice (Tyler, 1990).

It is critical, however, that we do not confuse or blur the distinction between the data and the legal, epistemic, or moral evaluation of those data. There is evidence showing that people believe that their moral intuitions are supported by “the facts.” (Liu & Ditto, 2012). To give one example, Liu and Ditto found that people who were morally opposed to condom education programs were more likely to believe that they encouraged teens to have sex. Belief in empirical facts aligns with moral beliefs.

Social scientists should not fall into that trap. If we as a research community are to recommend Procedure A over Procedure B, we must be clear about the basis of that recommendation. If the basis of the recommendation is a moral objection to procedures that we view as illegitimate rather than the experimental data, then we must be clear that the basis of the recommendation is a legal or moral objection rather than experimental data.

This raises a question about the purpose of empirical data in both scholarly debate and public policy. Consider two hypothetical summaries of data:

Procedure A reduces the false identification rate, but does not reduce the correct identification rate, relative to Procedure B. Recommendation: Implement Procedure A.

Procedure A reduces the false identification rate, but also reduces the correct identification rate, relative to Procedure B. Recommendation: Implement Procedure A.

The preference for Procedure A over Procedure B, irrespective of the results, raises serious questions about the purpose of social science research. If the preferences do not depend on the data, then what is the purpose of collecting those data?

Indeed, the strongest recommendation regarding eyewitness identification reform—to conduct lineups with a blind

administrator—has been made with little or no empirical data. Arguments in favor of blind lineup administration often appeal to the voluminous literature on experimenter expectancy effects, citing the meta-analysis by Rosenthal and Rubin (1978), the title of which refers to “the first 345 studies.” With 345 studies, one might reasonably conclude that this debate ended 34 years ago. However, none of the 345 studies reviewed by Rosenthal and Rubin (1978) compared blind lineup administration with nonblind lineup administration.

By my count, there is only one published study that made the key comparison for both guilty-suspect and innocent-suspect lineups (Greathouse & Kovera, 2009), and two published studies that made the key comparison only for innocent-suspect lineups and showed inconsistent results (Perlini & Silvaggio, 2007; Phillips, McAuliff, Kovera, & Cutler, 1999). By contrast, there are at least five unpublished studies that have compared blind and nonblind lineup administration (Beaudry, 2008; Dysart & Fugal, 2006; Dysart, Rainey, Owens, Chong, & Lawson, 2008; Haw, Mitchell, & Wells, 2003; Russano, Dickinson, Cass, Kovera, & Cutler, 2002). More data are in the shadows than in the light.

The principle behind blind lineup administration is intuitive, simple, and compelling: If one is concerned that police might deliberately or inadvertently leak their expectations regarding the lineup, a reasonable solution is to prevent the police from having expectations, a solution that would be achieved through blind lineup administration. Simply put, one cannot leak what one does not know. The principle is good. Data would be better. The history of science is filled with seemingly good ideas that had unintended and unexpected consequences. Intuitively compelling ideas require scientific scrutiny too.

The Role of Social Science Research

This last point reflects back to a point made in my article. To the extent that social science research has a useful role in shaping policy decisions, social scientists must do for policymakers what they do best and what policymakers cannot do for themselves: conduct careful studies, and provide a clear and complete analysis of the empirical data obtained from those studies. In this regard, social scientists must be honest brokers (Pielke, 2007). As Laudan (2012), Malpass (2006), Steblay et al. (2011) and Clark (2012) agree, the policymakers should take it from there and make policy decisions based on their careful and, in Laudan’s words, hard-headed analysis of the empirical data.

Declaration of Conflicting Interests

The author declared no conflict of interest with respect to the authorship or the publication of this article.

Notes

1. Research regarding the nature of the trade-off, however, is fruitful and important.
2. In similar fashion, classical conditioning is often referred to as Pavlovian conditioning rather than Twitmyerian conditioning, even though Twitmyer independently discovered conditioned reflexes (Coon, 1982).

3. Wells, Steblay, and Dysart (2012) imply that I blundered by not realizing that the lineup in the Ronald Cotton case was an all-suspect lineup that had no foils. However, their comment misquoted my example and switched the discussion from the live lineup to the photo lineup. Any debate as to whether the live lineup included foils may be laid to rest through Ronald Cotton's own words. "Later on, Phil (Cotton's attorney) told me (Cotton) that she (another victim at the lineup) picked out the guy standing next to me, number four, a college student . . . who wasn't a real suspect." (Thompson-Caninno, Cotton, & Torneo, 2009, p. 90).

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