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Distilling the Confidence-Accuracy Message:

A Comment on Wixted and Wells (2017)

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There has been a slow but steady evolution in how eyewitness researchers and the criminal justice system view the relationship between the accuracy of a witness's initial identification and the confidence that the witness expresses in that identification. This evolution is most clearly illustrated in a comparison of the conclusions drawn by Sporer, Penrod, Read, and Cutler (1995) with those drawn by Wixted, Mickes, Clark, Gronlund, and Roediger (2015). Sporer et al. concluded,

> Experts probably should, at a minimum, advise jurors that witness confidence is one, but only one, indicator of witness accuracy. The testimony should emphasize that confidence is far from a perfect indicator of witness accuracy (p. 324)

whereas Wixted et al. concluded,

Jurors should consider the level of certainty expressed by an eyewitness during the initial identifications (at which time confidence is likely to be a reliable indicator of accuracy) while disregarding the level of certainty expressed at trial (because, by then, confidence may no longer be a reliable indicator of accuracy). (p. 516)

In their expansive and ambitious article, Wixted and Wells (2017; this issue) discuss that evolution within the broader context of eyewitness-identification research and reform. Their main conclusion is that "when pristine identification procedures are used, eyewitness confidence is a highly informative indicator of accuracy, and high-confidence suspect identifications are highly accurate" (p. xxx). This raises two questions, which we take up in turn: What does it mean for identification procedures to be pristine? And what if the identification procedures are not pristine?

Pristine Identification Procedures

Wixted and Wells answer the first question by describing five characteristics that define pristine identification procedures (see their Box 3, p. xxx):

1. The lineup should include only one suspect.
2. The suspect should not stand out in the lineup.
3. The witness should be instructed that the offender might not be in the lineup.
4. The lineup should be administered using a double-blind procedure.
5. The statement of confidence should be obtained at the time of the identification.

Wixted and Wells present a detailed argument in favor of these pillars of pristine procedures, which we need not repeat here. We should note, however, that although there may be good reason to adopt these standards, there is very little evidence that they

increase the diagnostic accuracy of a suspect identification (Clark, 2012; Gronlund, Mickes, Wixted, & Clark, 2015). Thus, knowing whether the lineup procedure was pristine may be relatively uninformative about the defendant's guilt or innocence, in contrast to knowing the witness's confidence.

That said, some pillars are more important than others with respect to the specific issue of the confidence-accuracy relationship. We would argue that the fifth pillar is different from the other four in that it is not about the identification procedure per se but about the confidence judgment that is to be considered. On this point, Wixted and Wells make a compelling argument that confidence can change over time as witnesses are exposed to other sources of information that could influence their confidence (feedback from law enforcement, news reports about the case, etc.). To the extent that such post-identification information can potentially distort a witness's confidence, we agree with Wixted and Wells, and with the U.S. Supreme Court in *Manson v. Brathwaite* (1977), that the first expression of confidence made at the time of the identification is likely to be more informative than expressions of confidence made weeks, months, or years later when the witness testifies in court.

What If the Identification Procedures Are Not Pristine?

Denying the antecedent: "If" ≠ "if and only if"

The idea of pristine lineup procedures looms large in Wixted and Wells (2017), and it is clear that the confidence-accuracy relationship is strong if eyewitness-identification procedures conform to the pristine characteristics they describe. However, it would be easy to misinterpret the "if" clause as an "if and only if" clause—that is, as saying that the confidence-accuracy relationship holds if *and only if* the identification procedures are

pristine. Such a misinterpretation would constitute a logical fallacy of denying the antecedent. The claim "if pristine lineup procedures are used, then confidence is highly diagnostic of accuracy" does not mean "if pristine lineup procedures are not used, then confidence is not highly diagnostic of accuracy."

To be clear, Wixted and Wells (2017) do not make that claim. At the risk of appearing tedious, it is important to carefully parse the claims that Wixted and Wells do make and, importantly, the claims they do not make. They write:

The results [of the analyses] will show that when pristine identification procedures are used, eyewitness confidence *is* [emphasis added] a highly informative indicator of accuracy, and high-confidence suspect identifications are highly accurate. We go on to demonstrate that the confidence-accuracy relationship *can be* [emphasis added] compromised when certain non-pristine identification procedures are used. . . . (p. xxx)

We have emphasized key terms that are not highlighted in the original, specifically that confidence *is* highly informative—as a general rule—when the conditions are pristine and that the confidence-accuracy relationship *can be* compromised when the conditions are not pristine. Thus, Wixted and Wells make no claim that any or all deviations from pristine identification procedures will compromise the accuracy of identifications as a general rule.

Wixted and Wells (2017) also write that "there are known conditions under which confidence clearly informs accuracy and other known conditions under which it clearly does not" (p. xxx) and that "when *certain* [emphasis added] non-pristine testing conditions prevail (e.g., when unfair lineups are used), the accuracy of even a high-confidence suspect ID is seriously compromised" (p. xxx). The key here is that serious

compromising occurs under *certain*, but not any or all, deviations from pristine conditions. Specifically, their analyses show that accuracy is compromised when lineups are unfair.

Non-pristine identification procedures: Unfair lineups

The certain non-pristine testing condition to which Wixted and Wells (2017) refer is the unfair or biased composition of a lineup. The critical data from confidence-accuracy characteristic (CAC) curves are shown in their Figure 6 (p. xxx). Their analyses show that confidence and accuracy *are* strongly related even for unfair, biased lineups, but that the accuracy of high-confidence suspect identifications is lower for biased lineups than for unbiased lineups. In other words, the slopes of the CAC curves appear to be about the same irrespective of whether the lineups were biased on unbiased, but the asymptote of the CAC functions is lower for biased lineups than for unbiased lineups. Again, it is important to carefully parse the claims that Wixted and Wells make: "These findings underscore the critical point that our claims about the relationship between confidence and accuracy (and, in particular, the very high level of accuracy usually associated with high-confidence suspect IDs) apply to fair lineups, not to unfair lineups" (p. xxx). The key point here is that although "the accuracy of even a high-confidence suspect ID is seriously compromised" (p. xxx), the data nonetheless "exhibit a strong relationship between confidence and accuracy" (p. xxx), even for unfair lineups.[1]

Confidence over pristineness

A potential problem that arises from the misinterpretation of "if" as "if and only if" is that it implies that jurors should not consider the confidence of the witness if there is any deviation from pristineness (thereby translating the error of denying the antecedent into

jury instructions). However, if one accepts the opinions of the U.S. Supreme Court that the basic purpose of a trial is the determination of the truth (*Tehan v. US*, 1966) and that when it comes to eyewitness-identification evidence, reliability is the "linchpin" for determining admissibility (*Manson v. Brathwaite*, 1977), then jurors should be presented with all relevant evidence—subject to exclusions under the Federal Rules of Evidence (2017). That is, evidence should be presented that "has any tendency to make a fact more or less probable than it would be without the evidence," (p. 6) and jurors should give more weight to evidence that has greater probative value. In other words, jurors should consider confidence in their evaluation of eyewitness-identification evidence[2] because it is more informative with respect to accuracy than the pristineness of the identification procedures.

One criterion that Wixted and Wells (2017) identify as necessary for an eyewitness identification condition to be considered pristine is that the witness was told that the perpetrator may not be in the lineup. However, that tells the trier of fact little about the accuracy of the witness's identification. The research shows that such instructions reduce the likelihood that witnesses will make an identification but have very little effect on the accuracy of identifications.

In a recent study, Mickes et al. (2016) compared results from confidence ratings versus different biasing instructions. They used four different sets of instructions, two of which are of interest here. In these two conditions, participants either received or did not receive the instruction, "The person from the video may or may not be in the lineup." Both conditions yielded suspect-ID accuracies of 93%.[3] Thus, in this experiment, informing laboratory witnesses that the offender may not be in the lineup did not matter.

The same bottom line was suggested by a meta-analysis of studies that varied the instructions to the witness (Clark, Moreland, & Gronlund, 2014). The results suggested that instructions that the suspect may not be in the lineup shift the witness's response criterion, which affects choosing rates but is unlikely to affect the confidence-accuracy relationship.[4] As a consequence, if jurors were instructed to attend to the nature of the instructions but ignore the confidence of the witness, this would be tantamount to an instruction to carefully consider non-diagnostic information and ignore diagnostic information.

Another criterion that Wixted and Wells (2017) consider necessary for pristine eyewitness-identification procedures is that the lineup administrator should be blind. Although there are good reasons for blind lineup administration, and there is evidence that non-blind lineup administrators can influence witness confidence through feedback (which may be intentional or unintentional, explicit or implicit), there is also evidence that lineup administrator influence can strengthen the relationship between confidence and accuracy. Clark, Brower, Rosenthal, Hicks, and Moreland (2013) found that experimental witnesses who were steered to identify the suspect by a non-blind lineup administrator did so with no change in confidence for correct identifications of the guilty but with lower confidence for false identifications of the innocent. In other words, their confidence was an important diagnostic cue revealing their likely (in)accuracy. Thus, the mere fact that a lineup was non-pristine because it was administered by a non-blind administrator cannot be assumed to automatically compromise the information value of eyewitness confidence (and Wixted and Wells do not claim that it does, only that it can).

Pristineness Is a Moving Target

The analyses presented by Wixted and Wells (2017) suggest a very stable relationship between confidence and accuracy. In contrast, the research on the indices of pristine lineup procedures is relatively inconsistent (for reviews, see Clark et al., 2014; Gronlund et al., 2015). Only 6 years ago, eyewitness-identification researchers might have listed the sequential presentation of the lineup as a necessary component of pristine identification procedures (Steblay, Dysart, & Wells, 2011). Now, the superiority of the sequential lineup over the traditional simultaneous lineup has been challenged (National Research Council, 2014), and the U.S. Department of Justice (Yates, 2017), in its recently revised guidelines, suggests that sequential presentation may produce identification evidence that is less accurate, not more accurate, than simultaneous presentation. Thus, what was pristine 6 years ago is not pristine today.

Likewise, regarding lineup composition, Wixted and Wells (2017) note in very general terms that the index of pristine lineup composition is that the suspect should not stand out. However, previous prescriptions for pristineness were much more specific. The U.S. National Institute of Justice (1999) was very clear that proper lineup composition was achieved by selecting fillers that match a description of the perpetrator, not by selecting fillers based on their similarity to the suspect. This more specific instruction for composing lineups has been adopted by many law enforcement agencies, but the research does not support it (Clark, 2012; Clark et al., 2014). This provides another example of a condition once considered pristine falling out of favor.

Conclusion

Eyewitness-identification research is in the midst of a major revision. Wixted and Wells (2017) have laid down a strong case for a revision regarding the relationship between

confidence and accuracy, a revision with which we strongly agree. But readers should be careful not to assume that the fact that pristine conditions should be aimed for means that they are always necessary for confidence to hold diagnostic value. Furthermore, the broad assumption that the relationship between confidence and accuracy holds only under pristine testing conditions is not supported by data. In some cases, such as when lineups are biased, Wixted and Wells's analysis shows that confidence is still strongly associated with accuracy, even though the asymptotic level of accuracy is lower. In other cases, more research needs to be conducted in order to evaluate the relationship between confidence and the pristineness of the identification procedures.

Note that we are not arguing against instructions to the eyewitness that the perpetrator may or may not be present, blind lineup administration, or the construction of fair lineups; rather, we argue that the confidence-accuracy relationship, involving an initial lineup test, may provide useful information even if those procedures are not followed. Legal rules and jury instructions to consider confidence only when pristine conditions hold could focus jurors on less diagnostic information (indices of pristineness) rather than more diagnostic information (confidence), which would undermine the truth-seeking mission of the legal system.

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Notes

1. Although the quote is specifically in reference to the data from Gronlund et al. (2012), the strong relationship appears to hold for all of the studies whose results are depicted in Figure 6 (p. xxx).

2. The Federal Rules of Evidence do allow for the exclusion of relevant evidence if its probative value is outweighed by its prejudicial impact. However, given the strong probative value of a witness's initial expression of confidence, it would be hard to argue for its exclusion, particularly on the basis of whether other "pristine" rules were followed, given their lower probative values.

3. Confidence was not collected in these conditions, so this value includes guess responses. Had confidence been collected, the high-confidence responses would most likely have been even higher in accuracy.

4. There is some evidence that biased instructions may actually strengthen the confidence-accuracy relationship. Steblay (1997) noted that biased instructions increased the confidence of identifications for target-present lineups but had minimal effect on identifications for target-absent lineups.

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