Symmetry, Adversarialism, Scholarly Convention, and Latent Print Identification: A Reply to Merlino and Springer

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I am deeply appreciative of the apology offered by Merlino and Springer for the way in which parts of an article by Merlino et al., Meeting the Challenges of the Daubert Trilogy: Refining and Redefining the Reliability of Forensic Evidence (Meeting), could . . . be interpreted as a personal attack on [my] expertise, although it was not intended as such." At issue is the conclusion of Meeting, which discusses expert testimony I gave in a pre-trial hearing in a criminal case, People v. Hyatt, in 2001. In my response, Don’t Shoot the Messenger by One of the Messengers: A Response to Merlino et al. (Don’t Shoot), I interpreted Meeting as arguing that purported deficiencies in my testimony somehow “explained” both the overwhelming tendency of trial courts to admit latent print individualization evidence, despite the opinions of many

legal scholars that it did not meet the *Daubert* (or, in my opinion, the *Frye*) standard, and the supposed “reliability” of latent print individualization. In their reply, *Context and Controversy: Why Questions of Validity and Reliability are Seldom Resolved in an Adversarial Setting (Context and Controversy)*, Merlino and Springer clarify that the intent of their article was descriptive and not explanatory. They assert that “[i]t is clear . . . that our data are descriptive, but Dr. Cole incorrectly characterizes our study as explanatory.” They are baffled by my “assertions that we were inappropriately attempting to use *Hyatt* to demonstrate the reliability of latent print examination, or that we were using this case to explain why latent print testimony is admissible in most U.S. cases.” While I accept that their intent was descriptive rather than explanatory, this clarification still does not answer the issue I raised in *Don’t Shoot*: that *Hyatt* is unrepresentative of their data set. And, while I accept Merlino and Springer’s clarification that “[o]ur reason for choosing the *Hyatt* transcript was its extended discussions in direct and cross examination of both *Frye* and *Daubert* issues[,]” Merlino and Springer’s claim that the text of *Meeting* was “clear” in stating that my testimony in *Hyatt* was not meant to explain anything does not seem consistent with the text of a crucial passage of *Meeting*, which I now quote in full:

> The content analysis presented in Part I demonstrates that . . . the majority of challenges to this type of evidence [latex prints] have been unsuccessful. Critical examination of published decisions and transcripts of these cases offers some insights into why this is the case. A comprehensive discussion of case law is beyond the scope of this paper, but we offer as one example the exclusion of the defense’s proffer of the testimony of Dr. Simon Cole in People v. *Hyatt*.13

I stand by the point I made in *Don’t Shoot* that I am not being oversensitive in imagining that a reader of this passage might reasonably conclude that the admissibility of latent print individualization might somehow be traced to deficiencies in my scholarship or testimony in *Hyatt*.

Merlino and Springer argue that I misread *Meeting* in several places. While I do not agree with all of their claims of misreading, I would like to apologize myself for

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9. Id. at 144.
10. Id. at 139.
11. Id. at 139.
13. Id. at 135. But *Meeting* does contain language to this effect; I based this claim on the subtitle of the article, “Refining and Redefining the Reliability of Forensic Evidence.” They note that *Meeting* discusses various ways in which forensic examiners have endeavored to improve their practices, and they conclude, “Given what we actually do say, it would seem evident that ‘refining and redefining the reliability of forensic evidence’ refers to the efforts of the practitioners to improve their fields, and not to efforts to redefine the meaning of a scientific concept.” Id. at 136 (emphasis in original).
the ways in which Don't Shoot apparently misconstrued some of Meeting's arguments. Chief among these is the surprising revelation that I apparently assumed incorrectly (while making clear that this was an assumption on my part) that Merlino et al. believed that the reliability of latent print individualization has been demonstrated. I now know that they do not believe this. This clarification has some interesting implications. Because professional latent print examiners were among the authors of Meeting, this clarification converges with other evidence to show that even some professional latent print examiners now agree that the reliability of latent print individualization has not been demonstrated.

In light of this revelation, let us summarize the situation: Nearly all scholars, including both the Merlino group and myself, agree that the necessary data to measure the accuracy (or “reliability”) of latent print individualization is not yet available. And yet, we are engaged in dispute over expert testimony that I gave in which I said precisely that. Why?

Straw Man Arguments

Unfortunately, the main reason there appears to be disagreement is that Merlino and Springer repeatedly misconstrue my position and that of other scholars, despite my efforts to clarify my position in Don't Shoot. In Don't Shoot, I noted “[t]he distinction between asserting that the reliability of latent print identification is unknown and asserting that latent print identification is unreliable,” I asserted that in all my scholarly work and expert testimony I had consistently stated the former not the latter, and I offered evidence, in the form of a quotation from the transcript of Hyatt (which is publicly available on the internet), that clearly demonstrated that my testimony had asserted agnosticism as to reliability, rather than unreliability. And yet, in Context and Controversy, Merlino and Springer, despite complaining that I based my “response[ ]

I am glad to hear that Merlino et al. did not intend to redefine the meaning of a scientific concept. If we set aside the issue of how one “refines” the reliability of a process whose baseline reliability remains unknown, a fact recognized by Merlino et al. (see infra p. 151), this explains why the title of Meeting refers to “refining” the reliability of latent prints and handwriting analysis. It is still impossible, however, to reconcile the process of improvement that Merlino and Springer describe with the verb “redefine.” “Redefining” simply does not describe the sort of process of improvement that Merlino and Springer describe, and they do not explain what Merlino et al. intended by including it in their subtitle. At best, the inclusion of this word was simply poor word choice, for which Merlino et al. should bear responsibility, not the reader.

In Don't Shoot, I noted that Meeting did not explicitly take a clear position on whether or not the reliability of latent print individualization has been demonstrated. Given the absence of a clear articulation of Merlino et al.'s position, I inferred their position from a variety of remarks in Meeting (while making clear that I was making an inference). Cole, supra n. 5, at 123–124. I still contend that I made the most reasonable inference possible, given the text of Meeting. I am genuinely surprised—and pleased—to hear that Merlino et al. agree that the reliability of latent print individualization has not been demonstrated.

Merlino & Springer, supra n. 3, at 135 ("as Dr. Cole has testified on a number of occasions, studies of the reliability and validity of many areas of forensic practice have yet to be conducted, and these questions therefore remain largely unanswered from a scientist's perspective").

16. In Don't Shoot, I noted that Meeting did not explicitly take a clear position on whether or not the reliability of latent print individualization has been demonstrated. Given the absence of a clear articulation of Merlino et al.'s position, I inferred their position from a variety of remarks in Meeting (while making clear that I was making an inference). Cole, supra n. 5, at 123–124. I still contend that I made the most reasonable inference possible, given the text of Meeting. I am genuinely surprised—and pleased—to hear that Merlino et al. agree that the reliability of latent print individualization has not been demonstrated.

17. Merlino & Springer, supra n. 3, at 135 ("as Dr. Cole has testified on a number of occasions, studies of the reliability and validity of many areas of forensic practice have yet to be conducted, and these questions therefore remain largely unanswered from a scientist's perspective").

18. Ltr. from Robert Garrett, President, Intl. Assn. for Identification, to Patrick J Leahy, Chairman, Sen. Comm. on the Jud., IAI Letter Re: NAS Report, (Mar. 18, 2009) (available at http://www.clpex.com/Articles/TheDetail/300-399/TheDetail397.htm) ("The IAI has, for many years, sought support for research that would scientifically validate many of the comparative analyses conducted by its member practitioners. While there is a great deal of empirical evidence to support these exams, independent validation has been lacking.").

either intentionally or unintentionally, on claims that were never made, positions that were never stated"\textsuperscript{20} and accusing me of "an attempt to create a 'straw man' argument,"\textsuperscript{21} still consistently attribute to me and other scholars the position that latent print individualization is unreliable. To enumerate:

After apologizing for the closing paragraph of Meeting, Merlino and Springer offer reformulated wording, in which opinions that in Meeting appeared to be theirs are in fact attributed to Judge Brennan, the trial judge in Hyatt. But their reformulation still characterizes my testimony as having "assert[ed] that forensic testimony is unreliable, biased, or invalid without any properly conducted empirical research . . . ."\textsuperscript{22} Their apology does not address my assertion in Don't Shoot that Meeting mischaracterized my testimony.

Merlino and Springer assert that "the critics who have raised questions about the reliability of the forensic fields assert that they are fatally flawed without well-conducted empirical research . . . ."\textsuperscript{23} No citations are offered in support of this statement. This is not surprising because so-called "critics," including myself, have never asserted that latent print individualization is "fatally flawed." A Lexis search for this phrase in conjunction with "fingerprints" and "latent prints" yielded zero results.\textsuperscript{24} As I sought to clarify in Don't Shoot, what we assert is that its reliability has not been adequately measured. Which of us is creating a "straw man"?

Merlino and Springer suggest that "[a]s a critic of latent print examination" I "may have been predisposed from the start to disagree that forensic science practitioners have made any progress . . . ."\textsuperscript{25} Again, claiming that a reliability study has not been performed is quite different from claiming that no "progress," has been made, however "progress" is to be defined. Where have I ever made such a claim?\textsuperscript{26}

\textit{Symmetry}

Having established that scholars agree that reliability data on latent print individualization is lacking, Merlino and Springer then invoke the same superficially appealing symmetry principal that I criticized in Don't Shoot.\textsuperscript{27} Given that scholars have argued that rigorous application of Daubert demands that latent print evidence be excluded without reliability data, Merlino and Springer view it as "to the judge's credit" that, in Hyatt, he supposedly applied the same "high standards" symmetrically to the defense expert (me).\textsuperscript{28} "\textit{All} expert testimony," they argue, "should be held to these high

\begin{footnotesize}
\begin{enumerate}
\item Merlino \& Springer, supra n. 3, at 144.
\item Id. at 134.
\item Id.
\item Id. at 144.
\item A Lexis Academic search for ((fingerprint! or "latent print" or "latent prints") W/p "fatally flawed") in the "US Law Reviews and Journals, Combined" database, conducted on December 26, 2009, yielded zero results.
\item Merlino \& Springer, supra n. 3, at 133.
\item Here, as elsewhere, the lack of reference to any of my scholarly work allows Merlino and Springer to do precisely what they accuse me of doing: attribute claims to me that I do not believe I made. But, in my case my attribution of arguments to them were, at least, grounded in their written text, even if, as they claim, I misinterpreted that text.
\item Cole, supra n. 5, at 119 n. 54 and accompanying text.
\item Merlino \& Springer, supra n. 3, at 134.
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REPLY TO MERLINO AND SPRINGER

The notion that, when data is simply lacking, neither side of a scientific controversy should be afforded license to speak seems appealing. Thus, it seems to make sense for Merlino and Springer to say “that scholarly works that do not offer empirical, systematically collected data of the kind that would either support or refute the reliability of latent print analysis” have nothing to offer in the debate over latent print validity and admissibility. Merlino and Springer’s argument would make sense if the scholarly works in question made affirmative claims about reliability of latent print individualization. But, as Merlino and Springer seem to acknowledge, the vast majority of scholarly literature on the topic does nothing of the sort: it simply asserts, as they do, the absence of empirical data. Merlino and Springer do not explain why it should be “to the judge’s credit” to preclude scholars from testifying to what appears to be not only the consensus scholarly position, but also their own position—that reliability data is lacking—in a criminal trial in which latent print individualization testimony was proffered against the defendant.

Only by attributing to “critics” views that they do not hold, as I illustrated above, can Merlino and Springer sustain the illusion of a symmetric controversy in which the exclusion of experts from both sides is appropriate. They do this by constructing a false dichotomy between “critics” and “many academicians and practitioners [by which they presumably mean the authors of Meeting since no other scholars are cited] who, based on the current lack of empirical reliability or biased data, remain unconvinced that these fields are so fatally flawed that gross miscarriages of justice frequently occur.” Setting aside the issue of how the authors of Meeting are able to draw such conclusions from a lack of data, this characterization simply distorts the position of the critics. No citations are offered as to which scholar has claimed that because of latent print analyses gross miscarriages of justice frequently occur.” Speaking merely for myself, I have published a couple of rather lengthy treatments of the issue of latent print identification and wrongful conviction, none of which are cited by Merlino and Springer, and I have made rather careful claims, none of which could be fairly characterized by the language Merlino and Springer employ.

29. Id. (emphasis in original). It is worth noting that, in both Meeting and Context and Controversy, Merlino et al.’s application of this broad principle seems rather selective. While they applaud Judge Brennan’s application of it to my proffered testimony, they never state whether they think this principle should render latent print individualization (for which they concede reliability data is lacking) inadmissible and, if not, why not. (Given that latent print practitioners are among the authors of Meeting, it would be quite sensational if they agreed that latent print individualization should be inadmissible under a rigorous interpretation of Daubert or Frye.) Nor do they criticize any of the many judges who would seem to have failed to apply this principle to latent print individualization.

30. Id.

31. I made this point in Don’t Shoot, and it still has not been answered.

32. Merlino & Springer, supra n. 3, at 135.

Adversarialism

Context and Controversy is subtitled "Why Questions of Validity and Reliability are Seldom Resolved in an Adversarial Setting," and adversarialism is often disparaged throughout the article. My "reading" of Meeting is criticized as "adversarial rather than objective."34 Merlino and Springer "attempt to remove our discussion from the adversarial context . . . ."35 They lament that "opposing arguments have been made in adversarial circumstances that are not conducive to achieving the environment of trust and cooperation needed to discover where the truth really lies."36 And, they express their "sincere hope that proponents of both sides of the issue are able to step forward from the adversarial context of legal debate and into a new context of discovery, where collaboration, cooperation, communication, and critical thinking reside, and where true knowledge might really be achieved."37

Merlino and Springer's use of the term "adversarial" is somewhat ambiguous: at times, it appears to simply be a reference to the undeniable vigor with which I attacked Meeting; at others, it appears to refer to the oft claimed pernicious effect of our adversarial legal system on debates over scientific knowledge. As with the notion of symmetry, decrying adversarialism and extolling presumed virtues like "trust," "cooperation," "collaboration," "cooperation," and "communication" has a superficial appeal. But Merlino and Springer's critique of adversarialism deserves a little more scrutiny.

Recall that we have established that we are in a situation in which we agree that reliability data is lacking. Of course, no one would disagree with Merlino and Springer's position "that empirical research establishing the extent of the reliability of the forensic sciences is crucial."38 Where disagreement lies is in what to do now, before the research is done and, to some extent, how to motivate the conducting of such research. Merlino and Springer contend that "opposing arguments [that] have been made in adversarial circumstances . . . are not conducive to achieving the environment of trust and cooperation needed to discover where the truth really lies."39 This might be true if there were two groups of scholars, one asserting the high reliability of latent print individualization, the other asserting the low reliability of latent print individualization. But, as I have shown above, that is not an accurate description of the nature of the scientific controversy in question. Rather, the nature of the controversy is that many scholars, including myself, have asserted that reliability data is lacking (a position with which Merlino et al., recall, agree). One does not require an "environment of trust and cooperation" in order to discover whether this claim is true. It is a claim that may easily be refuted by the production of the very reliability data that we claim is missing. As Thomas Bohan nicely articulates it, what is first needed is not a validation study, but

34. Merlino & Springer, supra n. 3, at 133.
35. Id. at 134.
36. Id. at 137.
37. Id. at 145.
rather a “validation investigation.” Such an investigation would “determine whether a
technique or theory the scientific validation of which has been questioned has in fact
already been scientifically validated.” As Bohan notes, “This is . . . necessary . . . given
that the practitioners of the respective techniques claim with some heat that their
practices have already been validated.” In other words, at this point we are not
debating the validity of latent print individualization; we are debating whether validation
has already occurred. On that point, as noted above, Merlino, Springer and I, as well as
most scholars, appear to be in agreement that it has not, and this is what I told the Hyatt
jury.

As I acknowledged in Don’t Shoot, a claim about a lacuna in the literature can
never be “proven” in a definitive sense. Instead, scholars simply trust such claims after
enough reputable scholars seem to have done diligent enough literature searches (or
“validation investigations”). In this case, however, legal adversarialism actually seems
conducive to truth, rather than detrimental to it. As I have argued elsewhere, one extra
reason to trust this particular claim about a lacuna in the literature is that it has been
made in “adversarial context[s]” with reasonably high stakes. This should give an
external observer all the more reason to believe that if those who assert the lacuna have
overlooked something, their opponents would have identified the missing item of
research.

Given that most scholars are not making affirmative claims about the accuracy of
latent print individualization, but, rather, asserting the same absence of empirical data
that Merlino and Springer lament, are such “adversarial” claims actually detrimental to
the achievement of “true knowledge”? Here we have a testimonial claim—latent print
individualization—for which, Merlino and Springer agree, reliability data is lacking. And
yet, expert testimony by latent print examiners that the defendant’s friction ridge skin is
the only possible source of a particular latent print to the exclusion of all other possible
sources, sometimes accompanied by the claims that the “error rate” associated with this
claim is “zero,” has been routinely allowed by judges and heard by jurors for nearly a
century despite what appears to be scholarly agreement that there is no data to support
such claims. Under these circumstances, it is unclear why a healthy dose of legal
adversarialism is not precisely what is called for, and it is not clear why the jury should
not hear about the scholarly agreement that data is lacking.

Similarly, it is not entirely clear that what the current situation calls for is more
“trust and cooperation.” While “trust and cooperation” sound like virtues in the abstract,
given that what is needed, by all accounts, is measurement of the accuracy of latent print
individualization, it is not clear that “trust and cooperation” are necessary to achieving

40. Thomas L. Bohan, Strengthening Forensic Science: A Way Station on the Journey to Justice, 55 J.
Forensic Sci. 5, 6 (2010).
41. Id.
42. Id.
43. Simon A. Cole, Is Fingerprint Identification Valid? Rhetorics of Reliability in Fingerprint Proponents’
44. Natl. Research Council of the Natl. Acads., supra n. 38, at 143 (Feb., 2009); Thomas L. Bohan, supra n.
40, at 6; Simon A. Cole, More Than Zero, supra n.33.
the scientific end of producing that data. In theory, accuracy data can be obtained simply
by taking measurements; “trust and cooperation” are not, strictly speaking necessary.
Moreover, given that, as I have argued elsewhere,\textsuperscript{45} the current situation allows latent
print examiners to testify that latent print individualization decisions are infallible and
have an error rate of zero, latent print examiners and the prosecutors who proffer them to
testify in court might well view the procurement of accuracy data as not in their interest.
Likewise, criminal defendants might also have reasons to view accuracy data as not in
their interest.

To be sure, there is indeed a sense in which “trust and cooperation” are necessary
to the procurement of accuracy data, in that such data will be difficult to procure without
the cooperation of professional latent print examiners. However, this is a political
problem, not a scientific one, and it is far from clear that the best solution to this
particular problem is “trust” rather than the maligned “adversarialism.” Given that courts
currently permit latent print examiners to testify that an “individualization” constitutes
the elimination of all possible source of a latent print in the universe but one and to assert
an error rate of zero, it is not clear that any amount of “trust” will overcome the profound
legal disincentive to gathering accuracy data created by this legal regime. \emph{Excluding or
restricting} such testimony, through admissibility challenges, however, may well prove
quite effective at motivating the production of the empirical data that Merlino and
Springer view as so “crucial.”

My larger point, of course, is that, while it is easy and common to malign (legal)
adversarialism and adversarialism certainly has many vices, it has virtues as well, and
there are situations in which adversarialism may be effective at bringing about desirable
outcomes. While this is not the place for an extended discussion of that possibility, there
do seem to be good reasons to think that, contrary to Merlino and Springer’s view of
adversarialism as pernicious, the fingerprint controversy may be one of those situations
in which adversarialism would have a palliative effect—or, at least, it \emph{would} have such
an effect if admissibility doctrine were applied in a more rigorous manner than it has
been thus far.

If, on the other hand, by characterizing my reading of \emph{Meeting} as “adversarial
rather than objective,” Merlino and Springer mean that my argumentation is oriented
around a legal, rather than a scientific, dispute, the claim would seem to apply better to
their reply than to mine. As I noted in \emph{Don’t Shoot}, though I have written a number of
scholarly works concerning the validity of latent print individualization, \emph{Meeting} cited or
engaged with none of these. Instead, my views were characterized solely through a trial
judge’s secondhand characterization of what I had purportedly said in testimony in a pre-
trial hearing in 2001.\textsuperscript{46} I also showed, with quotations from that trial transcript, that
Merlino et al.’s characterization of my testimony as stating that latent print
individualization is “unreliable” was plainly false.\textsuperscript{47} This charge is not answered in
\emph{Context and Controversy}, and Merlino and Springer still do not cite any of the scholarly
work of either myself or any other scholarly “critic” of latent print individualization,

\textsuperscript{45} See Cole, supra n. 43.
\textsuperscript{46} Cole, supra n. 5, at 131–132.
\textsuperscript{47} Id. at 119 n. 52 and accompanying text.
again mischaracterizing our views. This mischaracterization creates the appearance of a symmetric scientific controversy over the claimed accuracy of latent print individualization in which "[s]cholars on both sides of the issue offer thoughtful and meaningful statements of their positions" but which has also been marred by "adversarial circumstances that are not conducive to achieving the environment of trust and cooperation needed to discover where the truth really lies."48 Instead, it seems to me that we have a situation in which scholars agree that reliability data is lacking, and yet practitioners and courts insist that the reliability of latent print individualization is somehow known to be very high, thus rendering it legally admissible. Given Merlino and Springer's expressed hope to "find a way to join together in an effort to set aside current biases and search for a true understanding of the forensic sciences using the principles of science[,]"49 I remain disappointed that Context and Controversy still does not engage the scholarly literature according to the conventions of scientific debate. Under those circumstances, which of us, I ask, is writing in an "adversarial rather than objective" manner?

49. Id. at 144.