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## A Discouraging Omen: A Critical Evaluation of the Approved Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline

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# **A DISCOURAGING OMEN: A CRITICAL EVALUATION OF THE APPROVED UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS FOR THE FORENSIC LATENT PRINT DISCIPLINE**

**Simon A. Cole\***

The theme of the 2018 *Georgia State University Law Review* symposium is the Future of Forensic Science Reform. In this Article, I will assess the prospects for reform through a critical evaluation of a document published in February 2018 by the United States Department of Justice (DOJ), the *Approved Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline* (ULTR).<sup>1</sup> I argue that this document provides reason to be concerned about the prospects of forensic science reform. In Part I, I discuss the background of the ULTR. In Part II, I undertake a critical evaluation of the ULTR. In the Conclusion, I discuss why the importance of the ULTR extends beyond merely one document and one discipline to implicate the future of forensic science reform more generally.

## *I. Background*

### *A. ULTRs*

To understand the rationale for treating a single three-page document as a measure of the prospects for forensic reform, some background will be useful. The lack of standardization in forensic testimony and reporting has been an issue of consternation for some

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1. DEP'T OF JUSTICE, APPROVED UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS FOR THE FORENSIC LATENT PRINT DISCIPLINE 1 (2018), <https://www.justice.gov/file/1037171/download> [<https://perma.cc/XGS9-95HE>].

time.<sup>2</sup> This issue received official notice in 2009 when the National Research Council included among its recommendations for “strengthening forensic science in the United States” a recommendation to “establish standard terminology to be used in reporting on and testifying about the results of forensic science investigations.”<sup>3</sup> A newly created institution, the Organization of Scientific Area Committees (OSAC), sponsored by the National Institute of Standards and Technology, is currently trying to write standards for testimony and reporting in many forensic disciplines.<sup>4</sup> However, no such standards have yet been approved.<sup>5</sup>

Another important development in this area that particularly impacted the DOJ was the 2015 release of a report on reporting practices by the Federal Bureau of Investigation (FBI) in the discipline of microscopic hair comparison (MHC). This report found that MHC was reported in a misleading manner in a stunning 95% of cases reviewed.<sup>6</sup>

Largely in response to the MHC review, in February 2016 the Deputy Attorney General announced that the DOJ would develop what would later become the ULTRs, but were then called “Approved Scientific Standards for Testimony and Reports” (ASSTRs), in many forensic disciplines.<sup>7</sup> Describing the ASSTRs, the Deputy Attorney General said, “We hope this effort will serve as a model for demonstrating our commitment to strengthening forensic

2. See, e.g., Bert Black, *Focus on Science, Not Checklists*, 39 TRIAL 24, 26 (2003).

3. NAT’L RES. COUNCIL OF THE NAT’L ACADS., STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 22, 189 (2009).

4. *OSAC Approved Standards*, NAT’L INST. OF STANDARDS & TECH. (Jan. 25, 2017), <https://www.nist.gov/topics/forensic-science/organization-scientific-area-committees-osac/osac-registry/osac-approved> [<https://perma.cc/M3GF-FZP4>].

5. *Id.*

6. Spencer S. Hsu, *FBI Admits Flaws in Hair Analysis Over Decades*, WASH. POST (Apr. 18, 2015), [https://www.washingtonpost.com/local/crime/fbi-overstated-forensic-hair-matches-in-nearly-all-criminal-trials-for-decades/2015/04/18/39c8d8c6-e515-11e4-b510-962fcfab310\\_story.html?utm\\_term=.67f5806990fa](https://www.washingtonpost.com/local/crime/fbi-overstated-forensic-hair-matches-in-nearly-all-criminal-trials-for-decades/2015/04/18/39c8d8c6-e515-11e4-b510-962fcfab310_story.html?utm_term=.67f5806990fa) [<https://perma.cc/6EDQ-XGCP>].

7. Sally Q. Yates, Deputy Att’y Gen., Remarks at the 68th Annual Scientific Meeting of the American Academy of Forensic Science (Feb. 24, 2016), <https://www.justice.gov/opa/speech/deputy-attorney-general-sally-q-yates-delivers-remarks-during-68th-annual-scientific> [<https://perma.cc/4QLB-ABEZ>] (“To address this problem [of testimonial overstatement revealed by the microscopic hair comparison review], the FBI is close to finalizing new internal standards for testimony and reporting—which they’re calling ‘Approved Scientific Standards for Testimony and Reports,’ or ASSTR.”).

science, now and in the future.”<sup>8</sup> The first draft documents, now renamed ULTRs, were published for public comment in June 2016.<sup>9</sup>

In April 2017, the U.S. Attorney General did not renew the National Commission on Forensic Science (NCFS).<sup>10</sup> This was an important development, because the NCFS had been created in 2013 “to provide recommendations and advice to the Department of Justice concerning national methods and strategies for strengthening the validity and reliability of the forensic sciences.”<sup>11</sup> The Attorney General replaced the NCFS with a Forensic Science Working Group.<sup>12</sup> In announcing this new position, the ULTRs were among only two specific projects mentioned that the DOJ would pursue “aimed at ensuring that the testimony of the Justice Department’s forensic examiners is consistent with sound scientific principles and just outcomes.”<sup>13</sup> This was significant because the entity charged with producing the ULTRs is now also the entity charged with regulating forensic science more generally in the United States.<sup>14</sup> Thus, to a far greater extent than before, the content of the ULTRs and the process by which that content is produced will tell us a lot about the future of the regulation of forensic science in the United States.

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8. *Id.*

9. *Forensic Science*, DEP’T OF JUSTICE, <https://www.justice.gov/archives/dag/forensic-science> [<https://perma.cc/TLK4-8GVS>] (last visited Apr. 15, 2018) (archived webpage).

10. Spencer S. Hsu, *Sessions Orders Justice Dept. to End Forensic Science Commission, Suspend Review Policy*, WASH. POST (Apr. 10, 2017), [https://www.washingtonpost.com/local/public-safety/sessions-orders-justice-dept-to-end-forensic-science-commission-suspend-review-policy/2017/04/10/2dada0ca-1c96-11e7-9887-1a5314b56a08\\_story.html?utm\\_term=.b4648d713d41](https://www.washingtonpost.com/local/public-safety/sessions-orders-justice-dept-to-end-forensic-science-commission-suspend-review-policy/2017/04/10/2dada0ca-1c96-11e7-9887-1a5314b56a08_story.html?utm_term=.b4648d713d41) [<https://perma.cc/2FVF-7GDH>].

11. DEP’T OF JUSTICE, RENEWED CHARTER FOR THE NAT’L COMMISSION ON FORENSIC SCIENCE (Apr. 23, 2015) <https://www.justice.gov/archives/ncfs/file/624216/download> [<https://perma.cc/7SX9-PPYN>].

12. Beth Reinhard, *Jeff Sessions Scuttles Forensics Partnership with Scientist*, WALL ST. J. (Aug. 7, 2017), <https://www.wsj.com/articles/jeff-sessions-scuttles-forensics-partnership-with-scientists-1502148688> [<https://perma.cc/R75P-SPZ3>]; Press Release No. 17-0880, Dep’t of Justice, Office of Pub. Affairs, Justice Department Announces Plans to Advance Forensic Science (Aug. 7, 2017), <https://www.justice.gov/opa/pr/justice-department-announces-plans-advance-forensic-science> [<https://perma.cc/W2ZD-Q9F4>].

13. Press Release No. 17-0880, *supra* note 12.

14. OSAC also regulates forensic science in the United States, but OSAC’s mandate, which is limited to setting standards, is much narrower than the NCFS’s mandate was. See Simon A. Cole, *Who Will Regulate American Forensic Science?*, 48 SETON HALL L. REV. 563, 566 (2018).

In 2018, at the annual meeting of the American Academy of Forensic Science, Deputy Attorney General Rod Rosenstein announced the DOJ's "plans to advance forensic science."<sup>15</sup> In fleshing out these "plans," the DOJ's press release listed four specific actions.<sup>16</sup> First among these was the publication of the ULTR for the latent print discipline.<sup>17</sup> As Rosenstein noted, the latent print ULTR "is the first approved Uniform Language document."<sup>18</sup> So, again, this first ULTR may tell us a lot about not only future ULTRs but also about the future of forensic reform.

### B. Latent Print Reporting

The reporting of the results of latent print analyses has been a vexing issue for several decades now. Historically, for more than a century, latent print analyses were generally reported in a rather simple framework. A latent print could be deemed "of value" or not.<sup>19</sup> Comparing a latent print of value with a known print could result in one of three reports: (1) identification; (2) inconclusive; (3) exclusion.<sup>20</sup> This framework is often described as categorical because it sorts all reports into one of three clearly delineated categories, which are treated as entirely distinct from one another, yet entirely

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15. Press Release No. 18-213, Dep't of Justice Office of Pub. Affairs, Justice Department Announces Plans to Advance Forensic Science (Feb. 21, 2018), <https://www.justice.gov/opa/pr/justice-department-announces-plans-advance-forensic-science-0> [<https://perma.cc/ZJ83-CJGY>].

16. *See id.*

17. *Id.* The other three were: (1) a testimony monitoring framework; (2) plans (as yet unfulfilled) to publish documents such as quality management documents and internal validation studies (and, presumably, standard operating procedures); and (3) the rechartering of the Council of Federal Forensic Laboratory Directors. *Id.* For more on standard operation procedures in the FBI's Latent Print Unit, see Simon A. Cole, *Implementing Counter-Measures Against Confirmation Bias in Forensic Science*, 2 J. APPLIED RES. MEMORY & COGNITION 61, 61 (2013).

18. Rod J. Rosenstein, Deputy Att'y Gen., Remarks at the American Academy of Forensic Sciences (Feb. 21, 2018), <https://www.justice.gov/opa/speech/deputy-attorney-general-rostenstein-delivers-remarks-american-academy-forensic-sciences> [<https://perma.cc/A2TP-DTRW>].

19. Recently, this decision has been complicated by differences between laboratories, some of which use an additional designation called "of value for exclusion only." SCI. WORKING GRP. ON FRICTION RIDGE ANALYSIS STUDY & TECH., STANDARDS FOR EXAMINING FRICTION RIDGE IMPRESSIONS AND RESULTING CONCLUSIONS § 4.1.4.2 (Mar. 13, 2013), [http://www.swgfast.org/documents/examinations-conclusions/130427\\_Examinations-Conclusions\\_2.0.pdf](http://www.swgfast.org/documents/examinations-conclusions/130427_Examinations-Conclusions_2.0.pdf) [<https://perma.cc/QC8Y-J6EF>] [hereinafter SWGFAST]. This issue need not concern us here.

20. Allyson A. Simons, *Technical Working Group on Friction Ridge Analysis, Study and Technology (TWGFAST) Guidelines*, 48 J. FORENSIC IDENTIFICATION 147, 147 (1998).

homogeneous within. This categorical framework has been criticized since at least the mid-1990s.<sup>21</sup> To avoid excess detail, the criticism can be summarized by two points.

First, categorical reporting is artificial and inferior to what might be called continuous reporting, in which the weight of each individual latent print comparison is described as it is assigned, rather than by reference to its place in a relatively crude three-category framework. Categorical reporting is vulnerable to the same criticism that can be made of any use of categories: the artificial boundaries between the categories render the system prone to perverse cliff effects. Thus, a comparison about which the examiner is 100% certain<sup>22</sup> is reported as identification, while a comparison about which the same examiner is 99.9999% certain is reported as inconclusive. Likewise, that 99.9999% certain result yields the exact same report—inconclusive—as a report that is 51% certain, 1% certain, or 0.1% certain.

The second criticism is that a categorical framework posits two entire categories as the extremes of the continuum of probability: identification is equivalent to a probability of one, and exclusion is equivalent to a probability of zero. Put another way, categorical reporting claims that *certainty* is possible. Indeed, under the categorical framework, positive results—that is, results that claimed an association between a latent print and a known print—*could not be reported in any way but certainty*. Many viewed this as violating what is sometimes called Cromwell's rule, which holds that the probability of an event is always between zero and one but can never be equal to zero or one.<sup>23</sup>

Forensic statisticians, and those who are persuaded by them, argue that categorical reporting frameworks distort forensic evidence by

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21. Christophe Champod, *Edmond Locard—Numerical Standards and 'Probable' Identifications*, 45 J. FORENSIC IDENTIFICATION 139, 139 (1995). It is possible to argue that figures such as Edmond Locard and Henry Faulds implicitly criticized the categorical framework in the early 20th century.

22. For purposes of illustration only, in this example I am assuming that claims to 100% certainty are not incoherent on their face and that the examiner's "certainty" is an appropriate way of reporting the weight of evidence.

23. DENNIS V. LINDLEY, *UNDERSTANDING UNCERTAINTY* 91 (2006).

both overvaluing and undervaluing forensic associations.<sup>24</sup> In the case of the latent print framework, all identifications are overvalued by the untenable claim to a probability of one, which amounts to certainty. Many inconclusive outcomes are undervalued because they are essentially deemed to mean nothing, even if there is a finding that the two prints very, very likely derive from the same source.

In place of this, forensic statisticians propose what is sometimes called a weight of evidence framework. In this framework, the examiner would report the weight of the evidence as a ratio between the probability of the evidence if the two prints derive from the same source and the probability of the evidence if the two prints derive from different sources. In such a framework, some value would always be assigned to each probability; neither probability would be assigned a value of zero.<sup>25</sup>

In 2015, the U.S. Defense Forensic Science Center (DFSC) began reporting latent print results in a probabilistic format.<sup>26</sup> The DFSC explicitly stated that it would no longer use the term identification because of its historical association with claims to certainty.<sup>27</sup> In 2015, the European Network of Forensic Science Institutes published a guideline recommending that forensic scientists, including latent print examiners, report their findings in the form of a likelihood ratio.<sup>28</sup>

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24. Cedric Neumann & Julian Champkin, *Fingerprints at the Crime-Scene: Statistically Certain, or Probable?*, SIGNIFICANCE, Feb. 2012, at 21, 25.

25. See, e.g., Christophe Champod & Ian W. Evett, *A Probabilistic Approach to Fingerprint Evidence*, 51 J. FORENSIC IDENTIFICATION 101, 101 (2001); Neumann & Champkin, *supra* note 24, at 21; Cedric Neumann, *Statistics and Probabilities As a Means to Support Fingerprint Examination*, in LEE AND GAENSSLEN'S ADVANCES IN FINGERPRINT TECHNOLOGY 419, 452 (Robert Ramotowski ed., 3d ed. 2013).

26. DEF. FORENSIC SCI. CTR., DEP'T OF THE ARMY, INFORMATION PAPER No. CIFS-FSL-LP, USE OF THE TERM "IDENTIFICATION" IN LATENT PRINT TECHNICAL REPORTS 1 (Nov. 3, 2015).

27. *Id.*

28. EUROPEAN NETWORK OF FORENSIC SCI. INSTS., ENFSI GUIDELINE FOR EVALUATIVE REPORTING IN FORENSIC SCIENCE 6 (Mar. 8, 2015), [http://enfsi.eu/wp-content/uploads/2016/09/m1\\_guideline.pdf](http://enfsi.eu/wp-content/uploads/2016/09/m1_guideline.pdf) [<https://perma.cc/N5ZN-TSYZ>].

C. *The Draft ULTR for the Forensic Latent Print Discipline*

In 2016, the DOJ published sixteen draft ULTRs with supporting documentation for public comment.<sup>29</sup> Numerous public comments were made. After the public comment period had closed, a committee convened by the American Association for the Advancement of Science (AAAS) wrote a 2017 report on latent print analysis.<sup>30</sup> This report considered and commented on the draft ULTR for the latent print discipline.<sup>31</sup> The public comments and the AAAS report criticized the latent print ULTR and its supporting documentation on several grounds. Below I list the criticisms of the ULTR's definition of identification, which reads:

The examiner may state or imply that an *identification* is the determination that two friction ridge prints originated from the same source because there is sufficient quality and quantity of corresponding information such that the examiner would not expect to see that same arrangement of features repeated in another source. While an *identification* to the absolute exclusion of all others is not supported by research, studies have shown that as more reliable features are found in agreement, it becomes less likely to find that same arrangement of features in a print from another source.<sup>32</sup>

Some criticisms of this statement include the following:

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29. *Forensic Science*, *supra* note 9.

30. WILLIAM THOMPSON ET AL., ASS'N FOR ADVANCEMENT OF SCI., FORENSIC SCIENCE ASSESSMENTS: A QUALITY AND GAP ANALYSIS: LATENT FINGERPRINT EXAMINATION (2017), [https://mcmprodaaas.s3.amazonaws.com/s3fs-public/reports/Latent%20Fingerprint%20Report%20FINAL%209\\_14.pdf?i9xGS\\_EyMHnIPLG6INIUYZb66L5cLdlb](https://mcmprodaaas.s3.amazonaws.com/s3fs-public/reports/Latent%20Fingerprint%20Report%20FINAL%209_14.pdf?i9xGS_EyMHnIPLG6INIUYZb66L5cLdlb) [<https://perma.cc/GPQ3-YAK4>].

31. *Id.*

32. DEP'T OF JUSTICE, PROPOSED UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS FOR THE FORENSIC LATENT PRINT DISCIPLINE 1 (June 3, 2016), <https://www.justice.gov/archives/olp/file/861911/download> [<https://perma.cc/JK63-PEAD>].



- (1) A categorical scheme allowing only three possible reports is too crude.<sup>33</sup>
- (2) The definition is circular.<sup>34</sup>
- (3) Replacing *identification to the exclusion of all others* (TTEOAO) with *identification*—or “minc[ing]” the term *identification*<sup>35</sup>—makes no scientific, logical, or linguistic difference and will not make any difference to lay people. The term *identification* should be replaced.<sup>36</sup>
- (4) A claim of identification is inherently a decision. A framework, known as decision theory, exists which provides a roadmap to making an identification decision. However, this framework is not used by the ULTR. Moreover, the framework would require the latent print examiner to have knowledge that is beyond the expertise of a fingerprint examiner.<sup>37</sup>

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33. Michele Triplett, Comment on Proposed Uniform Language for Testimony and Reports (June 17, 2016), <https://www.regulations.gov/document?D=DOJ-OLP-2016-0012-0018> [<https://perma.cc/6PDY-KVXF>].

34. *Id.*

35. THOMPSON ET AL., *supra* note 30, at 61.

36. *Id.* at 60; Simon A. Cole, Comment on Statements Approved for Use in Laboratory Reports by Expert Witnesses (July 8, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0085&attachmentNumber=1&contentType=pdf> [<https://perma.cc/53B8-L7UG>]; Friction Ridge Subcomm. of the Organization of Sci. Area Comms., Comment on Proposed Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline and Supporting Documentation (July 8, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0067&attachmentNumber=1&contentType=pdf> [<https://perma.cc/96N2-PG78>]; Jessica Gabel Cino, Comment on Proposed Uniform Language for Testimony and Reports (July 8, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0102&attachmentNumber=1&contentType=pdf> [<https://perma.cc/BZX9-6XUP>]; Innocence Project & Innocence Network, Comment on Proposed Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline (July 11, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0124&attachmentNumber=1&contentType=pdf> [<https://perma.cc/SP7L-H82L>]; Jules Epstein, Comment on the Proposed Uniform Language for Testimony and Reports (June 17, 2016), <https://www.regulations.gov/document?D=DOJ-OLP-2016-0012-0019> [<https://perma.cc/4ZJZ-KZEB>].

37. Simone Gittelsohn, Comment on Proposed Uniform Language for Forensic Latent Print Discipline (July 11, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0138&attachmentNumber=1&contentType=pdf> [<https://perma.cc/MUF9-6FFV>]; *see also* John Buckleton et al., Comment on Proposed Uniform Language for the Forensic Footwear and Tire Impression Discipline (July 5, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0052&attachmentNumber=1&contentType=pdf> [<https://perma.cc/2XJM-WV54>]. Specifically, the examiner would need to know: (1) the prior probability that the source of the known print is the source of the latent print; and (2) “the utility (or loss) values of correctly identifying the

- (5) The definition of *identification* is ambiguous as to whether it is intended to express certainty or uncertainty. If it is intended to express certainty, it violates Cromwell's rule.<sup>38</sup>
- (6) If the definition of *identification* is intended to express uncertainty, hedging with the term *expect* does not solve the problem.<sup>39</sup>
- (7) There is no scientific support for the claim that latent print examiners can tell when they are in a situation in which they can distinguish same-source and different-source pairings<sup>40</sup>—or, to put it another way, that they can precisely estimate the rarity of features observed in a latent print.<sup>41</sup>

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questioned impression, correctly not identifying the questioned impression, incorrectly identifying the questioned impression and incorrectly not identifying the questioned impression.” Gittelsohn, *supra*. For more on this issue, see *infra* Part II.B.2.b)(1).

38. Cole, *supra* note 36; Friction Ridge Subcomm. of the Organization of Sci. Area Comms., *supra* note 36; Cino, *supra* note 36; Epstein, *supra* note 36.

39. THOMPSON ET AL., *supra* note 30, at 62 (“We disagree . . . with the language that the DOJ suggests that examiners use. In our view, the DOJ’s proposed language is . . . scientifically unwarranted. Under the DOJ proposal examiners are forbidden from saying that the arrangement of features found in a latent print and in a matching exemplar would not be repeated in another source, as that statement would constitute the forbidden and unsupported claim that the two friction ridge impressions originated from the same source to the exclusion of all others. But examiners are allowed to say that they ‘would not expect to see that same arrangement of features repeated in another source.’ Examiners are thus allowed to make an assertion that is deemed scientifically unsupported and improper so long as they hedge by saying that they ‘expect’ that the assertion is true rather than saying outright that it is true.”) (emphasis omitted). See also Letter from Rush D. Holt, Chief Exec. Officer, Am. Ass’n for the Advancement of Sci., to Rod Rosenstein, Deputy Attorney Gen., U.S. Dep’t of Justice (Mar. 26, 2018) (on file with Georgia State University Law Review).

40. Cole, *supra* note 36 (“There is no scientific support for the claim that any method of latent print analysis . . . enables . . . a latent print examiner . . . to ascertain that the amount of corresponding friction ridge features that they perceive always derive from same-source pairings and never derive from different-source pairings.”).

41. THOMPSON ET AL., *supra* note 30, at 63 (“The problem with the DOJ’s proposed reporting language, then, is that there is no scientific evidence—none whatsoever—that latent print examiners have the ability to estimate with the required level of precision the frequency of the feature sets observable in latent prints in the human population. Because there is no proof that they can make such precise judgments accurately, there is no reason to believe that conclusions resting on their ability to make such precise judgments will be reliable or valid. Consequently, assertions about the probability that a feature set observed in a latent print will be repeated in another source are unwarranted. In our view, latent print examiners should not be making such statements.”); Brandon L. Garrett, Comment on Proposed Uniform Language for Testimony and Reports (June 29, 2016), <https://www.regulations.gov/contentStreamer?documentId=DOJ-OLP-2016-0012-0046&attachmentNumber=1&contentType=pdf> [<https://perma.cc/7J23-K3EL>]; Steve Lund & Hari Iyer,

## II. *The Approved ULTR for the Forensic Latent Print Discipline*

The newly approved and published ULTR has done little to address the criticisms above. Below, I discuss several continuing problems with the approved ULTR.

### A. *Process Issues*

#### 1. *Absence of Supporting Documentation*

The above criticism notwithstanding, the draft ULTRs were accompanied by longer documents titled *Supporting Documentation*.<sup>42</sup> These documents enabled greater understanding of the draft ULTRs' intended meaning, especially when the ULTRs were confusing, self-contradictory, or ambiguous. The approved ULTR for the latent print discipline contains no such supporting documentation. This makes it more difficult to understand the ULTR's intended meaning when, as discussed below, it is unclear, self-contradictory, or ambiguous. If the latent print ULTR is establishing a precedent for the others, this does not bode well for clarity and transparency.

#### 2. *Absence of Public Comment (and Failure to Respond to Original Public Comment)*

In announcing the ULTRs (then called ASSTRs), the DOJ stated that it planned to “invite feedback from the broader forensic community.”<sup>43</sup> The draft ULTRs were published in the Federal Register for public comment.<sup>44</sup> There were 127 comments made.<sup>45</sup>

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Comment on Proposed Uniform Language for Testimony and Reports for the Forensic Latent Print Discipline (July 11, 2016), <https://www.regulations.gov/document?D=DOJ-OLP-2016-0012-0141> [<https://perma.cc/7GMF-3S24>]. For more on this issue, see *infra* Part II.B.2(b).

42. DEP'T OF JUSTICE, SUPPORTING DOCUMENTATION FOR DEPARTMENT OF JUSTICE PROPOSED UNIFORM LANGUAGE FOR TESTIMONY AND REPORTS FOR THE FORENSIC LATENT PRINT DISCIPLINE 1 (2016), <https://www.justice.gov/archives/olp/file/861906/download> [<https://perma.cc/P5LN-X72Z>].

43. Yates, *supra* note 7.

44. Notice of Public Comment Period on Proposed Uniform Language for Testimony and Reports,

The comments on the latent print ULTR raised serious concerns. While we cannot assume the commenters were always correct, the process of responding to the public comments would have challenged the DOJ to consider the criticisms of current practice being made by the scientific community outside the DOJ.

Public comments on all documents published by the NCFS were adjudicated.<sup>46</sup> The public comments on the draft ULTRs were never adjudicated. Instead the process was simply restarted, and the “approved” ULTR was published without public comment.<sup>47</sup> The DOJ has asserted that the latent print ULTR “was peer-reviewed by experts outside of the Department, and their comments helped inform the approved language” through a “National Institute of Justice-facilitated peer review process.”<sup>48</sup> This is less transparent than the previous ULTR adjudication process.

## B. Substantive Issues

### 1. Categorical Reporting

The ULTR remains a categorical reporting framework with three categories: identification, inconclusive, and exclusion.<sup>49</sup> Categorical reporting is problematic for the reasons discussed above.<sup>50</sup> The ULTR offers no explanation as to how it reconciles the well-known problems with categorical reporting.

As noted above, a categorical framework that includes a category called identification constitutes a claim to certainty that two prints

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81 Fed. Reg. 48462 (July 25, 2016).

45. *Notice of Public Comment Period on Proposed Uniform Language for Testimony and Reports*, REGULATIONS.GOV (July 8, 2016), <https://www.regulations.gov/docketBrowser?rpp=25&so=DESC&sb=commentDueDate&po=25&dct=PS&D=DOJ-OLP-2016-0012> [<https://perma.cc/6Y9A-LBDF>].

46. NAT’L COMM’N ON FORENSIC SCI., GUIDANCE FOR THE ADJUDICATION OF PUBLIC COMMENTS, <https://www.justice.gov/ncfs/file/788186/download> [<https://perma.cc/WSR5-N95A>] (last updated June 1, 2017).

47. Rosenstein, *supra* note 18.

48. *Id.*; Letter from Ted Hunt, Senior Advisor on Forensic Sci., U.S. Dep’t of Justice, to Jules Epstein, Professor of Law and Dir. of Advocacy Programs, Temple Univ. Beasley Sch. of Law (Apr. 20, 2018) (on file with Georgia State University Law Review).

49. See DEP’T OF JUSTICE, *supra* note 1, at 2.

50. See *supra* Part I.B.

derive from the same source. The ULTR states: “‘Source identification’ is an examiner’s conclusion that two friction ridge skin impressions originated from the same source.”<sup>51</sup> Put another way, identification constitutes a claim that the potential donor pool of a latent print has been reduced from all the friction ridge skin in the universe to a single area of skin.

Such strong conclusions have been described as scientifically unsupportable by numerous authorities, including official reports<sup>52</sup> and scholars.<sup>53</sup> The ULTR proposes that federal latent print

51. DEP’T OF JUSTICE, *supra* note 1, at 2.

52. NAT’L RESEARCH COUNCIL, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES 140, 142 (2009); MELISSA K. TAYLOR ET AL., NAT’L INST. STANDARDS & TECH., LATENT PRINT EXAMINATION AND HUMAN FACTORS: IMPROVING THE PRACTICE THROUGH A SYSTEMS APPROACH 8 (2012); PRESIDENT’S COUNCIL OF ADVISORS ON SCI. & TECH., FORENSIC SCIENCE IN CRIMINAL COURTS: ENSURING SCIENTIFIC VALIDITY OF FEATURE-COMPARISON METHODS 101 (Sept. 2016); ANTHONY CAMPBELL, THE FINGERPRINT INQUIRY REPORT 740 (2011); THOMPSON ET AL., *supra* note 30, at 13–16.

53. See, e.g., David A. Stoney, *What Made Us Ever Think We Could Individualize Using Statistics?*, 31 J. FORENSIC SCI. SOC’Y 197, 197 (1991); Champod & Evett, *supra* note 25, at 113; Didier Meuwly, *Forensic Individualisation from Biometric Data*, 46 SCI. & JUST. 205, 207 (2006); Jennifer L. Mnookin, *The Validity of Latent Fingerprint Identification: Confessions of a Fingerprinting Moderate*, 7 L. PROBABILITY & RISK 127, 131 (2008); Ton Broeders, *Of Earprints, Fingerprints, Scent Dogs, Cot Deaths and Cognitive Contamination—A Brief Look at the Present State of Play in the Forensic Arena*, 159 FORENSIC SCI. INT’L 148, 154–55 (2005); see generally Simon A. Cole, *Grandfathering Evidence: Fingerprint Admissibility Rulings from Jennings to Llera Plaza and Back Again*, 41 AM. CRIM. L. REV. 1189, 1197 (2004); KEITH INMAN & NORAH RUDIN, PRINCIPLES AND PRACTICE OF CRIMINALISTICS: THE PROFESSION OF FORENSIC SCIENCE 56 (2000); Bernard W.N. Robertson, *Fingerprints, Relevance and Admissibility*, 2 N.Z. RECENT L. REV. 252, 255–56 (1990); Michael J. Saks & Jonathan J. Koehler, *The Individualization Fallacy in Forensic Science Evidence*, 61 VAND. L. REV. 199, 204 (2008); Quon Yin Kwan, *Inference of Identity of Source* (June 16, 1977) (unpublished Ph.D. dissertation, University of California, Berkeley) (on file with Georgia State University Law Review); John I. Thornton & Joseph L. Peterson, *The General Assumptions and Rationale of Forensic Identification: Statistical Basis for Evidence Evaluation*, in 4 MOD. SCI. EVIDENCE § 29:46 (David L. Faigman et al. eds., 2017–2018 ed.); Alex Biedermann et al., *Decision Theoretic Properties of Forensic Identification: Underlying Logic and Argumentative Implications*, 177 FORENSIC SCI. INT’L 120, 120–21 (2008) [hereinafter Biedermann, *Decision Theoretic Properties of Forensic Identification*]; James E. Starrs, *Judicial Control Over Scientific Supermen: Fingerprint Experts and Others Who Exceed the Bounds*, 35 CRIM. L. BULL. 234, 234 (1999); David H. Kaye, *Beyond Uniqueness: The Birthday Paradox, Source Attribution and Individualization in Forensic Science Testimony*, 12 L. PROBABILITY & RISK 3, 8–9 (2013); Jonathan Koehler & Michael J. Saks, *Individualization Claims in Forensic Science: Still Unwarranted*, 75 BROOK. L. REV. 1187, 1187 (2010); Simon A. Cole, *Forensics Without Uniqueness, Conclusions Without Individualization: The New Epistemology of Forensic Identification*, 8 L. PROBABILITY & RISK 233, 234 (2009); Mark Page et al., *Uniqueness in the Forensic Identification Sciences—Fact or Fiction?*, 206 FORENSIC SCI. INT’L 12, 13 (2011); Christophe Champod, *Fingerprint Examination: Towards More Transparency*, 7 L. PROBABILITY & RISK 111, 111–12 (2008); see D. Michael Risinger & Michael J. Saks, *Science and Nonscience in the Courts: Daubert Meets Handwriting Identification Expertise*, 82 IOWA L. REV. 21, 38 (1996); Max M. Houck, *Intellectual Infrastructure: A Modest*

examiners continue to report in terms of certainty, despite these numerous authorities stating such claims are unsupportable.

## 2. *Basis for a Categorical Report of Source Identification*

Given the widespread critiques of categorical reports as unsupportable, one would expect the ULTR to explain how it claims to support such a report. The ULTR offers three explanations:

- (1) This conclusion is an examiner's decision that the observed friction ridge skin features are in sufficient correspondence such that the examiner would not expect to see the same arrangement of features repeated in an impression that came from a different source and insufficient friction ridge skin features in disagreement to conclude that the impressions came from different sources.
- (2) The basis for a 'source identification' conclusion is an examiner's decision that the observed corresponding friction ridge skin features provide extremely strong support for the proposition that the two impressions came from the same source and extremely weak support for the proposition that the two impressions came from different sources.
- (3) A source identification is a statement of an examiner's belief (an inductive inference) that the

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*Critique of Forensic Science*, 53 SCI. & JUST. 1, 1 (2013); Antonio Amorim, *Opening the DNA Black Box: Demythologizing Forensic Genetics*, 31 NEW GENETICS & SOC'Y 259, 263–65 (2012); Alex Biedermann et al., *The Subjectivist Interpretation of Probability and the Problem of Individualisation in Forensic Science*, 53 SCI. & JUST. 192, 193–94 (2013) [hereinafter Biedermann, *Subjectivist Interpretation*]; Pierre Margot, *Forensic Science on Trial—What Is the Law of the Land?*, 43 AUSTRALIAN J. FORENSIC SCIS. 89, 95 (2011); Simon A. Cole, *Individualization Is Dead, Long Live Individualization! Reforms of Reporting Practices for Fingerprint Analysis in the United States*, 13 L. PROBABILITY & RISK 117, 117 (2014). See also Letter from Madeline H. deLone, Exec. Dir., Innocence Project, to Ted Hunt, Senior Forensic Advisor, U.S. Dep't of Justice and Kira Antell, Senior Counsel, Office of Legal Policy, U.S. Dep't of Justice (Mar. 22, 2018) (on file with Georgia State University Law Review).

probability that the two impressions were made by different sources is so small that it is negligible.<sup>54</sup>

All three statements say more or less the same thing in different words. In general, they draw on the language of probabilistic reasoning. Probabilistic approaches have gained increasing influence within forensic science because they claim to offer a more logical approach than the sort of nonprobabilistic categorical reporting described above.<sup>55</sup> Forensic statisticians argue that all forensics can and should be reported in a probabilistic manner.<sup>56</sup>

As forensic statisticians would advise, the ULTR sets up latent print analysis as a probabilistic problem that begins with the formation of two exhaustive and mutually exclusive hypotheses: (1) the two prints come from the *same source*; or (2) they come from *different sources*. So, the ULTR sets the problem up correctly. Then it says that the DOJ examiner should report a “source identification” when the probability of the different source hypothesis is “negligible,” “extremely weak[ly]” supported, or unexpected.<sup>57</sup> The problem with this approach can be summed up by two key points.

*a. Making a Claim to Certainty by Rounding a Small Probability to a Zero Probability*

As noted in the previous section, the ULTR suggests that latent print examiners report to the fact finder “that two friction ridge skin impressions originated from the same source.”<sup>58</sup> This statement is equivalent to reporting to the fact finder that there is zero probability that two friction ridge impressions originated from different sources. However, the ULTR then goes on to say that the basis for this testimony is *not* that there is zero probability that two friction ridge

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54. DEP’T OF JUSTICE, *supra* note 1, at 2.

55. *See, e.g.*, COLIN AITKEN & FRANCO TARONI, STATISTICS AND THE EVALUATION OF EVIDENCE FOR FORENSIC SCIENTISTS 16–17 (2005); BERNARD ROBERTSON ET AL., INTERPRETING EVIDENCE: EVALUATING FORENSIC SCIENCE IN THE COURTROOM 55 (2016).

56. *See, e.g.*, AITKEN & TARONI, *supra* note 55, at 17; ROBERTSON ET AL., *supra* note 55, at 55.

57. DEP’T OF JUSTICE, *supra* note 1, at 2.

58. *Id.*

impressions originated from different sources, but rather that this probability “is so small that it is negligible.”<sup>59</sup>

This reasoning is problematic for several reasons. First, the ULTR is self-contradictory. At first, it says that the examiner should report to the fact finder that there is zero probability that two prints originate from different sources.<sup>60</sup> Then, it states that this probability is not zero.<sup>61</sup> In short, the ULTR uses probabilistic reasoning to support a nonprobabilistic statement. This contradicts the whole rationale of a probabilistic approach, which is to try to understand—and perhaps quantify—the uncertainty surrounding particular propositions.

Perhaps the ULTR is saying that the probability is not in fact zero, but merely that the fact finder should be *told* that it is zero. In other words, the ULTR proposes to round a statement of uncertainty into a statement of certainty for the fact finder’s consumption. What is the justification for this rounding? Why is it preferable to report the rounded probability to the fact finder, rather than reporting the “true probability”? Why is the rounding being done in the direction that favors the state, rather than the defendant? The ULTR does not address these questions.

Forensic statisticians take a dim view of this rounding, as we know from the comments on the draft ULTR.<sup>62</sup> Forensic statisticians note that it “seems sensible to require that probabilities reported by scientists correspond to their actual personal beliefs.”<sup>63</sup> They suggest “[t]his view can be supported on a number of . . . grounds, including common sense, ethics, epistemology, and legal requirements that experts do not testify beyond their realm of expertise.”<sup>64</sup> But they have also formally demonstrated the intuitive point that reporting the probability you believe to be accurate is a better decision than

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59. *Id.*

60. *Id.*

61. *Id.*

62. See *supra* Part I.C.; see also Biedermann, *Subjectivist Interpretation*, *supra* note 53, at 193 (describing “the malpractice of rounding off small probabilities of *actual belief* to a zero *reported belief*”).

63. Biedermann, *Subjectivist Interpretation*, *supra* note 53, at 198.

64. *Id.*



reporting a rounded version of that probability. As they dryly note, “It is thus in the scientist’s interest to report his actual belief.”<sup>65</sup>

Second, the latent print community had been trying to verbally characterize the probability that two friction ridge impressions originated from different sources using words like “negligible,” “vanishingly small,” “essentially zero,” “minimal,” and “microscopic” for some years now.<sup>66</sup> The questions remain the same today as they have always been: What quantity is it that is being verbally characterized as negligible? Why is a word being used rather than the quantity itself? The answer, of course, is that there is no quantity. DOJ latent print examiners cannot calculate or estimate the probability that two friction ridge impressions originated from different sources, so they are simply declaring it to be extremely small *ipse dixit*. The ULTR adopts this argument even though some progress is being made toward quantifying probabilities for latent print associations.<sup>67</sup> Indeed, one U.S. laboratory, the DFSC, is now reporting the results of latent print analyses using calculated probabilities.<sup>68</sup> Thus, while the DFSC is actively trying to quantify probabilities, the DOJ is advising examiners who have *not* tried to quantify probabilities to tell the fact finder that they are negligible.

These arguments against rounding probabilities have been in the literature for some time. The ULTR evinces no awareness of them and offers no response to them.

*b. The ULTR Offers No Evidence That Examiners Can Determine the Source of a Latent Print with Certainty*

The ULTR appears to assume that latent print examiners can accurately and responsibly determine, estimate, or assign the relative probability of the evidence under two hypotheses. It does not suggest or claim they do so through measurements or data. Indeed, it does not

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65. *Id.* at 196.

66. Simon A. Cole, *More Than Zero: Accounting for Error in Latent Fingerprint Identification*, 95 J. CRIM. L. & CRIMINOLOGY 985, 1048 (2007).

67. *E.g.*, Cedric Neumann et al., *Quantifying the Weight of Evidence from a Forensic Fingerprint Comparison: A New Paradigm*, 175 J. ROYAL STAT. SOC’Y: SERIES A 371, 372 (2012).

68. DEF. FORENSIC SCI. CTR., *supra* note 26.

explain how they reach these probabilities at all. We can assume, then, they expect examiners to determine these probabilities through training and experience alone. As the AAAS observed, “there is no scientific evidence—none whatsoever—that latent print examiners have the ability to estimate with the required level of precision the frequency of the feature sets observable in latent prints in the human population.”<sup>69</sup> Even though the AAAS made these comments in response to the *draft* ULTR,<sup>70</sup> the *approved* ULTR offers no scientific evidence to refute the AAAS claim about the *lack* of scientific evidence.

*i. Decision*

One odd possible response to the above critique might be that the ULTR is not actually claiming that examiners have any particular ability to correctly discern the probability of the evidence if the prints come from the same source or different sources. After all, the ULTR says a source identification conclusion is “an examiner’s decision” about the probability of observing features depending on whether they come from the same source or different source.<sup>71</sup>

Decision? The normal English usage of the word decision connotes free will and choice.<sup>72</sup> There is no requirement inherent in the word that decisions be rational, evidence-based, data-driven, informed, or well warranted. Any of us can make a good or bad decision, but we can *decide* whatever we damn well want. This contrasts with, for example, the word determination—a word which was deleted from the draft ULTR<sup>73</sup>—which *does* connote that it is “ascertained, as after observation or investigation,” rather than merely chosen.<sup>74</sup>

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69. THOMPSON ET AL., *supra* note 30, at 63. See also Letter from Rush D. Holt, *supra* note 39.

70. THOMPSON ET AL., *supra* note 30, at 94.

71. DEP’T OF JUSTICE, *supra* note 1, at 2.

72. See *Decision*, CAMBRIDGE ENGLISH DICTIONARY (2018).

73. DEP’T OF JUSTICE, *supra* note 42, at 12.

74. *Determination*, DICTIONARY.COM, <http://www.dictionary.com/browse/determination?s=t> [<https://perma.cc/3CX4-ZJ47>] (last visited Mar. 29, 2018).

Could the ULTR be suggesting that DOJ latent print examiners can simply decide on the probability of the same source hypothesis based on a whim with no evidence whatsoever? It seems unlikely that is what was intended. But why then replace “determination” with “decision”? The explanation probably lies in the odd recent history of the use of the word decision in the latent print discipline. Some explication of that context is necessary.<sup>75</sup>

Beginning in 2008, a group of forensic scientists and statisticians published a series of papers advocating the application of decision theory to forensic identification.<sup>76</sup> Although their arguments have by no means been universally embraced, their influence can be discerned in the increasingly common characterization of latent print identifications as “decisions,” rather than as opinions, conclusions, or determinations.<sup>77</sup> This trend culminated with the Scientific Working Group on Friction Ridge Analysis and Technology (SWGFAST) replacing the word conclusion with the word decision in 2011.<sup>78</sup> Since then, it has become unsurprising, if not altogether common, to hear reference to “identification decisions” regarding latent prints.

It is difficult to avoid thinking that the ULTR’s use of the word decision represents a desire to join this trend. But what is striking is how different the ULTR’s use of the word decision is from the word’s use in decision theory and even from the SWGFAST’s usage. In decision theory, the decision is the end-point of the reasoning process.<sup>79</sup> The SWGFAST defined identification as a “decision.”<sup>80</sup> In

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75. See Biedermann, *Decision Theoretic Properties of Forensic Identification*, *supra* note 53, at 130. For greater detail, see Cole, *Individualization Is Dead, Long Live Individualization! Reforms of Reporting Practices for Fingerprint Analysis in the United States*, *supra* note 53.

76. See Biedermann, *Decision Theoretic Properties of Forensic Identification*, *supra* note 53, at 121. See also Alex Biedermann et al., *The Decisionalization of Individualization*, 266 *FORENSIC SCI. INT’L* 29, 29–38 (2016).

77. See Biedermann, *Decision Theoretic Properties of Forensic Identification*, *supra* note 53, at 120–21.

78. SWGFAST, *supra* note 19, at § 4.3.2.1.

79. The following, in lay terms, is how decision theory is supposed to work. The final stage of a forensic analysis is a decision—that is, not an arrival at some sort of definitive truth, but, rather, a decision to behave *as if* one or the other version of events is the truth. For example, one might decide to behave as if it will rain, and bring one’s umbrella, or one might decide to behave as if it will not rain and leave one’s at umbrella home. Likewise, one might decide to behave as if the defendant is guilty and execute him, or one might decide to behave as if he is innocent and set him free amongst us. In both cases, we do not know the truth, but we must (eventually) behave as if we do. Decision theory is a

the ULTR, the conclusion is the end-point of the reasoning process. Decisions are treated as the “basis” of that conclusion.<sup>81</sup> It is unclear what this is supposed to mean. The word decision is used in the ULTR where one would expect to see a word like perhaps measurement, analysis, estimate, reasoning, argument, data, or evidence. For example, the ULTR suggests that an important question is whether “the observed friction ridge skin features are in sufficient correspondence such that the examiner would not expect to see the same arrangement of features repeated in an impression that came from a different source.”<sup>82</sup> But the ULTR does not suggest that the examiner *determine* this, *assess* it, *measure* it, or *analyze* it. Rather, it suggests the examiner “decide” it.<sup>83</sup> But, as noted above, a decision (in the vernacular sense) can be entirely a matter of will or preference and requires no rational or evidential basis.

In this sense, the ULTR is entirely inconsistent with decision theory and indeed with any system of reasoning that makes any sense. It suggests that examiners make a series of “decisions” about probabilities and then base a categorical conclusion on those decisions. This essentially turns decision theory on its head. Decision theory is intended to be a way to use a series of probabilities—which are reached through some sort of calculations and/or reasoning process—to make a final “decision” about how to behave under conditions of uncertainty.<sup>84</sup> The ULTR proposes to make a series of

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framework for choosing one of these two behaviors by weighing both: (1) the probabilities of being right or wrong (i.e., about it raining *or* it not raining); *and* (2) the consequences of right and wrong decisions (e.g., getting wet or unnecessarily carrying one’s umbrella).

The point, as applied to forensic problems, was that the desired end-points—same source or different source—were not determinations or even conclusions but *decisions*. One can never know for sure whether two prints are in fact from the same source or different source. But one can—and sometimes must—decide to behave as if one or the other is true. And, importantly, the decision must necessarily be informed not merely by the risk of error but also by the decision-maker’s preferences regarding the consequences of error. Biedermann, *Decision Theoretic Properties of Forensic Identification*, *supra* note 53, at 121.

80. SWGFAST, *supra* note 19, at § 4.3.2.1.

81. DEP’T OF JUSTICE, *supra* note 1, at 2.

82. *Id.*

83. *Id.*

84. Biedermann, *Decision Theoretic Properties of Forensic Identification*, *supra* note 53, at 121–22.

decisions about probabilities and use them to make a categorical conclusion.

The final irony is that the decision theory papers in forensic statistics were intended to demonstrate why forensic examiners should *not* report categorical conclusions such as, for example: “these two prints came from the same source.” Decision theorists argue that reporting a categorical conclusion requires that some judgment be made—even if only implicitly—about the decision-maker’s preferences regarding the consequences of the available decisions.<sup>85</sup> Since it is not the expert’s place to impose her preferences upon either the fact-finder or society as a whole, the expert cannot proceed to make the final decision without inquiring into the preferences of the fact-finder or society. This is yet another reason why categorical reports by forensic experts are ill-advised. If the ULTR is, in its use of the term decision, trying to invoke decision theory to support its advocacy for categorical reporting, that would be enrolling decision theory in a project which it intended to oppose.

In short, if decision is meant in a purely vernacular sense, then the ULTR is taking the curious position that latent print source identification conclusions are simply expressions of will or choice on the part of DOJ examiners. If, on the other hand, decision is intended to invoke the technical concept called decision theory, then the ULTR has misused the term.

### 3. *False Concessions*

The ULTR ends with a section devoted to “Qualifications and Limitations of Latent Print Comparison Conclusions.”<sup>86</sup> The section lists five things that DOJ latent print examiners should *not* say.<sup>87</sup> It is useful to have these statements on record because, in some cases, these are statements that the DOJ *did* say for many years. For example, the ULTR says that DOJ examiners should not say latent

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85. *Id.* at 120.

86. DEP’T OF JUSTICE, *supra* note 1, at 2–3.

87. *Id.*

print examination “has a zero error rate” or is 100% certain.<sup>88</sup> This is important because FBI latent print examiners did say both of those things for many years.<sup>89</sup> Most significantly, they said them in the early admissibility hearings challenging latent print evidence under *Daubert*.<sup>90</sup> Essentially, the entire structure of precedents supporting the admissibility of latent print evidence under *Daubert* rests upon this now-disavowed claim.

While this list of “no-nos” does demonstrate progress in the DOJ’s thinking, to some extent the DOJ is merely ratifying decisions that have already been made by others. The International Association for Identification, the leading professional organization for identification professionals, banned claims of “zero error rate,” 100% certainty, and infallibility nine years ago.<sup>91</sup> But the more important issue is that this section consists of what I would call false concessions. By this I mean that the prohibition of these statements gives an appearance of progress, of compromise, of meeting forensic statisticians halfway. But that appearance is false because, in fact, prohibiting the five forbidden statements leaves the examiner’s report logically unchanged.

#### a. TTEOAOS

Perhaps the most egregious of these false concessions is the provision that DOJ examiners “not assert that two friction ridge impressions originated from the same source to the exclusion of all other sources.”<sup>92</sup> As noted above, the ULTR has already stated that examiners *should* assert “that two friction ridge skin impressions originated from the same source.”<sup>93</sup> We can deduce, then, that the ULTR is merely objecting to the seven words: “to the exclusion of all

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88. *Id.* at 3.

89. Cole, *supra* note 66, at 1034–35.

90. *E.g.*, United States v. Havvard, 117 F. Supp. 2d 848, 854 (S.D. Ind. 2000) (describing the “breathtaking” claim that the error rate is zero).

91. Memorandum from Robert J. Garrett, President, Int’l Ass’n for Identification (IAI), to the IAI Members (Feb. 19, 2009), [https://www.theiai.org/current\\_affairs/nas\\_memo\\_20090219.pdf](https://www.theiai.org/current_affairs/nas_memo_20090219.pdf) [<https://perma.cc/YB3H-96T4>].

92. DEP’T OF JUSTICE, *supra* note 1, at 2.

93. *Id.*

other sources” (TTEOAOS). However, there is no logical difference between the following two statements: (1) the defendant is the source of the print, and (2) the defendant is the source of the print TTEOAOS. Thus, this is a false concession because it appears to reform forensic science by prohibiting a “bad” phrase, but it in fact leaves the report to the fact-finder logically unchanged.

This argument was made in response to the draft ULTR. As the OSAC Friction Ridge Subcommittee public comment noted:

Other commentators have already noted that the mere removal of the words “to the exclusion of all others” does not remove their implication and that the implication is inappropriate. If a statement is made that “two friction ridge prints originated from the same source,” then *de facto*, they could not have been made by any other source. By using the exact same language in the proposed allowable language and unallowable language with the exception of those few words, unnecessary confusion may be introduced, as the two phrases say the exact same thing, with the exception that in one the exclusion of all others is explicitly stated, and in the other, it is merely implied.<sup>94</sup>

The ULTR evinces no awareness of this argument and offers no response to it. Instead, the ULTR appears to justify the distinction between saying “same source” with or without TTEOAOS with the argument that TTEOAOS “may wrongly imply that a source identification is based upon a statistically-derived or verified measurement or comparison of all friction ridge skin impression features in the world’s population, rather than an examiner’s expert conclusion.”<sup>95</sup> It is unclear why the ULTR holds that TTEOAOS implies this statement in a way that “same source” does not.<sup>96</sup>

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94. Friction Ridge Subcomm. of the Organization of Sci. Area Comms., *supra* note 36, at 1–2.

95. DEP’T OF JUSTICE, *supra* note 1, at 2.

96. *Id.* In fact, the ULTR is unclear whether it intends this statement to apply to TTEOAOS or to “individualization” or to both. The ULTR prohibits both TTEOAOS and the term “individualization” and then says, “[t]his may wrongly imply that a source identification is based upon a statistically-

*b. 100% Certainty*

The same may be said for banning the term 100% certainty. The ULTR advocates that DOJ examiners report: two prints come from the same source.<sup>97</sup> But it bans them from reporting: two prints come from the same source with 100% certainty.<sup>98</sup> But what is the difference?

*c. Individualization*

The same may be said about the ULTR banning the term individualization. Again, it appears that the ULTR is reforming forensic science by banning a bad phrase. But the ULTR advocates the use of the term identification.<sup>99</sup> Left unsaid is the fact that individualization and identification mean exactly the same thing in the latent print discipline and in forensic science generally.<sup>100</sup> As previously discussed, individualization and identification are treated as synonyms in numerous SWGFAST documents.<sup>101</sup> It is true that some in the latent print community have tried to distinguish the terms and assign identification a new meaning, which is essentially “near certainty that someone is the source of a latent print.”<sup>102</sup> As has been

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derived or verified measurement or comparison of all friction ridge skin impression features in the world’s population, rather than an examiner’s expert conclusion.” *Id.* In any case, the statement is no more plausible an explanation of how individualization differs from identification than it is for how same source with “to the exclusion of all others” differs from same source without it. *See discussion infra* Part II.B.3(c).

97. DEP’T OF JUSTICE, *supra* note 1, at 2.

98. *Id.* at 3.

99. *Id.* at 2.

100. *See Cole, Individualization Is Dead, Long Live Individualization! Reforms of Reporting Practices for Fingerprint Analysis in the United States, supra* note 53, at 117. *See also* Letter from Madeline H. deLone, *supra* note 53.

101. SCI. WORKING GRP. ON FRICTION RIDGE ANALYSIS STUDY & TECH., FRICTION RIDGE EXAMINATION METHODOLOGY FOR LATENT PRINT EXAMINERS § 3.3.1 (Aug. 22, 2002), <http://clpex.com/swgfast/documents/methodology/100506-Methodology-Reformatted-1.01-Archived.pdf> [<https://perma.cc/Y5AN-285H>]; SCI. WORKING GRP. ON FRICTION RIDGE ANALYSIS STUDY & TECH., GLOSSARY 10–12 (Sept. 9, 2003), [http://www.clpex.com/swgfast/documents/glossary/030909\\_Glossary-Consolidated\\_ver\\_1.pdf](http://www.clpex.com/swgfast/documents/glossary/030909_Glossary-Consolidated_ver_1.pdf) [<https://perma.cc/WWZ4-UJWK>]; SCI. WORKING GRP. ON FRICTION RIDGE ANALYSIS STUDY & TECH., STANDARDS FOR CONCLUSIONS § 1 (Sept. 11, 2003), [http://clpex.com/swgfast/documents/conclusions/030911\\_Standards\\_Conclusions\\_1.0-Archived.pdf](http://clpex.com/swgfast/documents/conclusions/030911_Standards_Conclusions_1.0-Archived.pdf) [<https://perma.cc/DTK9-XZMR>].

102. *See Cole, Individualization Is Dead, Long Live Individualization! Reforms of Reporting*



noted, however, the problem with such efforts is that the word identification has a plain English meaning plus decades of use in forensic science to mean *same source*.<sup>103</sup> Neither the discipline nor the DOJ can credibly attempt to simply assign new meaning to a word and expect the word to be understood that way by fact-finders or by practitioners.<sup>104</sup>

If the reader still has any residual uncertainty about whether the word identification does mean the reduction of the potential donor pool to a single source in the forensic community, they need only look to an article freshly published by the DOJ itself. The authors, including the Director of the National Institute of Justice Office of Investigative and Forensic Services, write that when forensic examiners “mean that the items being compared share a common source . . . the examiner will typically assert that he or she has ‘identified’ a questioned item as originating from a known source.”<sup>105</sup> Similarly, the newly posted OSAC Lexicon defines identification, regarding the friction ridge discipline, as follows: “See individualization.”<sup>106</sup> Individualization, in turn, is defined as “[t]he determination by an examiner that there is sufficient quality and quantity of detail in agreement to conclude that two friction ridge impressions originated from the same source.”<sup>107</sup> Finally, as an anecdotal illustration of the state-of-the-art in forensic practice, consider the standard operating procedure of the latent print unit of the largest police department in the United States, the New York Police Department, which gives identical definitions for identification and individualization.<sup>108</sup>

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*Practices for Fingerprint Analysis in the United States*, *supra* note 53, at 117.

103. Henry J. Swofford & Jessica Gabel Cino, *Lay Understanding of ‘Identification’: How Jurors Interpret Forensic Identification Testimony*, 68 J. FORENSIC IDENTIFICATION 29, 31 (2018).

104. TAYLOR ET AL., *supra* note 52, at 73.

105. Danielle Weiss & Gerald LaPorte, *Uncertainty Ahead: A Shift in How Federal Scientific Experts Can Testify*, 279 NAT’L INST. JUST. J. (2018), <https://www.nij.gov/journals/279/Pages/a-shift-in-how-federal-scientific-experts-can-testify.aspx> [<https://perma.cc/E573-CRDW>].

106. SCI. WORKING GRP. ON FRICTION RIDGE ANALYSIS STUDY & TECH., DOC. NO. 19, STANDARD TERMINOLOGY OF FRICTION RIDGE EXAMINATION (LATENT/TENPRINT) 5 (Mar. 14, 2013), [http://clpex.com/swgfast/documents/terminology/121124\\_Standard-Terminology\\_4.0.pdf](http://clpex.com/swgfast/documents/terminology/121124_Standard-Terminology_4.0.pdf) [<https://perma.cc/48RU-PTJL>].

107. *Id.*

108. N.Y. POLICE DEP’T, LATENT PRINT SECTION STANDARD OPERATING PROCEDURES MANUAL,

Therefore, banning the word individualization is another false concession. One word is banned, but another word, with the same meaning, is still permitted. And, that word is still defined as “same source.”<sup>109</sup>

The argument that individualization is synonymous with identification has been in the literature for some time.<sup>110</sup> The ULTR evinces no awareness of it and offers no response to it, other than the statement about verified measurement noted above.<sup>111</sup>

### CONCLUSION

In this Symposium, we were asked to reflect upon the future of forensic science reform. The latent print discipline is an important—and iconic—forensic discipline, and the ULTR is an important—and long-awaited—document. The approved ULTR is disappointing in the degree to which it moves the latent print discipline in the United States forward. It retains categorical reporting. At the same time, it seems to contradict itself by elsewhere suggesting that source identification conclusions are somewhat less than categorical. It retains the word identification which clearly connotes categorical reporting, while simultaneously resurrecting the tired strategy of trying to redefine the word by fiat to make its use less logically objectionable. It proposes that DOJ examiners estimate the rarity of arrangements of friction ridges in order to assign probabilities absent any evidence that that they can do any such thing. It proposes to rest a nonprobabilistic conclusion on probabilistic reasoning, and it proposes to rest a “conclusion” on a series of “decisions.” Finally, in its false concessions, it dangerously perpetuates within the latent print community the misleading notion that categorical reporting is perfectly acceptable as long as certain prohibited statements like

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PROCEDURE #24: DEFINITIONS 4 (July 10, 2015) (on file with the Georgia State University Law Review). The common definition is: “The determination of an examiner that there is sufficient quality and quantity of detail in agreement to conclude that two friction ridge impressions originated from the same source.” *Id.*

109. See DEP’T OF JUSTICE, *supra* note 1, at 2.

110. See Friction Ridge Subcomm. of the Organization of Sci. Area Comms., *supra* note 36.

111. See *supra* note 96 and accompanying text.

individualization, zero error rate, 100% certainty, and TTEOAOS are not uttered.

The disappointment, however, extends beyond the latent print discipline. This is because the DOJ itself announced that the ULTRs “will serve as a model for demonstrating our commitment to strengthening forensic science, now and in the future.”<sup>112</sup> The approved latent print ULTR is the product of the entity which has now taken the place in American forensic science once occupied by the NCFSS. It is among the first documents issued by that entity. As such, it may be a harbinger of what is to come in terms of the future of forensic science reform. In that context, the flaws in this document—its vagueness and ambiguity, its casual use of language, its self-contradiction, its continued perpetuation of claims to certainty, and its indifference to probability and uncertainty—may have implications for the future of forensic science reform far beyond a single document and a single discipline.

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112. Yates, *supra* note 7.