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FORENSICS**CRIMINAL LAW**

The sea change in our understanding of fingerprint identification testimony, and of its very real limits, requires lawyers and courts to look beyond the inadequate guidance past judicial decisions have provided, says attorney Gabriel A. Fuentes in this BNA Insight.

The author examines the fingerprint identification landscape, and concludes when *Daubert* or *Frye* is appropriately applied, there should be no place in the courtroom for fingerprint examiners to make individualization claims, at least until research exists to back up the validity of an opinion that will be so compelling to jurors who have been told for their entire lives that fingerprint identification is infallible.

Toward a More Critical Application of *Daubert* in Criminal Cases: Fingerprint Opinion Testimony After the National Academy of Sciences Report



BY GABRIEL A. FUENTES

More than three years have passed since the National Academy of Sciences released its groundbreaking report on the state of the forensic sciences in the United States. The NAS stated bluntly that with the exception of nuclear DNA analysis, no forensic method has been shown to establish—consistently and reliably—a connection between trace evidence and a specific individual.¹

¹ National Research Council, National Academy of Sciences, *Strengthening Forensic Science in the United States: A*

The NAS pointed out that fingerprint identification in particular lacked any genuine research to validate claims that examiners regularly made before courts over the years, including claims that examiners may “individualize” a latent fingerprint to a single person.² Even as the fingerprint examiner community is backing away from those claims, courts are continuing to allow examiners to make them in criminal cases. That should stop, at least until prosecutors can offer adequate evidence backing the validity of this opinion that has increasingly been called into doubt after the 2009 NAS report.

The NAS report and its aftermath should prompt prosecutors, defense lawyers, and judges to make a stark re-examination of how fingerprint identification evidence is evaluated, presented, and admitted in criminal trials. Criminal practitioners are in a new era, in which we should demand that courts give fingerprint identification greater scrutiny to ensure that examiners’ claims, and particularly those which contend latent prints may be “individualized” to a single person, are

Path Forward 7 (National Academies Press 2009) (“NAS Report”).

² *Id.* at 43-44, 143-45.

backed by research indicating that the claims are valid. Past judicial acceptance of the testimony must no longer be sufficient.

The Fingerprint Identification Landscape

One of the most persuasive aspects of fingerprint identification is its longevity in the public mind. Generations of jurors have grown up around the assumption that everyone's fingerprint is unique, and that by a comparison of a latent fingerprint left at a crime scene, an examiner can identify the person whose finger left the latent print. In Mark Twain's 1894 novel *Pudd'nhead Wilson*, the main character, a lawyer, proves his client innocent of a murder by arguing that a bloody fingerprint on the knife belonged to someone else, and even some of the early judicial decisions accepting fingerprint analysis cited Twain's novel as among the relevant authorities.³

Historically, the proponents of fingerprint analysis have pointed out that fingerprints have been used as seals or in lieu of signatures "since antiquity," but that the first U.S. court decision approving the admission of fingerprint identification as evidence in a criminal matter was *Illinois v. Jennings*.⁴ Remarkably, though, the *Jennings* court relied on an entry in the 1911 *Encyclopedia Britannica* for the notion that fingerprint identification had validity.⁵ For its research basis for validity of fingerprint identification, the *Encyclopedia* relied on the 1892 writings of Sir Francis Galton.⁶

Galton's signature work, *Fingerprints*, was not based on any research into the uniqueness of individual fingerprints or into the ability of anyone to individualize them.⁷ Galton's work was nonetheless cited by the same early 20th Century U.S. courts which had relied on Twain's *Pudd'nhead Wilson* to allow fingerprint evidence, and the cited passage was Galton's supposition that if only the Biblical contemporaries of Jezebel had her known prints on file, they could have identified her after the dogs of Jezreel devoured all but her skull, hands and feet.⁸

Jennings and its reliance on the *Encyclopedia* (and, by extension, Galton) would be a quirky anachronism if

not for the fact that *Jennings* was among the authorities cited by two of the leading federal appellate decisions today supporting the admission of fingerprint identification evidence based on the long history of its judicial acceptance.⁹ These two pre-NAS Report cases, *United States v. Havvard* and *United States v. Crisp*, represent the longstanding judicial view that fingerprint identification evidence should be admitted because it has always been admitted.

In both of these cases, the federal courts of appeal affirmed the admission of examiner testimony that the defendant himself was the exclusive source of the latent fingerprint.¹⁰ The U.S. Department of Justice continues to cite *Havvard* and *Crisp* today in support of the proposition that fingerprint examiners should be allowed to testify that a latent print is a "match" to a particular individual.¹¹

The ACE-V Method and the NAS Report

Since 1959, the identification method employed by today's examiners has gone by the name of ACE-V, an acronym for the words "analysis, comparison, evaluation, and verification [by a second examiner]."¹² Much of the NAS committee's work revolved around assessing the validity and reliability of the ACE-V method of fingerprint identification. In the end, the NAS Report concluded that ACE-V "provides a broadly stated framework for conducting friction ridge analyses," but added:

⁹ *United States v. Crisp*, 324 F.3d 261, 266 (4th Cir. 2003); *United States v. Havvard*, 260 F.3d 597, 601 (7th Cir. 2001).

¹⁰ See *Havvard*, 260 F.3d at 598 ("A latent fingerprint lifted from one of the handguns was later matched to an exemplar fingerprint obtained from Havvard."); *Crisp*, 324 F.3d at 265 ("a fingerprint expert . . . testified that Crisp's right palm had produced a latent print that had subsequently recovered" from a handwritten note used in a robbery).

¹¹ Brief of the United States at 32-37, *United States v. Clacy Watson Herrera*, No. 11-2894 (7th Cir. April 11, 2012). The author is counsel of record in this pending appeal.

¹² NAS Report at 137. The "analysis" phase refers to the analysis of the latent fingerprint impression to assess its ridge formations and the clarity of those formations, taking account of factors such as pressure, distortions, and the medium from which the impression was recovered. Christophe Champod, Chris Lennard, Pierre Margot, and Milutin Stoilovic, *Fingerprints and Other Ridge Skin Impressions* 15 (CRC Press LLC 2004). "Comparison" is the actual comparison of the features in the latent impression to those in a known or exemplar print, focusing on the different types of features (broken down into levels 1, 2, and 3) and accounting for the tolerances dictated by the quality of the latent impression. *Id.* at 21. "Evaluation" refers to the drawing of an inference about the identity of the source of the latent impression; similarities are evaluated and quantified, and dissimilarities are studied for whether they lead to an exclusion, or whether they may be explained consistent with an identification. *Id.* at 21-24. "Verification" refers to a second examiner's review of the first examiner's conclusions. *Id.* at 39-40. Champod, a respected fingerprint examiner, has acknowledged that as a protocol, the ACE-V method "does not completely fulfill the requirements . . . of (a) a fully articulated descriptive model, (b) a detailed and systematic account of the variation of the features, and (c) a transparent decision model." *Id.*, preface; see also Jennifer L. Mnookin, *The Courts, the NAS, and the Future of Forensic Science*, 75 *Brook. L. Rev.* 1209, 1268 (2010) ("ACE-V is extremely vague, and does not come close to providing a fully developed and adequately articulated method with detailed specifications.").

³ *State v. Kuhl*, 175 P. 190, 191 (Nev. 1913); *Stacy v. State*, 292 P. 885, 886 (Okla. Crim. App. 1930).

⁴ 96 N.E. 1077 (Ill. 1911). See Andre A. Moenssens, Fred E. Inbau, and James E. Starrs, *Scientific Evidence in Criminal Cases* 416, 438 (3d ed. 1986). The authors noted: "The *Jennings* case further held that persons experienced in the matter of fingerprint identification may give their opinions as to whether or not the fingerprints found at the scene of a crime corresponded with those of the accused." *Id.* at 438. Thus, fingerprint identification started with the bold claim that the examiner's ability to achieve "individualization" was beyond question.

⁵ *Jennings*, 96 N.E. 1081.

⁶ 10 *Encyclopedia Britannica* 376 (Cambridge Univ. Press 11th ed. 1911).

⁷ Francis Galton, *Fingerprints* passim (De Capo Press ed. 1965) ("Galton").

⁸ See *supra* n. 4; Galton at 113. The passage, alluding to the Second Book of Kings, is as follows: "We read of the dead body of Jezebel being devoured by the dogs of Jezreel, so that no man might say, 'This is Jezebel,' and that the dogs left only her skull, the palms of her hands, and the soles of her feet; but the palms of the hands and the soles of the feet are the very remains by which a corpse might be most surely identified, if impressions of them, made during life, were available."

However, this framework is not specific enough to qualify as a validated method for this type of analysis. ACE-V does not guard against bias; is too broad to ensure repeatability and transparency; and does not guarantee that two analysts following it will obtain the same results. For these reasons, merely following the steps of ACE-V does not imply that one is proceeding in a scientific manner or producing reliable results.¹³

The NAS Report made numerous other significant observations about the degree of validity and reliability underpinning the ACE-V method and fingerprint analysis generally:

- A “thorough analysis of the ACE-V method” by experts Ralph and Lyn Haber concluded unambiguously: “We have reviewed available scientific evidence of the validity of the ACE-V method and found none.”¹⁴

- Fingerprint examiners are “unjustified” in claiming they can match a latent fingerprint to a particular finger to the exclusion of all others in the world.¹⁵

- Claims of “uniqueness” in friction ridge patterns are unsubstantiated, in that “[t]he determination of uniqueness requires measurements of object attributes, data collected on the population frequency of variation in those attributes, testing of attribute independence, and calculations of the probability that different objects share a common set of observable attributes.” While “[s]ome scientific evidence support[s] the presumption that friction ridge patterns are unique to each person and persist unchanged throughout a lifetime. . . . None of these variabilities—of features across a population of fingers or of repeated impressions left by the same finger—has been characterized, quantified, or compared.”¹⁶

Co-chaired by the Hon. Harry T. Edwards of the D.C. Circuit Court of Appeals and Brown University biostatistics professor Constantine Gatsonis, the NAS’s Committee on Identifying the Needs of the Forensic Science Community included forensic scientists and legal and technical experts, and it heard presentations from a wider range of experts including fingerprint examiners and crime lab directors.¹⁷ After the report was issued, Judge Edwards commented that the NAS project had educated him about how the forensic disciplines as a whole were not as well-grounded in validity and reliability as he had assumed.¹⁸ On fingerprints specifically, Judge Edwards told a PBS documentary in April 2012 that when partial or smudged latent fingerprints present examiners with “hard cases,” the examiners

did not have research to back their claims that they could make identifications, and moreover, courts had been “misled” when examiners told them that the identification method had a zero error rate.¹⁹

Edwards added:

You had judges who were absolutely naïve and ill-informed writing in these opinions. The first case in which it came up was the FBI expert told [another circuit court of appeals] . . . zero error rate. Then another circuit court picked up the same information and said it’s a zero error rate . . . That’s repeated over and over again without us ever understanding that’s completely inaccurate, and you don’t have the science to support it.²⁰

Havvard and Crisp: A Now Outmoded View

Judge Edwards did not specify which circuit courts of appeal he was referencing, but notably, *Havvard* and then *Crisp* relied on then-uncontradicted FBI testimony (given before the district court in *Havvard* and cited by the Fourth Circuit later in *Crisp*) that fingerprint identification had a zero error rate.²¹ Aside from the NAS Report’s dismissal of the notion of zero error rates in fingerprint analysis as not realistic,²² prominent organizations from the fingerprint examiner community have also acknowledged that fingerprint analysis simply does not have a zero error rate. Shortly after the NAS Report was released, the International Association for Identification (IAI) and the Scientific Working Group on Friction Ridge Analysis, Study, and Technology (SWGFAST) issued statements backing away from the idea that a zero error rate was plausible or appropriate for court testimony.²³

But the implausibility of a zero error rate, and its rejection by the NAS Report and the fingerprint examiner community, is only the beginning of the problems underlying *Crisp* and *Havvard* as standard-bearing cases for the practical and legal limits on a fingerprint examiner’s testimony about identification. Both of these federal appellate decisions affirmed the admission of fingerprint examiner testimony to a “match” between the latent print and the defendant, based heavily on past judicial acceptance of the “science” of fingerprinting.

In *Havvard*, the Seventh Circuit noted that the district court had relied on the “100 years of successful use” of fingerprint analysis in criminal trials.²⁴ The Seventh Circuit then spoke approvingly of the district court’s conclusion that “fingerprinting techniques have been tested in the adversarial system.”²⁵

In *Crisp*, the Fourth Circuit cited the foregoing language from *Havvard* for the conclusion that “the principles underlying fingerprint identification . . . bear the

¹³ NAS Report at 142.

¹⁴ *Id.* at 143.

¹⁵ *Id.* at 142.

¹⁶ *Id.* at 142-44.

¹⁷ *Id.* at v, xi-xii.

¹⁸ Judge Edwards stated:

I started the NAS project with no skepticism regarding the forensic science community. Rather, I assumed, as I suspect many of my judicial colleagues do, that the forensic disciplines are well grounded in scientific methodology and that crime laboratories and forensic practitioners follow proven practices that ensure the validity and reliability of forensic evidence offered in court. I was surprisingly mistaken in what I assumed.

The Hon. Harry T. Edwards, Co-Chairman, NAS Committee on Identifying the Needs of the Forensic Science Community, Presentation at the Superior Court of the District of Columbia, Conference on The Role of the Court in an Age of Developing Science & Technology (May 6, 2010).

¹⁹ Interview by PBS Frontline with the Hon. Harry T. Edwards (released April 16, 2012).

²⁰ *Id.*

²¹ *Havvard*, 260 F.3d at 599; *Crisp*, 324 F.3d at 269.

²² NAS Report at 143.

²³ Press Release, Robert J. Garrett, President, International Association for Identification (February 19, 2009) (suggesting to IAI members that they not assert 100% infallibility or zero error rate in testimony about fingerprint comparisons); SWGFAST Position Statement (August 3, 2009) (“SWGFAST acknowledges that errors do occur and furthermore that claims of zero error rate in the discipline are not scientifically plausible.”)

²⁴ *Havvard*, 260 F.3d at 601.

²⁵ *Id.*

imprimatur of a strong general acceptance, not only in the expert community, but in the courts as well.”²⁶

The courts in *Havvard* and *Crisp* were considering challenges to the evidence under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,²⁷ in which the Supreme Court designated the trial courts as gatekeepers to confirm the validity and reliability of scientific evidence offered through experts, and *Kumho Tire Co. v. Carmichael*,²⁸ in which the Court extended the *Daubert* framework to all expert testimony involving technical or specialized knowledge.

The core of the *Daubert* inquiry surrounded whether the proposed testimony is supported by “appropriate validation—i.e., ‘good grounds,’ based on what is known.”²⁹ *Daubert* set forth a set of flexible factors for making that sort of determination, including whether the knowledge “can be (and has been) tested.”³⁰

The conclusions in *Crisp* and *Havvard* that 100 years of “adversarial testing” supported admissibility under *Daubert*’s notion of “testing” have prompted some withering criticism. In a passage quoted in the NAS Report, one commentator called this proposition “a silly statement” that resulted from judges being so reluctant to exclude fingerprint evidence that the prospect of doing so “stilled their critical faculties.”³¹

The NAS committee called this comment “a telling critique, especially when one compares the judicial decisions that have pursued rigorous scrutiny of DNA typing with decisions that have applied less stringent standards of review in cases involving fingerprint evidence.”³² In criminal cases, there is much reason to believe that the reliability of fingerprint analysis and identification methods, including ACE-V, was rarely if ever “tested,” because criminal defense lawyers often lack the resources or skill to mount a meaningful *Daubert* challenge.³³

Instead, the lack of meaningful *Daubert* challenges led to a “vicious cycle” in which the long history of courts unquestioningly admitting the evidence without challenge contributed to an unwillingness by advocates to make *Daubert* challenges.³⁴ But even assuming that “testing” in the adversarial system represents some form of “testing,” it is not the sort of “testing” contemplated by *Daubert*.

Daubert’s central premise that judges should act as gatekeepers by erecting a heightened reliability screen for expert evidence assumes that the ordinary adversarial processes of a case will not be sufficient to ensure

the validity and reliability of such evidence.³⁵ If past “adversarial testing” in the courts is sufficient to meet *Daubert*’s heightened reliability screen, then a discipline such as fingerprint identification faces no heightened screen at all. The gatekeeping role of the district court, under *Daubert*, would simply be subordinated to the decisions of past courts. Yet this very result appears to have occurred under *Havvard* and *Crisp*, in the absence of validation studies from the records in those cases.

Moreover, the courts in *Havvard* and *Crisp* decided those cases based on the records that were then before them. The state of the record in those pre-NAS Report cases is extremely thin. In *Havvard*, the defendant offered a 2000 National Institute of Justice solicitation for proposals for more fingerprint research studies, along with a 1995 Collaborative Testing Service report concerning fingerprint examination error rates—but the Seventh Circuit noted that neither of those documents was in the district court record, so neither could be considered on appeal.³⁶ Practically, then, the Seventh Circuit had virtually no study or other meaningful record before it in *Havvard* to show that fingerprint identification or ACE-V lacked demonstrated validity.

In *Crisp*, the record included the 2000 NIST solicitation and a few pre-NAS Report law review articles, but, as the Fourth Circuit noted, “no studies demonstrating the unreliability of fingerprinting analysis.”³⁷ Today, many highly relevant reports, articles, and other materials are widely known and available to any court considering a *Daubert* challenge to fingerprint identification, including but not limited to:

- the NAS Report;
- the 2006 report of the FBI Inspector General concerning the widely publicized fingerprint misidentification of Oregon lawyer Brandon Mayfield in the 2004 Madrid train bombing;³⁸
- the 2011 report commissioned by the British government on a widely publicized (in the United Kingdom) fingerprint misidentification case involving Scottish police officer Shirley McKie;³⁹
- a 2012 study by the NIST proposing a series of systematic and process improvements for the examination of latent fingerprints;⁴⁰
- recent re-evaluations, by prominent organizations in the fingerprint examiner community, of the limits of fingerprint identification;⁴¹ and

²⁶ *Crisp*, 324 F.3d at 268.

²⁷ 509 U.S. 579 (1993).

²⁸ 526 U.S. 137 (1999).

²⁹ *Daubert*, 509 U.S. at 590.

³⁰ *Id.* at 593.

³¹ NAS Report at 103, citing 1 D.L. Faigman, M.J. Saks, J. Sanders, and E.K. Cheng, *Modern Scientific Evidence: The Law and Science of Expert Testimony* § 1:1, p. 4 (Thomson/West 2007-2008).

³² NAS Report at 103.

³³ Nancy Gertner, “National Academy of Sciences Report: A Challenge to the Courts,” *American Bar Association, Criminal Justice* 11 (Spring 2012); Peter J. Neufeld, *The (Near) Irrelevance of Daubert to Criminal Justice: And Some Suggestions for Reform*, 95 Am. J. Pub. Health S107, S110 (2005).

³⁴ Nancy Gertner, *Commentary on the Need for a Research Culture in the Forensic Sciences*, 58 UCLA L. Rev. 789, 790 (2011).

³⁵ Mnookin, *supra* n. 13, 75 Brook. L. Rev. at 1244.

³⁶ *Havvard*, 260 F.3d at 600-01.

³⁷ *Crisp*, 324 F.3d at 267.

³⁸ FBI Office of Inspector General, *A Review of the FBI’s Handling of the Brandon Mayfield Case* (March 2006);

³⁹ Sir Anthony Campbell, *The Fingerprint Inquiry Report* (APS Group Standard 2011).

⁴⁰ National Institute of Standards and Technology, National Institutes of Justice, *Latent Print Examination and Human Factors: Improving the Practice Through a Systems Approach* (Feb. 2012) (“NIST Report”).

⁴¹ Position Statement. Scientific Working Group on Friction Ridge Analysis, Study, and Technology (April 21, 2012) (removing from SWGFAST’s definition of “individualization” the previously supposed ability of an examiner to match a latent fingerprint to one individual, to the exclusion of all others in the world),

■ a growing consensus of academics and professionals (including forensic scientists) that the forensic sciences in the United States need to be backed by a stronger research culture.⁴²

Finally, the courts in *Havvard* and *Crisp* suffered not only from the inadequacy of the record in those cases, and from the then-inadequately developed state of public knowledge concerning the state of the research base underlying fingerprint identification, but also from a lack of focus on how the relevant questions ought to have been framed before those courts. Again, in both cases, the government sought to introduce an opinion that a latent fingerprint was a “match” to the defendant, or that the defendant was the source of the latent fingerprint. The only way to interpret such testimony, if it is offered without limitation, is to consider it as an assertion that the latent fingerprints belong to the defendant only, to the exclusion of all others in the world.

Yet neither *Havvard* nor *Crisp* seemed to grasp that this particular form of testimony might require more rigorous vetting under *Daubert*. *Havvard* spoke of “the issue of reliability of fingerprint evidence” and whether “fingerprint comparisons are not reliable.”⁴³

Crisp described the defendant’s position as an argument for “the wholesale exclusion of a long-accepted form of expert evidence. Such a drastic step is not required of us under *Daubert*, and we decline to take it.”⁴⁴ But the question need not have been as “drastic.” The proper question was whether the examiners in those two cases could validly and reliably offer testimony that the latent fingerprints they examined were indeed those of the defendant and no other.

The *Daubert* analysis of the ability of those examiners to give that testimony should have involved a searching inquiry into what research supported the idea that individualization was grounded in good science, or, if the basis was merely experiential, what experience, training, or other basis could give the courts a reason to believe such an opinion could have validity in the first instance.

Instead, *Havvard* and *Crisp* framed the issue much more broadly, and in a way that suggested far more dire consequences to fingerprint identification than even the NAS Report would suggest years later. Not surprisingly, the courts in those cases were reluctant to throw out a century of jurisprudence on fingerprint analysis. *Daubert* never required them to go that far, and nor does it today require a court to hold that fingerprint analysis is “unreliable” or generally inadmissible. *Daubert* does require that if the specific testimony being offered has not been or cannot be shown to be reliable, the district court as gatekeeper should not admit it.⁴⁵ The practical consequence of this sort of judicial

approach is simply a heightened reliability screen for expert evidence, and that is what the Supreme Court had in mind all along in *Daubert*. The consequence is not that fingerprint identification testimony would be excluded under all circumstances and in all its forms.

Accordingly, given the significant differences in what we now know about fingerprints versus what the *Havvard* and *Crisp* courts knew when those cases were decided, and given the inappropriate way in which the relevant *Daubert* issues were framed in both of those cases, the *Havvard* and *Crisp* cases are of little use today in considering the reliability of the recurring claim by examiners that they can individualize or “match” a latent fingerprint to a specific individual person.

From Here Forward: A Need for Critical Judicial Analysis

Three years after the NAS Report, it is time to acknowledge that the report did bring about changes in how fingerprint identification evidence should be viewed by courts. Before the NAS Report, the lack of demonstrated validity and reliability of the ACE-V method was not widely known. As Judge Edwards has noted, courts were misled into believing that fingerprint identification had a zero error rate.⁴⁶ Courts were also told that experts could testify to a match between evidence and an individual source, but as Judge Edwards has noted, “that’s not accurate,” because the likelihood of a match should instead be expressed in probabilistic terms.⁴⁷

After the NAS Report, the 2012 NIST report recommending systemic improvements to latent fingerprint examination procedures specifically stated that testimony individualizing a latent print to one source, to the exclusion of all others, is “needlessly strong, not yet adequately supported by fundamental research, and impossible to validate solely on the basis of experience.”⁴⁸ The scientific working group of fingerprint examiners, SWGFAST, has rejected individualization, at least for now, as “not supported by research.”⁴⁹ So has the official report into the inquiry into the fingerprint misidentification of Scottish police officer Shirley McKie.⁵⁰

Yet reports of fingerprint examiners offering opinions that latent fingerprints are a “match” to a particular individual continue to persist.⁵¹ In at least three reported decisions since the summer of 2011, federal district courts have approved the admission of examiner testimony that latent fingerprints match or are those of the accused.⁵² These more recent cases follow a series

of community’s retreat from zero error rate and individualization claims give *Frye* jurisdictions much to consider in evaluating proffered fingerprint identification testimony, particularly if that testimony makes individualization claims not now supported by the relevant community of fingerprint examiners and research scientists.

⁴⁶ See *supra* n. 19.

⁴⁷ *Id.*

⁴⁸ NIST Report at 197.

⁴⁹ Position Statement. Scientific Working Group on Friction Ridge Analysis, Study, and Technology (April 21, 2012).

⁵⁰ Sir Anthony Campbell, *The Fingerprint Inquiry Report* 682-83 (APS Group Standard 2011).

⁵¹ See *supra* n. 19.

⁵² Each of these three decisions has individual problems. In *United States v. Gutierrez-Castro*, 805 F. Supp. 2d 1218,

⁴² Jennifer L. Mnookin, Simon A. Cole, Itiel E. Dror, Barry A.J. Fisher, Max M. Houck, Keith Inman, David H. Kaye, Jonathan J. Koehler, Glenn Langenburg, D. Michael Risinger, Norah Rudin, Jay Siegel, and David A. Stoney, *The Need for a Research Culture in the Forensic Sciences*, 58 UCLA L. Rev. 725 (2012).

⁴³ *Havvard*, 260 F.3d at 600.

⁴⁴ *Crisp*, 324 F.3d at 268.

⁴⁵ Nor should such evidence be admissible in jurisdictions following *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923), if the evidence is not “generally accepted” in the relevant scientific community. We can debate what constitutes general acceptance, and what constitutes the relevant scientific community, but the NAS Report coupled with the fingerprint exam-

of post-NAS Report federal district court cases which similarly did not address individualization (likely because it was not clearly presented), or which largely deferred to earlier pre-NAS Report decisions that had held fingerprint identification in general to be reliable.⁵³ Meanwhile, prosecutors still argue that individualization is valid under *Daubert*, in light of precedents such as *Havvard* and *Crisp*.⁵⁴

1228-35 (D. N.M. 2011), the court allowed an examiner to testify to a fingerprint match to the defendant but declined to “certify” the examiner as an expert. In finding that the proffered testimony was reliable, the court relied entirely on pre-NAS case law, most notably a conclusion in *United States v. Baines*, 573 F.3d 979 (10th Cir. 2009), in which the Tenth Circuit bought into the fallacy that fingerprint identification had been subject to adequate testing in the form of “the world of criminal investigations, court proceedings, and other practical applications, such as identification of victims of disasters.” *Gutierrez-Castro*, 805 F. Supp. 2d at 1230-31, quoting *Baines*, 573 F.3d at 990. Moreover, the *Gutierrez-Castro* court never differentiated between the reliability of fingerprint identification as a discipline and of individualization claims, which the discipline now has acknowledged are beyond its limits. *See supra* n. 49-50. Similarly, in *United States v. Stone*, No. 10-20123, 2012 BL 229856, at *3 (E.D. Mich. Jan. 25, 2012), the court allowed individualization testimony over a defense objection the court characterized as “a wholesale attack on latent fingerprint identification evidence in general,” as well as the holdings in *Crisp* and *Havvard*. *Stone* also relied on *United States v. Pena*, 586 F.3d 105 (1st Cir. 2009), another appellate matter argued before issuance of the NAS Report. Notably, the now-retired district judge who denied the *Daubert* challenge litigated on appeal in *Pena* wrote recently that the challenge was perfunctory, that no *Daubert* hearing took place because the defendant waived it, and that “[t]o my amazement, the defense announced it had no witnesses, no experts, and did not even wish to take advantage of the opportunity to examine the government witnesses. The motion, he insisted, had only been brought ‘for the record.’” Gertner, *supra* n. 34, at 10. Finally, in the most recent case as of this writing, a court rejected, without a hearing, a *pro se* *Daubert* challenge in which the *pro se* defendant declined to file a reply brief, and the district court accepted a magistrate judge’s recommendation that relied heavily on *Stone* and the same problematic roster of cases cited in *Stone*. *See United States v. Campbell*, No. 11-CR-460, 2012 BL 157136 (N.D. Ga. June 22, 2012), and *United States v. Campbell*, No. 11-CR-460, 2012 BL 257339, at *1 (N.D. Ga. April 19, 2012).

⁵³ These courts generally relied on mere acceptance of the method within the fingerprint examiner community, or on the notion that the NAS Report was not a proposal for “law reform,” and thus did not place significant weight in the absence of a true research basis for validity of the ACE-V method. *E.g.*, *United States v. Council*, 777 F. Supp. 2d 1006, 1011-12 (E.D. Va. 2011) (allowing evidence because “[f]riction ridge experts maintain widely recognized standards” which the expert applied to the prints at issue in this case); *United States v. Aman*, 748 F. Supp. 2d 531, 541 (E.D. Va. 2010) (ruling that important questions raised in the NAS Report, most significantly the subjectivity of examiners, are susceptible to vigorous attack on cross-examination); *United States v. Cerna*, No. CR 08-0730 WHA, 2010 BL 321214, at *8 (N.D. Cal. Sept. 1, 2010) (“the NAS report is not a law reform proposal and its findings are not coterminous with whether forensic evidence in a particular case is admissible”); and *United States v. Rose*, 672 F. Supp. 2d 723, 725 (D. Md. 2009) (“the Report itself did not conclude that fingerprint evidence was unreliable such as to render it inadmissible under Fed. R. Evid. 702”).

⁵⁴ *See supra* n. 12.

Meanwhile, the notion of the infallibility of fingerprint identification is embedded deeply in the public mindset, fueled by more than a century of popular culture, from Mark Twain’s *Pudd’nhead Wilson* to Jack Webb’s *Dragnet* and beyond.⁵⁵

Conclusion

The sea change in our knowledge and understanding of fingerprint identification testimony, and of its very real limits, requires lawyers and courts to look beyond the inadequate guidance that past judicial decisions have provided. In particular, the recurring but now discredited claim that an examiner may individualize a latent fingerprint to a single human source must be excluded from the courtroom, at least until an adequate research basis can be advanced to support that claim.

This sort of careful judicial scrutiny would be a needed fresh start, and a needed departure from a line of decisions that continues to build upon itself, and upon the flawed roster of pre-NAS Report decisions that admitted fingerprint identification testimony, including individualization, for some 100 years without any demonstrated basis of reliability. Courts today must reserve their power to exclude, under *Daubert* and *Kumho Tire*, evidence that cannot be shown to be reliable or valid.⁵⁶

Criminal cases, in which personal liberty is at stake, ought to warrant at least as stringent an application of *Daubert* and *Kumho* as in civil cases.⁵⁷ When *Daubert*, *Kumho*, or even *Frye* is stringently—and appropriately—applied, there should be no place in the courtroom for fingerprint examiners to make individualization claims, at least until the fingerprint examiner community and a community of relevant scientists are in consensus that research exists to back up the validity of an opinion that will be so compelling to jurors who have been told for their entire lives that fingerprint identification is infallible.

⁵⁵ *See, e.g.*, Jack Webb, *The Badge* 117 (Thunder Mouth’s Press ed. 2005 [first ed. 1958]) (referring to early Los Angeles Police Department criminalists as having taught detectives that “[n]othing in this world . . . is found in exact duplication—not even two billiard balls The chances of fingerprint duplication, they preached, are one in a billion, and though there are more than two-and-a-half billion persons on this earth, no one person has ever been found to duplicate another person in all physical characteristics.”).

⁵⁶ *See* Mnookin, *supra* n. 13, 75 Brook. L. Rev. at 1265-66, 1275 (arguing that exclusion “should have a central place in the judicial toolkit,” that judges including those evaluating the ACE-V method have been “lulled by plausible descriptions and seemingly persuasive explanations of forensic science techniques into dismissing the importance of the nearly complete lack of empirical support for the experts’ claims,” and that advancements in the research base underlying courtroom forensics will depend on “in significant part on judges, and whether they are prepared, at long last, to evaluate pattern identification evidence with their eyes wide open and their heads out of the sand.”).

⁵⁷ *See* Gertner, *supra* n. 34, at 10 (“We, the courts, can do better. In fact, we already do, albeit in civil, not criminal, cases It makes no sense to ignore *Daubert* and *Kumho* when liberty is at stake, but apply those cases rigorously when all that is involved is money. We must do better.”).

