

Question Presented

This court has solicited amicus briefs addressing the question of "whether, on the record in this case, the Commonwealth has met its burden under Daubert and Lanigan to establish the reliability of latent fingerprint individualization applying ACE-V methodology to simultaneous impressions."

In addressing that question, the undersigned consider to what extent, if at all, minor variations in practices long recognized prior to Daubert and Lanigan ought to generate hearings as to their admissibility.

Statement of the Interest of the Amicus Curiae

Pursuant to Mass. R. App. P. 17, the undersigned submit this brief as amicus curiae in support of the Commonwealth.

The undersigned District Attorneys, as chief law enforcement officers for their respective districts, routinely depend on fingerprint evidence in criminal investigations and prosecutions. The District Attorneys have a deep and compelling interest in the proper development of the law of evidence, including tests of admissibility under Lanigan and its progeny. Further, the District Attorneys have an interest in husbanding the resources of the Commonwealth so that

the time of criminal investigators, and the courts, is used wisely and economically.

Fingerprint evidence is a particularly potent weapon in the criminal justice system, one that daily exculpates innocents, identifies victims, and inculcates the guilty. The effects of any decision enlarging or constricting the admissibility of fingerprint evidence would have a dramatic impact on the public interest.¹

¹In 2001, one author pointed out that "[a]t the federal level, the United States' DNA database receives only about 2,000 requests annual . . . [but t]he FBI's . . . Integrated Automatic Fingerprint Identification System (IAFIS) . . . chews its way through an annual 85,000 inquiries." Bevan, Fingerprints 199 (2001). And, while one may expect that DNA identifications have become more common within the last five years, the same author reports that as of March 2000, the total number of DNA-based identifications of suspects by the New York City Police Department in its entire history was 200, while in the single year 1999 alone, the same department had identified 1,117 suspects by means of crime-scene fingerprints. Ibid. It is difficult to provide comparable statistics for Massachusetts; although the state police fingerprint unit handles a good deal of fingerprint identification work, individual counties and local departments may do their own processing. As for DNA, the backlog created by lack of resources at the State Police Crime Laboratory has resulted in many prosecutors' offices turning to private labs in an effort to expedite their cases, thus making an authoritative compilation of matches difficult.

Statement of the Case²

The undersigned adopt the Commonwealth's Statement of the Case.

Statement of the Facts

The undersigned adopt the Commonwealth's Statement of Facts.

Argument

- I. On the record in this case, the Commonwealth has met its burden under Daubert and Lanigan to establish the reliability of latent fingerprint individualization applying ACE-V methodology to simultaneous impressions.

The issue as posed by the motion judge's reservation and report, strictly construed, is quite a narrow one, and perhaps an atypical issue for amici to comment upon, focused as it apparently is on whether the Commonwealth has met its evidentiary burden in a particular case. The underlying assumptions of a

² Abbreviation key: Motion Transcript: "Tr., (preceded by volume number)"; The Defendant's Record Appendix is not sequentially numbered, so reference is made to both letter designation and the individual documents therein. Defendant's Brief: "Def. Br."; Commonwealth's Brief: "Com. Br."; Commonwealth's Supplemental Appendix: "SA." Supplemental Appendix to the instant Brief, "DA's App."; Amicus brief filed by David M. Siegel, Esq. and others on behalf of various amici, "Siegel amicus"; and Amicus brief filed by Lisa J. Steele, Esq., on behalf of NACDL, MACDL, and CPCS, "NACDL Amicus." All references are followed by page numbers.

Daubert-Lanigan analysis of fingerprint evidence, however, do concern amici.

- A. As a general rule, Daubert-Lanigan hearings are unnecessary for evidence long recognized as admissible under the Frye test.

Some twelve years after the first person in the United States was convicted of murder on the basis of fingerprint evidence,³ a federal circuit court issued a pithy opinion which was to guide courts as to the admission of expert testimony for almost a century: "the thing from which the [expert's] deduction is made must be sufficiently established to have gained general acceptance in the field to which it belongs." Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923). See Commonwealth v. Fatalo, 346 Mass. 266, 269 (1963) ("judicial acceptance . . . can occur only when it follows a general acceptance by the community of scientists involved").

A broadening or relaxation of the Frye test occurred with adoption of Rule 702 of the Federal

³ The facts are recounted, and the guilty verdict and death sentence affirmed, in People v. Jennings, 252 Ill. 534, 549, 96 N.E. 1077 (Ill. 1911) ("we are disposed to hold . . . that there is a scientific basis for the system of finger-print identification and that the courts are justified in admitting this class of evidence; that this method of identification

Rules of Evidence, which states that "if scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise." See generally Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).⁴ Rule 702 of the Massachusetts Proposed Rules of Evidence is identical.

The transition in this Commonwealth from a Frye test to a Daubert test was consummated in the two Lanigan cases. In Commonwealth v. Lanigan, 413 Mass. 154 (1992) (Lanigan I), this court applied essentially a Frye test and upheld a pretrial ruling that had excluded the admission of DNA test results, finding that the process used for estimating the frequency with which the defendant's DNA profile would occur in

is in such general and common use that the courts cannot refuse to take judicial cognizance of it"). .

⁴ The Daubert court made quite clear that it considered itself to be blessing a more lenient standard of admissibility. It contrasted Rule 702 with Frye's "rigid 'general acceptance' standard, which it pronounced "at odds with the 'liberal thrust' of the Federal Rules and their 'general approach of relaxing the traditional barriers to "opinion" testimony.'" 509 U.S. at 588, citations omitted.

the population had not been shown to be generally accepted in the field of population genetics. Id. at 162-163. On review after a remand in which a second judge admitted DNA evidence under a different process for determining the likelihood of a match, this court affirmed, and also accepted the Commonwealth's invitation to adopt Daubert's reasoning. See Commonwealth v. Lanigan, 419 Mass. 15, 25-26 (1994) (Lanigan II) ("we accept the basic reasoning of the Daubert opinion because it is consistent with our test of demonstrated reliability").

Amici believe that in many instances, the trial courts are losing sight of the point that the Daubert-Lanigan approach was adopted to broaden the admissibility of evidence, allowing in evidence that, because of its relative novelty, might be highly reliable but not yet "generally accepted in the scientific community." In adopting Daubert's "basic reasoning," however, this court pointedly noted that it "suspect[s] that general acceptance in the relevant scientific community will continue to be the significant, and often the only, issue." Lanigan II, 419 Mass. at 26; see also Canavan's Case, 432 Mass. 304, 311 (2000) (characterizing Lanigan II as

"abandoning exclusive reliance on general acceptance under the Frye test").

The clear import of this court's statement is that, absent a showing of substantial strength by an opponent, evidence long accepted under the Frye standard need not be the subject of an evidentiary hearing under Daubert-Lanigan. Unfortunately, the lower courts too often use Lanigan as a mandate to conduct time-consuming hearings re-examining long-accepted evidentiary practices.⁵ This is unnecessary. Amici believe that it would have a salutary effect on the administration of justice were this court to

⁵ At least two pressures operate to encourage Daubert-Lanigan hearings that are objectively unnecessary. Although the possibility of reversal for failure to grant an evidentiary hearing may be highly remote, the "cost" of retrying a case may loom quite large when weighed against the prophylactic benefit of according a hearing. Second, Daubert's reference to five factors that may be significant in determining the admissibility of evidence seem to have generated something of a "checklist mentality," although the Daubert court itself discouraged such an approach, and this court, as noted supra, has suggested that in many instances, the Frye approach may well be dispositive even under Lanigan. See Daubert, supra, at 593 ("we do not presume to set out a definitive checklist or test"); Kumho Tire v. Carmichael, 526 U.S. 137, 150 (1999) (quoting Daubert); see also United States v. Crisp, 324 F.3d 261, 266 (4th Cir.), cert. denied, 540 U.S. 888 (2003) (no definitive or exhaustive list") Coleman v. Dydula, 139 F. Supp.2d 388, 390 (W.D. N.Y. 2001) (trial court has "discretion to craft reasonable

repeat the admonition that "in the absence of specific, concrete evidence suggesting unreliability, Lanigan should not be used to revisit areas where we have validated expert testimony based on properly conducted personal observations and clinical testing applying generally accepted scientific techniques."⁶ Canavan's Case, 432 Mass. at 317 (Greaney, J., concurring).

- B. The general reliability of fingerprint evidence is not a matter requiring a Daubert-Lanigan hearing.

In its brief in Commonwealth v. Jones, 441 Mass. 1015 (2004), a case about post-conviction discovery involving fingerprints, the Commonwealth observed that:

Various litigants have sought to give the United States Supreme Court's holding in Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 589 (1993) a retrospective, as well as prospective cast, and as a result, long-cherished assumptions about the admissibility of expert opinion have recently come under scrutiny. Fingerprint evidence has not been immune from attack, including attack on its fundamental premise, the uniqueness of the individual print; critics allege that this premise remains

criteria to be used to determine reliability in a particular case").

⁶ The undersigned do not suggest that courts should not routinely undertake a limited voir dire as to an expert's qualifications in the matter, at least where such a voir dire is sought.

unproven. However, Daubert has proven an inadequate weapon for the defense bar: the reliability of fingerprint evidence enjoys virtually universal judicial acceptance. See Crisp, *supra* at 266 (noting that "every [Federal] Circuit that has . . . [assessed the admissibility of expert fingerprint identifications in the post-Daubert era] has found such evidence admissible").

Fingerprint evidence has been admissible in this country for nearly a century, and in Massachusetts almost as long. See Commonwealth v. Bartolini, 299 Mass. 503, 513, cert. denied, 304 U.S. 565 (1938). There was thus no need for the Superior Court to have conducted an evidentiary Daubert-Lanigan hearing, had such hearing been limited to the reliability of fingerprint evidence in general.⁷ Indeed, many courts have refused to hold an evidentiary hearing on the reliability of fingerprints, finding fingerprint testimony scientifically reliable. See, e.g., United

⁷ The motion judge's reservation and report reflects the widespread impetus to subject issues that have already passed the more narrow demands of Frye to what was originally conceived as the less stringent scrutiny of Daubert-Lanigan: "the post-Lanigan admissibility of fingerprint evidence has not been addressed in any appellate decision in this Commonwealth and seems likely to arise again." R.T. Reservation & Report, p. 20. Amici emphasize, however, that they express absolutely no criticism of the motion judge in the case at bar, as both parties requested a Lanigan hearing, and the particular use to which simultaneous prints are put in this case was, in

States v. Havvard, 260 F.3d 597, 600 (7th Cir. 2001) (citing examples); see also United States v. Crisp, 324 F.3d at 268 (fingerprint evidence "bear[s] the imprimatur of a strong general acceptance"; moreover, "[u]nder Daubert, a trial judge need not expend scarce judicial resources reexamining a familiar form of expertise every time opinion evidence is offered"); State v. Parks, 556 S.E.2d 20 (N.C. App. 2001), citing State v. Rogers, 64 S.E.2d 572, 578 (1951) (no error admitting expert testimony on footprints where State presented no evidence concerning the reliability of the method used by the detective and the trial court took no judicial notice of the reliability of such testing, where state supreme court had recognized fingerprinting as a reliable means of identification in 1951), overruled on other grounds by State v. Silver, 213 S.E.2d 247 (N.C.1975). As the defendant expressly concedes, "ACE-V" methodology is simply an incremental variation on time-tested methods.⁸ That it

amici's judgment, highly appropriate for such a hearing.

⁸ See Def. Br. 43-44 ("ACE-V is merely new terminology for what examiners always have done over the history of fingerprint analysis"). See also Meagher's testimony at Tr. 3:46. The motion judge agreed: "the steps performed by a fingerprint examiner using ACE-V are essentially the same steps that have been utilized

was employed here no more requires a Daubert-Lanigan hearing than does the introduction of a medical diagnosis based on a new model x-ray machine. See Commonwealth v. Murphy, 59 Mass. App. Ct. 571, 576 (2003) (“as the courts in Massachusetts have long accepted as reliable expert testimony about the authorship of handwriting, a Lanigan hearing was not necessary even had one properly been requested”).

Since the Commonwealth’s observations in the Jones case, it remains true that no appellate court in the country has failed to find fingerprint evidence admissible under Daubert.⁹ See, e.g., United States v.

by examiners over the past 100 years.” R. Q, Findings, Rulings & Order, p. 8.

⁹ According to the Siegel Amicus, the failure of the judicial branch to curtail the introduction of fingerprint evidence “may stem from courts’ lack of familiarity with the scholarly literature, the slow pace of its production, and from some fundamental misunderstandings of fingerprint individualization and the evidence advanced on its behalf.” Siegel amicus at x. Put colloquially, they believe appellate judges simply don’t “get it.” See also id. at 5 (“Judges, with all due respect, are in no better position to scientifically validate knowledge claims than are latent print examiners”). As this court, by the Siegel amici’s own account, is hardly the first to benefit from the testimony and advice of Mr. Acree and the Drs. Haber, perhaps they should consider the alternative possibility, as memorably phrased by Oliver Cromwell: “I beseech you, in the bowels of Christ, think it possible you may be mistaken.” Letter of Aug. 3, 1650, to the General Assembly of the Scottish Kirk.

Abreu, 406 F.3d 1304, 1307 (11th Cir. 2005) (*per curiam*)(fingerprint evidence satisfies Daubert standards), and cases cited. Given the unbroken line of cases so holding, the defendant's assertion that "latent fingerprint evidence is unreliable" and "fails each determinative factor identified by the United States Supreme Court," (Def. Br. 2, 20) is risible.

The virtual unanimity of judicial opinion that fingerprint evidence is reliable, might well lead one to conclude that "[t]o require an evidentiary hearing in these circumstances would carry the court to the extreme disavowed in Saferian, with judges "'becom[ing] Penelopes, forever engaged in unraveling the webs they wove.'" Commonwealth v. Saferian, 366 Mass. 89, 99 (1974), quoting from Hand, J., in Jorgensen v. York Ice Mach. Corp., 160 F.2d 432, 435 (2d Cir.), cert. denied, 332 U.S. 764 (1947)"; Commonwealth v. Savage, 51 Mass. App. Ct. 500, 506 (2001). Indeed, the contrary view would necessarily make a Daubert-Lanigan test a foundation for the admission of any scientific test, no matter how well established.

Each new jurisdiction or case, however, seems an occasion for the defense bar to rewind the film on the

projector, replay the movie, and watch with bated breath, hoping that this time, surely, the ending will be different. Thus the assorted characters speak their tropes. The defendant notes that he "called Professor James E. Starrs" to testify to the unreliability of latent fingerprint evidence and the government called Special Agent Stephen B. Meagher of the FBI. (Def. Br. 2-3). See and compare United States v. Mitchell, 365 F.3d 215, 222-223, 227-228, 246 (3^d Cir. 2004) (district court did not abuse its discretion in admitting prosecution's expert testimony on fingerprint identification after Daubert hearing that included testimony from, *inter alia*, Starrs and Meagher); United States v. Llera Plaza, 179 F. Supp. 2d 492, 508 n.18 (summarizing Starrs's criticisms of fingerprint evidence), *vacated upon reconsideration*, 188 F. Supp.2d 549 (E.D. Pa. 2002). See also People v. Gomez, 2004 Cal. App. Unpub. LEXIS 833 *5-6 (affirming Gomez's conviction in the teeth of expert defense testimony at trial from Professor Starrs, and affirming denial of pretrial hearing on reliability of fingerprint evidence)(reproduced at DA App. 7-12).

Adopting a tone "more in sorrow than in anger," the Siegel amicus brief laments the alleged failure of

the judiciary to date to join the defense experts in the "scientific mainstream,"¹⁰ and invites this court to lurch far from the judicial mainstream by suggesting that it might usefully reprise the "distinctively careful approach to the admission of expert testimony" that it showed toward DNA evidence. Siegel amicus at 1-2, citing Commonwealth v. Curnin, 409 Mass. 218, 225-227 (1991), Lanigan I, 413 Mass. at 163, and Lanigan II, 419 Mass. at 25. The argument could appeal only to those oblivious to context, as whatever its merits, the "distinctively careful approach" toward DNA evidence dealt with a relatively new forensic application of a relatively new

¹⁰The self-proclaimed possession of the "mainstream" by fingerprint critics is not new. One latent print examiner has responded with colloquial vigor: "How many scientists does it take to make a consensus? Supporting our science are numerous scientists, both of academic and forensic background: Dr. Babbler, Prof. Moenssens, Donald Siesig, Dr. Bruce Budlow, etc." G. Langenburg, "Defending Against the Critic's Curse," 19 The Print 3:2 (2003).

The undersigned are also of the view that the Siegel amici have a somewhat skewed view of the literature, and ignore parts of articles and presentations that fail to support their view. For example, their brief contains no less than four citations to articles by J.R. Vokey. (Siegel amicus at vii, viii). Nowhere, however, does it acknowledge Vokey's conclusion, however, that "match[ing] latent fingerprints . . . may be easier than commonly believed."

scientific discovery.¹¹ Indeed, at the time Lanigan I was decided, the Massachusetts State Police Laboratory had no DNA capability and used conventional serological blood testing. No appellate decision in Massachusetts had approved the use of DNA evidence, and though many jurisdictions had approved such evidence, the question remained open in others. See Shank, DNA Evidence in Criminal Trials: Modifying the Law's Approach to Protect the Accused from Prejudicial Genetic Evidence, 34 Ariz. L. Rev. 829, 831 & n.21 (1992) (DNA introduced into forensic research setting in 1985, with first criminal case granted appellate review in 1988, *i.e.*, Andrews v. State, 533 So.2d 841 (Fla.Ct.App. 1988) (holding DNA evidence admissible under relevancy standard)), review denied, 542 So.2d 1332 (Fla.1989); cf. Hadden v. State, 690 So.2d 573 (Fla.1997)(recognizing abrogation of Andrews standard and upholding use of Frye test).

Fingerprint evidence, however, dates back over a century. See Bevan at 143-145 (first known use of fingerprint evidence in trial came in India in 1898).

¹¹ Despite this court's careful approach, it quickly accepted DNA and, in fact, was the first appellate court to accept STR analysis, which has become the

Massachusetts has recognized the admissibility of fingerprint evidence for almost a century. The defendant and the amici supporting him "advocate[] the wholesale exclusion of a long-accepted form of expert evidence . . . a drastic step . . . not required . . . under Daubert." United States v. Crisp, 324 F.3d at 268.

There may be another reason for the Siegel amici's attraction to an inapt DNA analogy, and that is that it fits with their general attack on fingerprint evidence, i.e., the lack of a field-wide base rate. DNA is a poor basis of comparison because with DNA the elemental features (*i.e.*, alleles) are known, making probability comparisons much easier. Where DNA evidence has finite constraints, the statistical occurrence of alleles, fingerprint evidence is premised on the biological uniqueness of organisms: monozygotic twins share identical DNA, yet there is no doubt that each is a separate person with his or her own identity, and for that matter, his or her own fingerprints.¹² See, e.g., Bean, "When Clones

forensic standard See Commonwealth v. Rosier, 425 Mass. 807, 810-811 (1997).

¹²The defendant and his supporting amici consistently seek to conflate two separate things: the error rate

Go Bad: the Clone Crime Conundrum,"

<http://www.courttv.com/news/feature/clonecrime.html>;

see also NACDL amicus at 10, citing Tr. 2:159-162.

Declining to adopt the role of a judicial Penelope, the motion judge held latent fingerprint evidence admissible. This court should do likewise, for the reasons set forth in the judge's opinion, the Commonwealth's brief, and virtually every appellate opinion considering the issue since Daubert. One significant issue, however, remains to be considered.

- C. The judge did not abuse her discretion in ruling that a properly qualified expert witness may opine as to a suspect's identity based not on a single identifiable print but on the totality of simultaneous impressions,

for the science, which, consistent with the view that fingerprints (as opposed to DNA) are unique, experts place at "zero," and the error rate for its application, obviously higher. See, e.g., Siegel amici at 17 (falsely claiming that "latent fingerprint examiners claim to [match prints] with absolute certainty . . . and infallibility"). Any scientific test is subject to similar considerations; for example, a test for the presence of human blood may yield a false positive a certain percentage of the time, but human error in performing the test, or recording the results, will yield a different result. In one of the few times that the Siegel amici observe the distinction, they urge that "demonstrable cases of latent fingerprint misattribution establish a non-zero error rate that cannot be entirely ascribed to 'practitioner error.'" Siegel amici at 36. They would appear to be endorsing the proposition that two people have the same fingerprint, a phenomenon that has never been empirically verified.

where no one print in and of itself suffices to identify the suspect.

Following the motion judge's decision that latent print identification testimony was admissible, the defendant filed a "request for clarification" R. R. In response thereto, the judge issued a supplemental memorandum of decision holding that a properly qualified expert witness may indeed opine as to a suspect's identity based not on a single identifiable print but on the totality of simultaneous impressions. In so doing, the judge specifically "credit[ed] Agent Meagher's testimony that making an identification from simultaneous impressions involves the exact process involved in individualizing a single latent print, simply applying ACE-V to the composite of level one, two and three detail of multiple prints from the same hand," although of course, she also adduced other reasons for her decision. (R. S; Supp. Mem. Dec., p. 3).

The judge's reliance on Meagher's testimony imposed on the defendant, as one crucial task in his appeal, the burden of demonstrating to this court that she abused her discretion in so doing. Canavan's Case, 432 Mass. at 312. This he has not done.

Like Napoleon exhausting his men and resources in the bitter winter march on Moscow and finding himself lacking the resources to attack Kutuzov's forces, the defendant has lavished sixty-six pages on persuading this court that fingerprint evidence in general should be inadmissible, but musters only six sentences attacking the Commonwealth's "simultaneous impression" evidence. See Def. Br. 67-68.

The defendant's point on appeal is *not* that simultaneous impression identification is unreliable because it represents such a significant departure from single print identification, but quite the opposite, that the same problems he imagines with single print identification are "accentuated" by the simultaneous impression identification.¹³ Def. Br. at 67. Essentially, he concedes *sub silentio* the trial court's conclusion that making an identification from

¹³ The Siegel amici are more expansive on the subject of simultaneous impressions, but essentially take the same view. See Siegel amici at 7 ("the government has failed to establish the reliability of latent print individualization in general, and in particular through the use of simultaneous impressions"). In a supplemental letter to this court dated July 12, 2005, the defendant himself complained that this court's call for amici briefs was confusing and continued to ask the court to focus merely on the general question of fingerprints rather than the specific question of simultaneous impressions.

simultaneous impressions involves "the exact process involved in individualizing a single latent print."

(Supp. Mem. Dec., p. 3).

As the Commonwealth summarized facts pertinent to the issue to the motion judge,

a fingerprint expert . . . had analyzed four streaked fingerprints that had been observed and photographed on the driver's side door window of [the victim's] Ford Explorer. The expert testified [in Patterson I] that the location and pattern of these four fingerprints suggested that they had been made "simultaneously" by an individual who was closing the door. The expert further opined that he could add up (or "aggregate") the "points of identification" on [three] of the four fingerprints to obtain a sufficient number of points of identification to make a comparison to the known fingerprints of the defendant. By this method, the expert was able to determine that the fingerprints . . . were those of the defendant.

R. E, Com. Prelim. Mem. in Opp. to Def.'s Motion In Limine, p.3, transcript citations omitted.

The defendant first complains that "no evidence was presented as to how an impression is to be identified as 'simultaneous.'" (Def. Br. 67, emphasis supplied) However, nothing in the transcripts suggests that the point was ever seriously at issue, or even raised by the defendant, at the Daubert-

Lanigan hearing.¹⁴ Had it been, one might have expected, at a minimum, that the Commonwealth's expert, Stephen Meagher, would have opined on at some length, or been cross-examined on the subject, but he was not.¹⁵

Contrary to the defendant's argument, even though determination of simultaneity was not itself at issue, the Commonwealth offered at least a cursory explanation as to how "simultaneous impressions" are identified as such. According to Meagher,

it's easily understood that it's common that when you touch an object, that you don't

¹⁴ The defendant arguably made reference to the issue in his pre-hearing memorandum, where he states, quoting from Daubert, that the theory of simultaneity lacks the "existence and maintenance of standards controlling the technique's operation," but even if so charitably construed, the reference was oblique. (R. D, Def. Mem. Law, p. 41). The defendant first squarely raised the issue, in substantially the same language set forth in his brief, in his post-hearing submission of "Proposed Findings of Fact and Rulings of Law," p.61, R. O.

¹⁵ Reflecting the Daubert hearing's overwhelming focus on the reliability of fingerprint evidence in general, the entire cross-examination with respect to using simultaneous prints to make an identification is confined to a mere three pages of transcript. Tr. 5:54-5:57. Defense counsel first confirmed that the examiner makes a determination "as to whether or not more than one latent print was deposited simultaneously with another print," then secured the witness's assent to the proposition that "that is a determination . . . in the judgment of the examiner." (Tr. 5: 54-55). Defense counsel never inquired as to how an examiner may determine simultaneity.

touch it with just one finger. It's common that you would touch it with multiple fingers.

What an examiner looks for is the natural placement of those fingers to be able to determine the fact is . . . that those fingerprints were placed in sequence with each other, and a determination can be made and the examiner would state that these would be simultaneous impressions.

Tr. 3:60.

Amici supporting the defendant both point to Ashbaugh's criteria for simultaneous impressions, but to somewhat different purposes: following its prevailing *leit-motif*, the Siegel amicus dismisses the criteria as unsupported by "scientific research study," but the NACDL amicus cites them favorably, only to chastise the Commonwealth for not introducing the Ashbaugh criteria and demonstrating compliance with its standards. (Siegel Amicus at 11; NACDL amicus at 39-40). NACDL suggests that the Commonwealth may be able to demonstrate simultaneity with "testimony from [Lieutenant] Martin" at a subsequent hearing. NACDL amicus at 40.

Both Siegel and NACDL (like the defendant) proceed as if the process for determining whether prints were left simultaneously were truly at issue in the hearing below; more fatally, both ignore the

testimony by Meagher quoted above. NACDL, while commendably recognizing that Lt. Martin may well be able to explain his criteria for simultaneity, again ignores the scope of the hearing, which was directed not at a particular expert's application of fingerprint science, but the validity of that science itself.¹⁶

In any event, Lt. Martin's report suggests that the prints at issue meet all of the Ashbaugh criteria and then some. Clearly, all of the prints were located on the same "continuous or consistent" "substrate," *i.e.*, the driver's side passenger's window. The positioning of the prints on the frame and relative to each other was consistent with that of a left-handed person, and thus they "make anatomical sense." Moreover, the downward swiping action indicates "uniform motion," satisfying the criteria of "similar downward pressure" and "anatomically reasonable variation in that pressure." See Siegel

¹⁶ That Lt. Martin's particular actions were not considered at issue is shown by the failure of either the Commonwealth or the defendant to call him to the witness stand or to request findings relative to his report. The defendant was well aware that Martin would testify for the trial, having been provided with copies of his reports. Com. Notice of Discovery II, p. 3.

amicus at 11.

Not only is the simultaneous quality of the prints not merely defensible but, in fact, obvious, but it is also evident that expert testimony as to simultaneity is quite well suited to factual evaluation by a lay jury, even a lay jury that might lack the extraordinary ability to "scientifically validate knowledge claims" professed by the Siegel amici.¹⁷ See Siegel amicus at 5.

Absent fraud (which, properly, no one has suggested) there are, after all, only two possible

¹⁷ In Commonwealth v. Medina, a fingerprint expert testified that the direction and position of fingerprints found on a rifle did not comport with its having been fired from an inverted position, as contended by the defendant, who asserted that the death was a suicide. 372 Mass. 772, 781-782 (1977). On appeal, the defendant made the inverse of the argument offered by the defense bar here: he claimed that "any inference on the point was a matter of common sense for the jury and not a question on which an expert could have a judgment." Id. at 782. Citing Commonwealth v. Makarewicz, 333 Mass. 575, 591 (1956), this court held that admission of the testimony was within the trial judge's discretion. Id. Often, a fingerprint expert may note that prints are "simultaneous," but because that fact is not challenged, whether because it is obvious or for other tactical reasons, a reviewing court may not explicitly note the simultaneity in its opinion. Consider, for example, this court's opinion in Commonwealth v. Cortez, 438 Mass. 123 (2002), where a strong inference may be drawn that fingerprints of the defendant found "in the door jamb between the bedroom and the kitchen" were simultaneously impressed. Id. at 126, 131.

explanations for the downward swipe at issue: 1. it was made with the left hand of a person swiping his hand on the glass after leaving the initial impressions; 2. multiple parties at different times, by chance, left a random configuration of prints, each party then making a swipe mark in the same consistent downward direction, collectively giving the same impression of the fingers of one hand so acting. One need not possess a doctorate in statistics to determine which possibility commends itself to reason, science, and common sense.

Finally, that a properly qualified expert may opine that fingerprints were left simultaneously has long been recognized in Massachusetts and in other jurisdictions. See, e.g., Commonwealth v. Loftis, 361 Mass. 545, 550-551 (1972) (expert testifies prints consistent with a person placing his right hand on table); Commonwealth v. LeClaire, 28 Mass. App. Ct. 932, 934 (1990) (placement of three unidentifiable prints on interior side of glass, considered in conjunction with identifiable thumb print on the outside sufficient for expert to opine that defendant grabbed the window); State v. Murphy, 575 P.2d 448, 457 (Haw. 1978) (no error in permitting expert to

testify "that some of the latent finger- and palmprints were impressed simultaneously, or in one motion, and therefore were made by the same hand"); In the Matter of M.A.L., 2005 Tex. App. LEXIS 1472 (Ct. App. Tex. 2005) (officer testified that prints of two fingers side by side were a simultaneous impression); see also United States v. Salameh, 152 F.3d 88, 129 (2d Cir. 1998), cert. denied, 526 U.S. 1028(1999). Such testimony is routinely offered. See, e.g., DA's App. at 44-47 for one example.

In addition to attacking the alleged lack of criteria for determining when prints are simultaneous, the defendant suggests that the trial court abused its discretion in concluding that the type of identification the Commonwealth proposes to offer in the instant case "constituted an acceptable 'application' of the ACE-V methodology." (Def. Br. 67). Amici supporting the defendant, as will be discussed, elaborate somewhat on the defendant's point.

In fact, the judge did not abuse her discretion, as her conclusion was supported by evidence in the record which she was entitled to credit. The Commonwealth asked Meagher directly if one would use

the same "ACE-V process, the methodology, to make an individualization determination from simultaneous impressions as [one] would from a single fingerprint or a latent print?" He responded, "Yes. It would be the same process."¹⁸ (Tr. 3:60]. Meagher's answer is supported by other professionals. See J.Cowger, Friction Ridge Skin: Comparison and Identification of Fingerprints 181(1983) ("[i]f the examiner can determine that [a number of individual prints, each insufficient by itself for a conclusive determination of identity] . . . constitute a group of prints made by a single hand at one time, the prints can be treated as separate areas of a cohesive print, each in its appropriate geographical location, and be compared

¹⁸ The Siegel amici argue that "accepting, for the sake of argument, the reliability of this method, it was not the practice of this [Boston Police Department Identification Unit] to use it." Siegel amici at 27, citing Ron Smith and Associates Letter. The argument is irrelevant, as the subject of the Lanigan hearing was not the general practices of the Boston Police Department, nor yet the faithfulness with which the initial identifying officer followed them. The defendant may explore at trial, if necessary, by voir dire, whether the Commonwealth's experts who actually testify to the identification reached their conclusions by following ACE-V methodology. Notably, Ron Smith Associates concur in the identification of the defendant. See DA's App. 3-4.

as such"); see also S.H.Ostrowski,¹⁹ "Simultaneous Impressions: Revisiting the Controversy," The Weekly Detail 1, 5 (August 3, 2005)(noting that where only one out of a group of impressions "is independently identifiable, all that is required to identify an individual is that one print," and the others are considered of no apparent value; however, impressions of no apparent value early in the analysis phase of ACE-V may be suitable for comparison "when grouped with an additional impression[s] of no value for comparison purposes").

As Ostrowski's comments demonstrate, "no value" is quite clearly a term of art in the fingerprint community; this court ought to reject attempts to freight the FBI report with implications that do not necessarily attach and may more properly be explored, if the defendant wishes, by calling the FBI expert at trial. Undersigned take this opportunity, however, to point out a fundamental misconception running through

¹⁹ Ostrowski is a "Criminalist II" who works for the New Hampshire State Police Forensic Laboratory. He holds an M.S. in Forensic Science and a B.S. in Biology. His testimony was recently credited in a Daubert hearing by the Superior Court of New Hampshire denying a motion to exclude latent fingerprint evidence. See New Hampshire v. Sullivan, Sup. Ct. 03-

both defense amicus briefs, *i.e.*, the representation that the FBI has declared the fingerprints here making up the simultaneous impression of "no value." See Siegel amicus at 28; NACDL at 26-27. In point of fact, that FBI report references fingerprints on the other side of the Bronco, not the simultaneous impression on the driver's side window. See "Commonwealth's Notice of Discovery X-XI," Suffolk Superior Court.

Although the defendant, and amici supporting him, complain that Meagher identified "no studies addressing when simultaneous prints contain enough information to opine a match,"²⁰ Def. Br. 67 citing Tr. 5:56, they neglect to address Meagher's testimony that there is no

need for a study to do that given that that auspices of the fact (*sic*) that the underlying principle is that the entire human friction ridge skin is unique from the tip of the finger to the base of the palm[,] and therefore . . . any composite configuration of information from that entire area will be of that one singular source, that one person.

S-1635, 1636, 1637 (2005), reproduced at DA App. 32-43.

²⁰ The undersigned is likewise unaware of any studies setting forth such criteria for palm prints, heel prints, or lower joint impressions, and the reason is the same: the procedures for every type of friction ridge impression are the same.

So I don't care whether it's two fingerprints in simultaneous or a finger and a palm or the thumb and a[nother] area. It's all one continuous set of data that's associated to that person, to that hand. . . there wasn't a need to do a study.

(Tr. 5:57). See also Meagher's earlier testimony as to the biological development friction ridge growth on the hand, citing Dr. William Baber, Tr. 2:156 *et seq.*

Meagher's testimony anticipates, and refutes, the objections raised by the Siegel amici at 9-15 (and elsewhere), in that it contradicts their basic premise, that comparing a simultaneous impression to exemplar fingerprints must necessarily involve differing procedures, controls, and theoretical and analytical support, a premise itself at war with their view that simultaneous impression identification merely "compounds the scientific shortcomings of the ACE-V 'Methodology.'"²¹ (Siegel amici at 9).

²¹ The Siegel amici also make a number of "logical" arguments, relying on their own authority, suggesting that identification based on a simultaneous print is likely to be less accurate. They argue, incorrectly, that "Galton details cannot be spatially related to one another in discontinuous parts of a simultaneous image, *because they are not all on the same finger.*" Siegel brief at 13, emphasis in the original. Quite apart from the fact that there are spatial constraints in the relationship of the fingers to one another and the placement of the latents as they are recovered, there is no requirement that a print necessarily be

Notably, the Siegel amici begin their attack on simultaneous impression identification with an analogy to eyewitness identification:

An eyewitness who sees a perpetrator several times may recall an eyebrow, an ear, a nose or a chin, and yet still not be able to identify a specific person as the criminal. No one would seriously suggest that an 'identification' could then be made based only upon assembling a recognizable eyebrow, ear, nose and chin--without the eyewitness then observing the complete face of an alleged perpetrator. Yet this is precisely the claim of latent fingerprint examiners who propose using "simultaneous impressions."

Siegel amici at 9. The analogy is, of course, false,

continuous if it has sufficient detail to identify size, shape, orientation and relative position and is in proper sequence. Consider the following example: someone picks up a curved surface, such as a water glass. Flexion creases on the palm or finger joints will almost certainly cause a jump on the image, but the salient question is not whether there is a continuous impression, but whether the examiner can account for the gap. There, as with a simultaneous impression, standard ACE-V analysis applies.

Similarly, the Siegel amici incorrectly suggest--again, on their own authority-- that the probability of chance hits increases with a simultaneous print. Siegel amici at 13. The reverse may well be true, as the more surface area brought into the impression, the more information available to the examiner and the smaller the possibility of error. Often, a simultaneous print will offer more class information. Consider the following hypothetical: there is a simultaneous print consisting of three partial fingerprints, with the middle finger providing "level two detail," and the surrounding two fingers providing only level one detail. The examiner can use the Level

in that it posits a witness who cannot identify a person, but then does so upon observing fragmentary representations of the person; there is here no single identifiable fingerprint that has gone unrecognized, only to be later identified on the basis of partial prints. Despite its falsity, the analogy suggests more pertinent considerations:

First, all identifications are based on partial information; it is only a question of the amount of evidence sufficient to express an opinion, whether a general opinion or an opinion to a particular degree of certainty. One rarely sees the subject of an identification from all 360 degrees. Significant features—body scars, for example, may be masked by clothing. DNA evidence relies on a very limited number of probes, yet is highly reliable. Retinal and iris scans more than suffice to identify, though they are obviously limited to the eye. See, e.g., Comment, Banking on Biometrics: Your Bank's New High Tech Method of Identification May Mean Giving Up Your Privacy, 33 Akron L. Rev. 441, 447 & nn. 38-41. One can always wish for more data, right down to the

One detail on this non-Level Two print to exclude a suspect who lacks a whorl pattern.

molecular level, but at some point well short of that, one has enough. It is not surprising that there is no definitive answer to the precise quantum of evidence necessary to identify a fingerprint "given that researchers in the face recognition literature are still working on what constitutes a feature or the basis functions that describe a face." T. Busey & J. Vanderkolk, "Behavioral and Electrophysiological Evidence for Configural Processing in Fingerprint Experts," 45 Vision Research 431, 447 (2005), (reproduced at DA App. 14-31).²²

²² Busey's and Vanderkolk's research provides support, albeit indirect support, for the use of a simultaneous print. Their study sought to compare the performance of experts and novices in matching fingerprint fragments, and to that end conducted two experiments. T. Busey & J. Vanderkolk, *supra*, 45 Vision Research at 432-446. Because fingerprints recovered at a crime scene tend to be moderately to severely degraded, may represent only part of the fingerprint, and are contaminated by visual noise . . . [the fingerprint expert's] job is to 'see through the noise'" and make a correct match. Id. at 433.

Test subjects were presented with full images in noise, and partial images without noise. Experts showed strong performance for the full images presented in noise, which was much better than that of the novices. See id. at 436 & Fig. 5. Busey and Vanderkolk attributed the strong performance to the use of configural processing, noting both that McKone, Martini, and Nakayama (2002, 2003) have argued that the addition of noise may push observers to use configural processing (a psychological process that could accommodate a quality/quantity tradeoff by

While scientific investigation continues, as it should, the law makes practical judgments as to the reliability of identification evidence, however short of perfection all evidence may fall. As Holmes famously put it, "[t]he life of the law has not been logic; it has been experience . . . and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics." Holmes, The Common Law (Little Brown, 1881), p.1.

To return to the Siegel amici's analogy, one might well question, as a matter of sheer logic, the claim that identification may not be made by focusing on "an eyebrow, an ear, a nose or a chin," particularly where one or more of those features was unusually distinctive; for example, the eyebrow may be salt and pepper color, bushy, and unusually shaped, or perhaps cut by a scar. Often, witnesses are called upon to identify assailants who took pains to obscure certain features, by wearing mufflers, hats, sunglasses, or some other impediment to the witnesses' view.

integrating information over larger regions of space) and that the Busey-Vanderkolk experiment adduced "evidence for configural processing with singleton fingerprint elements." Id. at 439.

One's logical doubts about the Siegel amici's proposition find strong confirmation in Massachusetts law, well-summarized by Justice Spina, speaking for the Appeals Court:

It is permissible for jurors to accord weight and probative value to an identification based solely on a defendant's eyes, rather than a full view of a defendant's face. See, e.g., Commonwealth v. Boisselle, 16 Mass.App.Ct. 393, 398 (1983) (defendant wearing a ski mask identified by "unique" dark brown eyes); Commonwealth v. Gagne, 27 Mass.App.Ct. 425, 426 (1989) ("distinctive 'royal blue eyes' "). See also Commonwealth v. Donahue, 396 Mass. 590, 592 (1986) (defendant's photo picked out of an array solely on the basis of his "'odd ... real flat' nose"; judgment reversed on other grounds); Commonwealth v. White, 422 Mass. 487, 494, (1996) (defendant wearing a "ninja-style" mask identified based only on his eye and nose area).

Commonwealth v. Johnson, 46 Mass. App. Ct. 398, 403 (1999).

Moreover, the undersigned have found no evidence (nor do the Siegel amici cite any) to support the claim that an identification cannot be made on the basis of individual features. While people do tend to process faces holistically, they also preserve the individual features in memory and can often match them. This is exactly the kind of information used by

identikit users, who match individual features separately. See Commonwealth v. Weichell, 390 Mass. 62, 68 (1983), cert. denied, 465 U.S. 1032 (1984) (describing identikit process and holding resultant composite drawing admissible).

Further, there is a salient difference between an identification based on a witness's memory of a robber's eyes, as in Johnson, and an identification based on fingerprints. Whatever the virtues of cross-examination, and there are many, no one can recreate the visual image that impresses itself on an eyewitness's retina and brain. However, the prints that form the basis of a fingerprint identification are there for defense counsel, defense experts, and the jury to examine.²³ It bears noting that in the case at bar, Officer Foilb's original conclusions were confirmed by Sgt. Brian Winsor, Trooper Susan Ricci, and Trooper Deborah Rebeiro, all latent fingerprint experts, and subsequently by Captain George MacDougal, all of whom are assigned to the State Police Crime

²³ Indeed, as the fingerprints in the case at bar are left on a glass windshield, there would appear to undersigned counsel to be no bar to an expert witness's placing the defendant's ten-print card behind the prints in question as an additional means of checking claims of simultaneity.

Scene Services. In preparation for the coming trial, those conclusions have been reached by Lt. Kenneth Martin, as well as three I.A.I. Certified Latent Print Examiners employed by Ron Smith & Associates, *i.e.*, Ron Smith, Jamie Bush, and Bob Garrett. (DA's App. 1-6). The defendant may, of course, call his own experts. The motion judge was thus quite wise in pointing out that "the proponent of expert testimony need not prove that the expert's opinion is correct, only that it is supported by good grounds based on what is known, and that it has a reliable basis in the knowledge and experience of the discipline. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. at 590; Ruiz-Troche v. Pepsi Cola of Puerto Rico Bottling Co., 161 F.3d 77, 86 (1st Cir. 1998); Commonwealth v. Lanigan, 419 Mass. at 25. 'Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.' Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. at 596." R. Q, Findings, Rulings & Order at 14.

CONCLUSION

This court should not apply a crabbed version of the Daubert test to turn back the clock to the 19th century and leave juries in this Commonwealth, alone in all the jurisdictions in the United States, at the mercy of less reliable forms of identification evidence, such as eyewitness testimony. For the reasons set forth above, as well as the reasons set forth in the brief of the Commonwealth and the amicus brief of the Department of Public Safety, this court should answer the reported question, "yes."

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