
Vermont Criminal Law Month

August - September 2016



Vermont Supreme Court Slip Opinions: Full Court Rulings

Includes three-justice bail appeals

FAILURE TO GIVE UNANIMITY INSTRUCTION NOT PLAIN ERROR WHERE ACTS WERE NOT MATERIALLY NOR CONCEPTUALLY DISTINCT

State v. Nicholas, 2016 VT 92.
FAILURE TO GIVE UNANIMITY
INSTRUCTION: PLAIN ERROR.
UNDUE PREJUDICE FROM
CUMULATIVE ACTIONS.

Full court opinion. Domestic assault and cruelty to a child affirmed. 1) There was no plain error in the cruelty to a child instruction despite its failure to instruct the jury which of the injuries it could consider. The cruelty charge was based upon the number and nature of bruises on the child within a relatively short time. The defense was that the alleged victim was an active child with a depth perception problem, who incurred accidental injuries easily, and that no evidence connected him to any of the child's injuries. His generic defense was that he played no role in causing any of the child's bruises. Given that the child's various bruises could be considered neither materially nor conceptually distinct with respect to the child-cruelty charge, it is at least questionable whether the trial court committed any error at all in not giving a specific unanimity instruction on that charge. In any event there was no prejudice, and therefore no plain error,

because the jury also convicted the defendant of domestic assault based upon a single black eye, and that was a sufficient basis to support the child-cruelty charge. The different mens rea elements of the two offenses does not mean that the domestic assault conviction is not dispositive as to the child cruelty conviction. Domestic assault requires recklessness, and child cruelty requires willfulness. The defendant did not contend that although he played a role in causing the black eye, he did not do so recklessly. Rather, he contended that he played no role in causing the injury at all. 2) The defendant next argues that various actions by the State cumulatively created a risk of undue prejudice, and that the trial court abused its discretion in denying the defendant's motion for a mistrial on the basis of those actions. The defendant does not specifically argue that any one incident required a mistrial. The effect of each of these actions was fleeting and minimal. The court was therefore well within its discretion in denying the motion. Robinson, dissenting: The court should have given a unanimity instruction, because the evidence did distinguish among the injuries, and it was not a blanket or generic defense of no role in the injuries, because the defense

offered plausible innocent explanation for the two most significant injuries. Doc. 2015-010, August 19, 2016.

<https://www.vermontjudiciary.org/LC/Supreme%20Court%20Published%20Decisions/op15-010.pdf>

SPECIFIC INTENT TO THREATEN SHOWN BY RUNNING AT POLICE, YELLING, WITH MACHETE

State v. Dow, 2016 VT 91. INTENT TO THREATENED: SUFFICIENCY OF THE EVIDENCE. "SECRET INTENT" INSTRUCTION. PRIOR BAD ACTS: HARMLESS ERROR. AGGRAVATED AND SIMPLE ASSAULT: DOUBLE JEOPARDY. MISTRIAL: NOT JUSTIFIED BY DEFENSE QUESTIONING OF WITNESS.

Full court opinion. Aggravated assault affirmed; simple assault conviction vacated; denial of motion to dismiss on remaining counts reversed. 1) The State's evidence of specific intent to threaten for the aggravated assault offense was sufficient to support the verdict, where it indicated that the defendant at one point came running down the hallway of his home towards two police officers in a determined manner, carrying a knife, described by one officer as a machete, and the knife was in a half-raised position, the defendant was angry, aggressive, and yelling, and one officer was fearful and felt threatened. 2) The trial court's instruction that it is not the "secret intent" of the defendant that matters, but that intent which can be determined from his conduct and all the other circumstances which surround it, was not grounds for reversal, even though the use of this terminology was erroneous. The instructions as a whole breathed the true spirit and doctrine of the law, which gave detailed explanations of the intent requirements. Nor did the court err in declining to define the word "threaten." 3) The defendant argues that the court erred in admitting evidence of prior bad acts he committed against his wife, in connection with domestic assault charges relating to her. Any error was harmless because the

trial court granted a mistrial on those charges, and instructed the jury to disregard that evidence. 4) The defendant argues that his convictions for aggravated assault with a deadly weapon and attempted simple assault by physical menace violated double jeopardy. The defendant failed to raise this issue below. However, this did not waive the issue entirely, but merely forfeited the claim, and therefore it can still be reviewed on appeal under a plain error standard. Allowing both convictions to stand is plain error, because simple assault is a lesser-included offense of aggravated assault with a deadly weapon. In such a situation, the State has the right to choose which charge is to be dismissed. The State has clearly requested that the lesser conviction be dismissed and the greater conviction affirmed. 5) The trial court erred in granting the State a mistrial on the counts involving the defendant's wife, after she was cross-examined in a manner that created an implicit bias and unfairly undermined her credibility. The State has a high bar to meet in order to obtain a mistrial, and it was not met here. The questions at issue did not contravene the court's specific instructions, the Rape Shield law, or a specific rule of evidence, and no answers were given to the offending questions. The court had a number of opportunities to shut down the line of questioning, and failed to do so. Two unanswered good faith questions to which objections were sustained do not rise to the level of gross misconduct. Reiber and Eaton dissenting: would find that the mistrial was justified. Docs. 2015-116 and 2015-276, August 19, 2016.
<https://www.vermontjudiciary.org/LC/Supreme%20Court%20Published%20Decisions/op15-116.pdf>

POSSESSION OF STOLEN PROPERTY DOES NOT SUPPORT RESTITUTION ORDER BASED ON OTHER ITEMS TAKEN IN UNCHARGED BURGLARY

State v. Charbonneau, 2016 VT 83.
RESTITUTION: POSSESSION OF
STOLEN PROPERTY DOES NOT
SUPPORT RESTITUTION FOR
UNCHARGED BURGLARY.

Full court opinion. Restitution order in possession of stolen property case reversed. The factual basis for the defendant's plea was that several items of the victims' property were recovered from the defendant's residence; that the defendant's plea did not include the possession of any items other than those recovered; and that the defendant was not charged with, nor did he admit to, the underlying burglary of the victims' residence. Nonetheless, the trial court's order included both the value of those items recovered from the defendant's residence and the value of the property reported as stolen from the victims' residence during the burglary but not found at the defendant's residence. Based on evidence offered both at trial and at the restitution hearing, the trial

court made a factual finding that the defendant had committed the burglary. A restitution order may not include amounts resulting from conduct that was not covered by the defendant's conviction. Possession of stolen property and burglary are separate criminal offenses. The trial court exceeded the scope of the restitution statute by making findings to establish causation between the victims' loss and the defendant's involvement in the burglary of their home – conduct that was not covered by the defendant's conviction for possession of stolen property. The only losses directly resulting from the criminal conduct for which the defendant was convicted would relate to the items underlying that plea: the items recovered from the defendant's residence. Because these items were returned to the victims, there can be no finding of material loss. Doc. 2015-192, August 26, 2016.
<https://www.vermontjudiciary.org/LC/Supreme%20Court%20Published%20Decisions/op15-192.pdf>

REFERRING TO MIRANDA WAIVER AS A FORMALITY DID NOT UNDERMINE WAIVER

State v. Prue, 2016 VT 98.
CONFESSIONS: VALIDITY OF
WAIVER; VOLUNTARINESS.
EXCLUSION OF LATE-NOTICED
WITNESS: TRIAL COURT
DISCRETION. EVIDENCE OF CO-
CONSPIRATOR'S INTERNET
SEARCHES. DENIAL OF
SENTENCING CONTINUANCE.

Full court opinion. First degree murder, conspiracy to commit murder, and

attempted kidnapping, affirmed. 1) Under the U.S. Constitution, whether defendant's waiver and confession were voluntary are ultimately legal conclusions that are reviewed without deference. 2) The standard of review for determining a knowing and intelligent waiver is either de novo or clear error; the court declines to decide as the outcome would be the same either way in this case. 3) The interview transcript and audio recording support the trial court's findings that the defendant followed the conversation, understood the

nature of the interview, and knowingly and intelligently waived his rights. It was clear that the troopers were going to question him about the homicide, and not the identity theft that had originally brought the defendant to the police station. The court does not approve of describing the Miranda warnings as a formality, but this word choice did not undermine the validity of the waiver.

4) The Miranda warnings were not stale by the time that the defendant confessed. The one hour delay between the warnings and the more pointed questions leading to the confession did not require fresh warnings. Not only was the subject of the interview consistent, but the warnings were given in the same room as the subsequent interrogation, by the same officers who had been and were continuing to interview the defendant. 5) The evidence supports the trial court's finding that the confession was voluntary. First, the Miranda waiver was knowing, intelligent, and voluntary. Second, the defendant's statements throughout the interview reflect his understanding of his situation. Third, the record does not reflect any improper promises. Fourth, the defendant was resistant to some of the interrogation tactics, undermining his claim that his confession was involuntary. Fifth, the defendant made repeated demands for additional evidence to inform his calculus of his own self-interest. Sixth, the officers did not attempt to sweat out the defendant, but rather provided him with water, soda, bathroom breaks, and on multiple occasions asked if he wanted to continue, to which he responded that he would. Finally, the troopers never crossed the line from being confrontational into being coercive. In fact, as the defendant was drawing nearer to confession, his analysis of his self-interest became evidence in his language. The fact that he was lured to the barracks through a ruse does not undermine this conclusion, as he had multiple opportunities after being asked to speak about the homicide investigation to terminate the interview. 6) The defense sought to call a psychiatrist who had examined the defendant's wife, but the court excluded this witness in view of

the late disclosure and the prejudice to the State that would result from admission, since the State had not concluded its own psychiatric examination of the wife. The court did not abuse its discretion. The wife's diagnosis was relevant only if linked to her mental state at the time of the murder, and that link involved highly prejudicial and damning evidence against the defendant, thus the probative value for the defense was not great. In addition, the prejudice to the State was significant, since the State could not test the soundness of the psychiatrist's opinion. Finally, the trial court's prediction that the testimony would create a collateral issue that would confuse the jury was reasonable under the circumstances. 7) The trial court did not err in admitting evidence of the wife's internet searches, seven months, earlier, for topics such as "how to kidnap a girl." The jury could infer that the couple's conspiracy to kidnap and sexually assault a woman was underway by the time of the searches, in view of the fact that they were very close and spent almost all of their time together, as well as the uncanny resonance between the internet searches and their ultimate actions. The defendant argued on appeal that the evidence was unduly prejudicial, but this ground was not preserved for appeal, and there was no glaring error. There is substantial independent evidence of the conspiracy, including cell phone records, photographs, articles of clothing of the defendant found at the crime scene, surveillance recordings of them buying the TracFone used to phone the victim, the wife's role in placing the call, and the defendant's own statements to the police. 8) The trial court did not abuse its discretion in denying a motion to continue the sentencing in order to allow the defense to call the psychiatrist, and his wife. The court did not preclude the defense from calling the psychiatrist, but the defense chose not to because the State's expert had only recently completed his report, and the defense felt that it had insufficient time to prepare to cross-examine the State's expert. The trial court concluded that there

was little value in dueling expert witnesses, and much of the information concerning the defendant's relationship with his wife was available from other sources. It was unclear when the wife would be able to testify, since her plea was still subject to multiple contingencies; it was unclear what she would testify to; and the PSI contained the

same type of information the defendant sought to develop through his wife's testimony. Doc. 2015-002, September 9, 2016.

<https://www.vermontjudiciary.org/LC/Supreme%20Court%20Published%20Decisions/op15-002.pdf>

IMPAIRED DRIVING SUPPORTED STOP EVEN ABSENT SPECIFIC MOTOR VEHICLE VIOLATION

State v. Hayes, 2016 VT 105. MOTOR VEHICLE STOP: EVIDENCE OF IMPAIRED DRIVING ABSENT MOTOR VEHICLE VIOLATION. LOST EVIDENCE: TURNING OFF BODYCAM.

Full court opinion. Denial of motion to suppress evidence following conditional plea of guilty to DWI affirmed. 1) The police officer had a reasonable and articulable suspicion that the defendant may have been driving impaired, after he observed her nearly hit another car while exiting a store parking lot when she failed to yield the right of way to the other car, crossed over the fog line and kicked up dirt along the shoulder of the road when making a left hand turn, and turned off her headlights for a couple of seconds while making a right hand turn.

This is true regardless of whether any one of these missteps actually amounted to a motor vehicle violation. 2) The video recording of the stop was incomplete because the officer failed to toggle a switch.

Although a statute requires police to provide defendants with a copy of a video recording made of stops, there is no requirement that such recordings be made. Therefore, the officer was not negligent, despite the trial court's finding to the contrary. Nor can the defendant show prejudice. The recording stopped only after

all of the events that led to the traffic stop. Observations of intoxication made by the officer, in large part, would not have been a part of the video recording, and the defendant agreed to submit to a preliminary breath test, which indicated a BAC well over the legal limit, as did the two evidentiary tests taken at the police station. Nor could the defendant show a reasonable probability that a video recording would have produced evidence in her favor. Dooley, concurring: There is no obligation to tape major roadside stops. In addition, the Bailey test for lost evidence is generally inapplicable in cases where the lost, destroyed, or undisclosed evidence does not involve the ultimate question of guilt or innocence, but instead bears on the constitutionality of how that evidence was acquired. Robinson, concurring: Disagrees with the majority ruling that, just because there is no statutory or constitutional duty to record roadside stops, the failure to do so cannot be deemed negligent. This is at odds with the ruling in Porter that even though police have no duty to collect evidence, the failure to do so in a particular case may be so negligent and prejudicial as to warrant consideration of sanctions. Doc. 2015-420, September 9, 2016.

<https://www.vermontjudiciary.org/LC/Supreme%20Court%20Published%20Decisions/op15-420.pdf>



Vermont Supreme Court Slip Opinions: 3 Justice Panel Rulings

Note: The precedential value of decisions of three-justice panels of the Vermont Supreme Court is governed by V.R.A.P. 33.1(c), which states that such decisions "may be cited as persuasive authority but shall not be considered as controlling precedent." Such decisions are controlling "with respect to issues of claim preclusion, issue preclusion, law of the case, and similar issues involving the parties or facts of the case in which the decision was issued."

TURN REQUIRED WHEN LEAVING ROAD EVEN IF THAT MEANS GOING STRAIGHT DUE TO CURVE IN ROAD

State v. Brakarenka, three-justice entry order. MOTOR VEHICLE STOP: FAILURE TO SIGNAL TURN. EXIT ORDER: NO SLURRED SPEECH. VOLTAGE PROBLEMS WITH MACHINE: NOT RELEVANT TO ADMISSIBILITY.

DUI affirmed. 1) The motor vehicle stop was justified by the defendant's failure to signal a left hand turn. Although the trooper described the vehicle movement onto the other road as essentially straight, the turn required a significant change in direction from the main road, which curved to the right. The fact that the defendant had to depart from the course of travel of the road that she was on and cross a lane of oncoming traffic is sufficient to support the trial court's ruling that the defendant made a turn without signaling. 2) The officer had reasonable grounds to ask the defendant to exit her car, even though he did not report that she was slurring her speech. The erratic driving, watery and bloodshot eyes, odor of alcohol, and the defendant's admission that she had had two beers,

amply supported the court's conclusion that the exit order was justified. We have never required that one particular sign of intoxication, such as slurred speech, be shown before an exit order is justified. 3) The breath-test machine's recent history of abnormally high voltage readings, culminating in an error message two weeks after it was used in this case, did not require the court to exclude the breath test results. The threshold for admissibility is whether the analysis of the sample was performed by an instrument that met the applicable performance standards, which was the case here. The expert testimony concerning the voltage readings did not even address this threshold issue. To the extent that the expert testified that the machine was nonetheless unreliable at the time of the test, the evidence may influence the weight a factfinder assigns to the test result, but that does not render the test result inadmissible. Doc. 2015-315, September 16, 2016.

<https://www.vermontjudiciary.org/UPEO2011Present/eo15-315.pdf>

EVIDENCE SUPPORTED PERJURY CONVICTION

State v. Nutbrown-Covey, three-justice entry order. PERJURY: SUFFICIENCY OF THE EVIDENCE.

Conviction of perjury affirmed. The trial court did not commit plain error by failing to enter a judgment of acquittal based on insufficient evidence. There was substantial

evidence, even apart from the defendant's confession, that the defendant herself sent a threatening email, which she had stated under oath she had received from her

husband. Doc. 2015-378, September Term 2016.
<https://www.vermontjudiciary.org/UPEO2011Present/eo15-378.pdf>

TIPSTER REPORTING DRUNK DRIVER NEED NOT HAVE ACTUALLY SEEN OPERATION

State v. Wright, three-justice entry order. MOTOR VEHICLE STOP: TIP.

Denial of motion to suppress affirmed. The motor vehicle stop of the defendant's vehicle was supported by a reasonable suspicion of criminal conduct, based upon a tip phoned in by the clerk of a convenience store, who identified himself, and stated that a woman had driven to the store, was stumbling around, and appeared to be drunk, and described the vehicle, including the license plate number. An officer who responded to the car saw a vehicle

matching this description pulling out of the parking lot. The State did not need to establish that the clerk actually saw the defendant drive to the store. Given the gravity of the risk, the officer acted reasonably in stopping the vehicle rather than taking time to verify that the defendant, whom the officer had reasonable suspicion to believe was intoxicated, was actually the driver in her own vehicle. Doc. 2015-427, September Term 2016.
<https://www.vermontjudiciary.org/UPEO2011Present/eo15-427.pdf>

EVIDENCE OF SERIOUS BODILY INJURY WAS SUFFICIENT

State v. Chance, three-justice entry order. FAILURE TO CONDUCT COMPETENCY HEARING: NO PLAIN ERROR. SUFFICIENCY OF EVIDENCE OF SERIOUS BODILY INJURY.

Conviction of aggravated sexual assault affirmed. 1) The court did not commit plain error by failing to conduct another competency hearing before the start of trial. The court had no indication prior to the start of trial of any changed circumstances sufficient to warrant a new competency hearing. Defense counsel stipulated to the report finding the defendant to be competent two weeks before trial. 2) There was no plain error in the trial court's failure to enter a judgment of acquittal on its own

motion based upon insufficient evidence of serious bodily injury. The victim testified that the defendant choked her to the point that she could not breathe and she thought she was going to die. The ER physician who examined her observed that her voice was hoarse and that she had soft tissue swelling of her neck and a lump on the back of her head. The police investigator who spoke with the victim on the night in question also observed that her voice was hoarse and raspy and there was some discoloration of her neck. This was sufficient to support a finding of serious bodily injury. Doc. 2015-361, September Term 2016.
<https://www.vermontjudiciary.org/UPEO2011Present/eo16-313.bail.pdf>



Vermont Supreme Court Slip Opinions: Single Justice Rulings

TRIAL COURT IS NOT REQUIRED TO EXPLICITLY STATE THE SECTION 7554 FACTORS IT RELIED UPON IN DENYING BAIL

State v. Kane, single justice bail appeal.

BAIL APPEAL: HOLD WITHOUT BAIL ORDER DID NOT REQUIRE EXPLICIT STATEMENT BY COURT OF ANALYSIS OF FACTORS.

Order holding defendant without bail pending a merits hearing on an alleged violation of probation affirmed. 1) After arraignment on a violation-of-probation charge, the court has the authority to release a probationer pending a merits hearing, but there is no right to bail or release. The factors that must be considered in making this decision are those set out at 13 VSA 7554. 2) Review of

a hold without bail order is under the abuse of discretion standard. 3) The court below did not explicitly state its analysis of the 7554 factors, but it was not required to do so. It was presented with an adequate factual basis for determining that the defendant should be held without bail. The court was provided with information concerning the accused's mental condition, and her record of failure to appear at court proceedings. On this record, the court did not abuse its discretion. Doc. 2016-289, August Term 2016.

<https://www.vermontjudiciary.org/UPEO2011Present/eo16-289.bail.pdf>

SPARSE RECORD DID NOT SUPPORT IMPOSITION OF CASH BAIL

State v. Gould, single justice bail appeal. **BAIL APPEAL: IMPOSITION OF CASH BAIL NOT SUPPORTED BY RECORD.**

Conditions of release on pending violation of probation reversed and remanded. The sparseness of the record provides little support for the imposition of \$50,000 bail. The court did not specifically find that the defendant presented a flight risk, nor would the sparse record have supported such a finding. There was no evidence of his ability to raise bail in that amount and the impact

of a forfeiture of bail on him. The court determined that the accumulation and nature of the charges was sufficient to justify the high amount of bail. In order to create an adequate record to justify whatever decision the court reaches, the matter is remanded for a new evidentiary hearing to determine whether the defendant should be held without conditions of release or to determine what conditions of release should be imposed. Doc. 2016-304, September Term 2016.

<https://www.vermontjudiciary.org/UPEO2011Present/eo16-304.bail.pdf>

CHANGE IN CIRCUMSTANCES IS NOT REQUIRED BEFORE TRIAL COURT LOWERS BAIL

State v. Pape, single justice bail appeal.
BAIL APPEAL BY STATE: NO ABUSE
OF DISCRETION IN FINDING
MOTHER WAS SUITABLE
SUPERVISOR.

The State appeals from a trial court order reducing the amount of bail from \$10,000 to \$5,000 and releasing the defendant to his mother. The order is affirmed. 1) The court

need not find a change in circumstances before reducing bail. In any event, the trial court provided a reasoned analysis for reducing the bail amount. 2) The trial court did not abuse its discretion in finding that the defendant's mother was a suitable person to supervise him. Doc. 2016-313, September Term 2016.

<https://www.vermontjudiciary.org/UPEO2011Present/eo16-313.bail.pdf>

NAAG memo concerning 2016 PCAST report

On September 19, 2016, the President's Council of Advisors on Science and Technology issued a report entitled, *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*. Among other things, the Report concluded that forensic feature comparison methods for bite marks, firearms toolmark identification, and footwear analysis all lack scientific validity. As the National Association of Attorneys General (NAAG) notes, the Report is likely to lead to defense challenges regarding the admissibility of forensic evidence in criminal cases and attacks on convictions. The NAAG memo provides information about certain members of, and advisors to, PCAST; describes and analyzes the PCAST Report at length; summarizes responses to the Report by DOJ, the FBI, and the media; and outlines some potential responses—legal and otherwise—to the Report. This memo, attached to this edition of *Vermont Criminal Law Month*, may be distributed to other members of the prosecution and law enforcement community, if you wish, but NAAG requests that you do not cite to it or use it in its current form in any court proceedings. The PCAST Report itself may be obtained at:

<https://www.whitehouse.gov/administration/eop/ostp/pcast/docsreports>

**Cases marked with an asterisk were handled by the AGO.*

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ANALYSIS OF SEPTEMBER 19, 2016 PCAST REPORT: “FORENSIC SCIENCE IN CRIMINAL COURTS: ENSURING SCIENTIFIC VALIDITY OF FEATURE-COMPARISON METHODS”

September 23, 2016

*By Amie Ely, National Association of Attorneys General,
Director of NAGTRI Center for Ethics & Public Integrity*

I. PCAST Members and Senior Advisors

The President's Council of Advisors on Science and Technology (PCAST) refers to itself as “the leading external scientific advisory body established by the Executive Branch.” “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods” (herein “Report”), released September 19, 2016, at 144.

All of the 19 Members of PCAST are scientists. Only one has practiced forensic science.¹ Members’ areas of expertise range from mathematics and genome research, to physics and computer engineering, to aerospace and environmental change. Despite this lack of training and experience, at least five Members have previously spoken about or written on the need for radical overhaul of the current judicial approach to forensic evidence admissibility.

Eric S. Lander, Co-Chair of the Council, is a mathematician and researcher in genome biology. Lander is the only PCAST Member to have served as an expert witness in forensics, as he has testified on behalf criminal defendants in the past.

In a case that began his long relationship with the Innocence Project, Lander testified, as one of several defense experts, regarding the admissibility of DNA evidence in the prosecution of Joseph Castro, who was charged with murdering a pregnant woman named Vilma Ponce and her 2-year old daughter. *See, e.g., People v. Castro*, 544 N.Y.S.2d 985, 985, 989 (Bronx S. Ct. 1989). A small bloodstain, which prosecution experts were prepared to testify came from Ms. Ponce, was found on Castro’s watch. After a lengthy hearing, Bronx Supreme Court Judge Gerald Scheindlin suppressed the DNA evidence and announced a new legal test for admissibility of DNA evidence. This decision was inconsistent with several other decisions admitting similar DNA evidence—one of which was later affirmed by the New York Court of Appeals in a decision that rebuked the *Castro* case. *People v. Wesley*, 83 N.Y.2d 417, 436 n.2 (NY 1994) (“We disagree with the conclusion of the court in *People v. Castro*”).²

¹ One other Member, S. James Gates, Jr., is a staff member of the National Commission on Forensic Science, which was established by the DOJ in 2013. Gates is a theoretical physicist who studies string theory. His 101-page C.V. reveals no familiarity with—or even interest in—any areas of forensic science. *See* Curriculum Vitae: Sylvester James Gates, Jr., *available at* http://www.umdphysics.umd.edu/images/CV/gates_cv.pdf.

² In an interesting footnote to the *Castro* case: Joseph Castro pled guilty about a month after the DNA evidence was suppressed, and admitted that the blood on his watch did, indeed, belong to the woman he stabbed to death. *See* “DNA Forensic Testing Industry Faces Challenges to Credibility,” *The Scientist*, Nov. 1989, *available at* <http://www.the-scientist.com/?articles.view/articleNo/10722/title/DNA-Forensic-Testing-Industry-Faces-Challenge-To-Credibility/>.

The analysis in *Castro* was also criticized by the Second Circuit Court of Appeals, which noted that Judge Scheindlin arbitrarily “added another layer to make [the] already conservative test [set forth in *Frye*,³ the case followed by New York state courts] even more stringent.” See *United States v. Jakobetz*, 955 F.2d 786, 794 (2d Cir. 1992).⁴ Concluding that even with “novel, complex, and confusing evidence” like the then-nascent field of DNA, “the jury must retain its fact-finding function,” the Circuit warned against erecting “a difficult hurdle” to admissibility that “excludes highly relevant evidence simply because it is complicated.” *Id.* at 796. It then applied Federal Rule of Evidence 702 to conclude that the challenged DNA evidence had been properly admitted by the federal district court and affirmed the conviction. *Id.* at 797.

Since *Castro*, Lander has been an activist for the need to reevaluate forensic evidence in criminal trials. As a recent example: in an April 2015 *New York Times* editorial, “Fix the Flaws in Forensic Science,” he wrote, “Troubling, about a quarter of the cases examined by the Innocence Project (on whose board I now serve) involved forensic scientists who had erroneously claimed to identify defendants with near-certainty by matching hair samples, fibers, shoe prints or bite marks.” Available at <http://www.nytimes.com/2015/04/21/opinion/fix-the-flaws-in-forensic-science.html>. In the same editorial, which was published five months before PCAST was given the mandate to examine forensic science, Lander wrote “No expert should be permitted to testify without showing three things: a public database of patterns from many representative samples; precise and objective criteria for declaring matches; and peer-reviewed published studies that validate the methods.”

Perhaps unsurprisingly, as summarized below, the recommendations made by PCAST largely mirror those outlined by Lander in his *NYT* editorial.

In addition to its scientific members, PCAST was advised by lawyers and judges PCAST referred to as “Senior Advisors.” The Senior Advisors include several federal judges and lawyers who have expressed dissatisfaction with forensic science. For example, one of the co-chairs, Judge Harry Edwards (D.C. Cir.), was a co-chair of a committee that prepared a 2009 report titled “Strengthening Forensic Science in the United States: A Path Forward,” available at <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>, that was critical of forensic science and is relied upon in the PCAST Report. Edwards’s report concluded that “much forensic evidence—including, for example, bitemarks and firearm and toolmark identifications—is introduced in criminal trials without any meaningful scientific validation, determination of error rates, or reliability testing to explain the limits of the discipline.” Edwards Report at 107-08.

³ *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).

⁴ The Second Circuit noted that the Eighth Circuit, in a decision that was vacated, briefly adopted the *Castro* analysis. *Jakobetz*, 955 F.2d at 794-95 (citing *United States v. Two Bulls*, 925 F.2d 1127 (8th Cir. 1991). In a later case, the Eighth Circuit held that even if *Two Bulls* had “any precedential value, it ended with *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993).” *Pioneer Hi-Bred Int’l v. Holden Found. Seeds, Inc.*, 35 F.3d 1226, 1229 (8th Cir. 1994). Accordingly, *Castro* should be treated as an anomaly that has been universally rejected—a legal reality not acknowledged in the PCAST Report.

Another PCAST Senior Advisor is Ninth Circuit Judge Alex Kozinski. In an editorial supporting the PCAST Report, which was published on the *Wall Street Journal* website several hours before the Report was made public, Kozinski opined that the Report “will immediately influence ongoing criminal cases, as it provides a road map for defense lawyers to challenge prosecution experts.” See Alex Kozinski, “Rejecting Voodoo Science in the Courtroom,” *Wall Street Journal*, available at <http://www.wsj.com/articles/rejecting-voodoo-science-in-the-courtroom-1474328199>.

II. The Report

PCAST released its Report, titled “Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods,” near midnight on September 19, 2016. This report followed an August 26, 2016 draft that was widely leaked to the press but, as far as we know, not provided through any official channels to stakeholders directly impacted by its conclusions.

As described in greater length below, after creating requirements to assess whether various forensic disciplines are “scientifically valid,” the Report then considers whether the following forensic feature comparison methods meet the test it created: (1) DNA analysis of single-source and simple-mixture samples, (2) DNA analysis of complex-mixture samples, (3) bitemarks, (4) latent fingerprints, (5) firearms toolmark identification, and (6) footwear analysis.⁵ The Report concludes that only DNA analysis of single-source and simple-mixture samples and latent fingerprint science are “foundationally valid”; that some means of analyzing complex-mixture samples are, to be colloquial, better than others; and that bitemarks, firearms toolmark identification, and footwear analysis all lack scientific validity.

A. The Report’s Requirements for “Scientific Validity”

The Report argues that the following requirements should be met before certain areas of forensic science are determined to be “scientifically valid” and thus worthy of admission in federal criminal cases. See Report at 65-66. Because these requirements employ terms of art that PCAST uses in its later analysis and recommendations, the model is summarized and those terms of art are defined here.

1. Foundational Validity

a. Procedure

First, the method itself is capable of identifying features in evidence samples (e.g., identifying the characteristics of a latent fingerprint left at a scene); *second* the method can be used to compare features in two samples (e.g., comparing the latent with a known fingerprint from a suspect); and *third*, the method contains guidance about at what level of similarity the features in the two samples should be declared to be some the same source.

⁵ The Report also refers to a recent DOJ hair analysis evaluation. *Id.* at 67.

b. “Empirical Estimates”

“*Appropriately designed studies*⁶ from multiple groups” that establish (1) the method’s false positive rate (e.g., how often the suspect fingerprint is incorrectly declared to match the latent); and (2) the method’s sensitivity (e.g., the probability that it declares a proposed identification between samples that actually come from the same source). *Id.* at 65.

N.B.: For “objective” methods (defined here to be only DNA analysis), demonstrating reliability of the individual steps is sufficient to fulfill the foundational validity requirement. For “subjective” methods (here, bitemarks, latent fingerprints, firearms identification, and footwear analysis) “black-box” studies⁷ are the only way to establish foundational validity; “[i]n the absence of such studies, a subject feature-comparison method cannot be considered scientifically valid.”

2. Validity as Applied

If, and only if, the forensic feature-comparison method has been established as “foundationally valid,” its validity much be established as applied in every case in which it is used. In essence, this means that the examiner must have passed appropriate proficiency testing and must have applied the appropriate procedures in the specific case in which s/he is testifying. The examiners must also, e.g., report the overall false positive rate and sensitivity.

B. The Report’s Findings Regarding Forensic Disciplines

After establishing its requirements for forensic methods to be considered foundationally valid and valid as applied, the Report then considers whether the following forensic feature comparison methods are “scientifically valid and reliable”: (1) DNA analysis of single-source and simple-mixture samples, (2) DNA analysis of complex-mixture samples, (3) bitemarks, (4) latent fingerprints, (5) firearms identification, and (6) footwear analysis.⁸ *Id.* at 67-122.

PCAST notes that it “expects that some forensic feature-comparison methods may be rejected by courts as inadmissible because they lack adequate evidence of scientific validity.” *Id.* at 122. Here are the Report’s findings:

1. DNA Analysis of Single-Source and Simple-Mixture Samples

Single-source DNA—a DNA sample from only on person—and simple-mixture DNA—DNA from two people, such as DNA from rapist and a victim obtained from a rape kit—are

⁶ The Report contains “a number of criteria” that should be satisfied by a study, including that it is “conducted or overseen by individuals or organizations with no stake in the outcome” and that “there should be multiple independent studies by separate groups reaching similar conclusions.” *Id.* at 66. Presumably, this would mean that studies done by the very forensic scientists who practice in the areas criticized by the Report would be deemed inappropriately designed, and that until more than one “independent” study has been completed and published, the forensic areas are insufficiently scientifically rigorous to be admitted in court.

⁷ “Black-box studies” are defined as “empirical stud[ies] that assesses a subjective method by having examiners analyze samples and render opinions about the origin or similarity of samples.” *Id.* at 48.

⁸ The Report also refers to a recent DOJ hair analysis evaluation. *Id.* at 67.

foundationally valid. For a particular DNA analysis to be valid “as applied”, the Report states, a testifying expert must have “undergone rigorous and relevant proficiency testing,” should disclose in report whether s/he was told any facts about the case that “might influence the conclusion”; “should disclose, upon request, all information about quality testing and quality issues in his or her laboratory.” *Id.* at 69; *see also id.* at 147.

2. DNA Analysis of Complex-Mixture Samples

The Report is relatively agnostic about whether the analysis of DNA from “complex mixtures”—that is, from more than two contributors—is foundationally valid. It concludes that one “subjective” method, Combined-Probability-of-Inclusion, “**is not foundationally valid,**” but allows that courts might nonetheless consider admitting evidence obtained from that method if the analysts followed “rules specified” in a recent paper. *Id.* at 82. A second “objective” method, Probabilistic Genotyping, is described as “**a relatively new and promising approach**” for which foundational validity has not yet been established. *Id.* at 82; *see also id.* at 148. It nonetheless concludes that additional studies by “multiple groups, *not associated with the software developers*” are necessary to establish whether Probabilistic Genotyping is foundationally valid. *Id.* at 79.

3. Bitemarks

The Report concludes that bitemark analysis does “**not meet the standards for foundational validity,**” and cites several studies that supported that conclusion. *Id.* at 82; *see also id.* at 148. The Report adds that it is unlikely that bitemark analysis could ever be scientifically valid and “advise[s] against” devoting resources into additional professionalization and study. *Id.* at 87.

4. Latent Fingerprints

The Report “applauds the FBI’s efforts” in completing several black-box studies to assess the foundational validity of latent fingerprint analysis and “white-box” studies designed to assess validity as applied. After reviewing eight latent fingerprint studies, the Report concludes that only two were “properly designed” and recommends that jurors be informed there were “only two properly designed studies of the accuracy of latent fingerprint analysis,” and that those studies revealed false positives as high as one-in-18—what it refers to as “substantial.”⁹ *Id.* at 96, 101. The Report also recommends, without any empirical support, that jurors also be told that, because examiners in the studies “were aware they were being tested, the actual false

⁹ The study from which the one-in-18 error rate is cited is unpublished, and this conclusion is at odds with that reached by the study itself, as the authors concluded that 35 of the 42 false positives—out of 995 examinations—were likely because the participants made clerical errors. *Id.* at 94-95. If the study’s author’s conclusions were respected, the error rate would be one error in 73 cases, rather than one out of 18. Moreover, the study included some verification by a second examiner—a process used by the FBI. *Id.* at 90. In that verification portion, every single error was caught by the second examiner. *Id.* at 96 n.285. Thus, in cases in which a second examiner verifies the conclusions of the first, the data suggests that the false positive rate is vanishingly small. The Report nonetheless suggests that jurors be informed that fingerprint examiners may incorrectly report a match in over 5% of the cases they examine.

positive rate in casework may be higher.” *Id.* at 101, 149. Nevertheless, the Report concludes that latent fingerprints are **foundationally valid**. *Id.* at 149.

The Report also concludes that examiners must “complete and document their analysis of a latent fingerprint before looking at any known fingerprint” and “separately document any additional data relied upon” to compare the latent and known fingerprints added after the comparison began.¹⁰ *Id.* at 100. As the Report required for DNA examiners, it states that each fingerprint examiner must undergo “regular and rigorous proficiency testing,” for his or her analysis in a case to be valid as applied. Moreover, the Report states that it must be established in every case that the latent prints are “of the quality and completeness represented in foundational validity studies,” and instructs that “courts should assess the measures taken to mitigate bias during casework” by “ensuring that examiners are not exposed to potentially biasing information...” *Id.* at 101, 149.

5. Firearms Identification

The Report concludes that firearms analysis—that is, determining whether a bullet was fired from a particular firearm—“**currently falls short of the criteria for foundational validity**” because only one “appropriately designed study” exists. (That study found a false positive rate of one-in-66, but because PCAST found the other seven studies it reviewed to be incorrectly designed, it didn’t consider firearms identification to have been subjected to sufficiently rigorous testing to permit juries to consider evidence or testimony from firearms analysts. *Id.* at 112). The Report adds:

Whether firearms analysis should be deemed admissible based on current evidence is a decision that belongs to the courts. If firearms analysis is allowed in court, the scientific criteria for validity as applied should be understood to require clearly reporting the error rates seen in appropriately designed black-box studies (estimated at 1 in 66, with a 95 percent confidence limit of 1 in 46, in the one such study to date).

Id. at 112, 150. If firearms analysis is allowed in court, PCAST’s validity analysis requires, once again, a proficient expert who discloses any facts of which s/he was aware that might influence her/his conclusion. *Id.*

6. Footwear Analysis

The Report does not address whether examiners can reliably determine “class characteristics” of shoes—e.g., if a shoeprint was made by a size 12 Nike Air Jordan released in 2014. Instead, it considers whether a court should introduce expert testimony that a particular piece of footwear—e.g., the size 12 Nike in the defendant’s closet—made a particular shoeprint. Because none of the three studies PCAST located were, in its estimation, correctly designed, it concluded that any conclusions reached by footwear analysts were “**unsupported by any meaningful evidence or estimates of their accuracy and thus are not scientifically valid.**”

¹⁰ Only if that process is used, the Report suggests, is latent fingerprint analysis foundationally valid. *Id.* at 101.

Id. at 150. The Report did not include any specific directions to courts—unlike for firearms analysis.

7. Hair Analysis

PCAST relied entirely on the materials the DOJ cited for the DOJ’s Proposed Uniform Language for Testimony and Reports for the Forensic Hair Examination Discipline (the “DOJ Proposal”).¹¹ While the Report does not explicitly state that hair analysis lacks foundational validity, it disagrees with the DOJ Proposal, which concludes that “microscopic hair comparison has been demonstrated to be a valid and reliable scientific methodology...” *Id.* at 118. In rather pointed language, PCAST states that the studies the DOJ cited in support of that conclusion “do not provide a scientific basis for concluding...a valid and reliable process” *id.* at 120, as they were “strongly criticized by other studies for flawed methodology,” *id.* at 118.

The PCAST Report then suggests that the DOJ faces “constraints” in undertaking scientific evaluations of forensic science “because critical evaluations by the DOJ might be taken as admissions that could be used to challenge past convictions or present prosecutions,” underscoring the need for “a science-based agency” not involved with the criminal justice system to carry out “evaluations of scientific validity and reliability.” *Id.* at 122.

C. The Report’s Recommendations to the Federal Government

After concluding that several forensic science disciplines lack foundational validity, the Report makes recommendations to federal science-based agencies, the FBI Laboratory, the U.S. Attorney General and her prosecutors, and the federal bench. In summary, those recommendations are that the science-based agencies and the FBI secure millions of dollars to do more research and then do that research; and that the Attorney General and federal judges do not seek to admit, or admit into evidence, evidence from the forensic disciplines that PCAST has determined lack “foundational validity.”

1. Science-Based Agencies

The Report recommends that NIST (the National Institute of Standards and Technology) take the lead in designing and implementing studies, and in assessing the foundational validity and reliability of laboratory techniques and practices. *Id.* at 124, 128. It also recommends that NIST prepare an annual report “evaluating the foundational validity of key forensic feature-comparison methods, based on available, published empirical studies.” *Id.* at 124, 128-129. The Report suggest that NIST should help “propel” a “transformation” in complex DNA analysis, latent fingerprint analysis, and firearms analysis from subjective (human read) to objective (machine read) analyses. *Id.* at 125.

¹¹ DOJ’s Forensic Science Discipline Review is studying the areas of forensic science in the PCAST Report, but uses a much more transparent procedure to solicit feedback and criticism from the stakeholders who will be impacted by any FSDR recommendations. The impact of the PCAST Report on the FSDR process is difficult to predict.

NIST has been working with the forensic science community to establish the Organization of Scientific Area Committees for Forensic Science (OSAC).¹² *Id.* at 126, 129-130. PCAST criticizes OSAC as being “dominated by forensic professionals” and “concludes that OSAC lacks sufficient independent scientific expertise and oversight to overcome the serious flaws in forensic science.” *Id.* at 126. It recommends that OSAC be restructured and specifies a new committee that should be formed within OSAC that would be composed entirely of non-forensic scientists and statisticians. *Id.* It also recommends that any standards under review by OSAC be made available without cost to, e.g., indigent defendants. *Id.*

The Report notes that funding for research in forensic science is “extremely small,” and recommends “[s]ubstantially larger funding...” *Id.* at 127. PCAST says the “President should request and Congress should provide” \$14 million more to NIST than is currently appropriated. *Id.* at 129.

2. The FBI Laboratory

PCAST recommends that the FBI increase the research community’s access to its forensic database. *Id.* at 132-33. It also recommends that the FBI’s Research and Development budget be “increased to a total of \$20 million”¹³ in order to facilitate an expanded research program. *Id.* at 135.

3. The Attorney General

The Report recommends that the DOJ “ensure that testimony about forensic evidence presented in court scientifically valid.” *Id.* at 136, 140. The Report suggests that DOJ: undertake a review of forensic feature-comparison methods (beyond those reviewed in this report) to identify which methods used by DOJ lack appropriate black-box studies necessary to assess foundational validity. Because such subjective methods are presumptively not established to be foundationally valid, DOJ should evaluate (1) whether DOJ should present in court conclusions based on such methods and (2) whether black-box studies should be launched to evaluate those methods.

Id. at 136.

The Report states that if there are “not adequate empirical studies and/or statistical models to provide meaningful information about the accuracy of a forensic feature-comparison method, DOJ attorneys and examiners should not offer testimony based on the method. If it is necessary to provide testimony concerning the method, they should clearly acknowledge to courts the lack of such evidence.” *Id.* at 141. **The corollary to this, based on the above, is that**

¹² NIST describes OSAC here: <https://www.nist.gov/forensics/organization-scientific-area-committees-forensic-science>.

¹³ Or perhaps \$30 million; the Report is inconsistent. Compare *id.* at 132 (\$20 million) with *id.* at 135 (“The President should request and Congress should provide increased appropriations to the FBI to restore the FBI Laboratory’s budget for forensic science research activities from its current level to \$30 million and should evaluate the need for increased funding for other forensic-science research activities in the Department of Justice.”).

PCAST is recommending that the DOJ not seek to introduce evidence from the following disciplines: DNA analysis of complex-mixture samples—particularly those done with Combined Probability of Inclusion methods—bitemarks, firearms identification, footwear analysis, and hair analysis.¹⁴

In underscoring why its recommendations should be followed, Report states, without citation to any source, that improper forensic testimony has “led to many wrongful convictions.” *Id.* at 140.

The Report then criticizes, again, the DOJ’s hair science review process and suggests that the DOJ’s proposed uniform language for testimony and report for forensic footwear and tire impressions “have serious problems.” *Id.* at 137-138. It then recommends that the Attorney General “revise and reissue for public comment” these proposals “to bring them into alignment with standards for scientific validity.” *Id.* at 140-141.

4. The Federal Judiciary

PCAST summarizes its recommendation to federal judges regarding “scientific criteria” for admissibility as follows:

Scientific validity and reliability require that a method has been subjected to empirical testing, under conditions appropriate to its intended use, that provides valid estimates of how often the method reaches an incorrect conclusion. For subjective feature-comparison methods, appropriately designed black-box studies are required, in which many examiners render decisions about many independent tests (typically, involving “questioned” samples and one or more “known” samples) and the error rates are determined. Without appropriate estimates of accuracy, an examiner’s statement that two samples are similar—or even indistinguishable—is scientifically meaningless: it has no probative value, and considerable potential for prejudicial impact. Nothing—not personal experience nor professional practices—can substitute for adequate empirical demonstration of accuracy.

Id. at 143.

While the Report purports to make only scientific, not legal recommendations, it is hard to view the “scientific criteria” as doing anything but requiring a legal conclusion regarding admissibility consistent with PCAST’s recommendations regarding “foundational validity.” Indeed, PCAST itself links “foundational validity” to Federal Rule of Evidence 702(c) and “validity as applied” to Rule 702(d). *Id.* at 145.

¹⁴ While the Report does not explicitly conclude that hair analysis lacks foundational validity, it strongly suggests that conclusion—and, in inviting the DOJ to do its own analysis, it is difficult to see where such an analysis under the PCAST “standards” would find hair analysis foundationally valid.

PCAST notes that, in seeking “advice from our panel of Senior Advisors” regarding whether to afford legal precedent any weight, it was “advised that the Supreme Court has made clear that a court may overrule precedent if it finds that an earlier case was ‘erroneously decided and that subsequent events have undermined its continuing validity.’” *Id.* at 144 n. 387, 144. In the Report, PCAST claims to “express[] no view on the legal question of whether any past cases were ‘erroneously decided.’” PCAST then states that, “from a scientific standpoint, subsequent events have indeed undermined the continuing validity of conclusions that were not based on appropriate empirical evidence,” thus **inviting federal judges to overrule settled precedent regarding the admissibility of DNA analysis of complex-mixture samples, bitemarks, firearms identification, footwear analysis, and hair analysis.** *Id.* at 144.

III. Responses to the Report

A. The U.S. Department of Justice

U.S. Attorney General Loretta Lynch has stated that the DOJ “will not be adopting the recommendations related to the admissibility of forensic science evidence.” The statement, which is released to media outlets when they seek a comment about the PCAST Report, reads in full:

Over the past several years, the Department of Justice has taken unprecedented steps to strengthen forensic science, including new investments in forensic science research, draft guidance to lab experts when they testify in court, and reviews of forensic testimony in closed cases. We remain confident that, when used properly, forensic science evidence helps juries identify the guilty and clear the innocent, and the Department believes that the current legal standards regarding the admissibility of forensic evidence are based on sound science and sound legal reasoning. We understand that PCAST also considered the issue of certain legal standards, alongside its scientific review. While we appreciate their contributions to the field of scientific inquiry, the Department will not be adopting the recommendations related to the admissibility of forensic science evidence.

B. The Federal Bureau of Investigation

The FBI has released a one-page response to the Report, available at <https://www.fbi.gov/file-repository/fbi-pcast-response.pdf/view>. In that response, it agrees with PCAST that “forensic science plays a critical role in the criminal justice system” and thus “needs to be held to high standards,” and that additional funding is needed to “develop stronger ties between the academic research community and the forensic science community.”

The FBI then criticizes both the Report’s “broad, unsupported assertions regarding science and forensic science practice,” and PCAST’s decision to “create[] its own criteria for scientific validity.” The response also notes, correctly, that PCAST doesn’t even apply this invented and subjective criteria “consistently or transparently” and that PCAST ignores “numerous published research studies which seem to meet PCAST’s criteria...”

C. The Media

The media response to the Report has taken the assertions and recommendations at face value. Articles and Op-Eds published this week include:

- “White House Advisory Council Report Is Critical of Forensics Used in Criminal Trials,” *Wall Street Journal*:¹⁵ The Report “sets the stage for criminal-defense challenges of long-held evidentiary methods and promises increased courtroom battles with prosecutors over the use of expert witnesses.”
- Judge (and PCAST Senior Advisor) Harry T. Edwards, “A wake-up call on the junk science infesting our courtrooms,” *Washington Post*:¹⁶ The Report “persuasively explains” that “bite mark analysis, firearms identification, footwear analysis and microscopic hair comparisons ... have not yet been proved to be reliable forms of legal proof.” Edwards adds “What is noteworthy about the new report is that it is written solely by eminent scientists who carefully assess forensic methods according to appropriate scientific standards.”
 - *Note*: this is likely to be the piece that resonates most with judges.
- “Obama’s science advisors: Much forensic work has no scientific foundation,” *Ars Technica*:¹⁷ “The report finds that all of the techniques have problems when it comes to operating on a firm scientific footing, so PCAST makes strong recommendations for how to get forensic science to take its name seriously.” (Also accepts Lander’s claim that the *Castro* case led to “reforms and analysis that eventually put the field on firm scientific footing”)

IV. Next Steps for Prosecutors

The Report is likely to lead to defense challenges regarding the admissibility of forensic evidence in “live” criminal cases and attacks on convictions—both as direct appeals and as collateral challenges.¹⁸ It is also likely to confuse the public, particularly given the one-sided treatment in the media of the recommendations it makes. That said, it could serve as a bit of a “call to arms” for prosecutors to jointly address the legal challenges to the admissibility of valid and reliable forensics evidence and to better inform themselves about the benefits and limits of forensic science.

¹⁵ <http://www.wsj.com/articles/white-house-advisory-council-releases-report-critical-of-forensics-used-in-criminal-trials-1474394743>

¹⁶ https://www.washingtonpost.com/opinions/a-wake-up-call-on-the-junk-science-infesting-our-courtrooms/2016/09/19/85b6eb22-7e90-11e6-8d13-d7c704ef9fd9_story.html?utm_term=.996c9e5cbee6

¹⁷ <http://arstechnica.com/science/2016/09/obamas-science-advisors-much-forensic-work-has-no-scientific-foundation/>

¹⁸ For example, the Report may be used to argue that a defense attorney who stipulated to the admissibility of—or did not vigorously attack—ballistics toolmark evidence was constitutionally ineffective.

A. Addressing Legal Challenges: A Preliminary Assessment

The Report's legal analysis—while couched as a recommendation based on science—runs counter to settled caselaw regarding the admissibility of expert evidence. The analysis that follows is quite preliminary and does not purport to be an exhaustive review of the relevant legal standards or an assessment of how those standards have been applied throughout the states.

The Report suggests judges consider forensic evidence through a lens like that the Second Circuit rejected in *Jakobetz*: one that adds the additional element added by the judge in *Castro*—and one rejected by other courts throughout the land. The Report invites judges to usurp the role of jurors as factfinders—and, frankly, the role of defense counsel as informed partisans—by erecting “difficult hurdle[s]” that would “exclude[] highly relevant evidence simply because it is complicated.” *United States v. Jakobetz*, 955 F.2d 786, 796 (2d Cir. 1992). Moreover, while the Report cites *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993), it does not properly describe the clear directions the Supreme Court provided to judges assessing the admissibility of expert testimony.

1. *Daubert* Standard

Federal courts and some state courts follow *Daubert* and Federal Rule of Evidence 702, which direct judges to apply “a more liberal standard of admissibility for expert opinions than did *Frye v. United States*, 293 F. 1013, 1014 (D.C. Cir. 1923),” *Williams*, 506 F.3d at 161-62 (quoting *Daubert*, 509 U.S. at 588). As a recent Second Circuit Court of Appeals summarized the *Daubert* test:

An expert witness is “permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation,” but only after a trial judge has determined “whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue”...

Querub v. Moore Stephens Hong Kong, 15-2100 (Civ), 2016 U.S. App. LEXIS 9213 (2d Cir. N.Y. May 20, 2016) (unpublished) (quoting *Daubert*, 509 U.S. at 591-92).

As an example, the Second Circuit considered whether ballistics testimony—like that found by PCAST to lack “foundational validity”—was properly admitted by a trial court. *United States v. Williams*, 506 F.3d 151, 160-62 (2d Cir. 2007). The court below had denied the defendant's request for a full-blown *Daubert* hearing regarding the testimony, and had instead ruled on the papers submitted by the parties, which included:

- citations by the Government to other recent decisions admitting similar evidence
- information from the Government about the expert's training and experience, including her years spent examining firearms (12); her “hands-on training” from her supervisor; her attendance at seminars on firearms examiner; publication of her writings in a peer-reviewed journal; the number of firearms she'd examined (2,800); and her prior expert testimony on 20-30 occasions

Id. at 161. The Circuit easily concluded that the trial judge had fulfilled her gatekeeping function, given the information provided by the Government, and that there was no need for the “formality of a separate hearing.” *Id.*

2. *Frye* Standard

Other state courts apply the stricter *Frye* standard, including New York and Maryland. But as noted by the New York Court of Appeals in *Wesley*—and the Second Circuit in *Jakobetz*—even that standard does not erect the high hurdle proposed by the PCAST Report. *Wesley*, 83 N.Y.2d at 436; *Jakobetz*, 955 F.2d 794.

Under *Frye*, 293 F. 1013, scientific opinion testimony is admissible if the scientific principles involved are generally accepted in the relevant scientific community. The Criminal Practice Manual describes *Frye* as holding that: “expert testimony concerning scientific evidence must rest on a scientific principle that is demonstrably reliable and not still in the experimental stages[.]” 2 Crim. P. Man. §733:3 (LexisNexis 2016).

Frye states:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of the principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs.

293 F. at 1014. Thus, a ruling on admissibility under *Frye* distinguishes between the case-specific application of scientific principles and the underlying scientific principles themselves. It is not the expert’s opinion in a particular case, but rather “the thing from which the deduction is made [which] must be sufficiently established to have gained general acceptance in the particular field in which it belongs.” *Frye*, 293 F. at 1014.

For example, in Maryland, “an expert opinion must be based on a scientific method or principle that has gained general acceptance in the *relevant* scientific community.” *Ross v. Hous. Auth. of Balt. City*, 430 Md. 648, 660 n.10, (Md. 2013) (emphasis added). Even under this standard, as the Maryland Court of Appeals has held, “the validity and reliability of a scientific technique may be so broadly and generally accepted in the scientific community that a trial court may take judicial notice of its reliability. Such is commonly the case today with regard to ballistics tests, fingerprint identification, blood tests, and the like.” *Reed v. State*, 283 Md. 374, 391 A.2d 364 (1978) (adopting standard set forth in *Frye*).

Given that the PCAST Report is authored by scientists who are in no way members of the “relevant scientific community” in the disciplines they disavow, an argument can be made that none of their “findings” undercut the validity of, e.g., ballistics evidence. In many ways, the PCAST Members are akin to experts in mergers and acquisitions suggesting reforms to the

probable cause standard: they may be quite smart and well-versed in their field, but the fact that they happened to also be members of the same profession gives them no standing to dictate a sea change in areas in which they have no expertise.

B. Educating Prosecutors and Forensic Scientists

The PCAST Report has underscored the importance of prosecutors understanding the potential and limits of forensic science. The studies cited about bitemark analysis suggest that it is largely discredited—or “bad science.” As no good prosecutor ever wants an innocent person to be incarcerated based on faulty science—or any other inaccurate evidence—the PCAST Report can provide a useful stimulus for prosecutors to become informed about the proper use of forensic science in criminal investigations and trials.

As a result, the Report should stimulate conversations among federal, state, and local prosecutors about the legal issues in admitting forensics testimony—that is, how to thoughtfully address the inevitable “PCAST Motions” that will be made in an effort to remove valid and reliable evidence from jurors’ purview and to disturb settled verdicts. This highlights the need for trainings to ensure that prosecutors understand the scientific and logical support for, and factual bases of, forensic testimony they would seek to admit and defend.