Thank You for Testifying: The Need to Re-examine Admission of Expert Testimony under Rule 703 in Relation to the Confrontation Clause in Light of Williams v. Illinois

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Thank You for Testifying: The Need to Re-examine Admission of Expert Testimony under Rule 703 in Relation to the Confrontation Clause in Light of *Williams v. Illinois*

By: ¹

In 2009, in *Melendez-Diaz v. Massachusetts* the Supreme Court ruled that forensic laboratory reports were testimonial hearsay, and as such, prosecutors could not submit the reports in lieu of live testimony of the forensic analyst who had prepared them.² Two years later, in *Bullcoming v. New Mexico*, the Court held that prosecutors could not introduce such reports through a surrogate analyst who did not participate in the testing or review the results.³ Those cases left open a couple of thorny issues: 1) could a surrogate analyst testify to the results of the report in place of the original lab analyst if he or she had conducted an independent analysis of the data; and 2) could the report’s results be introduced as basis evidence under Rule of Evidence 703 to help explain that expert’s reliance on the report in forming his own independent opinion?

These questions looked like they might get answered this past term when the Court granted certiorari in *Williams v. Illinois*.⁴ There, the prosecution submitted evidence that the DNA profile obtained from the Defendant matched a DNA profile derived from vaginal swabs taken from the rape victim. It did not call the DNA analyst who had prepared the profile from the rape kit, nor did it admit the actual DNA report. Instead, the prosecution called an expert from another crime lab to testify that the two DNA profiles matched. As part of her testimony, the expert testified to the source of the evidentiary profile. The case had at its core a seemingly straightforward question: does introduction of the basis of an expert’s opinion (the results of a testimonial laboratory report) violate the Confrontation Clause in the absence of the testimony of the analyst who prepared the original report? Based on the outcomes of *Melendez-Diaz* and *Bullcoming*, the answer would seem to have been “yes.” As the Atlantic’s Andrew Cohen lamented after the opinion was released, however, this decision “should have been simple. But not with these justices.”⁵

Not only did the Court fail to satisfactorily answer the above questions in its ruling, it muddied the waters as to what constitutes testimonial hearsay in the context of forensic laboratory reports. Instead, a plurality found that the introduction of basis evidence during an expert’s testimony did not implicate the Confrontation Clause since such statements are offered not to prove the truth of their contents but merely to explain the assumptions on which the expert based his opinion.⁶ The Court also offered a second,

¹ The author is .
³ 131 S.Ct. 2705 (2011).
⁶ Williams, 132 S.Ct. at 2240.
independent basis for its decision—the DNA profile at issue was not testimonial since, at
the time of testing, it was not sought to obtain evidence against an identified suspect.  

Only four justices signed on to this line of reasoning, however. Justice Thomas
concurred that the lab report was nontestimonial in this instance but roundly criticized the
plurality’s reasoning. Justice Thomas concluded that the report at issue was not formal
enough to be considered testimonial since it had not been sworn to or certified by either
the analyst who performed the test or the reviewers. Four justices dissented, finding that
the reference to the Cellmark report was testimonial, and that the expert’s testimony
regarding the source of the DNA profile should have been excluded as a result. 

The Court failed to clarify the standards courts should use in evaluating forensic reports
under the Confrontation Clause. Instead, it created a gaping loophole through which
prosecutors can introduce the results of forensic laboratory reports without calling the
analysts who created them. If the courtroom demeanor or credibility of a witness is in
question, the prosecution can now simply call an expert to testify to his own independent
analysis of the data and introduce the details of his report under the guise that they
provide the factfinder with the basis for that opinion.

Although it did not overrule Melendez-Diaz and Bullcoming, the plurality did its best to
attack the foundation of those precedents. As Elena Kagan wryly noted in dissent, “in all
except its disposition, his [Alito’s] opinion is a dissent.” The Court tried to dodge the
Confrontation Clause issue by holding that the basis evidence was admitted for a
nonhearsay purpose and thus was not covered by the Clause. As if unpersuaded by the
weakness of its own argument, the plurality then created a modified primary purpose test
to assess the testimonial nature of statements that will leave lower courts scratching their
heads as to its legitimacy and applicability. In order to be testimonial, statements must
now be made with the primary purpose of producing evidence as well as being directed
against a previously identified suspect. The plurality seemed to pull this second
requirement out of thin air. Why, for example, would a fingerprint report that fails to
match any known individuals at the time it was prepared, but later confirms the identity
of the perpetrator, be any less testimonial than one that confirms the identity of a known
suspect at the time it is prepared? Both produce evidence of the suspect’s guilt. Both
attest to the true and accurate nature of the contents of the report. Both serve as a
substitute for in-court testimony.

This article attempts to answer the questions left unanswered by Melendez-Diaz,
Bullcoming, and now Williams. Part I discusses the differences between the different
types of surrogate witnesses and what role they may play in developing and reviewing
forensic reports. It also discusses what facts such surrogates can and cannot adequately

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7 Id. at 2243.
8 Id. at 2260 (Thomas, J., concurring).
9 Id. at 2265 (Kagan, J., dissenting).
10 Id.
11 Id. at 2243.
address on the witness stand by providing an overview of the errors that can be committed by analysts, and the review process that most forensic reports undergo. It also discusses what errors can be effectively detected by the reviewer. Part II discusses Rule 703, including the various foundational requirements for admission of expert testimony and the hearsay questions that such testimony raises. It also provides a brief history of the Supreme Court’s Confrontation Clause jurisprudence as it relates to forensic laboratory reports and discusses how lower courts have resolved those issues with regard to surrogate experts. Part III provides an in-depth look at the Williams decision. It critiques both the Illinois appellate court opinions on the state law foundational issues as well as the Supreme Court’s opinion on the Confrontation Clause question. Part IV proposes a new analysis for the admission of testimony surrounding forensic lab reports. It addresses the questions posed at the outset of this article including whether the introduction of surrogate testimony is the functional equivalent of hearsay for Confrontation Clause purposes and when surrogate experts should be allowed to testify.

I. Surrogate Witnesses

Forensic evidence plays a significant role in many criminal prosecutions. Testing and analysis of physical evidence can provide the key evidence that links a suspect to a crime. Types of forensic experts that are commonly called to testify in court include pathologists, DNA technicians, chemists, and fingerprint examiners. While the testing process can involve a number of individuals in the laboratory, a lead analyst usually prepares the report, signs it, and verifies its contents. When the original lead analyst is unable to testify (or in some cases is undesirable as a witness), a surrogate witness is selected to appear in his place. Surrogate witnesses are selected from three sources: other analysts in the lab who perform the same type of work as the original analyst, supervisors of the original analyst, and outside experts who share similar expertise to that of the original analyst.

A. Review Process for Forensic Analysis

Surrogates have often served as reviewers for the original analyst’s work. Review of an analyst’s work occurs in three basic ways: a technical review, an administrative review, or verification. During a technical or peer review, another analyst in the lab, who works in the same discipline as the original analyst, reviews the technical details of the first analyst’s work. This involves reviewing all of the notes and data relied upon by the first analyst in reaching his or her conclusions. The reviewer then must determine whether he or she would have reached that same conclusion or come to the same result, given that same information (i.e., that the DNA profile extracted from the crime scene evidence matches the DNA profile obtained from the suspect). A reviewer does not look at the actual item of evidence during this process, however. The purpose of a technical review

12 Phone interview with Kathleen Fetherstone, Denver Regional Laboratory Director for the Colorado Bureau of Investigation, September 13, 2012.
13 Id.
is to catch some or all of the errors that the first analyst may have committed.\textsuperscript{14} For example, the reviewer might catch an analysis error such as attributing a peak in a GC/MS printout to cocaine as opposed to heroin. A reviewer may also find that required written documentation is missing or incomplete for a particular step in the process.

In contrast, an administrative review, usually conducted by the analyst’s supervisor, is done to verify that all of the necessary paperwork in the report or case file is complete. This process usually involves a checklist review, including verifying that the chain of custody is complete, the analyst’s notes are complete and in the file, and that other necessary paperwork has been included in the case file and is in proper order.\textsuperscript{15} After a review is performed, it is documented in the case file along with the identity of the reviewer. Many labs are now requiring that all forensic case files have both an administrative and technical review (or verification where required) performed.

The FBI protocols for conducting DNA analysis provide a good overview of a typical review process. At the FBI lab, DNA analysis is conducted by a three-member team. The team contains a serologist, a PCR biologist, and an examiner.\textsuperscript{16} The serologist verifies that DNA is present in the biological sample submitted for analysis; the biologist extracts the DNA and develops a profile; and the examiner acts a case supervisor.\textsuperscript{17} After a DNA profile is extracted from an evidentiary sample, an initial technical review is performed by the examiner to ensure that FBI protocols were complied with.\textsuperscript{18} In addition, an independent technical review is performed by a second examiner who is not involved in the case. This peer review involves a number of steps, including verifying the accuracy of the file worksheets, the completeness of the chain of custody documents, that all serology controls and testing were performed, that all DNA samples selected were amplified and that all appropriate controls were run. The reviewer then compares his own conclusions with the actual case report to verify that both examiners agree on what conclusions can be drawn from the data.\textsuperscript{19} The Unit Chief then conducts an administrative review of the file to confirm that the case file documents are fully completed and in order.\textsuperscript{20} The examiner then writes a report stating those conclusions and, if necessary, later testifies in court about them.\textsuperscript{21} It should be noted that although an examiner may be involved at critical junctures in the testing process, he generally does not witness most of the work performed.\textsuperscript{22}

\textsuperscript{14} Id.
\textsuperscript{15} Id.
\textsuperscript{17} Id.
\textsuperscript{18} Id. at 30.
\textsuperscript{19} Id. at 32-33.
\textsuperscript{20} Id. at 32.
\textsuperscript{21} Id. at 30.
\textsuperscript{22} Id. at 31.
A verification stage is also required for some forensic disciplines involving comparisons such as firearms and fingerprints. During the verification process, a second analyst must follow standardized protocols now in place at most labs. Unlike a technical review, this process involves a second analyst looking at the actual evidence in question. For instance, a firearms examiner would inspect a cartridge casing under a comparison microscope and compare it to a casing fired from the suspect’s gun. He would then verify whether the first analyst’s conclusion that the two matched was correct.

B. Errors in Forensic Analysis and Testimony

Despite this complex review process, a number of highly publicized cases have come to light in recent years that have shown forensic science is not infallible, and that the reliability of the test results depends heavily on the skill and integrity of the individual analyst. Some convictions have been overturned and many new trials have been granted as a result. In 2009, the National Academy of Sciences released a report criticizing the scientific underpinning of many forensic disciplines and called for additional research to strengthen their scientific foundation. It also emphasized the need for increased training and standardization of crime labs and personnel across the country. In 2012, the FBI and Justice Department announced that they were conducting a full-scale review of thousands of cases to determine whether any defendants were wrongfully convicted or deserved new trials as a result of flawed forensic evidence. These stories highlight the need for court supervision over the admission of forensic evidence.

Two basic types of errors in forensic analysis can occur: the analyst can improperly conduct the testing process itself, and the analyst can misinterpret or misrepresent the results. Errors in the testing process occur in a number of ways: the analyst can accidentally or negligently fail to perform the test according to prescribed protocol; the analyst can intentionally fail to perform the test according to prescribed protocol; the samples can be mislabeled making the reported results not match the actual samples; the analyst may suffer from some unconscious or conscious bias, skewing the results of the test; or theft or alteration of evidence can occur. The errors can perpetuate themselves on the witness stand when the expert embellishes the significance or statistical probabilities of the test results, or worse, fraudulently misrepresents the findings.

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23 Id.
24 Id.
As an example of negligent evidence testing, the Colorado Department of Health reported in April of 2012 that 1,700 blood samples had to be retested because an analyst failed to follow standard protocols in performing the alcohol tests. Some of the retested samples had significantly lower alcohol levels than first reported. The error was discovered when an outside lab retested one of the samples and reported a significant discrepancy with the result obtained by the state’s analyst. The analyst was fired after the incident. He asserted that the mistakes were not his fault since he had only been on the job five months and alleged his supervisor failed to properly review his work for errors.

Examples of unethical behavior by lab analysts have been recently documented as well. In 2012, a chemist for the Massachusetts State Police lab was caught forging signatures on paperwork and falsifying laboratory reports. A police investigation revealed that the chemist had reported performing chemical analysis tests on a high number of drug samples when in fact she had actually tested only about 1 in 5 samples (so-called dry-labbing). She also overreported weights on a number of drug samples to reach the statutory cutoff for mandatory sentencing. She also failed to perform quality control procedures for all drug tests done in the lab.

The 2004 Madrid subway bombing case represents an instance of where unconscious bias may have been injected into the testing and review process of a fingerprint examination. An FBI fingerprint examiner identified a partial latent fingerprint found at the scene as belonging to Brandon Mayfield, an attorney living in the United States. Two other examiners confirmed the first analyst’s conclusions. However, the identification was found to be erroneous after Spanish officials later attributed the print to an Algerian terrorist. A review of the case was conducted by the Office of the Inspector General. The report concluded that several factors contributed to the misidentification.

First, the OIG panel concluded that the original examiner had failed to conduct a complete analysis of the latent print before inputting data into the Integrated Automated Fingerprint Identification System (IAFIS) to look for matching prints. Second, Mayfield’s print and the evidentiary print contained 10 points of similarity, an

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31 Id.

extraordinarily high number for two nonmatching prints. Consequently, this may have caused the original examiner to ignore dissimilarities or nonmatching features between the two prints.\(^3\) The panel found that the IAFIS “match” influenced the analyst’s initial identification since he was operating from the mindset that the computer had identified Mayfield’s print as a match to the latent print. The panel also found five characteristics of Mayfield’s print, which the examiner had concluded were present in both the latent print and Mayfield’s print, were not actually present in the latent print.\(^3\) The OIG panel concluded that “once the similarity was noticed, the process of circular reasoning began to infect the examiner’s mental process, particularly in the absence of standards or safeguards to require the examiner to keep distinct which features were seen in the latent during the analysis and which were only suggested during the comparison.”\(^3\) Third, the panel found that the conclusions of two subsequent examiners were tainted by their knowledge of the first examiner’s declaration of a match. Given that the verification of the initial match was done by a retired FBI examiner who had knowledge of the examiner’s opinion, the OIG panel expressed reservations that the review may not have been sufficiently independent. The Chief of the FBI’s Latent Print Unit also admitted that his review of the identification was biased by the prior identifications due to his high regard for the skills of the two examiners. As a result, he did not perform a complete re-examination of the prints.\(^3\)

Even DNA analysis, the so-called gold standard of forensic evidence, is not immune to these problems. While DNA testing has deservedly earned a sterling reputation for the reliability of its technique, this does not mean that DNA testing is infallible. A number of errors can occur, ranging from general incompetence to deliberate misconduct. For instance, a number of analysts have been caught faking the performance of control samples and reagent blanks designed to detect the presence of contamination.\(^3\) Controls are prepared using the same processes that the test sample undergoes to ensure that the reagents used do not contain DNA or that DNA was not otherwise introduced during the testing process.\(^3\) In an effort to prevent detection of their shoddy technique, some analysts have prepared the controls but not run them through machines for analysis. In 2002, the FBI discovered that one of its analysts had engaged in this practice for almost a two-year period.\(^3\)

Mislabling and cross-contamination of DNA samples has also occurred. For example, a rape suspect in Washington pled to a reduced sentence in 2002 after DNA tests showed another man’s DNA was present on the child’s underwear. As it turns out, the analyst

\(^3\) OIG Brandon Mayfield Report, supra note 33 at 127-28.
\(^3\) Id. at 138.
\(^3\) Id. at 150.
\(^3\) Id. at 176.
\(^3\) Thompson, supra note 28, at 12.
\(^3\) OIG DNA Report, supra note 18, at 35.
\(^3\) Id. at 41. At the time, the FBI’s DNA protocols did not require supervisors to review the instrument data to determine if controls had in fact been run. The FBI protocols have since been changed to require this step of reviewers. Id. at 46.
had cross-contaminated the sample with DNA from another case he was working on. A review of the lab showed that analysts had mishandled DNA in 23 other cases, including eight where samples were contaminated with the analyst’s own DNA.\textsuperscript{40}

Supervisory reviews and quality assurance checks do detect many of these errors before they make their way to the courtroom. For example, in 2009, the Colorado Springs crime lab reported that blood-alcohol results had been reported too high in 82 DUI cases. The error was discovered during a routine quality control check.\textsuperscript{41} The effort to make reviews mandatory in one hundred percent of cases has also helped reduce the number of errors making their way to the courtroom. Not all errors are easily detected during the review process, however. For example, contamination errors such as the suspect’s DNA being transferred from another source into an evidentiary sample can give a false positive result that can fool reviewers. The error is not obvious because there is another plausible explanation—i.e., that the suspect is the source of the DNA.\textsuperscript{42} Furthermore, the review process itself may not be as rigorous as it needs to be in all labs. For instance, questions about the Massachusetts chemist’s work detailed above began to arise in 2010, but supervisors conducted only paperwork reviews and did not retest any of the samples she had allegedly dry-labbed.\textsuperscript{43}

II. Rule of Evidence 703 and the Confrontation Clause

Before analyzing the Williams decision, it is necessary to explain the relationship between the hearsay rule, the Confrontation Clause, and the foundational requirements underlying an expert’s opinion under Rules 702, 703, and 901. Although the United States Supreme Court concerned itself only with the Confrontation Clause issue in Williams, the foundational requirements for the admission of expert testimony are equally important to an understanding of the issues raised by surrogate expert testimony and so shall be explained in depth in this article.

A. Admission of Expert Testimony under Rule 703

As it was first adopted, Federal Rule of Evidence 703 permitted an expert to rely on inadmissible evidence such as hearsay in forming his opinion if it was the type of evidence ordinarily relied upon by other experts in that field. Former Rule 703 stated:

> The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the


\textsuperscript{42} Thompson, supra note 28, at 12.

\textsuperscript{43} Murphy, supra note 31.
hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted.\textsuperscript{44}

In 2000, the federal Rule was substantially amended and then restyled in 2011. The current rule keeps the first two paragraphs of the former rule but added a third paragraph intended to discourage the admission of the basis evidence underlying the expert’s testimony. It now reads:

An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed. If experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject, they need not be admissible for the opinion to be admitted. But if the facts or data would otherwise be inadmissible, the proponent of the opinion may disclose them to the jury only if their probative value in helping the jury evaluate the opinion substantially outweighs the prejudicial effect.\textsuperscript{45}

Rule 703 authorizes two separate powers: it permits an expert to rely on facts that are not in the record such as hearsay statements in forming and offering an opinion, and it permits the judge to admit the underlying facts supporting the expert’s opinion if doing so will help the factfinder understand and evaluate the opinion. The rule was designed to “broaden the basis for expert opinions” beyond what was permitted under common law.\textsuperscript{46}

At common law, an expert was only allowed to testify to opinions based on his own personal observations or facts of record. He was allowed to offer an opinion based on facts of record only after being made aware of them in a hypothetical question. Thus, when experts relied upon data produced by others in forming their opinions, the witnesses who had produced that data had to be produced and examined. A record then had to be created to demonstrate what facts or data the expert had relied on and that all those matters had been admitted into evidence.\textsuperscript{47}

The central purpose of Rule 703 is “to promote efficiency by expanding the acceptable bases for expert testimony to include inadmissible evidence such as hearsay.”\textsuperscript{48} Rule 703 was designed to expedite the trial process by eliminating the use of hypothetical questions and shifting the burden from the trial court to the expert in evaluating the basis evidence. By allowing an expert to testify to opinions based on evidence yet to be admitted (or deemed altogether inadmissible), the rule dispenses with the formality of making the proponent of the opinion first establish the foundation for such basis evidence.

\textsuperscript{44} Fed. R. Evid. 703 (1999). Illinois Rule 703 is virtually identical to this former version of Federal Rule 703 and was in effect in Illinois at the time of Williams’ trial.
\textsuperscript{45} Fed. R. Evid. 703.
\textsuperscript{46} Advisory Comm. Notes to Rule 703.
\textsuperscript{48} Id.
evidence. The Advisory Committee explained this purpose of the rule by way of example:

Thus a physician in his own practice bases his diagnosis on information from numerous sources and of considerable variety, including statements by patients and relatives, reports and opinions from nurses, technicians and other doctors, hospital records, and X-rays. Most of them are admissible in evidence, but only with the expenditure of substantial time in producing and examining various authenticating witnesses... His [the doctor’s] validation expertly performed and subject to cross-examination, ought to suffice for judicial purposes.49

Some commentators believe that Rule 703 was not intended to permit the introduction of surrogate testimony. Jesse Norris asserts that:

Allowing a declarant's boss to testify in the declarant's place, relying solely on materials prepared by the declarant in preparation for trial, is a highly anomalous and constitutionally suspect form of expert testimony. The issue is the same when the surrogate is an outside expert: an expert is relying solely on data produced by a nontestifying analyst in preparation for trial. If Congress or Rule 703's drafters anticipated such an application, they certainly left no evidence of this. The Advisory Committee notes describe a scenario that seems as far removed as possible from surrogate testimony: a physician draws on a variety of sources of evidence, most of them admissible, to make an expert decision. Surrogate testimony is the polar opposite of this example, since surrogates rely solely on inadmissible evidence prepared specifically for litigation.50

1. The Reliability Requirement of Rule 703

Rule 703 permits an expert to rely on inadmissible information in forming his opinion as long as it is of a type that other experts in the field would reasonably rely on. Conversely, the court may exclude the testimony if the facts or data relied upon by the expert are not of the type typically relied upon by other experts in that field. For example, the Alaska Supreme Court found that it in forming an opinion about accident causation, it was unreasonable for any expert to have relied on eyewitness accounts of whether sand trucks were deployed on the highway since DOT personnel had firsthand knowledge of this fact.51

Under Rule 703, the court must make a preliminary finding that the underlying data is reliable before the expert’s opinion can be admitted. For example, the comment to

Arizona Rule of Evidence 703 contains an instruction mandating judicial review on the issue of reasonable reliance:

It should be emphasized that the standard “if of a type reasonably relied upon by experts in the particular field” is applicable to both sentences of the rule. The question of whether the facts or data are of a type reasonably relied upon by experts is in all instances a question of law to be resolved by the court prior to the admission of the evidence.\(^{52}\)

An Arizona appellate court explained that the judicial review of the reliability of the underlying facts and data is necessary because Rule 703 “prescribes a foundational hurdle for the admission of expert testimony and requires an adequate foundation be offered to ensure that the data, facts, or methods upon which the expert's opinion is based exhibit sufficient indicia of reliability.”\(^{53}\) In other words, courts need to look beyond the expert’s averment that the data underlying his opinion is the type on which other experts reasonably rely in order to determine the reliability of the foundation on which the opinion rests.

In making this reliability determination, however, courts have often conducted little more than cursory examinations into the reliability of the basis evidence, giving deference to the expert’s affirmation that the basis evidence is within the customary practice of his field.\(^{54}\) McCormick explains that this deference is proper because “[i]t is reasonable to assume that an expert in a science is competent to judge the reliability of statements made to him by other investigators or technicians.”\(^{55}\) The Hawaii Court of Appeals further explained it as follows:

The rationale for this provision is that experts in a given field can be presumed to know what sort of evidence is sufficiently trustworthy for them to use as a basis for their opinions. Thus, if experts in the relevant field use a particular type of evidence for their out-of-court opinions, that evidence usually is a sufficiently trustworthy basis for in-court opinions, regardless of the admissibility of that evidence.\(^{56}\)

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52 Advisory Committee cmt. to Ariz. R. Evid. 703.
54 See e.g., People v. Kelly, 549 P.2d 1240 (Cal. 1976) (reliability of underlying data goes to weight not admissibility of expert testimony); Wilson v. Clark, 417 N.E.2d 1322 (Ill. 1981) (“the key element in applying Federal Rule 703 is whether he information upon which the expert bases his opinion is of a type that is reliable”).
56 Wilson, 2009 WL 48141 at 25.
Thus, courts have often left issues surrounding the reliability of the expert’s opinion to be tested by cross-examination rather than by judicial review during a pretrial hearing.\footnote{In re Village of Bridgeview, 487 N.E.2d 1109, 1114 (Ill. App. 1985) (“specific evidence of unreliability is a proper subject for impeachment of the expert’s opinion”).}

The judge should not give the expert absolute deference under Rule 703, however. Judge Weinstein stated in the Agent Orange litigation that “if the underlying data are so lacking in probative force and reliability that no reasonable expert could base an opinion on them, an opinion which rests entirely upon them must be excluded.”\footnote{In re Agent Orange Liab. Litig., 611 F. Supp. 1223, 1245 (E.D.N.Y. 1985), aff’d 818 F.2d 187 (2d Cir. 1987).} He noted that this reliability determination “requires at least that the expert base his or her opinion on sufficient factual data, not rely on hearsay deemed unreliable by other experts in the field, and assert conclusions with sufficient certainty to be useful given applicable burdens of proof.”\footnote{In re Agent Orange Liab. Litig., 611 F. Supp. at 1244.} Consequently, a trial court should not permit an expert to testify to an opinion if the foundational facts and data underlying that opinion are unreliable because “any opinion drawn from that data is likewise unreliable.”\footnote{Merrell Dow Pharmaceuticals, Inc. v. Havner, 953 S.W.2d 706, 714 (Tex. 1997).} The Third Circuit equated this process with the judge’s gatekeeper function under Rule of Evidence 702: \textit{Daubert} makes clear for the first time at the Supreme Court level the courts have to play a gatekeeping role with regard to experts. . . By requiring the judge to look to the views of other experts rather than allowing the judge to exercise independent judgment [under Rule 703], current Third Circuit case law eviscerates the judge’s gatekeeping role with respect to an expert’s data and instead gives that role to other experts. . . We now make clear that it is the judge who makes the determination of reasonable reliance, and that for the judge to make the factual determination under Rule 104(a) that an expert is basing his or her opinion on a type of data reasonably relied upon by experts, the judge must conduct an independent evaluation to reasonableness. The judge can of course taken into account the particular expert’s opinion that experts reasonably rely on that type of data, as well as the opinions of other experts as to its reliability, but the judge can also take into account other factors he or she deems relevant.\footnote{In re Paoli R.R. Yard PCB Litig., 35 P.3d 717, 748 (3d Cir. 1994).}

Recognizing the lax way in which this standard has been applied, some states have attempted to strengthen it by requiring the proponent of the opinion to establish the reliability of the underlying facts.\footnote{See e.g., Hawai‘i R. Evid. 703; Tenn. R. Evid. 703.} For example, under Tennessee’s version of Rule 703, an additional sentence was added in 2009, requiring the court to “disallow testimony in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness.”\footnote{Tenn. R. Evid. 703.} The Tennessee Supreme Court held that determination of the trustworthiness of the underlying facts “necessarily extends beyond the question of
whether experts in the field rely upon such facts.” 64 It concluded that “[a] foundation built upon facts contrary to known undisputed facts, facts that do not adequately support the conclusion, or assumptions that neither reasonably arise from an expert’s expertise or inferences that can reasonably be drawn from the evidence are examples of failings that would render the facts relied upon by an expert insufficiently trustworthy.” 65

Even under these more rigorous standards of review, expert testimony is rarely excluded, however. 66 Only if the expert’s opinion is “so fundamentally unsupported that it can offer no assistance to the jury” will it be excluded under Rule 703. 67 For example, the Sixth Circuit held that an expert’s opinion was inadmissible because it was based on a number of guesstimates and speculations. 68

2. Reliability of Expert Testimony under Rule 702

A finding that an expert reasonably relied on outside facts or data in forming his opinion under Rule 703 does not end the inquiry, however. The proponent of the evidence may also have to prove the reliability of the scientific or other technical methods used in developing the underlying data under Rule of Evidence 702. 69 Rule 702 requires that expert testimony must be “based upon sufficient facts or data” and also be the product of “reliable principles and methods.” 70 Under this Rule, the trial court “must scrutinize not only the principles and methods used by the expert, but also whether those principles and methods have been properly applied to the facts of the case.” 71 Thus, under Rule 702, the trial court is charged with being a “gatekeeper” to exclude unreliable expert testimony. 72

Courts have found that Rule 702 applies to the qualifications of an expert and the methods and reasoning used to render an opinion, but it generally does not “regulate the underlying facts or data that an expert relies on when forming her opinion.” 73 However, just because a judge finds that an expert has reasonably relied on hearsay or other inadmissible evidence in forming his opinion under Rule 703 does not mean that the

64 State v. Scott, 275 S.W.3d 395, 409 (Tenn. 2009).
65 Scott, 275 S.W.3d at 409.
66 See e.g., Tyler v. Union Oil Co. of Calif., 304 F.3d 379, 393 (5th Cir. 2002) (expert’s testimony was admissible, despite the fact the tests underlying his opinion were flawed).
67 Hartley v. Dillard’s, Inc., 310 F.3d 1054, 1061 (8th Cir. 2002).
69 Most states have adopted Rule 702 and some form of the Daubert analysis. Derek Regensburger, Criminal Evidence: From Crime Scene to Courtroom at 254 (Wolters-Kluver 2011). Only 12 states still apply the Frye standard and even some of those require a preliminary determination of reliability. Id.
70 Fed. R. Evid. 702.
71 Advisory Committee Cmt Rule 702.
73 United States v. Lauder, 409 F3d 1254, 1264 (10th Cir. 2005).
opinion is exempt from the admissibility requirements of Rule 702. To hold otherwise would create a paradoxical application of Rule 703—“one that would allow expert witnesses to testify about, and base their opinions on, data that has no demonstrable scientific validity.” 74 In other words, it is per se unreasonable for an expert to rely on test results that have no demonstrable scientific validity under Rule 702.75 The Advisory Committee to the Rules of Evidence explains the relationship between Rules 702 and 703:

There has been some confusion over the relationship between Rules 702 and 703. The [2000] amendment makes clear that the sufficiency of the basis of an expert’s testimony is to be decided under Rule 702. Rule 702 sets forth the overarching requirement of reliability, and an analysis of the sufficiency of the expert's basis cannot be divorced from the ultimate reliability of the expert's opinion. In contrast, the “reasonable reliance” requirement of Rule 703 is a relatively narrow inquiry. When an expert relies on inadmissible information, Rule 703 requires the trial court to determine whether that information is of a type reasonably relied on by other experts in the field. If so, the expert can rely on the information in reaching an opinion. However, the question whether the expert is relying on a sufficient basis of information—whether admissible information or not—is governed by the requirements of Rule 702.76

3. Expert Opinion must be Relevant

In addition to establishing the reliability of the underlying data supporting the expert’s opinion, the proponent must also establish the relevance of the expert’s opinion. Where the expert’s testimony involves the testing of physical evidence, this requires two steps: it must be demonstrated that (1) the raw data relied upon by the expert in forming his conclusions was derived from the evidentiary sample at issue and that the evidentiary sample was not subject to contamination, degradation, or alteration; and (2) the evidentiary tests relied upon by the expert were performed using reliable methods and machinery.

a. Proof that the evidence tested is the same as the evidence seized

Under Rule 901, the proponent of physical evidence must authenticate it by establishing that the evidence is what he claims it to be.77 This is often done through testimony of a witness who has personal knowledge of the item.78 Where the evidence is susceptible to alteration, tampering or contamination, mere identification of the item is insufficient to authenticate it; evidence must be presented that it was not altered or tampered with.

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75 Guerre-Chaley, 88 P.3d at 543.
76 Advisory Committee Cmt Fed. R. Evid. 702.
77 Fed. R. Evid. 901(a).
78 Fed. R. Evid. 901(b).
One method of doing so is to establish “a chain of custody sufficient to render it improbable the original evidence has been exchanged with other evidence, contaminated or tampered with.”\(^{79}\) To establish the chain of custody, the government need only show that it took “reasonable precautions to preserve the evidence in its original condition, even if all possibilities of tampering are not excluded.”\(^{80}\) A perfect chain of custody is not a prerequisite to admission of forensic evidence.\(^{81}\) Ordinarily, deficiencies in the chain of custody go to the weight, not admissibility of the evidence and are left for the jury to determine.\(^{82}\) A missing link in the chain of custody does not prevent the admission of physical evidence, so long as there is “sufficient proof that the evidence is what it purports to be and has not been altered in any material respect.”\(^{83}\) The key question is whether the authentication testimony is “sufficiently complete so as to convince the court that it is improbable that the original item had been exchanged with another or otherwise tampered with.”\(^{84}\)

Where a party offers expert testimony about the testing of physical evidence but not the physical evidence itself, the question becomes not one of authentication (there is no need to authenticate a live witness) but one of relevancy.\(^{85}\) In other words, in order for an expert’s testimony to be relevant, there must be sufficient proof that the substance tested is the same as the substance seized at the scene.\(^{86}\) Therefore, while proof of the chain of custody is not necessary to establish the relevance of an expert’s opinion, it is still an important element in the analysis. The failure to establish the chain of custody can “cast doubt” on the admissibility of the expert’s testimony because it makes it less likely that the substance tested was the same as the substance seized.\(^{87}\)

Even where the chain of custody evidence is not complete, however, the relevancy hurdle is not a high one to clear. The expert’s testimony will be found relevant as long as a jury could reasonably infer that the analyst tested the physical evidence alleged to have been seized, and that it had not been contaminated or tampered with. For example, in United States v. Grant, the Second Circuit found that there was sufficient evidence presented for

\(^{80}\) United States v. Dent, 149 F.3d 180 (3d Cir.1998), citing United States v. Kelly, 14 F.3d 1169, 1175 (7th Cir.1994).
\(^{81}\) United States v. Moore, 425 F.3d 1061, 1071 (7th Cir. 2005).
\(^{82}\) See United States v. Nichols, 169 F.3d 1255, 1263 (10th Cir. 1999); United States v. Cartagena-Carrasquillo, 70 F.3d 706, (1st Cir. 1995) (court found that a one kilo difference in drug weight could be explained by plausible explanations for the discrepancies).
\(^{84}\) Id.
\(^{85}\) United States v. Grant, 967 F.2d 81, 83 (2d Cir. 1992).
\(^{87}\) Grant, 967 F.2d at 82-83.
the jury to conclude that the package seized from the defendant contained heroin despite
the fact the government could not account for a fourteen-day period between the time the
suspected heroin was signed out of the airport evidence vault and when it was checked
into the DEA laboratory for analysis.\footnote{Id. at 82.} The court found that the lab records indicated that
the package seized and the package tested weighed precisely the same amount; there was
no indication that the package had been tampered with; the field test performed on the
substance seized from defendant was presumptive positive for heroin; and the
defendant’s statements to her co-conspirator evidenced the defendant’s belief that the
packages contained heroin.\footnote{Id. at 84.}

b. Reliability of the machine used to generate the test result

Where the prosecution offers expert testimony based on test results derived from an
electronic or mechanical device, the trial court must make an additional finding of
relevancy--the proponent must establish that the machine or device used to test the
physical evidence was working properly and produced a reliable result.\footnote{See e.g., United States v. Lauder, 409 F.3d 1254, 1265 (10th Cir. 2005); State v. Jobe, 486 N.W.2d 407, 419 (Minn. 1992), quoting State v. Schwartz, 447 N.W.2d 422, 428 (Minn. 1989) (“[w]hether the results of any specific DNA RFLP testing is admissible, however, depends on ‘the laboratory’s compliance with appropriate standards and controls, and the availability of the testing data and results.’”).} Rule 901
provides that test results may be authenticated in this manner by introducing evidence
“describing a process or system and showing that it produces an accurate result.”\footnote{Fed. R. Evid. 901(b)(9). Ill. R. Evid. 901(b)(9) is virtually identical.} This
reliability requirement is met where the proponent shows that the machine and its
functions are reliable, that the machine was correctly adjusted and calibrated, and that the
data put into the machine was accurate.\footnote{United States v. Washington, 498 F.3d 225, 231 (4th Cir. 2007).}

Although this is technically an issue of reliability, it is properly resolved under Rule 901,
not as a \textit{Daubert} challenge under Rule 702.\footnote{United States v. Lauder, 409 F.3d 1254, 1264 (10th Cir. 2005).} The Tenth Circuit explained that the
question of whether a particular device or machine generates an accurate result “involves
an inquiry as to whether there is sufficient evidence to authenticate the accuracy of the
image and the reliability of the machine. Authentication or identification is an aspect of
relevancy that is another condition precedent to admissibility.”\footnote{United States v. Lauder, 409 F.3d 1254, 1265 n. 6 (10th Cir. 2005).} Federal Practice and
Procedure explains how Rules 702 and 901 relate to one another in this manner:

\begin{quote}
Whether Rule 901 or Rule 702 governs the admissibility analysis is a function of the
type of reliability problem posed by the evidence. Rule 901 normally controls
where there is no question as to the general reliability of the technology employed
\end{quote}
by the machine and the only question is whether the machine is in good working order. Rule 702 applies where the question is not whether the machine is in good working order but, rather, whether the technology employed by the machine is valid and the data produced by the machine is reliable evidence of the fact it is offered to prove.\textsuperscript{95}

In other words, if a question is directed to the reliability of the scientific practice or technique generally, then Rule 702 governs its resolution. If, on the other hand, the question concerns whether the machine or device was operating properly and therefore could have produced a reliable result in a particular instance, then Rule 901 governs.

Thus, an expert’s testimony can be excluded on grounds that an adequate foundation has not been established for the testimony. For example, an Illinois appellate court held that a chemist’s testimony should be stricken where the State failed to offer any evidence that the GC/MS machine used to test the suspected cocaine was functioning properly at the time it was used.\textsuperscript{96} Some courts have held, however, that Rule 703 does not require the testimony of the person who generated the data used by the expert to establish this foundation. The Arizona Supreme Court pointed out the absurdity of such a requirement:

For example, no orthopedic surgeon could testify unless the radiologist who read the x-rays on which the surgeon relied was first called to testify, and the radiologist could not testify until the technician who took the x-rays had testified. Presumably, the process could continue without end. We therefore reject the argument [that the person who generated the data must testify] and avoid the nightmare that would exist without application of Rule 703.\textsuperscript{97}

Where surrogate testimony is involved, however, John Wait suggests that the original analyst must be called as well to establish a foundation for the surrogate’s testimony:

In these situations, the testing analyst would submit materials showing that he or she performed tests on a particular sample, which produced raw data; and the testifying expert could use that raw data to form his or her own opinion as to whether the tested substance is a controlled substance. Each could testify at trial as to his or her portion of the testimonial evidence presented. Yet, even in these circumstances, the prosecution would have to offer the testing analyst to confirm that the raw data was, indeed, procured from: (1) the actual sample at issue in the case; (2) by a method of testing in accordance with industry standards; and (3) performed with an acceptable degree of competence. This would have to be

\textsuperscript{97} State v. Rogovich, 932 P.2d 794, 798 (1997).
established prior to another expert, other than the testing analyst, using the raw data to give testimony concerning the nature of a seized substance.\textsuperscript{98}

B. The Introduction of Basis Evidence Under Rule 703

Rule 703 also permits the introduction of the information that provides the underlying basis for the expert’s conclusions in limited circumstances. Most states, including Illinois, have adopted the prior version of Federal Rule 703 and liberally admit such basis evidence, subject only to the traditional balancing of probative value and prejudicial impact under Rule 403.\textsuperscript{99} Because of concerns over the misuse of basis evidence, Federal Rule 703 was amended in 2000 to discourage its admission. Under the current federal rule, admission of basis evidence is generally disfavored unless it can be shown that the probative value of the evidence substantially outweighs its prejudicial effect.\textsuperscript{100} The Advisory Committee comments to the amended rule caution that the underlying basis information is not admissible “simply because the [expert’s] opinion or inference is admitted.”\textsuperscript{101} The Advisory Committee instructs that “a trial court applying this Rule must consider the information's probative value in assisting the jury to weigh the expert’s opinion on the one hand, and the risk of prejudice resulting from the jury's potential misuse of the information for substantive purposes on the other.”\textsuperscript{102} A limiting instruction is required to be given if such evidence is admitted.\textsuperscript{103} This new language essentially flip-flops the traditional balancing test for assessing the prejudicial impact of evidence.

1. Does the Admission of Basis Evidence Implicate the Confrontation Clause Because It Is Hearsay?

In \textit{Crawford v Washington}, the Supreme Court held that the Confrontation Clause applies to generally bar testimonial hearsay from evidence. It was careful to point out, however, that the Clause did not apply to nonhearsay.\textsuperscript{104} Expert testimony introduced under Rule 703 can implicate \textit{Crawford} in two ways: when a testifying expert describes the findings

\textsuperscript{98} John Wait, Another “Straightforward Application”: The Impact of \textit{Melendez-Diaz} on Forensic Testing and Expert Testimony in Controlled Substance Cases, 33 Campbell L. Rev. 1, 24 (2010).

\textsuperscript{99} See e.g., People v. Pasch, 604 N.E.2d 294, 311 (Ill. 1992) (disclosing the underlying facts and data for the purpose of explaining the expert’s opinion “undoubtedly” aids the jury in assessing the value of the expert’s opinion); In re Amey, 40 A.3d 902, 913 (D.C. App. 2012) (“the common law of evidence in the District of Columbia favors the admission of an expert's testimony about the hearsay bases of his opinions and permits its presentation on direct examination unless its legitimate probative value is substantially outweighed by the risk of unfair prejudice”).

\textsuperscript{100} Amey, 40 A.3d at 913.

\textsuperscript{101} Advisory Committee Cmt. to Fed. R. Evid. 703.

\textsuperscript{102} Id.

\textsuperscript{103} Id.

\textsuperscript{104} Crawford, 541 U.S. at 59, n. 9.
or conclusions of other forensic analysts and when he discloses statements learned during the investigation of the case.\textsuperscript{105} If the basis evidence underlying the expert’s conclusions constitutes testimonial hearsay, its disclosure will likely be barred by \textit{Crawford}. Thus, in order to be admissible, the basis evidence must either be nonhearsay or nontestimonial.\textsuperscript{106}

Hearsay is defined as an out-of-court statement offered to prove the truth of the matter asserted.\textsuperscript{107} In other words, an out-of-court statement offered for some collateral purpose is not considered to be hearsay because the truth of the statement being offered is immaterial.\textsuperscript{108} In order to determine whether the statement is being offered for its truth, the judge should compare the original assertion to the purpose for which it is being offered in court. If the two match, then the statement is being offered for its truth.\textsuperscript{109} For example, in the absence of the statements satisfying some hearsay exception (such as the present sense impression exception), a prosecutor ordinarily could not offer testimony containing out-of-court statements about the color of a light to show that the defendant ran a red light in causing an accident. However, if a witness had previously made a statement that the light was red but is now testifying that it was green, the prosecutor could offer the out-of-court statement of the witness to show that her testimony had changed. The truth of the witness’s statement is irrelevant in this context; it does not matter whether the light was red or green, only that the witness had previously made a statement that materially differs from her trial testimony. Similarly, in \textit{Tennessee v. Street}, the co-defendant’s confession was offered against the defendant to prove that the defendant’s own confession was not a rehashing of his accomplice’s confession (thus diminishing his argument that it was coerced).\textsuperscript{110} There, the Court had permitted the contents of the co-defendant’s confession to be admitted to counter defendant’s contention that his own confession was a sham. He had alleged that the police officer had read aloud his co-defendant’s confession and forced him to repeat it. The confession was not offered to prove the truth of its contents but only to show that its contents differed significantly from the Defendant’s confession.

\textbf{a. Most Courts Consider Basis Evidence to be Nonhearsay}

On its surface, the admission of basis evidence underlying an expert’s testimony under Rule 703 should not be considered hearsay. Basis evidence is purportedly admitted for the limited purpose of explaining the expert’s opinion, not to prove its truth. Most courts that have reached the issue have explicitly held that basis evidence cannot be admitted as

\begin{itemize}
  \item \textsuperscript{106} Id. at 806.
  \item \textsuperscript{107} Fed. R. Evid. 801.
  \item \textsuperscript{108} \textit{See} C. Michael Fenner, The Hearsay Rule, 2d ed. at 16-17 (Carolina Academic Press 2009).
  \item \textsuperscript{109} \textit{See} Derek Regensburger, Criminal Evidence: From Crime Scene to Courtroom, at 376 (Wolters-Kluwer 2011).
  \item \textsuperscript{110} 471 U.S. 409 (1985).
\end{itemize}
substantive evidence to prove the truth of its contents.\textsuperscript{111} As such, courts have ruled that Rule 703 does not create a hearsay exception; rather, the admission of basis evidence is a reflection that such out-of-court statements are nonhearsay.\textsuperscript{112}

There is a real danger, however, that the proponent of expert evidence may use Rule 703 “as a backdoor hearsay exception,” whereby “a crafty litigant could give hearsay to its expert for the purpose of having the expert refer to it as a basis for the expert’s opinion.”\textsuperscript{113} To prevent the admission of “backdoor” hearsay, courts have crafted an exception to the general rule that basis evidence is nonhearsay: where the testifying expert acts as a “mere conduit” for the non-testifying expert’s opinion, the basis evidence should be treated as hearsay and the opinion excluded.\textsuperscript{114} The Tenth Circuit clarified the circumstances when an expert serves as a “mere conduit”:

If an expert simply parrots another individual’s testimonial hearsay, rather than conveying her independent judgment that only incidentally discloses testimonial hearsay to assist the jury in evaluating her opinion, then the expert is, in effect, disclosing the testimonial hearsay for its substantive truth and she becomes little more than a backdoor conduit for otherwise admissible testimonial hearsay.\textsuperscript{115}

This line is particularly blurry where case agents are also endorsed as testifying experts. The danger there is that the agent will simply repeat hearsay statements he has learned during the course of his investigation.\textsuperscript{116} Thus, the fact that a court has determined under Rule 703 that the expert reasonably relied on the underlying data should not serve as a substitute for its ruling on the hearsay issue.\textsuperscript{117}

Where experts have been asked to testify to opinions concerning the contents of forensic reports, courts have focused on “the degree to which a substitute analyst parrots the hearsay testimony of another,” or serves as a “mere surrogate” for the findings of the first analyst.\textsuperscript{118} The critical line of demarcation is whether the analyst offered an opinion based on his independent analysis of the reports or merely repeated the findings of the original analyst.\textsuperscript{119}

\textsuperscript{111} See e.g., Gannett Co., Inc. v. Kanaga, 750 A.2d 1174, 1189 (Del. 2000).
\textsuperscript{114} Rogovich, 932 P.2d at 794, n. 1; State v. Lundstrom 776 P.2d 1067, 1074 (Ariz. 1989).
\textsuperscript{115} United States v. Pablo, 625 F.3d 1285, 1292 (10\textsuperscript{th} Cir. 2010).
\textsuperscript{116} See United States v. Mejia, 545 F.3d 179, 198 (2d Cir. 2008) (testimony that defendant was a gang member was hearsay since it derived from information the expert had read or heard from interrogations or interviews conducted during his investigation).
\textsuperscript{117} Kanaga, 750 A.2d at 1187.
\textsuperscript{118} State v. Gonzales, 274 P.3d 151, 156 (N.M. App. 2012).
\textsuperscript{119} United States v. Johnson, 587 F.3d 625, 635 (4\textsuperscript{th} Cir. 2009) (“As long as [the expert] is applying his training and experience to the sources before him and reaching an
For example, the Tenth Circuit upheld the testimony of a DNA expert who did not prepare the original DNA profiles but conducted an extensive review of the testing procedures and formed her own opinions about the test results.\textsuperscript{120} Similarly, a Washington appellate court upheld the testimony of a DNA lab supervisor in \textit{State v. Lui}.\textsuperscript{121} Since the expert testified to her own opinions based on her review and independent analysis of the data and testified to the lab’s chain of custody and quality control procedures, the court rejected the argument that the lab supervisor was acting as a mere conduit for the original analysts.\textsuperscript{122} In contrast, the North Carolina Court of Appeals concluded that an expert’s testimony confirming the original analyst’s conclusions about the identity of a controlled substance violated the Confrontation Clause:

It is clear from the testimony of Special Agent Schell that she had no part in conducting any testing of the substance, nor did she conduct any independent analysis of the substance. She merely reviewed the reported findings of Agent Gregory, and testified that if Agent Gregory followed procedures, and if Agent Gregory did not make any mistakes, and that if Agent Gregory did not deliberately falsify or alter the findings, then Special Agent Schell ‘would have come to the same conclusion that she did.’\textsuperscript{123}

\textbf{b. A Minority View is that Basis Evidence is Hearsay}

Given that it allows an expert to testify to an opinion based on otherwise inadmissible hearsay, there is a good argument that, for all practical purposes, basis evidence should be considered hearsay and Rule 703 operates as a hearsay exception by permitting its introduction.\textsuperscript{124} Some courts and commentators have rejected the assertion that basis evidence is normally admitted only for the limited purpose of explaining the expert’s testimony. D.H. Kaye outlines this argument in the \textit{New Wigmore}:

To use the inadmissible information in evaluating the expert testimony, the jury must make a preliminary judgment about whether this information is true. If the jury believes that the basis evidence is true, it will likely also believe that the

\begin{itemize}
  \item \textsuperscript{120} Pablo, 625 F.3d at 1294.
  \item \textsuperscript{121} 221 P.3d 948 (Wash. App. 2009).
  \item \textsuperscript{122} Lui, 221 P.3d at 955-56.
  \item \textsuperscript{123} State v. Brewington, 693 S.E.2d 182, 185 (N.C. App. 2010).
  \item \textsuperscript{124} Ross Andrew Oliver, Note: Testimonial Hearsay as the Basis for Expert Opinion: The Intersection of the Confrontation Clause and Federal Rule of Evidence 703 after \textit{Crawford v. Washington}, 55 Hastings L.J. 1539, 1552 (2004).
\end{itemize}
expert’s reliance is justified; conversely, if the jury doubts the accuracy or validity of the basis evidence, that presumably increases skepticism about the expert’s conclusions. The factually implausible, formalist claim that experts’ basis testimony is being introduced only to help in the evaluation of the expert’s conclusions but not for its truth ought not permit an end-run around a constitutional prohibition. 125

UCLA law professor Jennifer Mnookin, another leading advocate of this approach, has deemed the labeling of basis evidence as nonhearsay to be a legal fiction. 126 She speculates that the reason for this is twofold: 1) if basis evidence is considered nonhearsay, parties would be discouraged from introducing otherwise inadmissible evidence through expert testimony if basis evidence could not be admitted for its truth; and 2) courts would not have to struggle with the unenviable task of interpreting a poorly drafted rule (authorizing the admission of basis evidence without providing for a corresponding hearsay exception to admit it). 127 Prior to Crawford, protections under the Confrontation Clause were meager at best. Mnookin notes that had courts applied a more rigorous standard to the admission of basis evidence, it would have meant that “the protection [of the Confrontation Clause] turned out to be especially robust in a place where the arguments for it were, if not weakest, then certainly no stronger than in many other settings.” 128 As such, courts simply avoided the Confrontation issue by deeming basis evidence to be nonhearsay.

The problem with this argument, according to Mnookin, is that it makes “almost no sense.” 129 Mnookin believes that evaluation of the expert’s testimony necessarily entails evaluation of the expert’s sources:

To be sure, the jury might have better grounds for evaluating the expert's testimony if it hears about the data upon which the expert relied for her conclusion. But part of a rational evaluation of the expert will thus entail an evaluation of her sources—which will inevitably involve a judgment about the likelihood that the sources themselves are valid and worthy of reliance. In other words, to decide how much to credit the expert’s sources, the jury should, logically, first assess the odds that they are reliable. And what is this but a judgment about the likely truth of their contents? 130

Mnookin asserts that the justification for treating basis evidence as nonhearsay has “fallen away entirely” as the Court has shifted its focus under the Confrontation Clause

127 Id. at 813.
128 Id. at 815.
129 Id. at 816.
130 Id.
from a reliability analysis to the testimonial nature of the statement.\textsuperscript{131} Thus, she argues that courts should discontinue its use:

If a basis statement upon which an expert relies is testimonial, its use is unconstitutional whether or not it also fits within a hearsay exception, and whether or not it is reliable. Given this, to pretend that expert basis statements are introduced for a purpose other than the truth of their contents is not simply splitting hairs too finely or engaging in an extreme form of formalism. It is, rather, an effort to make an end run around the constitutional prohibition by sleight of hand.\textsuperscript{132}

Over the past few years, this argument has started to gain traction in a few courts. For instance, in \textit{People v. Goldstein}, the New York Court of Appeals recognized that while it was reasonable for a psychiatrist to rely on interviews of third parties in forming her opinion, the contents of those same interviews could not be published to the jury.\textsuperscript{133} Rejecting the argument that the statements were offered merely to explain the expert’s opinion, the court noted that “the distinction between a statement offered for its truth and a statement offered to shed light on an expert’s opinion is not meaningful in this context.”\textsuperscript{134} It concluded that the basis evidence was inadmissible because it was being admitted for its truth:

\begin{quote}
We do not see how the jury could use the statements of the interviewees to evaluate Hegarty’s opinion without accepting as a premise either that the statements were true or that they were false. Since the prosecution's goal was to buttress Hegarty’s opinion, the prosecution obviously wanted and expected the jury to take the statements as true.\textsuperscript{135}
\end{quote}

Similarly, the Idaho Supreme Court held that basis evidence was admitted for its truth in \textit{State v. Watkins}.
\textsuperscript{136} There, DNA evidence was sent to a private lab for analysis. The state called a coworker of the original lab analyst who performed the DNA tests to testify to the results of those tests. The prosecution had offered the analyst’s notes to help explain her opinion. The court found that the contents of the analyst's notes were “relevant only for the purpose of proving the truth of the matter asserted therein—that Channell created reference DNA samples for Watkins and the six-year-old girl, extracted DNA from both the inside and outside of the condom, and tested the DNA for a match with the reference samples.”\textsuperscript{137} The court further explained that the State “clearly relied upon the hearsay evidence for the purpose of demonstrating the chain of custody, Channell's testing

\begin{tabular}{ll}
131 & Id. at 822. \\
132 & Id. at 822. \\
133 & People v. Goldstein, 843 N.E.2d 727 (N.Y. 2005). \\
134 & Goldstein, 843 N.E.2d at 732-33. \\
135 & Id. at 732. \\
136 & 224 P.3d 485 (Id. 2009). \\
137 & Id. \\
\end{tabular}
methodology, and to identify the locations on the condom and panties on which Watkins’ and the victim’s DNA were found.” 138 Since no other evidence was presented of those facts, the court concluded that the expert’s testimony was “without evidentiary significance.” 139

A California appellate court also adopted this position in People v. Dungo. 140 The court found that the substance of the first pathologist’s report was being admitted through the surrogate expert. As such, it concluded that the substance of expert’s testimony could not be evaluated without accepting the truth or falsity of the underlying report:

Thus, in evaluating Dr. Lawrence's opinions concerning the cause of Pina’s death, the jury was required to evaluate truth and accuracy of Dr. Bolduc’s autopsy report. In other words, the weight of Dr. Lawrence's opinions was entirely dependent upon the accuracy and substantive content of Dr. Bolduc’s report. 141

While not adopting the Goldstein/Mnookin position outright, a couple of other courts have expressed support for it by conducting a more searching inquiry into the purpose behind the admission of basis evidence. In State v. Moss, an Arizona appellate court concluded that expert testimony implicates the Confrontation Clause where it is the “functional equivalent of hearsay” for purposes of the Confrontation Clause. 142 The State sought to have an expert testify to his opinion that the defendant was impaired by methamphetamine at the time of the accident, based in part on his review of the blood test results. 143 The trial judge excluded the testimony of the expert on the ground that his testimony would violate the Confrontation Clause. 144 The court affirmed the judge’s ruling, holding that the expert’s testimony contained both hearsay and the functional equivalent of hearsay. By testifying to the blood test results themselves, the court found that the expert would be acting as a mere conduit for the blood test analysis performed by the original lab analysts. 145 The court also found that the remainder of the expert’s opinion was objectionable even though it may have satisfied the reliability requirement of Rule 703. It noted that as “the likelihood increases that the jury will consider the

138 Id. at 494.
139 Id. at 492.
140 98 Cal. Rptr. 3d 702 (Cal. App. 2009), review granted.
141 Id. at 713. Although the court appears to be basing its decision on Jennifer Mnookin’s argument discussed below (that the characterization of the admission of basis evidence as nonhearsay is a legal fiction), this is a classic example of the testifying expert serving as a mere conduit for the underlying expert’s opinion. Dr. Lawrence conducted no independent examination of the data and in fact had to rely to Dr. Bolduc’s description of hemorrhaging on the victim’s neck. Id. at 712 n. 12. Thus, it is clear that Dr. Lawrence’s testimony should be excluded as hearsay under either formulation of the test.
143 Id. at 1145.
144 Id. at 1144.
145 Id. at 1148.
evidence for its truth rather than for the limited purpose for which it is being offered, the core concerns protected by the confrontation clause must be scrutinized more carefully.”

The court concluded that “even if Dr. Kelly relied only in part on the blood test results for his opinion that Moss was impaired by drugs, we believe it will be difficult to prevent the jury from considering the blood test results as key evidence of Moss’s impairment, even assuming a limiting instruction is given.”

In *People v. Hill*, a panel of the California Court of Appeals similarly expressed approval of the *Goldstein* holding while not outright adopting it. The trial court had permitted a gang expert to testify not only to his opinion that the defendant had acted with a gang purpose, but to the hearsay statements that formed the basis of that opinion as well. Although choosing not to overturn the trial court’s ruling (and overrule prior California Supreme Court precedent to the contrary in the process), the court criticized the continued viability of the notion that basis evidence is admitted for a strictly nonhearsay purpose.

“We agree with *Goldstein* that where basis evidence consists of an out-of-court statement, the jury will often be required to determine or assume the truth of the statement in order to utilize it to evaluate the expert’s opinion.”

The court did point out that if the *Goldstein* analysis is adopted, a corresponding hearsay exception will have to be created because most of the statements serving as basis evidence would be excluded as hearsay.

2. Is basis evidence testimonial?

Assuming that basis evidence is hearsay or its functional equivalent, the final step of the analysis under the Confrontation Clause is to determine whether the offered statement is testimonial. According to the Supreme Court, testimony is a “solemn declaration or affirmation made for the purpose of establishing or proving some fact.” While not adopting a comprehensive definition of the term testimonial, the Supreme Court in *Crawford v. Washington* held that it applied to at least three sets of circumstances: 1) prior uncross-examined testimony by a witness at a hearing or trial; 2) out-of-court statements contained in formalized testimonial materials such as affidavits and depositions; and 3) statements made pursuant to police interrogation or under similar conditions.

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146 Id. at 1148.
147 Id. at 1148. Although noting that the conclusions asserted by the New York Court of Appeals in *Goldstein* are “supportive” of the result it reached, the court refused to base its decision on them because they are “inconsistent” with the pre-*Crawford* statements of the Arizona Supreme Court [that the admission of basis evidence under Rule 703 is nonhearsay]. Id. at 1149, n. 8.
148 120 Cal. Rptr. 3d 251 (Cal. App. 2011).
149 Id. at 271. “But for the long line of California Supreme Court precedent supporting Thomas, we would reject that opinion and adopt Goldstein’s logic, which seems compelling.” Id. at 274
150 Id. at 274.
151 Id. at 275.
circumstances that would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.\footnote{153}{Crawford, 541 U.S. at 51-52.}

In \textit{Melendez-Diaz v. Massachusetts}, the Court held that a laboratory report, prepared as evidence against the defendant, is testimonial and could not be introduced without the testimony of the analyst who prepared it.\footnote{154}{557 U.S. 305 (2009).} The Court found that such reports are akin to affidavits because they contain “the precise testimony the analysts would be expected to provide if called at trial.”\footnote{155}{Id. at 310.} The Court refused to exclude forensic analysts from the strictures of the Confrontation Clause, noting, “there is not a third category of witnesses, helpful to the prosecution, but somehow immune from confrontation.”\footnote{156}{Id. at 314.} The Court found that cross-examination is “designed to weed out not only the fraudulent analyst, but the incompetent one as well.”\footnote{157}{Id. at 319.}

In \textit{Bullcoming v. New Mexico}, the prosecutor called a second analyst to testify about the results of an alcohol blood test that another analyst had conducted.\footnote{158}{131 S.Ct. 2705 (2011).} The Court held that the blood-alcohol test results were testimonial in nature since the test was performed solely for an evidentiary purpose to aid a police investigation.\footnote{159}{Id. at 2717.} The Court then held that the surrogate’s testimony was objectionable because it could not satisfactorily convey what the first analyst had known or observed about the testing process, nor could it expose “lapses or lies” on the part of the original analyst.\footnote{160}{Id. at 2715.} In effect, the Court found that the surrogate was acting a mere conduit for the first analyst. The Court rejected the argument that the surrogate analyst provided a sufficient substitute for cross-examination, holding “the Clause does not tolerate dispensing with confrontation simply because the court believes that questioning one witness about another's testimonial statements provides a fair enough opportunity for cross-examination.”\footnote{161}{Id. at 2716, n. 7.} The Court noted that defense counsel should’ve been allowed to question the first analyst regarding his “proficiency, the care he took in performing his work, and his veracity.”\footnote{162}{Id. at 2716.} Of particular importance, the surrogate did not know why the original analyst had been placed on unpaid leave.\footnote{163}{Id.}

Justice Sotomayor wrote a concurring opinion in which she reiterated that the blood alcohol test results were testimonial because their primary purpose was to create an “out-of-court substitute for trial testimony.”\footnote{164}{Bullcoming, at 2720, quoting Michigan v. Bryant, 131 S.Ct. 1143, 1155 (2011).} Without stating that these examples would
constitute the nontestimonial use of forensic reports, she then identified four situations that were not present in *Bullcoming*. First, the blood alcohol report was not prepared for any alternate purpose, such as providing medical treatment to the defendant, other than producing evidence in a criminal trial. Second, she observed that this was not a case where a supervisor or reviewer, who has personal knowledge of or connection to the scientific test at issue, was called to testify. “It would be a different case if, for example, the supervisor who observed an analyst conducting the test testified about the results or a report about such results.”165 Third, this was not a case where an expert witness was asked for his independent opinion about the underlying testimonial reports that themselves were not admitted into evidence. Justice Sotomayor noted that “[w]e would face a different question if asked to determine the constitutionality of allowing an expert witness to discuss others’ testimonial statements if the testimonial statements were not themselves admitted as evidence.”166 Fourth, she noted that the prosecution had not introduced a machine-generated report that did not contain any statements or analyses of the analyst himself.167

Several lower courts have seized on this language from Sotomayor’s concurrence in *Bullcoming* and concluded that a surrogate expert’s testimony does not violate the Confrontation Clause where the expert has conducted an independent analysis of the underlying data. In *Commonwealth v. Munoz*, the Massachusetts Supreme Court upheld the testimony of the laboratory’s senior chemist in place of the chemist that had tested the suspected drugs (who had since retired).168 The surrogate testified to the procedures the analyst would’ve followed in analyzing the drugs, the conclusions of the original analyst, and his own conclusions based on review of the data.169 The court held that the supervisor was not prevented from testifying to his own independent opinion as to the weight and composition of the cocaine:

A substitute analyst may accordingly be cross-examined on the data on which that analyst purports to have relied reasonably, the basis on which he or she concluded that such data were adequate and appropriate to the task, and the basis for concluding that the data have been prepared in conformity with relevant accepted professional standards, inquiries that implicate the manner in which the testing analyst performed his or her work.170

The Georgia Court of Appeals issued a similar opinion in *McMullen v. State*.171 There, a second analyst testified to the results of defendant’s blood test based on his own independent analysis of the original analyst’s report and data. The court found it significant that the surrogate examined and analyzed every piece of data that was

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165 Id. at 2722.
166 Id.
167 Id.
169 Munoz, 958 N.E.2d at 1171.
170 Id. at 1175.
produced. He also testified that the report contained information regarding calibrations and controls run prior to and after the testing of the defendant's blood from which it was possible for the expert to conclude both that “the instrument was in proper working order and that the tests were performed correctly.”  

Because the expert personally viewed and analyzed the data upon which he testified, the court concluded that the expert was acting more than a mere “surrogate,” as opposed to the expert in Bullcoming.

3. Does Surrogate Testimony that Involves an Independent Analysis of the Data Provide an Adequate Substitute for Cross-examination?

Where the expert offers an independent analysis, many courts have held that the situation is distinct from those faulted in Melendez-Díaz and Bullcoming since the surrogate can provide a suitable substitute on cross-examination. For example, in Munoz, the Massachusetts Supreme Court found that surrogate analysts can be cross-examined effectively in two ways: the surrogate can testify to the general risks of errors inherent in that type of testing, and because the analyst based his opinion on data generated by the first analyst, the expert can be cross-examined about the specific risks of error that could have led to an erroneous conclusion in that case. While noting that cross-examination of the substitute analyst will not address “every risk of bias or error in the forensic testing forming the basis of that opinion,” the court also found that the witness was likely familiar with the original analyst’s reputation for veracity and diligence since he had worked with him for many years.

In State v. Hoff, the Wisconsin Court of Appeals rejected the argument that the rulings in Melendez-Díaz and Bullcoming required overturning Wisconsin precedent, State v. Williams, which predated those cases. The court distinguished those cases on the

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172 McMullen, 730 S.E.2d at 160.
173 Id.
174 See e.g., United States v. Mirabal, 2010 WL 3834072 (D.N.M. 2010) (testimony of supervisor of forensic chemist who performed the original analysis did not violate Confrontation Clause since supervisor could be cross-examined about what tests the analyst performed, whether they had been performed incorrectly, and the fact that the expert did not perform the tests herself).
175 Munoz, 958 N.E.2d at 1174-75.
176 Id. at 1776-77.
177 819 N.W.2d 563 (Table), 2012 WL 2378591 (Wis. App. 2012). In Williams, the Wisconsin Supreme Court held that the testimony of experts who independently analyze the data of others does not violate the Confrontation Clause:

[A] highly qualified witness, who is familiar with the procedures at hand, supervises or reviews the work of the testing analyst, and renders her own expert opinion is sufficient to protect a defendant's right to confrontation, despite the fact that the expert was not the person who performed the mechanics of the original tests.
ground that they did not involve an expert who had performed an independent evaluation and analysis of the data.\textsuperscript{178} The court found it significant that the surrogate had peer-reviewed the first analyst’s report and testified that the tests had been performed in accordance with the lab’s standard operating procedures, and that the machine was working correctly.\textsuperscript{179} She also explained that if protocol had not been followed, the drugs would not have been extracted. She noted that if a mistake had been made as to drug identification, the screening test and the confirmation test would not have been in agreement.\textsuperscript{180}

While most courts that have considered the issue have found that surrogate analysts do provide an adequate opportunity for cross-examination, some have questioned this assertion. For example, a dissenting justice on the Indiana Supreme Court in \textit{Pendergrass v. State} argued that the surrogate was an inadequate substitute for cross-examination in that case because she “could not testify whether [the analyst] diverged from standard laboratory procedures or how carefully or competently she performed the specific analyses.”\textsuperscript{181} He also argued that “[a]lthough a supervisor might be able to testify to her charge’s general competence or honesty, this is no substitute for a jury's first-hand observations of the analyst that performs a given procedure; and a supervisor’s initials are no substitute for an analyst's opportunity to carefully consider, under oath, the veracity of her results.”\textsuperscript{182}

Several commentators have also challenged the assertion that surrogate testimony provides sufficient opportunity for cross-examination where the expert has performed an independent analysis of the data. Jesse Norris has been an ardent critic of surrogate testimony, arguing that the need for Confrontation is the same, regardless of whether the surrogate performs an independent analysis of the data, since the analyst-generated portion of the data is “necessary for the surrogate to draw his or her conclusions.”\textsuperscript{183} He also contends that experts are not truly conducting an independent analysis of the data in these situations because an expert’s opinion is dependent on the results obtained by the original analyst, which in turn is dependent on the analyst’s ability to apply the correct methodology in conducting the test.\textsuperscript{184}

The court further explained that the “critical point . . . is the distinction between an expert who forms an opinion based in part on the work of others and an expert who merely summarizes the work of others.” Id.\textsuperscript{178} Hoff, 2012 WL 2378591, slip op. at 5.\textsuperscript{179} Id.\textsuperscript{180} Id. at 2.\textsuperscript{181} 913 N.E.2d 703, 711 (Ind. 2009).\textsuperscript{182} Id.\textsuperscript{183} Jesse Norris, Who Can Testify about Lab Results after Melendez-Diaz and Bullcoming?: Surrogate Testimony and the Confrontation Clause, 38 Am. J. Crim. L. 375, 407 (2011).\textsuperscript{184} Id. at 412-13.
Norris asserts that by limiting cross-examination to the surrogate, it “deprives the defendant of an opportunity to challenge the skill, qualifications, methodology and trustworthiness of the analyst, even though the validity of the underlying data wholly depends on the analyst.”  

According to Norris, this is true because “[i]f the analyst did not apply the methodology as described in his or her notes, or fraudulently altered test results, the surrogate will normally have no way of knowing.”

Jennifer Mnookin has also argued that substitute cross-examination of an expert does not satisfy Crawford’s requirements “any more than cross-examining a detective who took an affidavit can substitute for cross-examining the declarant.”

This is particularly true in the context of forensic reports where cross-examination of the original analyst could reveal additional weaknesses or discrepancies that the substitute expert is simply not aware of.

The danger of surrogate testimony is highlighted by People v. Dungo. There, the prosecution had called the supervisor of Dr. George Bolduc, the forensic pathologist who had performed the autopsy, to testify to the results of the autopsy and Dr. Bolduc’s conclusions as to the cause of death. San Joaquin County prosecutors refused to call Dr. Bolduc as a witness due to his checkered background. Dr. Bolduc had been fired or had resigned from three previous positions. He resigned from Orange County in 1995 after the California Supreme Court criticized him for forming conclusions in a murder trial based on the police report rather than the medical evidence; he was fired from Kern County in 1996 after a detective criticized him for conducting an autopsy on a baby before an evidence technician was able to collect adhesive tape from the victim’s face; and in 2002, he was fired from Sonoma County after it was revealed that he had failed to disclose his work for Kern County on his resume.

The supervisor, Dr. Robert Lawrence, was not present at the autopsy and relied exclusively on Dr. Boludc’s report and autopsy photos in forming his opinions.

The California Court of Appeals reversed the defendant’s conviction and remanded the case for a new trial. The court noted that the prosecution’s failure to call Dr. Bolduc as a witness “prevented the defense from exploring the possibility that he lacked proper training or had poor judgment or from testing his policy, proficiency, and methodology.”

Of note, Dr. Lawrence was unable to answer a number of questions about Dr. Bolduc’s background during cross-examination because he was unfamiliar with the details of those cases.

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185 Id. at 401.
186 Id. at 411.
187 Mnookin, supra note  , at 834.
188 Id. at 846.
190 Dungo, 98 Cal. Repr. 3d at 708.
191 Id. at 714.
192 Id. at 708.
III.  Williams v. Illinois

A.  Facts

A woman was kidnapped and raped in Chicago in 2000. A sexual assault kit was obtained from the victim and sent to the Illinois State Police lab. At the lab, a chemical test was conducted which confirmed the presence of semen. The kit was then resealed and placed in a freezer. Nine months later, the kit was sent to Cellmark Diagnostics Laboratory in Maryland. A Cellmark analyst obtained a male DNA profile from the vaginal swabs and sent a report to the Illinois State Police lab in April of 2001. Sandra Lambatos, a technician at the Illinois lab, then performed a computer search in the Illinois state DNA database. The search returned a hit to Williams whose DNA profile had been put in the system when he was arrested in 2000 on another charge.

Defendant was eventually arrested on the rape charge and elected to have a bench trial in April 2006. The State called three forensic witnesses. The first testified to his performance of the confirmatory test for the presence of semen in the rape kit. The second analyst testified to the DNA profile she had extracted from defendant after he had been arrested in 2000. The State also called Lambatos. She testified about her performance of the computer search, resulting in a hit to Defendant. While she did not have knowledge of the procedures used at Cellmark to obtain a DNA profile, she did testify that Cellmark was an accredited lab and that the Illinois state lab had routinely sent samples to Cellmark to reduce their backlog. She also testified how DNA profiles could be matched to an individual based on the idea of individuals having a unique genetic code. Finally, she testified that the two profiles were a match. The following colloquy took place between the prosecutor and Ms. Lambatos:

Q: Was there a computer match generated of the male DNA profile found in semen from the vaginal swabs [of the victim] to a male DNA profile that been identified as having originated from Sandy Williams?
A: Yes, there was.

Based on her own comparison of the two profiles, Lambatos concluded that Williams could not be excluded as a possible source of the semen in the rape kit and provided the statistical probability that another person’s DNA could have been the source.

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193 Williams, 132 S.Ct. at 2229.
194 Id.
195 Id. at 37 (Thomas, J., concurring).
196 Id. at 2229 (Alito, J.).
197 Id.
198 Id.
199 Id.
200 Id. at 2230.
201 Id.
202 Id.
DNA profile and report generated by Cellmark were not admitted into evidence nor did any of its analysts testify.\textsuperscript{203}

The trial judge admitted the testimony over defense objection. He ruled that Illinois Rule of Evidence 703 permitted Lambatos’ testimony. He noted that the expert’s testimony was based in part on her “own independent testing of the data received from Cellmark.”\textsuperscript{204} Defendant was convicted at trial and appealed.

\textbf{B. Court of Appeals Opinion}

The Illinois Court of Appeals affirmed the conviction. It first found that the State had established a sufficient foundation for Lambatos’ testimony. The court found that Lambatos’ reliance on the Cellmark DNA report was reasonable under Rule 703 since Lambatos had testified that Cellmark’s techniques are generally accepted in the scientific community and that she had previously relied on Cellmark for DNA analysis.\textsuperscript{205} The court also found that the State had satisfied the additional foundational requirement of instrument functionality because Lambatos had testified that Cellmark was an accredited lab and should have had quality control procedures in place. Thus, it concluded that defendant's argument was based upon “pure speculation that the equipment may not have been working properly, and such speculation is best tested during cross-examination.”\textsuperscript{206} The Court of Appeals also rejected Williams’ second argument that the State had failed to establish a proper chain of custody. Since the shipping manifests showed the sample was sent to Cellmark and returned to the state lab and Lambatos testified that the sample did not show any signs of degradation, the court concluded that Lambatos’s testimony was sufficient to establish that reasonable measures were taken to safeguard the evidence.\textsuperscript{207}

Judge Cunningham filed a vigorous dissent, finding that the State had completely failed to lay a foundation for Lambatos’ testimony.\textsuperscript{208} Citing \textit{People v. Raney}\textsuperscript{209} for support, she stated that the State “must establish a foundation which includes some evidence that the machine producing those results was functioning properly when it was used for testing.”\textsuperscript{210} Judge Cunningham noted that the foundational evidence was even weaker than that given in \textit{Raney}:

\begin{quote}
Unlike the testifying scientist in \textit{Raney} [who did not establish a sufficient foundation], Lambatos did not perform or even observe the critical procedure that was allegedly used to isolate the defendant’s DNA. In fact Lambatos had no
\end{quote}

\textsuperscript{203} Id.
\textsuperscript{204} Id. at 2231.
\textsuperscript{206} Id.
\textsuperscript{207} Id. at 968.
\textsuperscript{208} \textit{Williams}, 895 N.E.2d at 971 (Cunningham, J., dissenting).
\textsuperscript{209} \textit{Raney}, 756 N.E.2d 338 (Ill. App. 2001).
\textsuperscript{210} \textit{Williams}, 895 N.E.2d at 972.
knowledge of whether the machine used in the testing was functioning and whether it was accurately calibrated, or anything else about it. Neither did she personally know anything about any of the procedures used in the laboratory where the testing was done.\textsuperscript{211}

Like the witness in Raney, she found that Lambatos did not provide any evidence as to whether the underlying tests had been performed with proper calibrations and safeguards.\textsuperscript{212} She rejected the majority’s argument that testimony about Cellmark’s methods generally was sufficient to establish the necessary foundation since none of Lambatos’ testimony was about the methods Cellmark had used in this case. Judge Cunningham also noted that the State had conceded that Lambatos could not have reached her conclusion about the DNA match without relying on the tests performed by technicians at Cellmark.\textsuperscript{213} Thus, she concluded that “absent a proper foundation, it was error to permit the expert testimony of forensic scientist Lambatos concerning a match between the defendants DNA and the DNA found in samples taken from the victim.”\textsuperscript{214}

\section*{C. Illinois Supreme Court Opinion}

The Illinois Supreme Court affirmed in part and reversed in part the judgment of the Court of Appeals.\textsuperscript{215} First, the court held that a sufficient foundation had been laid for Lambatos’ testimony, finding that it was reasonable for Lambatos to rely on the Cellmark report under Illinois Rule of Evidence 703. The court found it significant that Lambatos had reviewed Cellmark’s data and did not have any question about the match to Williams’ profile nor did she observe any problems in the chain of custody or signs of contamination.\textsuperscript{216} It also rejected the argument that there was no testimony as to the functionality of the instruments used by Cellmark. The court distinguished Raney on the ground that Lambatos performed an independent analysis of the data and did not merely regurgitate data generated by a machine.\textsuperscript{217} It also found that Lambatos had testified that Cellmark was an accredited laboratory and would have employed calibrations and controls in conducting the DNA analysis.\textsuperscript{218} Accordingly, the court concluded that the reliability of Cellmark’s analysis went to the weight, not admissibility of Lambatos’ testimony.\textsuperscript{219}

\begin{itemize}
  \item \textsuperscript{211} Id. at 973.
  \item \textsuperscript{212} Id. at 974.
  \item \textsuperscript{213} Id.
  \item \textsuperscript{214} Id.
  \item \textsuperscript{215} People v. Williams, 939 N.E.2d 268 (Ill. 2010). The Illinois Supreme Court upheld the lower court’s rulings on the foundational and Confrontation Clause questions but reversed the Court of Appeals ruling on a sentencing issue that is not the topic of this article.
  \item \textsuperscript{216} Id. at 275.
  \item \textsuperscript{217} Id. at 276.
  \item \textsuperscript{218} Id.
  \item \textsuperscript{219} Id. at 277.
\end{itemize}
The court also affirmed the appellate court’s ruling on the confrontation issue. The court concluded that the State did not introduce testimony regarding the Cellmark report for its truth, but rather, “to show the underlying facts and data Lambatos used before rendering an expert opinion in this case.” The court rejected the argument that Lambatos was merely a conduit for the results of the Cellmark report:

Her testimony consisted of her expert comparison of the DNA profile in the ISP database with the DNA profile from the kit prepared by Cellmark. She used her own expertise to compare the two profiles before her. Lambatos ultimately agreed with Cellmark’s results regarding the male DNA profile. But Lambatos additionally made her own visual and interpretive comparisons of the peaks on the electropherogram and the table of alleles to make a conclusion on the critical issue: that there was a match to the defendant's genetic profile. Accordingly, Cellmark’s report was not used for the truth of the matter asserted and was not hearsay.

Justice Freeman filed a special concurrence. Like Judge Cunningham on the Court of Appeals, he believed the State had failed to establish an adequate foundation for Lambatos’ testimony:

Strikingly absent from Lambatos’ testimony is any information about Cellmark's extraction and amplification processes in generating the profile that was used to produce the data upon which she relied in her making comparisons. Lambatos’ ‘testing’ in this case consisted of her own reading to match up the numbers generated on the computer charts, which was derived from Cellmark’s underlying scientific processes. What Lambatos failed to testify to during her examination was what occurred at Cellmark beginning from when Cellmark received the package containing the victim’s vaginal swabs and blood sample to when Cellmark analysts performed the extraction and amplification procedures.

Justice Freeman characterized Lambatos’ assumption that Cellmark analysts followed proper guidelines in performing the DNA extraction as “rank speculation.” He contrasted her testimony with that of the analyst who had produced Williams’ DNA

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220 Id. at 279, citing People v. Lovejoy, 919 N.E.2d 843 (Ill. 2009) (testimony of medical examiner was proper where he relied on toxicologist’s report that six different types of drugs were identified in victim’s body since it was offered to aid the jury in assessing the value of his opinion); People v. Johnson, 915 N.E.2d 845 (Ill. App. 2009) (testimony of DNA expert permitted under Rule 703 to explain the basis of his opinion even where he did not perform underlying DNA test).

221 Id. at 280.

222 Justice Freeman filed a concurrence because he believed the error in admitting Lambatos’ testimony to be harmless. Williams, 939 N.E.2d at 287, (Freeman, J., concurring).

223 Id. at 283, (Freeman, J., concurring).

224 Id. at 284.
profile for comparison, who had testified to the protocols she had followed and had also utilized “clean lab” techniques when generating Williams’ profile. Justice Freeman also found the facts of Williams to be in stark contrast to those of People v Johnson. There, a Cellmark supervisor, who had served as a technical reviewer, testified in place of the original lab analysts who had performed the DNA tests by relying on a report that indicated what methods and controls had been used. Like in Williams, an Illinois State Crime Lab employee then testified that the Cellmark profile matched the defendant’s profile. Unlike the Cellmark supervisor in Johnson, however, Justice Freeman noted that Lambatos was not a Cellmark employee, did not rely on the detailed type of report that the supervisor had, did not know who performed the tests at Cellmark, nor could she identify what, if any, protocols were followed. Although recognizing that expert evidence should not be excluded simply because an analyst deviated from a particular protocol, Justice Freeman noted that Lambatos could not establish “any protocol.” He concluded that “by accepting Lambatos’ assumption that because Cellmark was accredited, the protocols she had personally developed for the lab to use were, in fact, used to generate the DNA profile, the court errs in finding that an adequate foundation was laid.”

D. United States Supreme Court Decision

1. Plurality opinion

The United States Supreme Court granted certiorari to review the Confrontation Clause issue. The plurality held that Lambatos’ reference to the Cellmark report did not violate the Confrontation Clause because it was not testimonial hearsay. Finding that the Confrontation Clause applied only to hearsay statements, the Court held that the admission of basis evidence under Rule 703 is not covered under the Clause because it is not being offered for its truth, and therefore, is not hearsay. The Court found that basis evidence is admitted only to help the factfinder understand the expert’s thought process and help it weigh his opinion.

The Court distinguished this case from Melendez-Diaz and Bullcoming on the ground that the report itself was not admitted into evidence for the purpose of proving its truth. It found that Lambatos’ testimony as to the source of the Cellmark profile was a ‘mere

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225 Id.
226 906 N.E.2d 70 (Ill. App. 2009), judgment vacated and remanded, 934 N.E.2d 1006 (Ill. 2010). The appellate court was directed to reconsider its judgment in light of the ruling in Williams.
227 Johnson, 906 N.E.2d at 78.
228 Id. at 79.
229 Williams, at 286 (Freeman, J., concurring).
230 Id.
231 Id.
232 Williams, 132 S.Ct. at 2228.
premise” of the prosecutor’s question.\textsuperscript{233} Thus, the Court concluded that Lambatos had simply assumed the premise to be true when she answered that there was in fact a match between the two profiles. The Court stated that the dissent’s argument (Lambatos’ reference to the report was hearsay) rested on a clear error—that the truth of Lambatos’ testimony depended on the truth of the contents of the Cellmark report and therefore her reference to the report must have been admitted for its truth.\textsuperscript{234} The Court concluded that the correctness of Lambatos’ testimony—that the two profiles matched—was not dependent on the origin of the samples from which the profiles were derived.\textsuperscript{235}

The plurality also rejected the argument that Lambatos reference to the Cellmark report was used to establish the foundation for her testimony. According to the plurality, Lambatos referred to the Cellmark report only to establish that it contained a DNA profile that matched Defendant’s, not to prove that the report contained an accurate profile of the perpetrator’s DNA.\textsuperscript{236} Further, it found that there was no evidence that the judge took the expert’s answer as substantive evidence to establish where the DNA profiles had come from. Even had this not been the case, the Court concluded that these foundational issues were controlled by Illinois state law, not the Confrontation Clause:

If there were no proof that Cellmark produced an accurate profile based on that sample, Lambatos' testimony regarding the match would be irrelevant, but the Confrontation Clause, as interpreted in \textit{Crawford}, does not bar the admission of irrelevant evidence, only testimonial statements by declarants who are not subject to cross-examination.\textsuperscript{237}

The Court noted that the relevance of this match was then established by independent circumstantial evidence showing that the Cellmark report was based on a forensic sample taken from the crime scene.\textsuperscript{238} In any event, the Court found that the Illinois Supreme Court had adequately resolved this issue since sufficient foundational evidence had been presented in the form of chain-of-custody evidence.\textsuperscript{239} It noted that there was no suggestion that any other items containing Williams’ DNA had been sent to Cellmark which might have explained the potential for a mix-up or cross-contamination. The Court concluded that “the fact that the Cellmark profile matched Williams—the very man whom the victim identified in the lineup and at the trial as her attacker—was itself striking confirmation that the sample Cellmark tested was the sample taken from the victim’s vaginal swabs.”\textsuperscript{240} The Court also noted that strong circumstantial evidence existed as to the reliability of Cellmark’s work:

\begin{itemize}
  \item Id. at 2236.
  \item Id. at 2239.
  \item Id.
  \item Id.
  \item Id. at 2238.
  \item Id. at 2240-41.
  \item Id. at 2237, n. 7.
  \item Id. at 2238.
\end{itemize}
If the semen found on the vaginal swabs was not petitioner's and thus had an entirely different DNA profile, how could sloppy work in the Cellmark lab have transformed that entirely different profile into one that matched petitioner's? And without access to any other sample of petitioner's DNA (and recall that petitioner was not even under suspicion at this time), how could a dishonest lab technician have substituted petitioner's DNA profile?  

Ultimately, the Court concluded that these foundational issues were more properly viewed as impacting the probative value of Lambatos’ testimony, not its truth (and thus its admissibility under the Confrontation Clause).

Next, the Court found it significant that the case was tried before a judge, not a jury. While recognizing that basis evidence is generally barred from disclosure to a jury, the Court found that Rule 703 places no such restriction on judges. “When the judge sits as the trier fact, it is presumed that the judge will understand the limited reason for the disclosure of the underlying inadmissible information and will not rely on that information for any improper purpose.” Thus, since the judge assumably would have known not to rely on Lambatos’ reference to the Cellmark report for its truth, the Court concluded that the Confrontation Clause did not apply.

The plurality offered a second justification for upholding Williams’ conviction--the basis evidence was not testimonial, even if it was considered to be hearsay. It noted that in previous cases where the Court has rejected the admission of testimonial statements, they shared two common characteristics: “(a) they involved out-of-court statements having the primary purpose of accusing a targeted individual of engaging in criminal conduct, and (b) they involved formalized statements such as affidavits, depositions, prior testimony, or confessions.” The court found that the Cellmark report was quite different in character since it was not prepared for the primary purpose of accusing a targeted individual. Instead, the Court concluded that the primary purpose of the report was to catch up a rapist who was still at large, not to obtain evidence for use against the defendant who was not under suspicion at the time. The Court found it significant that at the time Cellmark technicians prepared the DNA profile from the rape kit, they did not know who the perpetrator was or what the consequences of their report would be.

\[^{241}\textit{Id. at 2239.}\]
\[^{242}\textit{Id. at 2239.}\]
\[^{243}\textit{Id. at 2235.}\]
\[^{244}\textit{Id. at 2240.}\]
\[^{245}\textit{Id. at 2242.}\]
\[^{246}\textit{Id. at 2243.}\]
\[^{247}\textit{Id.}\]
such, the Court concluded that there was no real chance that sample contamination, sample switching, mislabeling, or fraud could have led Cellmark to produce a DNA profile that matched defendant.\textsuperscript{248}

2. Justice Thomas’ Concurrence

Justice Thomas concurred in the result but sharply criticized the plurality’s reasoning. Scoffing at the notion that Lambatos referred to the Cellmark report for any purpose other than to prove its contents, Justice Thomas pointed out that in previous decisions the Court had required out-of-court statements to be introduced for a “legitimate, non-hearsay purpose.”\textsuperscript{249} He believed that the admission of the factual basis underlying an expert’s opinion did not satisfy this requirement:

“[S]tatements introduced to explain the basis of an expert’s opinion are not introduced for a plausible non-hearsay purpose. There is no meaningful distinction between disclosing an out-of-court statement so that the factfinder may evaluate the expert’s opinion and disclosing that statement for its truth.”\textsuperscript{250}

Justice Thomas concluded that the validity of Lambatos’ opinion ultimately turned on the truth of Cellmark’s statements. “The plurality's assertion that Cellmark’s statements were merely relayed to explain ‘the assumptions on which [Lambatos’] opinion rested, overlooks that the value of Lambatos’ testimony depended on the truth of those very assumptions.”\textsuperscript{251} While noting that the existence of other evidence corroborating the basis testimony could render a potential Confrontation Clause violation harmless, he stated that “it does not change the purpose of such testimony and thereby place it outside of the reach of the Confrontation Clause.”\textsuperscript{252}

He also rejected the plurality’s argument that this case should be treated differently since it was a bench trial. “[T]he point is not that the factfinder is unable to understand the restricted purpose for basis testimony. Instead, the point is that the purportedly ‘limited reason’ for such testimony—to aid the factfinder in evaluating the expert’s opinion—necessarily entails an evaluation of whether the basis testimony is true.”\textsuperscript{253}

Furthermore, he admonished the Court for allowing a rule of evidence to so easily “trump” a defendant’s right of confrontation. He stated that the Court has previously recognized that “concepts central to the application of the Confrontation Clause are ultimately matters of federal constitutional law that are not dictated by state or federal evidentiary rules.”\textsuperscript{254} Although some courts may decide to weigh the balance in favor of

\begin{footnotesize}
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\item \textsuperscript{248} Id. at 2244.
\item \textsuperscript{249} Id. at 2256 (Thomas, J., dissenting).
\item \textsuperscript{250} Id. at 2257.
\item \textsuperscript{251} Id. at 2258.
\item \textsuperscript{252} Id. at 2258.
\item \textsuperscript{253} Id. at 2257 n. 1.
\item \textsuperscript{254} Id. at 2256.
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excluding basis evidence under Rule 703, Justice Thomas noted that a balancing test is “no substitute for a constitutional provision that has already struck the balance in favor of the accused.”

Justice Thomas also criticized the plurality’s creation of a revised primary purpose test. While agreeing that the declarant must “primarily intend to establish some fact with the understanding that his statement may be used in a criminal prosecution,” he characterized the plurality’s version as a misreading of that standard:

The shortcomings of the original primary purpose test pale in comparison, however, to those plaguing the reformulated version that the plurality suggests today. The new primary purpose test asks whether an out-of-court statement has ‘the primary purpose of accusing a targeted individual of engaging in criminal conduct.’ That test lacks any grounding in constitutional text, in history, or in logic.

Moreover, Justice Thomas found that the Confrontation Clause does not limit the time frame at which one becomes a witness. Justice Thomas concluded that the inquiry into whether a statement is “inherently inculpatory” is irrelevant in determining whether a statement is testimonial. As a result, he concluded the fact that Cellmark employees did not know who the suspect was at the time they prepared the DNA profile was irrelevant to a determination of the report’s testimonial nature.

Justice Thomas also criticized the plurality's attempt to characterize the Cellmark report as resolving an ongoing emergency. He believed that the distinction between emergencies and evidence gathering is unworkable in this context, in light of the mixed purposes that often accompany statements made to the police. Justice Thomas felt that the evidentiary purpose was clearly the prevalent motive behind the creation of the DNA profile.

Despite his conclusion that Lambatos’ reference to the Cellmark report was hearsay, Justice Thomas found that it was not testimonial and thus not subject to the Confrontation Clause. He stated that the Cellmark report lacked the solemnity of an affidavit or deposition because it was neither “a sworn nor a certified declaration of fact.” Justice Thomas noted that in contrast to the Cellmark report, the reports in Melendez-Diaz had been sworn to before a notary public by the analysts who had tested the cocaine.

3. Justice Kagan’s dissent

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255 Id at 2259.  
256 Id. at 2262.  
257 Id.  
258 Id.  
259 Id. at 2260.  
260 Id.
At the outset of her dissent, Justice Kagan recognized that while there were five votes to approve the admission of the Cellmark report, there was “not a single good explanation” for doing so. Justice Kagan’s frustration with the plurality was evident throughout her dissent, rhetorically querying at one point, “[h]ave we not already decided this case?” She found the Cellmark report was identical to those ruled inadmissible in Melendez-Diaz and Bullcoming in “all material respects.” When compared to the Bullcoming report, she found that the Cellmark analysis “has a comparable title; similarly describes the relevant samples, test methodology, and results; and likewise includes the signatures of laboratory officials.”

Just as Justice Thomas had done, Justice Kagan expressly rejected the plurality’s conclusion that the contents of the Cellmark report were not admitted for their truth. Contrasting the facts of Street with those of the current case, Justice Kagan explained that the factfinder would inherently have to rely on the truth of the out-of-court statement where a witness uses it as the basis for her conclusion:

The situation could not be more different when a witness, expert or otherwise, repeats an out-of-court statement as the basis for a conclusion, because the statement’s utility is then dependent on its truth. If the statement is true, then the conclusion based on it is probably true; if not, not. So to determine the validity of the witness’s conclusion, the factfinder must assess the truth of the out-of-court statement on which it relies. . . Unlike in Street, admission of the out-of-court statement in this context has no purpose separate from its truth; the factfinder can do nothing with it except assess its truth and so the credibility of the conclusion it serves to buttress.

Justice Kagan also rejected the plurality’s contention that Lambatos had merely assumed that Cellmark had developed the DNA profile from the victim’s vaginal swabs. In her opinion, Lambatos affirmed, without qualification, that Cellmark had in fact obtained a male DNA profile from the swabs:

There is nothing wrong with Lambatos testifying that two DNA profiles—the one shown in the Cellmark report and the one derived from Williams’s blood—matched each other; that was a straightforward application of Lambatos’ expertise. Similarly, Lambatos could’ve added that if the Cellmark report resulted from scientifically sound testing of L.J.’s vaginal swab, then it would link Williams to the assault. What Lambatos could not do was what she did: indicate that the Cellmark report was produced in this way by saying that L.J.’s vaginal swab contained DNA matching Williams’s.

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261 Id. at 2265 (Kagan, J., dissenting).
262 Id. at 2267.
263 Id. at 2266.
264 Id.
265 Id. at 2268-69.
266 Id. at 2270.
She explained that the critical distinction was one of degree: if Lambatos was merely stating a logical proposition (if X is true, then Y follows), then that would be constitutionally acceptable. However, once she made a statement that contained a factual allegation premised on someone else’s work (Y is true because X is true), it converted her testimony to a testimonial statement covered by the Confrontation Clause.267

Justice Kagan also rejected the plurality’s argument that the rules regarding the admission of basis evidence should be relaxed if a judge is serving as factfinder. “[T]he presence of a judge does not transform the constitutional question. In applying the Confrontation Clause, we have never before considered relevant the decision maker’s identity.”268 Justice Kagan similarly rejected the plurality’s reliance on state evidence law in upholding Lambatos’ testimony. She noted that the Court has previously made it clear in Crawford that the protections of the Confrontation Clause are not “coterminous” with the rules of evidence.269 She also criticized this approach because it would encourage prosecutors to do by subterfuge what they could not do directly:

But under the plurality’s approach, the prosecutor could choose the analyst-witness of his dreams (as the judge here said, “the best DNA witness I have ever heard”), offer her as an expert (she knows nothing about the test, but boasts impressive degrees), and have her provide testimony identical to the best the actual tester might have given (“the DNA extracted from the vaginal swabs matched Sandy Williams’s”)—all so long as a state evidence rule says that the purpose of the testimony is to enable the factfinder to assess the expert opinion’s basis.270

She also found that Lambatos was not a sufficient substitute for cross-examination of the Cellmark analyst. “He [Williams’ defense attorney] could not probe whether the analyst had tested the wrong vial, inverted the labels on the samples, committed some more (sic) technical error, or simply made up the results.”271 Justice Kagan concluded that once the State elected to introduce the substance of the Cellmark report, it had a constitutional duty to call the analyst who prepared the report.272

Justice Kagan also criticized the plurality’s reformulated primary purpose test. Picking up where Justice Thomas left off, she accused the plurality of crafting a test that has “no basis in our precedents.”273 She added, “[w]here that test comes from is anyone’s

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267 Id. at 2270, n. 2
268 Id. at 2271.
269 Id. at 2272.
270 Id.
271 Id. at 2267.
272 Id. at 2267.
273 Id. at 2273.
guess." She attacked the new formulation on the ground that “none of our cases has ever suggested that, in addition, the statement must be meant to accuse a previously identified individual; indeed, in Melendez-Diaz, we rejected a related argument that the laboratory ‘analysts are not subject to confrontation because they are not accusatory witnesses.’”

Thus, Justice Kagan concluded that Lambatos’s reference to the conclusions contained in the Cellmark report was hearsay that should have been subject to the strictures of the Confrontation Clause. She lamented the plurality’s break with Melendez-Diaz and Bullcoming, noting that this decision leaves “significant confusion” in its wake.

E. Commentary on the Williams v. Illinois

The Williams decision is troubling in any number of respects. The Illinois Supreme Court erred by authorizing the admission of expert testimony that lacked a sufficient foundation as to its authenticity and reliability under Illinois evidence law. There was no evidence presented as to the methods and procedures used by Cellmark to extract a DNA profile from the rape kit, that its machinery was working properly at the time its analyst developed the profile, or that Cellmark had properly maintained the chain of custody for the evidence. Second, the United States Supreme Court failed to correct this error by not prohibiting the introduction of basis evidence that is testimonial in nature. By permitting

274 Id. Richard Friedman has a good idea of where this new test came from. He postulates that the Court incorporated the arguments of Paul Vinegrad, who has urged that the impact of the Confrontation Clause should be lessened where the police have not identified a particular suspect at the time potentially incriminating evidence is obtained. Vinegrad asserts that this new rule should be implemented in cold cases where the original analyst was unavailable to testify once a suspect was identified. He argues that witness statements should not be covered under the Confrontation Clause unless each of the following four requirements are met:

(1) a government official (or their agent) responsible for the investigation and prosecution of crime, (2) by some affirmative action (i.e., questioning, "interrogation," etc.), was involved in the production of the particular statement, (3) at a time that an "adversarial relationship" existed between the government official (or their agent) and a particular person (i.e., at the time the statement was produced, the government had "reasonable suspicion" to detain (or "probable cause" to arrest) a particular person for criminal activity), and (4) viewed objectively, from the perspective of a competent adult in the position of the declarant, the declarant knew that they were providing a statement against someone.


275 Id. at 2274, quoting Melendez-Diaz, 557 U.S. at 313.

276 Id. at 2277.
expert witnesses to testify to the contents of otherwise inadmissible testimonial hearsay under the guise that it informs the factfinder of the basis of their opinions, the Court allowed the prosecution to admit through the backdoor—evidence of the DNA profile’s source—what it could not through the front.

1. The Illinois Appellate Courts’ Improperly Concluded that an Adequate Foundation Was Laid for Lambatos’ Testimony

First, a proper foundation was not established for Lambatos’ opinion that the two DNA profiles matched. As discussed above, this requires a two-part inquiry: 1) was the information of a type that it can be said under Rule 703 that the expert reasonably relied on it (i.e., would it be used by other experts in the field in forming an opinion); and 2) if so, can the particular test or procedure that produced the data underlying the expert’s opinion be sufficiently authenticated under Rule 901 such that it can be said that the expert’s opinion has the necessary foundational relevance to be admitted. The Illinois courts conflated this two-part inquiry, using proof of the first to establish the second. It became sufficient in their minds that the expert’s reliance on the DNA profile produced by Cellmark was reasonable under Rule 703.

Recall from Part II that under the first prong of the analysis, the court should, at the very least, determine whether the expert based his or her opinion on sufficient factual data, relied on hearsay deemed reliable by other experts in the field, and asserted conclusions with a sufficient level of certainty. Here, the Illinois courts did not conduct a very searching inquiry into the reliability of the data underlying Lambatos’ opinion. For instance, the Illinois Supreme Court found it sufficient that Lambatos relied on evidence (DNA profiles) that other DNA experts would use in forming a conclusion that Williams’ DNA matched the DNA found in the rape kit.\(^{277}\) Because Lambatos did not see signs of contamination or detect any problems in the chain of custody, the court found the underlying data to be sufficiently reliable.\(^{278}\) Of course the court had to take her word for it since there was no direct testimony from a Cellmark representative to verify these assertions.

As part of its duty to determine the admissibility of expert testimony prior to trial, the court must also determine the reliability of the methods and techniques used to generate the data under Rule 702. Given that courts have universally found polymerase chain reaction (PCR) coupled with short tandem repeats (STR) to be a reliable method of DNA extraction and amplification, the trial court need only have determined whether that methodology was applied in a reliable manner in this case. The problem in Williams was that the trial court appeared to abandon altogether its gatekeeper responsibility.\(^{279}\) While Lambatos testified to the end result (a DNA profile was obtained from the rape kit), how Cellmark got that result remains a mystery. Although Lambatos testified as to how she

\(^{277}\) Williams, 939 N.E.2d at 275.

\(^{278}\) Id.

\(^{279}\) The issue was not discussed in the appellate opinions so it may not have been raised on appeal.
would have conducted the tests, she could only speculate as to how Cellmark actually did so. Thus, there was no evidence presented in this case as to whether those methods were applied in a reliable fashion.

Even if it was reasonable for Lambatos to have relied on the Cellmark lab report, the Illinois courts should have excluded it as irrelevant. Under the second prong of the inquiry, the prosecution must present evidence that expert’s opinion and the data she was relying on to form it are sufficiently linked to the case at hand. To do so, two foundational requirements must be established: 1) proof that the test results relied on by the expert are actually those obtained from testing the evidentiary sample tied to the case, including that the sample was not subject to contamination or degradation before or during the testing process; and 2) that the machinery used to test the evidence was functioning properly such that it produced a reliable result.

Had the Illinois courts properly conducted this inquiry, several troubling concerns should have been apparent. First, the State offered little evidence to prove that the DNA samples tested by Cellmark were those compared by Lambatos. A proper chain of custody was not established for the rape kit evidence while it was in Cellmark’s hands. While deficiencies in the chain of custody such as a missing link ordinarily go to the weight of the evidence not its admissibility, the chain of custody in Williams did not merely have holes in it; it was missing entirely. The only evidence presented on this point consisted of two shipping manifests, showing the Illinois State Police lab had delivered the rape kit to Cellmark and that Cellmark had returned the samples several months later. There was no testimony as to what was done with the evidence once it was received at Cellmark or how it was handled and stored. Simply because the defendant’s DNA profile was generated from evidence tested at Cellmark and the rape kit was shipped to Cellmark, it cannot be assumed that Williams’ profile came from the rape kit.

In United States v. Crockett, a federal district court expressed significant concerns about the government’s ability to establish the relevancy of the expert’s opinion under a similar set of facts to that in Williams. There, the defendant was charged with taking cocaine from the Detroit Police Department property room and replacing it with a non-controlled substance. The government did not endorse the chemist who performed both tests, but instead endorsed a lab supervisor.280 In a pretrial ruling, the district court questioned how the government was going to prove that the chemist “actually tested the substance that was lodged in the property room.”281 The court found that in order for the lab supervisor’s opinion to be relevant, “there must be information in the record to prove what was tested.”282 The court held that “the government must offer evidence that establishes a foundation for the test results that satisfies the court making the admissibility decision under Rules 104 and 901, but there also must be evidence from which a rational juror could conclude that Williams tested the substance later removed

280 Crockett, 586 F. Supp. 2d at 880.
281 Id. at 886.
282 Id. at 888.
from the property room by the defendant.” 283 The court held that the report of the nontestifying analyst could not “furnish that link without violating the hearsay rule and the Confrontation Clause.” 284

Given the lack of direct testimony, this issue ultimately comes down to the strength of the circumstantial evidence presented. In Williams, Lambatos testified that she would have seen signs of degradation (had it been present) and there was no evidence presented that Cellmark had received Williams’ DNA from another source. There was also no evidence presented that the rape kit had actually been tampered with. Thus, contamination was highly unlikely as a valid explanation for why Williams’ DNA was found in the rape kit sample. Consequently, while the foundational evidence was far from overwhelming, all three courts properly concluded that the DNA profile Lambatos relied on had come from the rape kit sample.

By far the most troubling aspect of all three court opinions, however, was their failure to recognize the fact that the State failed to prove that Cellmark had used proper quality control procedures and that its machinery was working properly at the time of its analysis. The Illinois Supreme Court concluded that proof of these facts was not necessary since Lambatos had conducted an independent analysis of the data and had testified that Cellmark was an accredited lab. 285 But as Judge Cunningham of the Illinois Court of Appeals pointed out in her dissent, “rank speculation” as to what procedures Cellmark may have used cannot substitute for proof of what it actually did. Justice Freeman of the Illinois Supreme Court also found proof of this fact to be sorely lacking: “[t]he shipping manifests, which are not enough to even establish a proper chain of custody once the samples reached their destination at Cellmark, certainly cannot establish whether a laboratory was ‘clean’ or whether Lambatos’ protocols were actually followed.” 286 Without this added evidence to authenticate the reliability of the DNA profile, Lambatos’ opinion was like Wile E. Coyote—floating in mid air with nothing to support it.

The Supreme Court’s conclusion—the fact that Cellmark derived a DNA profile from the rape kit matching Williams’ profile is proof of the reliability of Cellmark’s procedures—is even more unfounded. Taking this line of reasoning to its logical extreme, any scientific test that identifies the guilty party or the alleged controlled substance, regardless of whether proper controls and quality control procedures were followed, would be deemed to be reliable. This is an example of circular reasoning that would make Nick Naylor proud. 287 Moreover, this line of reasoning reflects a fundamental misunderstanding of the science allegedly supporting it. As the Office of the Inspector General pointed out in its

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283 Id.
284 Id.
285 Williams, 939 N.E.2d at 276.
286 Williams, 9393 N.E.2d at 286, (Freeman, J., concurring).
287 Christopher Buckley’s protagonist in Thank You for Smoking was a skilled tobacco lobbyist who often engaged in such logical fallacies to promote his product.
review of the FBI DNA lab, the conclusions that can be drawn from a DNA profile are limited if proper controls have not been run:

The failure to analyze properly the positive and negative controls and reagent blanks does not necessarily render DNA testing results inaccurate. Rather, it limits the conclusions that the DNAUI scientists may draw from the testing. Without properly analyzing the negative control and the reagent blank, DNAUI scientists cannot be sure that the only source of the test results is the DNA from the evidence under examination. . . If the positive control is not analyzed properly, the DNAUI scientists cannot evaluate how well the amplification and capillary electrophoresis processes worked.  

Consequently, Lambatos’ opinion about the DNA match should have been stricken since an adequate foundation had not been laid for its admission.

2. The Supreme Court Improperly Concluded that the Basis Evidence Was Not Subject to the Confrontation Clause

Once the Illinois courts had let the cat out of the bag, the Supreme Court could only limit the damage.  

Not only did it decline to do so, the Court also attempted to rewrite Confrontation Clause precedent in the process. First, the plurality erred by holding that the basis evidence was not hearsay and therefore was not subject to the Confrontation Clause. Finding that the purpose of the disclosure of basis evidence under Illinois Rule of Evidence 703 was to help the factfinder understand the expert’s thought process and determine what weight to give the expert’s opinion, the plurality provided an example to explain its reasoning:

For example, were the factfinder to suspect that the expert relied on factual premises with no support in the record, or that the expert drew an unwarranted inference from the premises on which the expert relied, then the probativeness or credibility of the expert’s opinion would be seriously undermined. The purpose of disclosing the facts on which the expert relied is to allay these fears—to show that the expert’s reasoning was not illogical, and that the weight of the expert’s

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288 OIG DNA Report, supra note __ at 36.
289 Because it could not act to correct the errors made by the lower courts under Illinois law, the only issue properly before the Supreme Court was whether the basis evidence should have been excluded under the Confrontation Clause. Since Lambatos’ testimony was not just limited to a rehashing of the findings of the Cellmark analyst but instead presented an entirely new opinion (that the DNA profiles matched), no argument can be made that Lambatos was acting as a mere conduit for the Cellmark analyst. Therefore, the Confrontation Clause issue was limited to the basis evidence. The Illinois courts had already found that there was sufficient evidence in the record to establish a foundation for Lambatos’ opinion. Thus, even had the Supreme Court found the basis evidence had been improperly admitted, it would have amounted to harmless error.
opinion does not depend on factual premises unsupported by other evidence in the record—not to prove the truth of the underlying facts.\textsuperscript{290}

The Court’s own example disproves its theory, however. How else would the factfinder assess the probative value of the expert’s opinion or determine that he drew an unwarranted inference from the premises on which he relied unless it first assessed the truth of the underlying evidence? Although the plurality’s holding on this issue is in line with most other courts that have addressed it, it ignores the reality of the situation. Simply because courts have held that basis evidence cannot be admitted for its truth does not mean that is what is actually occurring.

The Court’s assertion that Lambatos’ reference to the contents of the Cellmark report was made merely to explain the basis of her opinion is disingenuous. This is not a situation akin to \textit{Street} where out-of-court statements were offered for a collateral purpose, making their truth immaterial. Had Cellmark employees testified that they had not prepared a DNA profile from the rape kit or had never received the DNA sample, the plurality’s argument might have some merit. Instead, the truth of the contents of the Cellmark report referenced by Lambatos was far from immaterial. The crux of Lambatos’ opinion was that the two DNA profiles matched and that the odds of a second person having that same DNA profile were infinitesimally small. The basis evidence in this case—that the profile matched to Williams was derived from the rape kit sent to Cellmark—does not merely help explain Lambatos’ testimony, it lays the foundation for it.

The plurality also concluded that “the correctness of this expert opinion [that the profiles matched] . . . was not in any way dependent on the origin of the sample from which the profiles were derived.”\textsuperscript{291} True enough. Except this was not the portion of Lambatos’ testimony that violated the Confrontation Clause. As Justice Kagan pointed out, an expert would have been allowed to testify that the profiles matched since that fact is within the personal knowledge of the expert. The testimony became objectionable, however, when Lambatos referenced the source of the sample by confirming Williams’ DNA profile matched the profile that Cellmark had extracted from the rape kit.

Without the basis evidence, Lambatos’ testimony would have been supported only by circumstantial evidence that the DNA profile obtained by Cellmark was derived from the rape kit. Given the lack of direct testimony as to foundation for the opinion and the weakness of the circumstantial evidence on this point, there was a very real possibility that the trial judge could have ruled Lambatos’ testimony was inadmissible in the absence of the basis evidence. As such, the prosecution’s clear intent in offering this evidence was to prove its truth, not merely to help explain Lambatos’ testimony.

The plurality also erred by finding that the basis evidence was not hearsay because the judge would not have relied on the basis evidence for its truth. It admitted that the

\textsuperscript{290} Williams, 132 S.Ct. at 2240.
\textsuperscript{291} Williams, 132 S.Ct. at 2239.
outcome would have been different had the same information been submitted to a jury.\textsuperscript{292} The question of whether the basis evidence is admissible under the rules of evidence is one thing; whether it violates the Confrontation Clause is quite another. By differentiating between judge and jury, the plurality created two versions of the Confrontation Clause—one that is applicable to judges and one that is applicable to juries. Just because the judge may know to ignore the hearsay nature of basis evidence does not change the fact that it is hearsay and thus subject to the Confrontation Clause.

Furthermore, Justice Thomas and the four dissenters were correct to fear that this ruling would open the door to all sorts of expert testimony about otherwise inadmissible basis evidence. Justice Kagan offered the analogy of a police officer testifying to an eyewitness’s description of the birthmark of the defendant on the ground it explains the basis for the officer’s conclusion that the suspect was in fact the mugger.\textsuperscript{293} A better analogy would be the following: assume a driver caused an accident and was drunk at the time. The victim observed the suspect stumbling and slurring his speech after the accident. The suspect then drove off. Half an hour later, the victim told a police officer her observations about the suspect. The suspect is caught two weeks later, so no chemical test of his sobriety can be performed. Prior to trial, the victim moves to another state and cannot be located. The prosecution wants to endorse the officer as an expert in accident reconstruction and drunk driving and have him render an opinion that the defendant was drunk at the time of the accident. She also wants the officer to testify that the basis for his opinion is the victim’s observations of the suspect shortly after the accident. Prior to Williams, this testimony would have been excluded since the victim’s statements are hearsay and are clearly testimonial since they were made pursuant to police questioning. Under the plurality opinion in Williams, however, the prosecution would now be able to introduce the substance of the victim’s statements under the guise that they are being offered not for their truth, but merely to provide the basis of the officer’s opinion. This is not a use that the Confrontation Clause was intended to be put.

The plurality tried to counter these fears by pointing to four safeguards: first, the trial court could strictly enforce the requirements of Rule 702 that the expert must possess some specialized training or knowledge that will assist the trier of fact; second, experts are generally precluded from disclosing inadmissible evidence to a jury; third, in the event of such a disclosure, the judge can issue a limiting instruction informing the jury that inadmissible evidence cannot be accepted for its truth and that the expert’s opinion is only as good as the independent evidence that underlies it; and fourth, the trial court can strike any expert opinion that is not supported by sufficient independent evidence.\textsuperscript{294} These “safeguards” are no substitute for the constitutional safeguard inherent in the Confrontation Clause, however.

Furthermore, these alleged safeguards would have very little prophylactic effect. First, the qualifications of the surrogate chosen to replace the original analyst on the witness

\textsuperscript{292} Id. at 2241, n. 11.  
\textsuperscript{293} Williams, 132 S.Ct. at 2269, (Kagan, J., dissenting).  
\textsuperscript{294} Id. at 2241
stand are almost never at issue. Surrogates are usually chosen from the ranks of peer reviewers and supervisors, experts that could hardly be termed unqualified. No argument could be made, for example, that Lambatos was not qualified to render an expert opinion in Williams. Second, reliance on the balancing test in Rule 703 to keep out questionable basis evidence is a debatable proposition, particularly outside the federal court system. As previously discussed, the admission of basis evidence is actually favored in many states. Third, the use of limiting instructions as an effective juror education tool has proven to be equivocal at best. Finally, the Court’s reliance on trial judges to strike expert testimony on foundational grounds is wishful thinking. If the judge did not strike Lambatos’ testimony on foundational grounds in Williams, then why is it safe to assume that judges would do any differently in cases presenting closer calls?

The plurality’s second justification for the introduction of this evidence, that it is not testimonial even if it is considered to be hearsay, is even more tenuous. The plurality developed a new test for determining whether statements are testimonial--statements must now be made both for the purpose of providing evidence in an ongoing investigation and made against an identifiable suspect.

Justice Thomas is right. This new test has no basis in law or logic. In none of the Confrontation cases since Crawford has the Court made mention of whether the identity of the suspect was known at the time the statement was made. According to Justice Scalia (the father of the modern Confrontation Clause jurisprudence), in order for an out-of-court statement to qualify as testimonial, “the declarant must intend the statement to be a solemn declaration rather than an unconsidered or offhand remark; and he must make the statement with the understanding that it may be used to invoke the coercive machinery of the State against the accused.”295 The suspect’s identity is irrelevant to resolution of this inquiry. If the declarant makes a statement knowing that it may be used to prosecute the perpetrator, it does not matter whether that prosecution occurs a day from now or ten years from now once a suspect is identified. The statement is still testimonial, regardless of whether the identity of the perpetrator is known at the time it was made.

As if a new test for testimonial evidence was not bad enough, the plurality found that the results of Cellmark’s DNA analysis would not be considered testimonial under the old test, either, since it was intended to resolve an ongoing emergency. In Davis v. Washington, the Court exempted certain statements made pursuant to police interrogation from the Confrontation Clause. The Court held that statements are non-testimonial when “made in the course of police interrogation under circumstances objectively indicating that the primary purpose of interrogation is to enable police assistance to meet an ongoing emergency” but are testimonial “when the circumstances objectively indicate that there is no such ongoing emergency, and that the primary purpose of interrogation is to establish or prove past events potentially relevant to later criminal prosecution.”296 The Court set out a number of factors for courts to weigh in determining whether a statement was

meant to be testimonial. These included when the statement was made, what the
statement described, whether the declarant’s statement was necessary to resolve the
current emergency, and the circumstances which gave rise to the statement such as by
whom the statement was initiated and the level of its formality. The Court broadened
the scope of what could be classified as an emergency situation under the primary
purpose test in *Michigan v Bryant*. It cited additional factors that should be considered
in making this determination, including the type of weapon involved, whether the threat
posed to the police and the victim was ongoing, the victim's medical state, the level of
formality of the encounter between the witness and the police, the identity of the
interrogator and the content of his questions, the existence of an emergency and the
parties’ perception that one existed, and the circumstances of the interrogation.

The *Williams* plurality erred by applying the emergency exception outside the context of
police interrogation. The emergency exception was designed to apply only to testimonial
statements made to police officers or their agents. The exception has no application
outside this context. Logically, this makes sense since the other forms of testimonial
materials (statements made during court testimony, formalized statements transcribed in
an affidavit or deposition, or statements made under circumstances that would lead an
objective witness reasonably to believe that the statement would be available for use at a
later trial) are almost always never made during emergencies. The emergency exception
certainly has no application to statements made in reports generated by the crime lab.
The raison d’etre of a crime lab is to find and analyze evidence to tie the responsible
individuals to a given crime and crime scene. Signed lab reports are the equivalent of
affidavits. They certainly are not made with the intent of seeking law enforcement
assistance to end an ongoing emergency. While a peripheral benefit of the crime lab’s
analysis of evidence is that a bad guy may get taken off the street before he has a chance
to commit another crime, the same could be said of virtually any statement that aids a law
enforcement investigation.

The facts of *Williams* simply do not amount to the type of situation envisioned by the
Court in *Davis* and *Bryant* as designed to enable police assistance in responding to an
ongoing threat. Given that the Cellmark report was generated months after the rape in
response to request by the Illinois State Police lab, it can hardly be argued that the
statements contained in the DNA report were intended to seek police assistance in
handling an emergency or necessary to resolve it. As Justices Thomas and Kagan pointed
out, if this were not the case, why did it take nine months for the crime lab to send the
sample to Cellmark for analysis and another four for Cellmark to return the results?

Last but not least, it should be noted that the doom and gloom forecast envisioned by the
*Melendez-Diaz* dissenters and the plurality in *Williams* has not come true. It may be 2012

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297 State v Krasky, 736 N.W.2d 636, 647, citing Davis v. Washington, (Page, J.,
dissenting).
299 Bryant, 131 S.Ct. at 1158-62.
300 Williams, 132 S.Ct. at 2262-63.
but the end of the world has not come to pass. Crime labs have not been buried by
testimony duties and prosecutors have not changed their approach to using scientific
evidence. In his concurrence, Justice Breyer raised a straw man argument that prosecutors
will somehow eschew DNA evidence in favor of less reliable forms of evidence if the
outcome of Williams would have been different. This is pure nonsense. What self-
respecting prosecutor would willingly give up the strongest piece of evidence simply
because it might be inconvenient to call the actual analyst who tested it or have the
evidence retested? In fact, Illinois prosecutors in a similar case to Williams, People v.
Johnson, called a representative of Cellmark to testify where the evidence had been
outsourced to Cellmark for DNA testing. In no event they did simply fold shop and
withdraw the DNA evidence simply because it was an inconvenience to call an expert
from outside the state.

IV. A New Standard for the Admission of Surrogate Testimony

The Williams case highlights the need for courts to develop a new approach to the
admission of forensic expert testimony under Rule 703. Testimony of surrogate experts
under Rule 703 presents a real dilemma. If such testimony is characterized as hearsay,
then it falls within the reach of the Confrontation Clause unless it can be shown that the
information relied on by the expert is nontestimonial. On the other hand, if courts
consider the testimony not hearsay and thus not subject to the Confrontation Clause, then
it invites wholesale substitution of experts.

Rule 703 was originally intended to streamline the process of admitting expert testimony. It
recognizes the modern-day reality that experts rely on the opinions and findings of
others in forming their own opinions and that courts should not impede their testimony by
enforcing arcane foundation rules. Using surrogate experts to testify to the test results of
other laboratory analysts who prepared them is simply not a use of Rule 703
contemplated by its drafters. Where surrogate testimony is involved, the original
analyst’s report serves as the sole source of data from which the expert bases his opinion.
The probative value of the expert’s opinion therefore depends solely on the reliability and
accuracy of the tests performed by the original analyst. Unlike the example given to
explain Rule 703 (where the doctor uses an x-ray or MRI report to form an opinion as to
causation), the expert in this situation is simply rehashing the findings of the first analyst.
This would be akin to the doctor in the above example simply testifying that he would
have reached the same conclusion as the original radiologist—i.e., that the scan showed a
ligament tear or the presence of a tumor. Thus, surrogate testimony should be treated as
hearsay subject to the restrictions of the Confrontation Clause.

The question then becomes whether surrogate testimony violates the Confrontation
Clause even where the expert claims to perform an independent analysis of the
underlying data. In other words, does testimony in this form serve as the functional
equivalent of hearsay? One view, espoused by most lower courts that have examined the

\[301\] Id. at 2251, (Breyer, J., concurring).
\[302\] 941 N.E.2d 242, 251 (Ill. App. 2010).
issue, is that the testimony is not hearsay because the expert is not acting as a mere conduit where such independent analysis occurs.\textsuperscript{303} The other view is that the expert who independently analyzes the data is no different than the expert who is a mere conduit for it.

Commentators such as Jesse Norris have concluded that surrogate expert testimony violates the Confrontation Clause under either scenario:

\begin{quote}
[D]epicting surrogates as independently analyzing “raw data” is highly misleading. This is because the “raw data” is heavily dependent on the analyst’s methodology and because such independent analyses are likely to be nominal and cursory, allowing the surrogate to serve as a mere conduit for analyst-produced testimonial evidence. . . Even though the analyst’s data and its implicit statements are not directly admitted into evidence, they are indirectly admitted through the surrogate testimony. Ignoring this reality because the evidence was not directly admitted would amount to a formalistic retreat from the principles and purposes of the Confrontation Clause.\textsuperscript{304}
\end{quote}

He posits four arguments against the testimony of surrogate experts:

1. surrogate testimony is inconsistent with the Court’s strong emphasis in \textit{Melendez-Diaz} on the importance of cross-examining the actual analyst; (2) depicting surrogates as independently analyzing “raw data” is highly misleading; (3) Rule 703 was never intended to allow a surrogate to rely wholly on data produced by a nontestifying witness in preparation for trial; and (4) strong public policy considerations, such as the risk of false convictions, suggest that surrogate testimony is a “dangerous form” of evidence that should rarely be admitted.\textsuperscript{305}

The second approach is the more logically consistent one. It seems to be an arbitrary distinction to label one form of testimony as hearsay (where the expert serves as a mere conduit for another’s test data) and another as nonhearsay (where the expert provides independent analysis of the data) where, in reality, there is no substantive difference between the two. In both cases the testifying expert’s opinion depends entirely on the whether the first analyst actually performed the procedures indicated in his notes and whether those tests were performed correctly. In either case, the expert is relaying the out-of-court findings and conclusions of another individual and offering them for their truth as evidence against the defendant. In effect, the expert is simply answering a

\begin{footnotesize}
\textsuperscript{303} The \textit{Williams} case presented what appeared to be an ideal opportunity for Justice Sotomayor to clarify what she had meant in her \textit{Bullcoming} concurrence. Apparently, Sotomayor’s exceptions were not carved in stone. Although the case seemed to fall under one of her four exceptions (independent analysis by an expert), she signed on to Kagan’s dissent, leaving readers to speculate what her \textit{Bullcoming} concurrence actually means going forward.

\textsuperscript{304} Norris, supra note \textsuperscript{ }\textsuperscript{303} , at 409, 414-15.

\textsuperscript{305} Norris, supra note \textsuperscript{ }\textsuperscript{303} , at 409.
\end{footnotesize}
hypothetical question: assuming that the first analyst performed the tests and quality controls indicated in his notes, are you in agreement with his findings and conclusions? Thus, the expert is both serving as a substitute for the first analyst while also buttressing that person’s credibility by confirming his analysis. Consequently, both forms of testimony should be considered hearsay and fall under the ambit of the Confrontation Clause.\textsuperscript{306}

The \textit{Williams} case presents a slightly different question, however: is the surrogate still providing the equivalent of hearsay when he not only conducts an independent analysis of the original data but also provides an independent opinion, based only in part on the original analyst’s conclusions? The answer is no. In this situation, the surrogate is acting more like the physician using an MRI to form his conclusion as to causation. Consequently, even Justice Kagan concluded in dissent that Lambatos’ testimony was proper with respect to the fact the DNA profiles matched. Since the Confrontation Clause does not touch that portion of the expert’s opinion, it is imperative that the trial judge conduct a searching inquiry into the foundational aspects of the surrogate’s testimony. As previously discussed, this is precisely the opposite of what occurred in \textit{Williams}. Thus, the battle over whether the introduction of the underlying basis evidence should be subject to the Confrontation Clause became virtually irrelevant.

As a result, the slew of opinions in \textit{Williams} provided little clarity. Here is what the Court should have said. Testimony by the expert who prepared and signed the original report should be the preferred method of delivering the results of forensic examinations to the factfinder. The original analyst is in the best position to attest to what tests were actually performed, whether proper protocols were followed, and whether any irregularities occurred during the testing process. That individual can also vouch for his own credibility and character better than anyone else. A surrogate expert provides the functional equivalent of hearsay where she testifies to the results and conclusions of another analyst, even where the surrogate performs an independent analysis of the data. If the expert relied on testimonial statements in forming her opinion, the expert’s testimony should be barred under the Confrontation Clause unless it qualifies under some exception. If she did not rely on testimonial statements, then the expert should be allowed to testify, assuming her testimony meets the reliability and relevance requirements discussed in part II. This same analysis would also apply to surrogates who provide opinions independent from the original analyst’s conclusions because those opinions should not be considered hearsay.

\textsuperscript{306} By labeling expert testimony in this form as hearsay, this would of course mean that Rule 703 would need to be reclassified as creating a new hearsay exception—the testifying expert exception. This will have little practical effect in civil cases. As long as the court finds that the underlying information relied upon by the expert was reliable, the expert’s opinion will still be admissible under this new exception. The bar for admissibility in criminal cases would become greater, however, since the testimony would have to satisfy both the reliability requirements of Rule 703 and the testimonial analysis under \textit{Crawford}. 
This presents a dilemma for courts. If the Confrontation Clause is applied too formally, it could block the testimony of surrogates where it is truly necessary—in situations where the original analyst is unavailable due to death, illness, and the like. In some cases such as low copy number or touch DNA analysis, the amount of evidence obtained for testing is too small to allow for retesting. In others, the test, such as an autopsy, cannot be fully repeated due to the fact the body has been embalmed or cremated. The wheels of the criminal justice system should not be ground to a halt by happenstance simply because the original analyst has died, retired, or is otherwise unavailable. If surrogates are not allowed to testify in those situations, the defendant could walk free due to no negligence or malfeasance on the part of the prosecution. Thus, an exception is needed to provide for these relatively rare but potentially devastating situations.

Jesse Norris suggests permitting surrogates to testify where the source of information relied upon for their testimony is nontestimonial in nature.\(^\text{307}\) This of course is no exception at all. Witnesses are already permitted to testify to nontestimonial hearsay statements as long as the statements fall under some recognized hearsay exception. Furthermore, almost all forensic laboratory analysis is testimonial. By their very nature, scientific lab reports are prepared in anticipation of trial for the purpose of providing evidence against the eventual defendant. Under current law, the only exception for the introduction of testimonial hearsay is if the declarant was subject to cross-examination at a prior hearing and is unavailable for trial. In the case of a forensic analyst, it is highly unlikely that she would have been subject to cross-examination prior to trial. This means that surrogates for forensic analysts would almost never be allowed to testify under Norris’ exception.

A better-crafted exception would not distinguish the types of information relied on by the surrogate but simply recognize that surrogates can provide an adequate substitute for cross-examination under certain circumstances. This, of course, is in direct contradiction to Justice Ginsburg’s statement in \textit{Bullcoming} that confrontation should not be dispensed with simply because the court believes that a surrogate witness “provides a fair enough opportunity for cross-examination.”\(^\text{308}\) But surrogate experts are not the equivalent of police officers testifying to the hearsay statements of lay witnesses. They have similar expertise to the original analyst, have often performed detailed reviews of the forensic analysis, and are able to detect many of the errors that the analyst could have committed.

If such an exception is going to be recognized, however, a number of precautions must be taken to limit the dangers that surrogate testimony potentially poses. First, the original analyst must be unavailable to testify under Rule 804. This requirement will prevent prosecutors from expert shopping to avoid calling analysts who lack sufficient credibility or courtroom presence. Second, the evidence must be incapable of being retested. Many forensic tests such as chemical analyses are not unduly time-consuming or expensive to conduct. Thus, the evidence should be retested where possible and the new analyst called

\(^{307}\) Norris, supra note 1, at 428.

\(^{308}\) \textit{Bullcoming}, 131 S.Ct. at 2716.
to the stand. Third, the surrogate must have sufficient personal knowledge of the original testing process so that she can adequately lay a foundation for her opinion. The surrogate must be able to testify as to what tests were done, what protocols were in place to prevent contamination or other errors, and what steps were taken to preserve the integrity of the evidence while it was in the lab for testing. In any event, an expert who has no knowledge of these facts (such as the one in Williams) should not be allowed to testify in place of the original analyst. Fourth, the surrogate must have conducted a complete review of the original analyst’s notes and report such that she can offer an opinion that she would have come to the same conclusions as the original analyst, given the same set of facts. This requirement would prevent surrogates from simply parroting the findings of the original analyst without offering any scientific or other expertise to justify the testimony. Fifth, a complete personnel file pertaining to the job performance of the original analyst must be made available to the defense. This would ensure that any questions about the analyst’s competence or integrity were made aware to the defense and a supervisor could be called to answer questions about such issues. Finally, in no event should the basis evidence underlying the surrogate expert’s opinion be admitted into evidence under Rule 703. Since such reports and data are testimonial in nature, they should not be backdoored as basis evidence under the guise that they are only being admitted for the limited purpose of explaining the expert’s opinion.

Limiting surrogate testimony to situations where the expert is unavailable and the evidence cannot be retested will admittedly cause minor inconvenience to forensic laboratories. A greater percentage of time will have to be devoted to court preparation and testimony for individual scientists in labs that do not already engage in this practice. Forensic scientists may have to be better trained in courtroom testimony or chosen for their job based in part on their communication skills as a result. The FBI would have to change its own policy in the DNA unit since it currently requires the examiner, not the PCR biologist who conducted the test, to testify in court. This is not an insurmountable obstacle, however. The vast majority of cases do not go to trial and defendants often waive the personal appearance of the analyst in routine cases such as drug analysis.

CONCLUSION

The Williams plurality erred by finding that the admission of basis evidence under Rule of Evidence 703 did not violate the Confrontation Clause in the context of surrogate testimony. Basis evidence is hearsay since it is quite clearly admitted to prove the truth of its contents. The factfinder must evaluate its accuracy before using it to help explain the expert’s testimony. Despite the plurality’s finding to the contrary, the expert’s reference to the Cellmark lab report was also testimonial in nature. The identity of the suspect is irrelevant to a determination of whether the original analyst created a testimonial document when he tested physical evidence in the case.

It is unlikely that the Williams decision will leave a lasting imprint on Confrontation Clause jurisprudence, however. The 2000 amendment to the federal rule made the admission of basis evidence much more difficult in federal court. As a result, federal courts will have little occasion to apply the Williams holding. The decision will have
more of an impact in those states that have not adopted the 2000 amendment and give more leeway for courts to admit basis evidence. Even in those states, the case’s impact will be blunted, however, given the plurality’s focus on the identity of the factfinder. The *Williams* plurality suggested that the outcome would have been different had the case been tried before a jury.

*Williams* also dealt with a surrogate who testified to an independent opinion, derived only in part from the conclusions of the original analyst; it did not deal with the more common situation where the surrogate simply introduces the test results produced by the first analyst. We will have to wait to hear from the Court whether that precise situation violates the Confrontation Clause, at least where the surrogate has performed an independent analysis of the data. In that case, the outcome is likely to be different, particularly if the test results relied on by the expert satisfy Justice Thomas’ formality requirement. Moreover, the new primary purpose test developed by the plurality will likely never see the light of day in future cases. It is doubtful that courts will adopt a test that the plurality announced in dicta and only four justices support.

The real problem in *Williams* was the Illinois courts’ finding that a proper foundation had been laid for Lambatos’ testimony, despite a factual record on those points that could only be characterized as virtually nonexistent. This case points to the need for courts to make a more searching inquiry into the reliability and relevance questions that surround expert testimony. If prosecutors are going to turn to surrogates to introduce forensic evidence, then courts should not simply move aside the proverbial velvet rope outside the courthouse door when presented with the impressive credentials of the witness. Criminal defendants deserve better, especially when stories of falsified forensic evidence and incompetence continue to make headlines.