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A GAME OF KATSO AND MOUSE: CURRENT THEORIES FOR GETTING FORENSIC ANALYSIS EVIDENCE PAST THE CONFRONTATION CLAUSE

Ronald J. Coleman and Paul F. Rothstein*

“You still read the official statement and believe it. It’s a game, dear man, a shadowy game. We’re playing cat and mouse . . .”

–Sherlock Holmes to Dr. Watson¹

INTRODUCTION

The Sixth Amendment’s Confrontation Clause ensures that an “accused” in a “criminal prosecution[]” has the right “to be confronted with the witnesses against him.”² Although perhaps a simple concept, defining the scope of confrontation rights has proven extremely difficult. *Crawford v. Washington*, the leading Supreme Court case on this issue, announced that the Confrontation Clause only applies to so-called “testimonial” statements.³ The Supreme Court opted not to define “testimonial” in *Crawford*, but it would appear to include out-of-court written or oral statements meant or understood to provide some form of evidence for use at trial, especially if made solemnly and to a state actor or agent.⁴ Pursuant to *Crawford* and its progeny, testimonial statements may not be used against a criminal defendant unless the prosecution produces the declarant as a witness for cross-examination.⁵

The law has had particular difficulty in scoping confrontation rights in forensic analysis cases, such as those where the prosecution seeks to utilize a laboratory report of DNA, blood alcohol content, narcotics, or other “CSI” type analyses. In such cases, what should it mean to afford an accused the right to confront the “witness” providing evidence “against” her? Should the machine or report itself be

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1. *Sherlock Holmes: A Game of Shadows*, ROTTEN TOMATOES, https://www.rottentomatoes.com/m/sherlock_holmes_a_game_of_shadows/quotes/.

2. U.S. CONST. amend. VI. The right to confront also applies to states pursuant to the Fourteenth Amendment. *Pointer v. Texas*, 380 U.S. 400, 403 (1965).

3. See *Crawford v. Washington*, 541 U.S. 36 (2004).

4. *Id.* at 51, 58; see also Paul F. Rothstein, *Unwrapping the Box the Supreme Court Justices Have Gotten Themselves Into: Internal Confrontations over Confronting the Confrontation Clause*, 58 *How. L.J.* 479, 480 (2015).

5. That is, except where the declarant is unavailable and there has been some sufficient prior opportunity to cross-examine such declarant. *Id.* at 59.

considered the accusing “witness,” or should a human witness need to be produced? If a human witness is required, should it be the individual conducting the test, the one preparing the report, a supervisor responsible for reviewing and quality-controlling the report, or someone else? Should it matter whether the individual was involved in the test at all? Should it matter whether the report was prepared for use against the defendant or for some other purpose, such as medical treatment? And what if the prosecution does not seek to enter the report into evidence at all, but instead offers testimony from an independent expert who discusses the contents of the report? With so many issues to consider, prosecutors and defendants may have difficulty predicting how the Confrontation Clause will apply in any given forensic analysis case. Indeed, in the absence of clear guidance, these stakeholders may resort to something of a game of admissibility “cat and mouse,” under which evasion and posturing becomes the substitute for clear rules and predictable outcomes.

Dissenting from the denial of certiorari in *Stuart v. Alabama*, Justice Gorsuch recently recognized the “decisive role” of forensic evidence in modern criminal trials, but decried the lack of clarity in this area of law, noting the confusion sown by *Williams v. Illinois*, the Supreme Court’s last word on this point.⁶ The Supreme Court has long appeared eager to find a mechanism for mitigating the difficulties of applying *Crawford* to the forensic analysis context. *Williams* seems to have further exacerbated the problem. The U.S. Court of Appeals for the Armed Forces adopted an innovative approach to forensic analysis evidence under the Confrontation Clause in *United States v. Katso*.⁷ A *Katso*-like approach has appeal given its focus on assuring an adequate basis for cross-examination and illumination of errors and biases.⁸ Recognition of a *Katso*-like approach could be one sensible path for the Court to take, but when faced with the opportunity to adopt such an approach in *Stuart*, the Court opted to deny certiorari and leave the law unresolved.⁹

The purpose of this Article is to analyze modern Confrontation Clause and forensic analysis jurisprudence and present six theories through which to argue that forensic analysis evidence is admissible consistent with the Confrontation Clause. The theories presented here are not intended to be employed individually, but rather combined to diminish the possibility that the Confrontation Clause will necessitate exclusion of such evidence. Part I discusses background on the Confrontation Clause. Part II describes the recent illustrative cases of *Katso* and *Stuart*. Part III presents our six theories and explores how

6. 139 S. Ct. 36, 36 (2018) (Gorsuch, J., dissenting from denial of cert.) (internal quotation marks and citation omitted). Justice Sotomayor joined Justice Gorsuch’s dissenting opinion. The facts of *Stuart* are discussed below. See *infra* Part II.B.

7. 74 M.J. 273 (C.A.A.F. 2015). The facts of *Katso* are discussed below. See *infra* Part II.A.

8. See *id.* at 282.

9. See generally *Stuart*, 139 S. Ct. 36.

local stakeholders might utilize *Katso*-like reasoning to support their positions.

I. BACKGROUND ON THE CONFRONTATION CLAUSE

In the nearly quarter century prior to the Supreme Court's landmark decision in *Crawford*,¹⁰ the "reliability" analysis set out in *Ohio v. Roberts*¹¹ guided the courts in Confrontation Clause cases. Under the *Roberts* regime, in order to admit a hearsay statement against a criminal defendant, the Confrontation Clause required the non-testifying declarant to be unavailable and the statement itself to be reliable (that is, it needed to "bear[] adequate 'indicia of reliability'").¹² In *Crawford*, however, the Supreme Court rejected the *Roberts* reliability test and ushered in the modern Confrontation Clause paradigm, which analyzes whether the statement in question is "testimonial."¹³ In this Part, we will provide background on the testimonial statement paradigm, the primary purpose analysis, and the Confrontation Clause and forensic analysis evidence.

A. Testimonial Statement Paradigm

In *Crawford*, a defendant, Michael Crawford, was charged with crimes relating to stabbing another man, and the state sought to introduce certain tape-recorded statements made to the police by the defendant's wife (who was unable to testify pursuant to state marital privilege rules).¹⁴ Crawford argued that admission of the tape-recorded statements violated his federal Confrontation Clause rights,¹⁵ but the tape was played for the jury and Crawford was convicted.¹⁶ Following appeals, the Supreme Court granted certiorari and found that admission of the taped statements without the opportunity to cross-examine the declarant violated the Confrontation Clause.¹⁷

Justice Scalia, writing for the Court, considered the Clause's text and the lengthy common law history of the right to confront.¹⁸ He concluded that, although the ultimate goal of the Confrontation Clause is reliability of evidence, the Clause grants a procedural right to have such reliability tested in a specific manner: cross-examination.¹⁹ The text of the Clause applies to a "witness

10. 541 U.S. at 36.

11. 448 U.S. 56 (1980).

12. *Id.* at 66 (citation omitted). Pursuant to *Roberts*, reliability could be inferred where evidence falls into a "firmly rooted hearsay exception." *Id.*

13. *Crawford*, 541 U.S. at 50–53.

14. *Id.* at 38–40. Under Washington state law, marital privilege generally barred a spouse from testifying in the absence of consent from the other spouse, but such privilege did not cover out-of-court statements made by a spouse which were admissible pursuant to a hearsay exception. *Id.* at 40.

15. *Id.* at 40–41.

16. *Id.* at 38.

17. *Id.* at 38–42, 68–69.

18. *Id.* at 42–61.

19. *Id.*

against” an accused, in other words, those bearing “testimony.”²⁰ “Testimony” would typically be a “solemn declaration or affirmation made for the purpose of establishing or proving some fact.”²¹ Justice Scalia found that, consistent with the history and text of the Clause, a certain class of out-of-court statements made by a non-testifying witness could be considered “testimonial.”²² He further found that such statements could not be introduced against a criminal defendant, absent unavailability and a prior opportunity for cross-examination.²³ Justice Scalia did not provide a full definition of what would fall within the category of “testimonial” statements, but he acknowledged that the category at least covered statements made during police interrogations, as well as prior testimony at a former trial, before the grand jury, or at a preliminary hearing.²⁴

In his concurring opinion, Chief Justice Rehnquist registered his disapproval of the Court’s new interpretation of the Confrontation Clause.²⁵ He noted that while the Court left setting out a “comprehensive definition of ‘testimonial’” for another day, state and federal prosecutors “need[ed] answers as to what beyond the specific kinds of ‘testimony’ the Court lists . . . is covered by the new rule.”²⁶ The Court had, according to the Chief Justice, “cast[] a mantle of uncertainty over future criminal trials in both federal and state courts[.]”²⁷

In future cases, the Court would seek to better define the contours of the *Crawford* paradigm. One important consideration the Court has analyzed is the “primary purpose” of the statement.

B. Primary Purpose Analysis

In evaluating whether a given statement is testimonial, the Court has analyzed the statement’s objective “primary purpose.”²⁸ Specifically, as set out in *Michigan v. Bryant*,²⁹ if the Court determines that the objective primary purpose of the statement is to create an *ex parte* substitute for in-court testimony (e.g., to prove prior events potentially relevant to subsequent prosecution), the statement will be testimonial.³⁰ If, however, the statement is made for some other purpose, such as to aid in an ongoing emergency, it will be nontestimonial.³¹ Although *Bryant* is the

20. *Id.* at 51 (internal quotation marks and citation omitted).

21. *Id.* (citing 2 N. WEBSTER, AN AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE (1828)).

22. *Id.* at 42–68.

23. *Id.* at 68.

24. *Id.* In one of the formulations of the “testimonial” class of statements that Justice Scalia references as an example, such statements include the “functional equivalent” of “*ex parte* in-court testimony . . . that declarants would reasonably expect to be used prosecutorially.” *Id.* at 51 (citation omitted).

25. *Id.* at 69 (Rehnquist, C.J., concurring). Justice O’Connor joined the Chief Justice in his concurrence. *Id.*

26. *Id.* at 68, 75.

27. *Id.* at 69.

28. *See, e.g., Michigan v. Bryant*, 562 U.S. 344 (2011); *Davis v. Washington*, 547 U.S. 813 (2006).

29. 562 U.S. 344.

30. *Id.* at 356–59.

31. *See id.*

leading case on the Court's "primary purpose" analysis, it built upon the Court's earlier decision in *Davis v. Washington*.³² In *Davis*, the Court considered two consolidated appeals of domestic disturbance cases: (1) *State v. Davis*,³³ in which the prosecution sought to enter evidence from a 911 call prior to police arriving on the scene;³⁴ and (2) *Hammon v. State*,³⁵ in which the prosecution sought to introduce statements made by the victim after the police arrived and the accused seemed under control.³⁶ The Court determined that statements made during the course of police interrogations would be nontestimonial if made under circumstances which objectively indicate that the "primary purpose" of such interrogation is to assist police in meeting an ongoing emergency.³⁷ Conversely, such statements would be testimonial where circumstances objectively indicated no ongoing emergency existed, and the interrogation's "primary purpose" was to prove or establish prior events potentially relevant to subsequent prosecution.³⁸ Consistent with these determinations, the Court found that the statements made after officers arrived on the scene in *Hammon* were testimonial, but the statements made during the 911 call prior to police arrival in *State v. Davis* were nontestimonial.³⁹

Bryant greatly expanded upon the "primary purpose" concept discussed in *Davis v. Washington*.⁴⁰ In *Bryant*, the police found a gunshot victim mortally wounded in a gas station parking lot.⁴¹ Statements made by the victim to the police minutes prior to the arrival of emergency medical services implicated Richard Bryant.⁴² The victim was brought to the hospital where he passed away in the following hours.⁴³ At Bryant's trial, police officers from the scene testified as to what the victim told them.⁴⁴ Bryant was convicted of, among other things, second-

32. 547 U.S. 813.

33. 111 P.3d 844 (Wash. 2005).

34. The Court noted that even if 911 operators are not law enforcement officers, they may be considered agents of law enforcement where they interrogate 911 callers. See *Davis*, 547 U.S. at 823 n.2. Accordingly, the Court considered, for purposes of its opinion and without offering a decision on the point, such operators' acts to be police acts, and left open when or if a statement made to an individual other than law enforcement personnel would be "testimonial." *Id.*

35. 829 N.E.2d 444 (Ind. 2005).

36. *Davis*, 547 U.S. at 819–21.

37. *Id.* at 818–22.

38. *Id.* at 822.

39. *Id.* at 827–31. In his opinion concurring in the judgment in part and dissenting in part, Justice Thomas noted that the Court in *Crawford* had abandoned the *Roberts* reliability analysis (which it had described as "inherently, and therefore permanently, unpredictable"), and two years later in *Davis*, the Court was adopting an "equally unpredictable" test which requires district courts to "divin[e] the 'primary purpose' of police interrogations." *Id.* at 834 (Thomas, J., dissenting) (internal quotation marks and citations omitted) (emphasis omitted).

40. *Michigan v. Bryant*, 562 U.S. 344, 358–60 (2011).

41. *Id.* at 349.

42. *Id.* at 349–50.

43. *Id.*

44. *Id.*

degree murder.⁴⁵ After appeals, the Supreme Court granted certiorari.⁴⁶

Justice Sotomayor, writing for the Court, reaffirmed that an “ongoing emergency” was one of the most important circumstances that informs the “primary purpose” of the interrogation,⁴⁷ but noted that it was not the only possible such circumstance:

Whether formal or informal, out-of-court statements can evade the basic objective of the Confrontation Clause, which is to prevent the accused from being deprived of the opportunity to cross-examine the declarant about statements taken for use at trial. When, as in *Davis*, the primary purpose of an interrogation is to respond to an “ongoing emergency,” its purpose is not to create a record for trial and thus is not within the scope of the Clause. But there may be *other* circumstances, aside from ongoing emergencies, when a statement is not procured with a primary purpose of creating an out-of-court substitute for trial testimony. In making the primary purpose determination, standard rules of hearsay, designed to identify some statements as reliable, will be relevant. Where no such primary purpose exists, the admissibility of a statement is the concern of state and federal rules of evidence, not the Confrontation Clause.⁴⁸

Unlike in *Davis*, *Bryant* required the Court to consider a situation where an “ongoing emergency” extended beyond the instant victim to include potential threats to responding police and the general public.⁴⁹ In determining whether the “primary purpose” of a police interrogation was to assist in an “ongoing emergency,” the Court noted it would “objectively evaluate the circumstances in which the encounter occur[ed] and the statements and actions of the parties.”⁵⁰ The Court considered such circumstances, statements, and actions in *Bryant*, and concluded that the victim’s statements were not testimonial and the Confrontation Clause would not bar their admission.⁵¹

45. *Id.* It should be noted that Bryant’s trial took place prior to the Supreme Court’s decisions in *Crawford* and *Davis*, but such precedent would have been considered on appeal. *Id.* at 350.

46. *Id.* at 352.

47. *Id.* at 361. This would be the case because such emergency focuses those involved on something other than proving prior events potentially relevant to subsequent prosecution. *Id.* at 358–61.

48. *Id.* at 358–59.

49. *Id.* at 359.

50. *Id.* The Court pointed out that an additional benefit of this approach was that it would ameliorate issues associated with looking at only one participant’s intention—in particular the problem of “mixed motives” of the interrogators and declarants. *Id.* at 367–69. Examples of mixed motives discussed by the Court included police acting as both criminal investigators and first responders, and victims making statements to police to end a threat but also wanting an attacker to be incapacitated or rehabilitated. *Id.* at 368. Justice Scalia, in his dissent, was “at a loss” as to how the Court’s analysis would ameliorate the “mixed motive” problem, given that if it were difficult to discern the primary purpose of a declarant with a mixed motive, adding the “mixed motives” of a police officer would only compound the difficulty. *Id.* at 383 (Scalia, J., dissenting).

51. *Id.* at 377–78. In reaching this conclusion, the Court considered many items, including for example that the case involved a gun, that the victim’s statements did not indicate the dispute was private or that the threat had ended, that neither the victim nor the police knew the shooter’s location, that the victim was suffering from a mortal wound and bleeding, and that the situation and interrogation was informal. *Id.* at 374–77.

Justice Thomas concurred in the judgment because he felt that the victim's questioning lacked sufficient "formality and solemnity" for such statements to be "testimonial."⁵² He criticized the "primary purpose" test for being "'an exercise in fiction' that is 'disconnected from history' and [that] 'yields no predictable results.'"⁵³

Justice Scalia, in his dissenting opinion, charged the Court with being the "obfuscator of last resort."⁵⁴ He argued that the Court's decision would require "judges to conduct open-ended balancing tests and amorphous, if not entirely subjective, inquiries into the totality of the circumstances bearing upon reliability."⁵⁵ He also pointed to the "incoherent" result of the Court's attempt to "fit its resurrected interest in reliability into the *Crawford* framework," when in fact "[r]eliability tells us *nothing* about whether a statement is testimonial."⁵⁶ Justice Scalia further stated that neither *Davis* nor *Crawford* addressed whose perspective was significant when assessing an interrogation's primary purpose: the interrogator's, the declarant's, or both.⁵⁷ According to Justice Scalia, while the Court in *Bryant* chose to adopt a test based on the purposes of both, solely the declarant's intention should be relevant.⁵⁸

52. *Id.* at 378 (Thomas, J., concurring).

53. *Id.* at 379 (citing his own opinion, concurring in the judgment in part and dissenting in part, in *Davis v. Washington*, 547 U.S. 813, 839 (2006)).

54. *Id.* at 380 (Scalia, J., dissenting).

55. *Id.* at 393 (internal quotation marks and citation omitted); see also David Crump, *Overruling Crawford v. Washington: Why and How*, 88 NOTRE DAME L. REV. 115, 132–37 (2012) (discussing problems with "primary purpose" test in *Davis* and *Bryant*).

56. *Bryant*, 562 U.S. at 392. For instance, Justice Scalia noted that:

Hearsay law exempts business records . . . because businesses have a financial incentive to keep reliable records. . . . The Sixth Amendment also generally admits business records into evidence, but not because the records are reliable or because hearsay law says so. It admits them "because—having been created for the administration of an entity's affairs and not for the purpose of establishing or proving some fact at trial—they are not" weaker substitutes for live testimony.

Id. (citation omitted).

57. *Id.* at 381.

58. *Id.* at 381–82. As Justice Scalia stated:

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.

Id. at 381. Accordingly, the "hidden purpose of an interrogator cannot substitute for the declarant's intentional solemnity or his understanding of how his words may be used." *Id.* Justice Ginsburg, in her dissenting opinion, agreed that it was the declarant's intention that was relevant, and the decision of the Court "confounds our recent Confrontation Clause jurisprudence, . . . which made it plain that '[r]eliability tells us nothing about whether a statement is testimonial [.]'" *Id.* at 395 (Ginsburg, J., dissenting) (citation omitted). Justice Ginsburg also noted that "dying declarations"—"statements made by a person about to die and aware that death was imminent"—were a well-established exception to admitting out-of-court statements in the law inherited from England, and, had that issue been properly raised before the Court, she would have taken up the question of whether such exception survived recent Confrontation Clause jurisprudence. *Id.* at 395–96.

While courts may have difficulty making “primary purpose” determinations and evaluating whether statements are testimonial, such difficulty is compounded when courts are faced with cases involving statements resulting from forensic analysis, such as those contained in laboratory reports. It is to this area that we now turn.

C. *Confrontation Clause and Forensic Analysis Evidence*

Over the last decade, the Supreme Court has had several occasions to consider forensic analysis evidence in the context of the Confrontation Clause: *Melendez-Diaz v. Massachusetts*,⁵⁹ *Bullcoming v. New Mexico*,⁶⁰ and *Williams v. Illinois*.⁶¹ *Melendez-Diaz* was the first major Supreme Court case in this area.

1. *Melendez-Diaz v. Massachusetts*

Luis Melendez-Diaz was charged with crimes related to selling cocaine.⁶² Melendez-Diaz and another man, Thomas Wright, were arrested after the police found several clear plastic bags containing a substance that looked like cocaine on Wright and “hidden” in the police cruiser that brought the two men to the station.⁶³ The prosecution entered the seized bags into evidence at trial along with three “certificates of analysis” presenting results of forensic analysis performed on the substances.⁶⁴ Such certificates reflected the weight of the bags and that the seized substance contained cocaine.⁶⁵ As required under Massachusetts law, the certificates had also been sworn before a notary by analysts at a Massachusetts state laboratory.⁶⁶ Over Melendez-Diaz’s objection that *Crawford* required in-person testimony by the analysts if the certificates were to be admitted, such certificates were admitted as “prima facie evidence” of the analyzed narcotic and Melendez-Diaz was convicted.⁶⁷ Following the appeals process, the U.S. Supreme Court took the case.⁶⁸

Justice Scalia, writing for the Court, had “little doubt” that the certificates fell within the “core class of testimonial statements” the Court previously described in

59. 557 U.S. 305 (2009).

60. 564 U.S. 647 (2011).

61. 567 U.S. 50 (2012).

62. *Melendez-Diaz*, 557 U.S. at 308.

63. *Id.* Four of the clear white plastic bags were found when police searched Wright. *Id.* Once the men were taken to the station, police did a search of the police cruiser and found a bag containing nineteen smaller bags hidden in the partition between the seats. *Id.*

64. *Id.*

65. *Id.*

66. *Id.*

67. *Id.* at 309.

68. *Id.*

Crawford.⁶⁹ Although referred to as “certificates,” such documents were “quite plainly” affidavits.⁷⁰ They were “functionally identical” to in-court testimony, doing exactly what a witness would do on direct examination.⁷¹ Not only would the circumstances lead an objective witness to reasonably believe they would be used at trial, but their “sole purpose” under state law was to provide “prima facie evidence.”⁷² Moreover, despite the argument advanced that the analysts were not subject to the Confrontation Clause because they were not “accusatory” or “conventional” witnesses, Justice Scalia found that the analysts themselves were “witnesses” for purposes of the Clause.⁷³ Nor was Justice Scalia persuaded that the “resul[t] of [allegedly] neutral, scientific testing” should be treated differently for Confrontation Clause purposes than a witness recounting past events.⁷⁴ The Court concluded that it was error to admit the certificates.⁷⁵

Justice Thomas concurred because he agreed with the Court that the certificates were affidavits. However, he wrote separately to make clear his position that the Confrontation Clause only covers statements in “formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions.”⁷⁶

In Justice Kennedy’s dissent, joined by Justices Alito, Breyer, and Roberts, he argued, among other things, that: (1) there was no need to produce the analyst who prepared the scientific analysis in order to support admission of such analysis; (2) a distinction existed between “conventional witnesses” (to whom the Clause applied) and testing analysts (to whom it did not); and (3) the Court’s decision

69. *Id.* at 310. Justice Scalia cited to such description of the class of testimonial statements from *Crawford*:

Various formulations of this core class of testimonial statements exist: *ex parte* in-court testimony or its functional equivalent—that is, material such as affidavits, custodial examinations, prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially; extrajudicial statements . . . contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions; statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.

Id. (internal quotation marks and citation omitted).

70. *Id.* (citing *Affidavits*, BLACK’S LAW DICTIONARY (8th ed. 2004), which defines affidavits as “declaration[s] of facts written down and sworn to by the declarant before an officer authorized to administer oaths”). Justice Scalia stated that the certificates were “incontrovertibly a solemn declaration or affirmation made for the purpose of establishing or proving some fact.” *Id.* (internal quotation marks and citations omitted).

71. *Id.* at 310–11 (citing *Davis v. Washington*, 547 U.S. 813, 830 (2006)).

72. *Id.*

73. *Id.* at 313–17.

74. *Id.* at 317. For instance, Justice Scalia noted that confrontation is a means of ensuring accurate forensic analysis and was designed to weed out both the fraudulent and incompetent analyst. *Id.* at 318–19. Justice Scalia was also unpersuaded by other arguments advanced, including that the certificates should not be subject to the Confrontation Clause because they were similar to business or official records, that Melendez-Diaz had the ability to subpoena the witnesses, or that the “necessities of trial and the adversary process” suggested the requirements of the Clause be relaxed. *Id.* at 319–32. Justice Scalia doubted that the “sky w[ould] . . . fall” due to the burdens on the system and pointed out that so-called “notice-and-demand” statutes (which may require a defendant to demand their right to confront an analyst), could further ease any burden. *Id.* at 325–27.

75. *Id.* at 329.

76. *Id.* (Thomas, J., concurring).

would present logistical difficulties and harm law enforcement efforts.⁷⁷ In particular, the dissent argued that many individuals are often involved in forensic drug tests and that it would not be clear which individual would need to testify, or whether all of them would.⁷⁸ If all such individuals were required to testify, the dissent charged that the Court had basically “forbidden the use of scientific tests in criminal trials.”⁷⁹

After *Melendez-Diaz*, the next major Supreme Court case relating to the Confrontation Clause and forensic analysis evidence was *Bullcoming v. New Mexico*.⁸⁰ *Bullcoming* gave the Court another chance to consider which, if any, analyst(s) would be required to testify in support of forensic analysis.

2. *Bullcoming v. New Mexico*

In *Bullcoming*, Donald Bullcoming was arrested for driving while intoxicated, and the principal piece of evidence at trial was a laboratory report which certified that Bullcoming’s blood alcohol concentration (BAC) was well above the relevant threshold.⁸¹ The BAC test required use of a device called a gas chromatograph machine.⁸² Operation of such a device requires “specialized knowledge and training,” and human error may occur at each step of the gas chromatograph process.⁸³ At trial, rather than producing the analyst who signed the actual certification, the prosecution instead offered a separate analyst, who neither observed nor participated in the test on Bullcoming’s blood, but was familiar with the testing procedures of the laboratory.⁸⁴ The New Mexico Supreme Court acknowledged that, in view of *Melendez-Diaz*, the BAC analysis was testimonial.⁸⁵ However, it concluded that live testimony from an analyst other than the certifying analyst was sufficient.⁸⁶ First, it found that the certifying analyst was a “mere scrivener” who

77. *Id.* at 330–63. Commenters have also discussed problems with the Court’s *Melendez-Diaz* opinion. See, e.g., Crump, *supra* note 55, at 137–43; Andrew W. Eichner, *The Failures of Melendez-Diaz v. Massachusetts and the Unstable Confrontation Clause*, 38 AM. J. CRIM. L. 437 (2011).

78. *Melendez-Diaz*, 557 U.S. at 332–33 (Kennedy, J., dissenting). For example, the Court discusses the following individuals as playing a role in a forensic drug test: (1) a person preparing the sample, putting it in a machine for testing, and retrieving the machine printout; (2) an individual to interpret the machine printout; (3) a person who calibrated the machine and certified that it was in good working order; and (4) a person—such as a laboratory director—who has certified that the subordinates in the laboratory have followed established procedures. *Id.*

79. *Id.* The Court also pointed to harms in other contexts, including authentication of documents and establishing chain of custody. *Id.* at 335.

80. 564 U.S. 647 (2011).

81. *Id.* at 651.

82. *Id.* at 654.

83. *Id.*

84. *Id.* at 651. It should be noted that the certifying analyst who was not produced had been very recently placed on unpaid leave for unrevealed reasons. *Id.* at 655.

85. *Id.* at 656.

86. *Id.* at 651–52.

only transcribed results that the gas chromatograph machine generated.⁸⁷ Second, although the testifying analyst did not participate in the test itself, he was a qualified expert witness with respect to the gas chromatograph machine and so could serve as a “surrogate” for the certifying analyst.⁸⁸ The U.S. Supreme Court reversed the New Mexico Supreme Court’s judgment.⁸⁹

The Court found that admission of the forensic report containing a testimonial certification through the live testimony of a scientist who did not perform the test reported in the certification, observe the performance of such test, or sign the certification, violated the Confrontation Clause.⁹⁰ Such “surrogate” testimony, the Court determined, was insufficient.⁹¹ The certifying expert was not a “mere scrivener” because (1) he made multiple representations not in the raw machine data, including that the sample was intact and the seal unbroken; (2) the sample number and report number corresponded; (3) he adhered to a protocol; and (4) no condition or circumstance affected the validity of the analysis or integrity of the sample.⁹² Further, the “surrogate” testimony of the non-certifying analyst could not convey what the certifying expert knew or observed regarding the events his certification concerned, nor could it expose any lies or lapses on the certifying expert’s part.⁹³ The Court also rejected the state’s argument that the affirmations in question were not testimonial.⁹⁴ Even though the statements in *Melendez-Diaz* were sworn and the BAC report in *Bullcoming* was unsworn, the formalities of the report were sufficient to render the certifying expert’s assertions testimonial.⁹⁵ Justice Ginsburg argued, in a part of her opinion not commanding a majority of the Court,⁹⁶ that a constitutional requirement could not be disregarded for convenience, that the Court’s opinion would not be altered due to the potential burdens on prosecution, and that predictions of dire consequences were dubious.⁹⁷

87. *Id.* at 657 (citation omitted).

88. *Id.*

89. *Id.* at 657–58.

90. *Id.* at 652. Justices Kagan and Sotomayor joined all but Part IV of the Court’s opinion, and Justice Thomas joined all but footnote 6 (relating to a statement being “testimonial” if such statement has the “primary purpose” of proving or establishing past events potentially relevant to subsequent prosecution) and Part IV. *Id.* at 651 n.*, 659 n.6.

91. *Id.* at 652.

92. *Id.* at 660.

93. *Id.* at 661–62. The Court found potentially significant that the testifying analyst was placed on unpaid leave, and the testifying analyst could not speak to that issue. *Id.* The Court also noted that the state had not asserted that the testifying expert had an independent opinion on Bullcoming’s BAC. *Id.* at 662.

94. *Id.* at 664–65.

95. *Id.*

96. This part of her opinion was Part IV, in which Justices Kagan, Sotomayor, and Thomas did not join. *Id.* at 651 n.*.

97. *Id.* at 665 (citations omitted). The Court noted, for example, that retesting of the sample or the existence of a notice-and-demand procedure might mitigate the burdens on law enforcement. *Id.* at 665–67. The Court also noted that few cases actually go to trial, and that in forensic cases, defendants will often stipulate to admission of the forensic analysis. *Id.* at 667. Finally, the Court pointed out that, in jurisdictions where an analyst’s appearance is part of her job, the “sky has not fallen.” *Id.*

Justice Kennedy dissented, along with Justices Roberts, Breyer, and Alito, arguing that the Court should not have taken the “serious misstep” of expanding *Melendez-Diaz* to require testimony of the preparing analyst.⁹⁸ The dissent also noted that concepts such as “solemnity,” “reliability,” and the distinction between utterances aimed at helping police keep the peace and those targeted at proving past events have “weaved in and out of the *Crawford* jurisprudence.”⁹⁹ The dissent pointed to the “ambiguities” in the Court’s approach and the difficulty in determining who would need to testify.¹⁰⁰ It also argued that the Court’s approach would have an adverse effect on states and prosecutions.¹⁰¹

One of the most interesting opinions was Justice Sotomayor’s concurrence. Justice Sotomayor wrote separately to highlight that the report was testimonial because its “primary purpose” was evidentiary,¹⁰² and to emphasize the limited nature of the Court’s opinion.¹⁰³ In particular, Justice Sotomayor described four “factual circumstances” not presented in, and therefore not addressed by, *Bullcoming*.¹⁰⁴ First, it was not a case in which a prosecutor advanced an alternative purpose for the report (such as the need to provide Bullcoming with medical treatment).¹⁰⁵ Second, it was not a case in which the testifying individual was a reviewer, supervisor, or other individual with personal, albeit limited, connection to the relevant test.¹⁰⁶ Justice Sotomayor noted that it would be a different situation if a supervisor who had observed the analyst conducting the test, for instance, were testifying about the results of a test or a report about such results.¹⁰⁷ However, she noted that the degree of involvement required did not need to be decided in the context of *Bullcoming*.¹⁰⁸ Third, it was not a case in which a qualified expert witness was asked for an independent opinion based on underlying reports not themselves admitted (pursuant to Federal Rule of Evidence 703).¹⁰⁹ Justice Sotomayor

98. *Id.* at 674–75 (Kennedy, J., dissenting).

99. *Id.* at 678.

100. *Id.* at 679–80.

101. *Id.* at 682–84 (noting that “increases in subpoenas will further impede the state laboratory’s ability to keep pace with its obligations”).

102. *Id.* at 668 (Sotomayor, J., concurring). Justice Sotomayor found that, notwithstanding the report not being sworn, for the reasons advanced by the Court, the report and certification had the “primary purpose of creating an out-of-court substitute for trial testimony.” *Id.* at 670 (citation omitted).

103. *Id.* at 668.

104. *Id.* at 668, 672–74.

105. *Id.* at 672.

106. *Id.* at 672–73.

107. *Id.* at 673.

108. *Id.*

109. *Id.* FED. R. EVID. 703 states that:

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 their prejudicial effect.

continued that it would be a different question whether such an expert could discuss the testimonial statements of others where such statements were not, themselves, admitted.¹¹⁰ Fourth, and finally, it was not a case where a state sought to admit only machine-generated raw data in conjunction with expert witness testimony, and so the Court needed not decide that.¹¹¹

Perhaps fortuitously, in the next major Supreme Court case on the Confrontation Clause and forensic analysis evidence, *Williams v. Illinois*,¹¹² the Court was afforded the opportunity to consider a case analogous to Justice Sotomayor's third factual circumstance: the "expert witness" asked for an "independent opinion" regarding an "underlying testimonial" report not itself admitted.¹¹³ The Court in *Williams* would have great difficulty grappling with this issue, and would ultimately produce an opinion that confused more than it clarified.

3. *Williams v. Illinois*

In *Williams*, a case concerning rape among other alleged crimes, a sample of the victim's blood and vaginal swabs were taken while she was being treated at the hospital.¹¹⁴ A forensic scientist at a state police laboratory confirmed the presence of semen.¹¹⁵ Evidence suggested that the vaginal swabs were then sent to a separate outside laboratory, Cellmark Diagnostics Laboratory, which responded with a report containing the DNA profile of a male based on semen from the swabs.¹¹⁶ At that point, Sandy Williams was not yet a suspect for the rape.¹¹⁷

A forensic specialist at the state police laboratory, Sandra Lambatos, then conducted a computer search to confirm whether Cellmark's profile matched an entry in the DNA database, and the computer found a match with Williams.¹¹⁸ After the victim identified Williams in a lineup, Williams was indicted, and he opted for a bench trial before a state judge.¹¹⁹ The prosecution called three expert forensic witnesses to testify in connection with linking Williams to the crime through DNA: (1) a forensic scientist at the state police lab who confirmed presence of semen on the swabs using an acid phosphatase test; (2) a state forensic scientist who had developed a DNA profile from a blood sample previously collected from Williams by using Short Tandem Repeat (STR) and Polymerase Chain Reaction (PCR)

110. *Bullcoming*, 564 U.S. at 673.

111. *Id.* at 673–74. For a more detailed analysis of what issues the Court decided in *Bullcoming* and what issues it left open, see Ronald J. Coleman & Paul F. Rothstein, *Grabbing the Bullcoming by the Horns: How the Supreme Court Could Have Used Bullcoming v. New Mexico to Clarify Confrontation Clause Requirements for CSI-Type Reports*, 90 NEB. L. REV. 502 (2011).

112. 567 U.S. 50 (2012).

113. *Bullcoming*, 564 U.S. at 673.

114. *Williams*, 567 U.S. at 59.

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.* at 59–60.

techniques; and (3) Lambatos, offered as an expert in forensic DNA analysis and forensic biology.¹²⁰

Lambatos testified regarding, among other things: (a) the process of using STR and PCR to generate DNA profiles; (b) how one DNA profile could be matched to another; (c) how it was common for one DNA expert to rely on records from another such expert; (d) chain-of-custody issues; and (e) her comparison of the semen from the vaginal swabs with the DNA profile of Williams which she would call a “match.”¹²¹ The Cellmark report was never admitted into evidence or shown to the factfinder, but Lambatos admitted on cross-examination that her testimony relied on the Cellmark profile, even though she did not observe or conduct any testing on the swabs.¹²²

The defense sought to exclude portions of Lambatos’ testimony implicating events at Cellmark based on the Confrontation Clause.¹²³ The prosecution, invoking a state evidence rule similar to Federal Rule of Evidence 703, argued that Lambatos was entitled to disclose facts forming the basis of her opinion even if she was not competent to testify as to such underlying facts.¹²⁴ The lower courts refused to exclude the testimony, with the Supreme Court of Illinois finding that when the report was referenced by Lambatos, it was not being offered for “the truth of the matter asserted,” but instead to show the underlying data and facts used in rendering her expert opinion.¹²⁵ The Supreme Court granted certiorari.¹²⁶

Justice Alito authored the plurality opinion, joined by Justices Roberts, Kennedy, and Breyer.¹²⁷ Justice Alito found the Confrontation Clause inapplicable for two independent reasons: (1) the Cellmark report was not offered for its truth; and (2) it was not prepared with the “primary purpose” of accusing Williams.¹²⁸ As to the “offered for truth” point, Justice Alito began by reiterating the long-accepted principle that an expert witness could offer an opinion based on facts relating to the events in a case, even where that expert lacked first-hand knowledge of such facts.¹²⁹ Although in jury trials, Illinois state and federal law normally precluded

120. *Id.* at 60.

121. *Id.* at 60–62.

122. *Id.* at 62.

123. *Id.* at 62–63.

124. *Id.* at 63.

125. *Id.* at 64.

126. *Id.* For a debate on issues raised in connection with *Williams* and published just before the Supreme Court’s opinion was issued, see Ronald J. Coleman & Paul F. Rothstein, *Williams v. Illinois and the Confrontation Clause*, PUBLICSQUARE.NET (Dec. 6, 2011), <http://www.publicsquare.net/2011/12/williams-v-illinois-confrontation-clause/>.

127. *Williams*, 567 U.S. at 55. Although Justice Alito’s opinion is referred to as the “plurality” opinion, the dissent notes that “in all except [the plurality opinion’s] disposition, [Justice Alito’s plurality] opinion is a dissent: Five Justices specifically reject every aspect of its reasoning and every paragraph of its explication.” *Id.* at 120 (Kagan, J., dissenting).

128. *Id.* at 64–86.

129. *Id.* at 67. Courts at common law had dealt with this situation through either (1) an expert’s reliance on facts already established in the record; or (2) use of a hypothetical question to the expert (through which such

experts from disclosing inadmissible evidence underlying their testimony, no such restriction was placed on bench trials (as in this case).¹³⁰ Justice Alito noted that *Crawford* had reaffirmed the point that the Confrontation Clause did not preclude use of testimonial statements for a purpose other than establishing their truth.¹³¹ He said it was helpful to inventory what Lambatos had actually testified to with respect to Cellmark:

She testified to the truth of the following matters: Cellmark was an accredited lab . . . ; the ISP [state police laboratory] occasionally sent forensic samples to Cellmark for DNA testing . . . ; according to shipping manifests admitted into evidence, the ISP lab sent vaginal swabs taken from the victim to Cellmark and later received those swabs back from Cellmark . . . ; and, finally, the Cellmark DNA profile matched a profile produced by the ISP lab from a sample of petitioner's blood. . . . Lambatos had personal knowledge of all of these matters, and therefore none of this testimony infringed petitioner's confrontation right.

Lambatos did not testify to the truth of any other matter concerning Cellmark. She made no other reference to the Cellmark report, which was not admitted into evidence and was not seen by the trier of fact. Nor did she testify to anything that was done at the Cellmark lab, and she did not vouch for the quality of Cellmark's work.¹³²

Justice Alito stated that the principal argument purportedly supporting a Confrontation Clause violation was the following testimony (as referenced by the dissent):

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

A: Yes, there was.¹³³

Justice Alito pointed out that the dissent believed the italicized portion of the above testimony violated the Confrontation Clause because Lambatos did not have personal knowledge that Cellmark's profile was based on the victim's swabs.¹³⁴ According to Justice Alito, however, the italicized portion was not offered for its truth, but rather to simply reflect the premise of the question posed.¹³⁵ He conceded that the dissent's argument "would have force" if Williams had opted for a jury

expert was asked to assume certain factual predicates were true and to voice an opinion based on the given assumptions). *Id.* More recently, courts have allowed experts to offer opinions predicated on facts about which they do not have personal knowledge and no longer require the hypothetical question. *Id.* at 69.

130. *Id.* at 69–70.

131. *Id.* at 70.

132. *Id.* at 70–71 (citations omitted).

133. *Id.* at 71 (citations omitted).

134. *Id.* at 72.

135. *Id.*

trial rather than a bench trial.¹³⁶ Justice Alito noted that his conclusion was consistent with *Bullcoming* and *Melendez-Diaz* in that the reports in those cases were introduced and there was no question this was done to prove the truth of the reports' assertions.¹³⁷

As to the "primary purpose" point, Justice Alito noted that even if the report had been admitted for its truth, there would be no Confrontation Clause violation because the Confrontation Clause refers to testimony by a "witness against" an accused.¹³⁸ The Court had previously identified two characteristics of the abuses prompting the Confrontation Clause: "(1) they involved out-of-court statements having the primary purpose of accusing a targeted individual of engaging in criminal conduct and (2) they involved formalized statements such as affidavits, depositions, prior testimony, or confessions."¹³⁹ The Cellmark report was not prepared with the "primary purpose" of making an accusation against a targeted individual.¹⁴⁰ Its primary purpose was to catch a rapist at large, and those involved could not have known it would be used against Williams (who was neither under suspicion nor in custody) or anyone else in the law enforcement database.¹⁴¹ It was typical for lab technicians working on creating DNA profiles to not know what would be the consequences of their work, and in many labs, multiple individuals work on a profile (which makes it likely that the purpose of each involved individual is simply to perform her task).¹⁴² Justice Alito concluded that use of a DNA report "prepared by a modern, accredited laboratory bears little if any resemblance to the historical practices that the Confrontation Clause aimed to eliminate."¹⁴³

Justice Breyer wrote a concurring opinion noting that the other opinions failed to adequately answer the following question: "How does the Confrontation Clause apply to the panoply of crime laboratory reports and underlying technical statements written by (or otherwise made by) laboratory technicians? In this context, what, if any, are the outer limits of the 'testimonial statements' rule set forth in [*Crawford*]?"¹⁴⁴ He believed additional briefing on this issue would be helpful

136. *Id.* at 72–74. He also purported to knock down other arguments, advanced by the dissent, that the state admitted the report's "substance" into evidence. *Id.* at 75–79. He points out, among other things, that Federal Rule of Evidence 703 may permit disclosure of "basis evidence" not admissible for its truth to help a jury evaluate an expert's opinion. *Id.* at 77–78.

137. *Id.* at 79. He noted that his conclusion would not lead to abuses suggested by the dissent: (1) trial courts could "screen out" experts seeking to act as "mere conduits for hearsay;" (2) experts were normally not permitted to disclose inadmissible evidence to juries; (3) limiting jury instructions could be utilized; and (4) where the prosecution could not find separately admissible evidence to support foundational facts underlying an expert's testimony, such testimony could not be given weight. *Id.* at 79–81.

138. *Id.* at 81–82.

139. *Id.* at 82.

140. *Id.* at 84.

141. *Id.* at 84–85.

142. *Id.* at 85. Justice Alito also added that "the knowledge that defects in a DNA profile may often be detected from the profile itself provides a further safeguard." *Id.*

143. *Id.* at 86 (internal quotation marks and citation omitted).

144. *Id.* (Breyer, J., concurring).

(and so would have set the case for re-argument), but in the absence of that, adhered to the dissenting views in *Bullcoming* and *Melendez-Diaz*.¹⁴⁵ He stated that he would consider reports such as the one at issue outside the coverage of the Confrontation Clause.¹⁴⁶

Justice Thomas wrote a separate concurring opinion to again emphasize his focus on “formality and solemnity.”¹⁴⁷ Because he found that Cellmark’s statements did not have such requisite solemnity and formality, they were not testimonial for Confrontation Clause purposes.¹⁴⁸

Justice Kagan’s dissent was joined by Justices Scalia, Ginsburg, and Sotomayor.¹⁴⁹ The dissent reiterated that: (1) testimony against criminal defendants needed to be subjected to cross-examination; and (2) recent decisions of the Court found that if prosecutors wanted to offer forensic testing results into evidence, the defendant must be afforded the right to cross-examine “an analyst” who is responsible for the test.¹⁵⁰ The dissent considered this an “open-and-shut case” where the state did not provide Williams his right to confront.¹⁵¹ The dissent also argued that, in view of the plurality and concurring opinions, there were “five votes” approving admission of the report, but “not a single good explanation.”¹⁵² In addition, the dissent decried the “uncertainty” the plurality and concurring opinions “sow[ed].”¹⁵³

It is interesting that Justice Sotomayor joined the dissent in *Williams*, given that the case presented a question similar to the third hypothetical she set out in

145. *Id.* at 86–87. Justice Breyer specifically highlighted several previously raised arguments, such as the issue of which of many possible laboratory witnesses should testify, and noted that, consistent with the dissents in *Melendez-Diaz* and *Bullcoming*, states could create an exception which presumptively permits introduction of a DNA report from an accredited crime laboratory. *Id.* at 90–93.

146. *Id.* at 99. Under Justice Breyer’s view, the defendant could still call the laboratory employee to testify, and could “show the absence or inadequacy of the alternative reliability/honesty safeguards, thereby rebutting the presumption and making the Confrontation Clause applicable.” *Id.*

147. *Id.* at 104 (Thomas, J., concurring).

148. *Id.* Justice Thomas concluded that the statements by Cellmark were offered for their truth. *Id.* at 109. However, the report was not sufficiently solemn to be testimonial because: (1) it lacked the solemnity of a deposition or affidavit; (2) it was neither a certified declaration of fact nor sworn; (3) it did not attest to the fact that its statements reflected the testing process or results accurately; (4) neither signing reviewer purported to have performed the test or certified the accuracy of those performing the test; and (5) it did not result from any formalized dialogue which resembled custodial interrogation (even though it was produced at law enforcement’s request). *Id.* at 110–11.

149. *Id.* at 118 (Kagan, J., dissenting).

150. *Id.* at 119. It should be noted that in other parts of the dissent, Justice Kagan referred to “the analyst.” See, e.g., *id.* at 125.

151. *Id.* at 119.

152. *Id.* at 120.

153. *Id.* at 141; see also Laird Kirkpatrick, *The Admissibility of Forensic Reports in the Post-Justice Scalia Supreme Court*, U. CHI. L. REV. ONLINE (Aug. 27, 2019), <https://lawreviewblog.uchicago.edu/2019/08/27/the-admissibility-of-forensic-reports-in-the-post-justice-scalia-supreme-court-by-laird-kirkpatrick/> (charging that “*Stuart v. Alabama* is an example of the confusion created by *Williams*”); Crump, *supra* note 55, at 151–57. For a further discussion of *Williams* and its implications, see Rothstein, *supra* note 4.

Bullcoming as being a potentially different case.¹⁵⁴ It may have been that her opinion on the issue evolved, or that she felt there was some distinction between her hypothetical scenario and the facts raised by *Williams*.

Since *Williams* was the Supreme Court's last major case on the Confrontation Clause and forensic analysis evidence, and since it failed to produce a usable majority, many issues in the area remain unresolved.¹⁵⁵ In the next Part, we discuss two recent lower court cases decided after *Williams*: *Katso* and *Stuart*.

II. RECENT ILLUSTRATIVE CASE LAW

We have selected the post-*Williams* cases *Katso* and *Stuart* because they illustrate and inform theories raised in the next section. Although neither are Supreme Court precedents—and so neither can resolve the unresolved issues from a precedent standpoint—they offer approaches to certain outstanding items that may be instructive. We begin with a discussion of *Katso*, a Confrontation Clause case that arose in the military court-martial context.

A. *United States v. Katso*

In *United States v. Katso*,¹⁵⁶ the U.S. Court of Appeals for the Armed Forces considered the case of a defendant who had been convicted of several offenses by a general court-martial, including aggravated sexual assault and burglary.¹⁵⁷ After the victim reported that she was raped, she was brought to the hospital and a nurse examiner collected rectal, oral, and vaginal swabs, along with a blood sample and debris from the victim's clothing.¹⁵⁸ Another nurse examiner collected *Katso*'s saliva and blood, along with penile and scrotal swabs.¹⁵⁹ Both nurse examiners handed the samples to agents at the Air Force Office of Special Investigations (AFOSI).¹⁶⁰ Special Agent Blair, an AFOSI Special Agent (SA), testified that he received these samples from the two AFOSI agents who were at the hospital, and the samples were combined into two "sexual assault kits," one for *Katso* and one for the alleged victim.¹⁶¹ The agents from the hospital also prepared documents accompanying each kit (which SA Blair reviewed), and SA Blair sent such documents and the evidence to an army criminal investigation laboratory (with a request form enclosed reflecting identifying numbers for the evidence, and describing each piece of evidence).¹⁶²

154. See *Bullcoming*, 564 U.S. at 673.

155. See sources cited *supra* note 153.

156. 74 M.J. 273 (C.A.A.F. 2015).

157. *Id.* at 274.

158. *Id.* at 275.

159. *Id.*

160. *Id.*

161. *Id.*

162. *Id.*

Robert Fisher, the laboratory employee responsible for conducting the initial analysis of the kits, was with his mother in Florida during the court-martial while she was undergoing major surgery.¹⁶³ Instead, the government offered testimony regarding the forensic analysis from David Davenport, who conducted a technical review of Fisher's initial analysis.¹⁶⁴ Davenport had, at the time of trial, worked at the laboratory as a forensic DNA examiner for more than six years.¹⁶⁵

During a hearing on a motion to suppress, Davenport testified to the procedures at the laboratory for processing evidence and his technical review of Fisher's analysis, which required him to verify the results and approve the report.¹⁶⁶ Davenport testified at that same hearing that he "independently compared" the relevant DNA profiles to verify the matches—which involved processing machine-generate raw data, interpreting the profiles for matches, and recalculating the probability of a match—and that he agreed with, and initialed, the report.¹⁶⁷

At the court-martial, Davenport testified as an expert witness to provide an independent opinion of the DNA analysis results, but the report itself was not admitted.¹⁶⁸ Davenport only referenced the report to note that he checked it against the documents submitted with the samples (to ensure such samples were properly listed and identified) and reviewed Fisher's interpretation regarding the results.¹⁶⁹ Based on his review, Davenport testified to the following:

1. The evidence collected from [the victim] and [Katso] was tested "per protocol,"
2. The evidence was received in a sealed condition,
3. The evidence was inventoried properly,
4. The known samples were analyzed properly,
5. DNA profiles were generated "from the known blood of [the victim] and [Katso],"
6. The swabs collected from [the victim] contained semen,
7. DNA consistent with [the victim] and [Katso] was found on the rectal swabs from [the victim],
8. Unidentifiable male DNA was found on [the victim]'s vaginal swab, and

163. *Id.* at 276.

164. *Id.*

165. *Id.*

166. *Id.* at 276–77.

167. *Id.* at 277.

168. *Id.*

169. *Id.* at 277–78.

9. DNA consistent with [the victim] and [Katso] was found on [Katso]'s penile and scrotal swabs.¹⁷⁰

Davenport also testified regarding the likelihood of a match between the recovered DNA profiles and other individuals.¹⁷¹ On cross-examination, he testified that he did not conduct the initial tests that produced the DNA profiles and that the analysis failed to reveal anything regarding the nature of sexual contact.¹⁷²

In rendering its decision, the U.S. Court of Appeals for the Armed Forces suggested that two questions needed to be considered.¹⁷³ First, whether the expert relied on out-of-court testimonial statements when testifying.¹⁷⁴ Second, if so, whether the expert's testimony was still admissible because the expert reached his own conclusions predicated on knowledge of underlying facts and data, such that the expert was, himself, the "witness[] against" the defendant.¹⁷⁵

On the first question, the court concluded that many of the statements and data that Davenport relied upon, such as material in the case file, were not testimonial.¹⁷⁶ For example, the court noted that nothing suggested that the documents from AFOSI were testimonial (they primarily related to chain of custody), or that the raw data generated was either testimonial or a statement.¹⁷⁷ Nor was there any indication that the lab results or notes from Fisher which underlay the report were signed, had indicia of formality, certified anything, or that Fisher anticipated their use at trial.¹⁷⁸ Further, it was "clearly erroneous" for the lower court to find that Davenport was only able to identify Katso by name through repeating testimonial statements in the report, since the record suggested he learned the parties' names through review of the underlying data.¹⁷⁹ The court concluded that Davenport's statements regarding proper receipt, inventory, testing, and analysis of the evidence, along with his identification of the relevant parties, were admissible because they relied on nontestimonial items.¹⁸⁰ The report itself, however, was more complicated, and the court decided to assume, *arguendo*, that parts of it were testimonial for purposes of its second question.¹⁸¹

As to the second question, the court noted that the Supreme Court had never faced a situation directly on point and that Davenport was neither a "surrogate"

170. *Id.* at 278.

171. *Id.*

172. *Id.*

173. *Id.* at 279.

174. *Id.* (citations omitted).

175. *Id.* (citations omitted).

176. *Id.* at 279–80.

177. *Id.* at 280.

178. *Id.*

179. *Id.*

180. *Id.*

181. *Id.* The court noted that although the report did not contain any formal certification, Fisher knew that Katso was a suspect and that the report "would be 'made official and sent to the agent in the case.'" *Id.*

expert nor a “mere conduit” for others’ testimonial statements.¹⁸² Unlike in *Melendez-Diaz* and *Bullcoming*, the government here had not sought to admit the relevant report (or certificate) into evidence.¹⁸³ Further, in *Melendez-Diaz* the certificates included a “bare-bones statement” and failed to provide the petitioner with an opportunity to learn about the tests or the analysts’ ability to interpret them.¹⁸⁴ In contrast, Davenport’s knowledge of the underlying facts and testimony afforded Katso the opportunity to determine which tests Fisher performed, whether such tests were routine, and whether Davenport possessed the requisite skills and judgment to interpret the results.¹⁸⁵

Similarly, Davenport was different than the “surrogate” witness disallowed in *Bullcoming*.¹⁸⁶ Based on his personal knowledge, Davenport described the tests, testing process, and means for discerning lapses in protocol.¹⁸⁷ Unlike the non-testifying analyst in *Bullcoming*, Fisher had also not been placed on unpaid leave for unknown reasons, but was instead spending time with his ill mother (suggesting neither that he was incompetent nor that the government was seeking a tactical advantage).¹⁸⁸ Davenport also confirmed that he was testifying to, and had formed, an independent opinion, which provided an opportunity for cross-examination.¹⁸⁹ The court further found that Davenport’s review would seemingly place the present case within one of Justice Sotomayor’s hypotheticals in her concurring opinion in *Bullcoming*, that “the testimony might have been admissible if the expert had some ‘degree of involvement’ in the testing process, as when ‘the person testifying is a supervisor, reviewer, or someone else with a personal, albeit limited, connection to the test at issue.’”¹⁹⁰ Moreover, unlike in *Williams*—in which the testifying expert had not witnessed any of the work or calibrations, but trusted the lab to do reliable work since it was accredited—Davenport: (1) saw all work underlying the tests and calibrations; (2) closely scrutinized and analyzed the results; (3) compared the profiles; and (4) re-ran the statistical analysis.¹⁹¹

Without guiding precedent, the court found that where an expert relies in part on out-of-court statements by a declarant, the admissibility of the expert’s opinion turns upon the degree of “independent analysis” undertaken by the expert in arriving at her opinion.¹⁹² On the one hand, an expert may not be a “conduit” for

182. *Id.* at 275, 281 (internal quotation marks and citations omitted).

183. *Id.* at 281.

184. *Id.*

185. *Id.*

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.* (citation omitted).

191. *Id.* at 282. The court also argued that these actions by Davenport would seem to satisfy the concerns of Justice Thomas in his concurring opinion and Justice Kagan in the dissent. *Id.* The court also pointed out “the lack of majority support in *Williams* for any point but the result[.]” *Id.* (internal quotation marks and citation omitted).

192. *Id.*

relaying testimonial hearsay and act as a “transmitter” rather than communicating her “independent judgment.”¹⁹³ On the other hand, expert witnesses did not need to personally perform a test in order to interpret and review the data or results of such test.¹⁹⁴ In the context of the present case, the court concluded that Davenport offered his independent expert opinion and that the Confrontation Clause was not violated by its admission.¹⁹⁵

The takeaway from *Katso* seems to be that there was an ample basis to challenge and evaluate the report because the expert witness had so exhaustively examined all the underlying paperwork from the various analysts whose work went into the report.¹⁹⁶ A pivotal innovation lies at the basis of the *Katso* court’s reasoning: only the final report was testimonial, and only it needed to be justified by a “not for truth” analysis. The underlying paperwork of all the component analysts was only for quality control and not intended for evidence, so it was not testimonial.¹⁹⁷ If extended, this concept might help alleviate the issue of who, in a string of analysts, must take the stand. Extrapolating even further, the *Katso* court’s emphasis on the exhaustiveness of the expert witness’s review of the underlying work leaves open the theoretical possibility that an expert unaffiliated with a laboratory—who is engaged by the laboratory solely to testify and conducts an exhaustive review in preparation for such testimony—could suffice.

Although the report itself was not admitted in *Katso*, the case reinforces the concept that more than a mere “surrogate” or “conduit” expert may satisfy the Clause, provided certain conditions—such as personal involvement and independence—are satisfied. In *Stuart*, discussed below, the Alabama court seemingly went even further than the court in *Katso* and accepted a more remote supervisor as a sufficient witness.

B. *Stuart v. Alabama*

In *Stuart v. Alabama*,¹⁹⁸ Vanessa Stuart was convicted of, among other things, criminally-negligent homicide.¹⁹⁹ Police found Stuart and the deceased victim after

193. *Id.* (citation omitted).

194. *Id.* For example, the court noted that an expert who repeats statements from inadmissible cover memoranda violates the Clause; such witness “should have ‘proffer[ed] a proper expert opinion based on machine-generated data and calibration charts, his knowledge, education, and experience and his review of the drug testing reports alone.’” *Id.* (citation omitted).

195. *Id.* at 283–84. The dissenting judge felt that *Katso* should have had the Confrontation Clause right to cross-examine Fisher regarding whether he followed the protocols for preparing the samples and potential contamination. *Id.* at 284 (Ohlson, J., dissenting).

196. In *United States v. Owens*, 484 U.S. 554, 559 (1988), Justice Scalia made clear in a different confrontation context, that the Confrontation Clause guarantees only a good basis, not a perfect basis, to evaluate credibility in cross examination. *Id.* (“[T]he Confrontation Clause guarantees only an *opportunity* for effective cross-examination, not cross-examination that is effective in whatever way, and to whatever extent, the defense might wish.”) (internal quotation marks and citations omitted).

197. *Katso*, 74 M.J. at 279–84.

198. *Stuart v. Alabama*, 268 So.3d. 607, *cert denied*, 139 S.Ct. 36 (2018).

199. *Id.* at 1a, 2a.

responding to a 911 call relating to an accident on the interstate.²⁰⁰ One of the officers testified that, while Stuart was being helped by emergency personnel, the officer smelled alcohol as Stuart passed.²⁰¹ Stuart was brought to the hospital and advised of her rights, but refused a blood test.²⁰² After she tried to leave and was arrested, her blood was drawn pursuant to a search warrant.²⁰³ Forensic analysis showed that more than four hours after the accident, she had a blood-alcohol level of 0.174 (which Dr. Jason Hudson, Alabama Department of Forensic Sciences (DFS) toxicology section chief, estimated would have been higher at the time of the accident).²⁰⁴ In appealing her conviction, Stuart argued, among other things, that the lower court erred in admitting forensic evidence through testimony from a state's witness, Hudson, who did not perform the blood analysis.²⁰⁵ Specifically, Stuart argued that it was a violation of her Confrontation Clause rights that the court permitted Hudson to testify as to the results of her blood analysis when no evidence established that he had supervisory duties with respect to her case, signed any reports, or reviewed the findings.²⁰⁶ Furthermore, he was not even employed at the DFS when such analysis was conducted.²⁰⁷

The Alabama Court of Criminal Appeals affirmed Stuart's conviction and found that her Confrontation Clause rights were not violated by permitting Hudson to testify to the results of the blood analysis.²⁰⁸ In making this finding, the court noted:

Dr. Hudson gave extensive testimony regarding the policies and procedures of the DFS's toxicology laboratory. This included controls in the analysis and the laboratory's standard practice of having the results of the analysis independently reviewed. Dr. Hudson testified that, "as the [toxicology] section chief, I'm fundamentally the toxicology supervisor so I'm responsible for the day-to-day workflow in the laboratory, testing assignments for cases, as well as personnel management." . . . "This testimony provided [Stuart] with ample opportunity to cross-examine [Hudson] regarding the [blood]-analysis report."²⁰⁹

The Supreme Court of Alabama denied certiorari on March 16, 2018.²¹⁰ Stuart then filed a U.S. Supreme Court certiorari petition, arguing that the decision below was contrary to *Bullcoming*.²¹¹ The petition was denied on November 19, 2018.²¹²

200. *Id.* at 2a.

201. *Id.*

202. *Id.*

203. *Id.* at 3a.

204. *Id.*

205. *Id.* at 3a, 8a.

206. *Id.* at 8a.

207. *Id.*

208. *Id.* at 13a, 19a.

209. *Id.* at 13a (citations omitted).

210. *Id.* at 21a.

211. See *Stuart v. Alabama*, 139 S. Ct. 36 (2018).

212. See *id.*

Justice Gorsuch authored a strong dissent from the denial of certiorari (joined, interestingly, by Justice Sotomayor), in which he was highly critical of *Williams* and argued that permitting Alabama to produce an analyst other than the one who performed the blood-alcohol test violated the Confrontation Clause.²¹³ Justice Gorsuch recognized the increasing importance of forensic evidence in modern criminal trials.²¹⁴ He emphasized the need for cross-examination and the right to confront in view of the risk of “mischief” or “mistake” on the part of forensic analysts, such as when an analyst alters evidence, contaminates a sample, or makes an error during testing.²¹⁵

Justice Gorsuch stated that he believed the Confrontation Clause was violated in *Stuart*, but noted that the “problem appear[ed] to be largely of [the Supreme Court’s] creation” in view of *Williams*, which “yielded no majority and its various opinions have sown confusion in courts across the country.”²¹⁶ He criticized Alabama’s alternative contentions that: (1) the report was offered as a basis for expert testimony rather than for its truth; and (2) the report was not “testimonial.”²¹⁷

On the first point, Justice Gorsuch emphasized that although *Williams* had no majority opinion, at least five of the Justices rightfully rejected that concept and questioned why any prosecutor would seek to offer the report other than to prove the truth of the report’s assertions.²¹⁸ He argued that the “whole point” was to show that, due to the report’s truth, the jury should credit the testifying expert’s opinion as to the blood-alcohol level some hours later.²¹⁹ On the second point, Justice Gorsuch pointed out that the “fractured” *Williams* decision revealed the argument to be flawed in the views of eight Justices.²²⁰

According to Justice Gorsuch, the *Williams* plurality took the position that a forensic report was only testimonial where it was “prepared for the primary purpose of accusing a targeted individual who is in custody [or] under suspicion.”²²¹ The dissent took the broader view that, even if a report is devised with a purely investigative purpose and with no target in mind, it could be testimonial when “made under circumstances which would lead an objective witness reasonably to believe that [it] would be available for use at a later trial.”²²² Using even the more restrictive standard of the plurality, Justice Gorsuch argued that the report in *Stuart* would be testimonial, since there was “no question” *Stuart* was in custody when the test was conducted or that the forensic report was prepared with the “primary

213. *Id.* at 36–37 (Gorsuch, J., dissenting from denial of cert.).

214. *Id.* at 36.

215. *Id.*

216. *Id.*

217. *Id.* at 37.

218. *Id.*

219. *Id.*

220. *Id.*

221. *Id.*

222. *Id.* (internal quotation marks and citation omitted).

purpose” of securing Stuart’s conviction.²²³ Justice Gorsuch concluded his dissent by registering his belief that the Court “owe[d]” lower courts, which were “struggling to abide” by the Supreme Court’s holdings, greater clarity.²²⁴

This dissent is interesting for a number of reasons. First, it provides insight into Justice Gorsuch’s opinion on the Confrontation Clause. Since *Williams*, Justice Scalia (the author of *Crawford* and one its strongest proponents) and Justice Kennedy have been replaced by Justices Gorsuch and Kavanaugh. It is unclear exactly how these new Justices will rule on Confrontation Clause matters.²²⁵ However, Justice Gorsuch’s *Stuart* opinion suggests his position on the Clause’s application to forensic reports might be closer to that of Justice Scalia than to certain of the other “conservative” Justices.²²⁶ Second, given that Justice Sotomayor joined the dissent, this may be further evidence that her position on the Clause has evolved since she set out her hypotheticals in *Bullcoming*, and that her position in *Williams* better reflects where she currently stands on the Clause.²²⁷ Third, that the dissent so strongly criticized *Williams* and called for greater clarity in the law may mean that the Court will soon take a case which it considers a better vehicle for setting out clearer rules in this area.

In any event, without further guidance from the Supreme Court in *Stuart*, prosecutors and defendants will continue to need to be guided by *Williams* and relevant

223. *Id.*

224. *Id.*

225. It is especially difficult to know how the new Justices would rule because traditional “conservative” and “liberal” distinctions are often unhelpful in predicting Justices’ behavior in respect of the Confrontation Clause. If, for instance, the new Justices subscribe to Justice Scalia’s interpretation of the Clause, the strength of some of the theories we will discuss in the next section might be different than if they adopt a view more similar to the other “conservative” Justices. Reviewing prior decisions of the two new Justices is of limited value, since the new Justices might have simply felt bound to apply Supreme Court precedent. For instance, although it was decided before *Williams*, it could potentially be noteworthy that in *United States v. Moore*, then-Circuit Judge Kavanaugh found the introduction into evidence of autopsy and drug analysis-related reports contravened the Confrontation Clause because the authors of the reports were not made available for cross-examination. See 651 F.3d 30, 71–72 (D.C. Cir. 2011). However, in *Moore*, the court’s opinion discussed and purported to apply *Crawford*, *Melendez-Diaz*, and *Bullcoming*, and so it may simply reflect then-Circuit Judge Kavanaugh’s desire to follow standing Supreme Court precedent. *Id.* at 70–74. Similarly, one could try to read “tea leaves” in connection with Justice Gorsuch’s findings prior to being elevated to the Supreme Court, but it would still not be fully clear how he would rule as a Justice. See, e.g., *United States v. Keck*, 643 F.3d 789, 797 (10th Cir. 2011) (spreadsheets of “MoneyGram” transactions not testimonial). *Stuart* has caused some commenters to believe Justice Gorsuch will take Justice Scalia’s stance on the Confrontation Clause. See, e.g., Richard D. Friedman, *First word from Justice Gorsuch on the Confrontation Clause*, CONFRONTATION BLOG (Nov. 19, 2018), <http://confrontationright.blogspot.com/2018/11/first-word-from-justice-gorsuch-on.html> (arguing that it appears Justice Gorsuch is a “tiger” on the Confrontation Clause and will take Justice Scalia’s position, but noting it is not clear where Justice Kavanaugh stands); Kirkpatrick, *supra* note 153 (“[I]t appears that Justice Gorsuch would support the result in *Melendez-Diaz* and *Bullcoming* and agree with the dissent in *Williams*, just as Justice Scalia did. It remains to be seen what position Justice Kavanaugh will take on these questions.”).

226. See, e.g., Friedman, *supra* note 225; Kirkpatrick, *supra* note 153.

227. See *Stuart*, 139 S. Ct. at 36; see also Friedman, *supra* note 225 (“And another piece of good news [from *Stuart*] is that Justice Sotomayor felt called upon to join the dissent; on this part of Confrontation Clause doctrine, at least, it appears that she is now in the right corner.”). It is also possible, as noted above, that Justice Sotomayor sees some important distinction between her hypothetical in *Bullcoming* and the facts in *Williams*.

lower court interpretations. The next Part presents six theories through which it may be argued that forensic analysis evidence is admissible consistent with the Clause.

III. THEORIES FOR ADMISSION OF FORENSIC ANALYSIS EVIDENCE

At present, there are at least six theories for entering forensic analysis evidence without supporting testimony from the analyst who conducted the original analysis or test. Although these theories may not work individually, they may be combined to formulate an argument for admissibility.²²⁸

A. *Theory 1: Report Itself Not Testimonial*

The first theory for admitting forensic analysis evidence consistent with the Confrontation Clause is admitting the report when the report itself is not testimonial. Pursuant to this theory—assuming the report would otherwise be admissible under relevant evidence rules²²⁹—it would be admissible without the need to produce any supporting expert witness.²³⁰

One example of this theory in practice might be where a psychiatric or medical report is compiled outside the context of a criminal prosecution. Such a report might be created for treatment reasons, but then becomes useful in a subsequent criminal case. In that instance, the report would not have been created for the “primary purpose of creating an out-of-court substitute for trial testimony”²³¹ and might not be found testimonial.

Another practical example might be an autopsy report, depending on the relevant circumstances, including the purpose for the autopsy and the report’s creation. It is important to keep this theory distinct from the idea, discussed further below, of offering an otherwise testimonial report for reasons other than for its truth.

B. *Theory 2: Report Used as Basis for Expert Testimony, Not for Truth*

A second theory is using the report or forensic analysis evidence as a basis for expert testimony rather than for its truth.²³² This is the first *Williams* plurality route,²³³ and the current strength of this theory is unclear. At the time of *Williams*,

228. It is important to note two items here. First, because the views of at least the two new Justices are not fully clear on all points, the strengths or weaknesses of these theories may be altered based on such views. Second, we are focused not only on whether a forensic report is admissible—directly or through some form of recounting of it by the expert witness on the stand—but also on when the information in the report is something upon which the expert’s opinion relies in some way.

229. For instance, the requirements for authentication and relevance would still need to be met.

230. A certification might also be admitted pursuant to this theory, assuming the certification itself is not testimonial.

231. *Michigan v. Bryant*, 562 U.S. 344, 358–59 (2011).

232. *See supra* Part I.C.3.

233. *See supra* Part I.C.3.

it counted only four Justices as adherents, and two Justices from *Williams*²³⁴ have also since been replaced. Although the views of these new Justices are unclear, Justice Gorsuch seems opposed to this theory based on his criticisms of the *Williams* plurality on this point in his *Stuart* opinion.²³⁵

To strengthen this approach, a few items need to be kept in mind. First, *Williams* was a bench trial²³⁶ so this theory might be harder to use in a jury trial.²³⁷ Second, if used in a jury trial, it would strengthen this theory if the prosecution presents the evidence clearly and makes very clear to the jury that the testimonial material is only being used to provide the basis for the expert's testimony and not for its truth. Third, it would strengthen this theory to use a hypothetical question from the prosecutor to the testifying expert, such as: "assuming fact 1, fact 2, and fact 3 are true, what would your opinion be as to . . . ?" The hypothetical question would help demonstrate to a jury that the facts are not offered for their truth. In connection with use of such hypothetical question, the prosecution should make sure to have independent, admissible evidence of the hypothetical facts relied upon by the expert (i.e., the facts contained in the report). Finally, the testifying expert must be giving an actual independent opinion rather than attempting to act as a mere "conduit" for the otherwise testimonial statements of individuals involved in the test or analysis.

C. Theory 3: Report Not Specifically Accusatory

A third potential theory might be arguing that the report or forensic analysis evidence is not specifically accusatory.²³⁸ This is the second *Williams* plurality route, and again, the strength of this theory is unclear for the reasons noted above.²³⁹

An example of this theory might be where the alleged perpetrator was not a suspect at the time the report was prepared. Subsequently, however, the alleged perpetrator is connected to the crime and the prosecution wants to use the report against the perpetrator at trial. In that event, consistent with the first theory, the report would not be testimonial and there would be no need to produce a supporting expert for purposes of the Confrontation Clause.

D. Theory 4: Informality of Report

A fourth, albeit weaker, theory is arguing a report or certification lacks sufficient "solemnity" or "formality" to constitute a testimonial statement. Without the support of the other Justices, Justice Thomas has been relatively consistent in

234. See *Williams v. Illinois*, 567 U.S. 50 (2012).

235. See *Stuart v. Alabama* 139 S. Ct. 36, 36–37 (2018); see also Friedman, *supra* note 225; Kirkpatrick, *supra* note 153.

236. *Williams*, 567 U.S. at 56.

237. At least in theory, judges should be more able to utilize evidence for a permissible purpose than jurors.

238. See *supra* Part I.C.3.

239. *Williams*, 567 U.S. at 81–86.

requiring some degree of solemnity in determining whether the forensic statement is testimonial. For instance, Justice Thomas considered the statements in *Melendez-Diaz* (in which the findings of the forensic analysis were contained in sworn certificates) and *Bullcoming* (in which, albeit not formally sworn, the analyst's "certificate" was "formalized in a signed document") sufficiently solemn to be deemed testimonial.²⁴⁰ In *Williams*, by contrast, Justice Thomas considered the report not to have affirmed or certified anything, and he concluded that the report lacked sufficient formality to be deemed testimonial.²⁴¹ Although Justice Thomas appears to be the lone adherent to formality as a standalone theory, formality could be combined with other theories, such as those based on the *Williams* plurality views, to strengthen other theories.

It is important to note, however, that prosecutors may not engage in "bad-faith attempts" to evade formality and "conspir[e] to elude confrontation by using only informal extrajudicial statements against an accused."²⁴² Justice Thomas has emphasized that the Confrontation Clause would reach such "bad-faith attempts" at evasion.²⁴³ Moreover, even if it were not bad faith for a prosecutor to use less formal statements to obviate the need to comply with the Clause, Justice Thomas has noted that such statements might be seen as less reliable or persuasive by the fact finder.²⁴⁴

E. *Theory 5: Supporting Witness More Than "Surrogate" or Mere "Conduit"*

A fifth theory is offering a witness that is more than a mere "conduit" or "surrogate." *Katso* brings into focus the issue of who is the relevant witness: the testimonial report or the expert on the stand.²⁴⁵ Is the expert a mere "conduit" or sufficiently independent? This question depends on a number of factors. First, the prominence of the report in the trial is relevant—i.e., was it introduced, and if not, how extensively was it mentioned? Second, the extent of the testifying expert's own independent judgment and input in offering her opinion is important. This would include looking at the extent of her involvement in the actual test, the laboratory conducting the test, other tests of the same kind, or a combination of these factors. It would also include looking into the thoroughness of her review of the non-testimonial material underlying the report. Third, it is likely vital that the entire analysis can be sufficiently tested by cross-examining the testifying expert. This last point seems to be a key underpinning of the analysis.

Consistent with *Katso*, the expert should ideally be very closely connected to the laboratory and testing process and exhaustively informed regarding the specific

240. *Bullcoming v. New Mexico*, 564 U.S. 647, 664–65 (2011); *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 329 (2009) (Thomas, J., concurring).

241. *Williams*, 567 U.S. at 103–04 (Thomas, J., concurring).

242. *Id.* at 113.

243. *Id.*

244. *Id.*

245. See *supra* Part II.A; *United States v. Katso*, 74 M.J. 273 (C.A.A.F. 2015).

test.²⁴⁶ The expert should also be qualified and able to testify regarding tremendous steps of internal validation.²⁴⁷ The expert should then base her own wholly independent opinion in part on the analysis, and not act as a mere mechanism for introducing evidence in the report, which might otherwise be excluded.²⁴⁸

There are at least two difficulties in using the *Katso* analysis as a means of admitting evidence in future cases. First, it is unclear whether future courts will follow *Katso*'s analysis. Second, it is unclear how much less involvement, connection, and independence than was present in *Katso* might suffice. If, for example, *Stuart* were to represent a forward trend in court thinking, then a much more remote supervisor might be sufficient. If not, the somewhat high bar set by *Katso* may be required. Without further guidance from the courts, the selected witness should be as involved, connected, qualified, and independent as practicable.

F. *Theory 6: Notice and Demand Without Demand*

The sixth theory for entering forensic analysis evidence consistent with the Confrontation Clause is to bring the criminal action in a state with a so-called “notice and demand” law and have the defendant fail to make a demand.²⁴⁹ Pursuant to such a law, the accused has the right to confront a witness sufficient to support admission of the forensic report, but must demand that right after receiving notice from the prosecution of the prosecution’s intention to utilize the forensic report.²⁵⁰ If such law were applicable and if the accused did not make the demand within the required period, the prosecution would be free to introduce the report without the need for a supporting witness.²⁵¹

This “notice and demand” mechanism has been seemingly approved by the Supreme Court in dicta.²⁵² In *Melendez-Diaz*, Justice Scalia’s majority opinion discussed the existence of such procedures as a means of refuting the argument that the “sky [would] fall” due to the majority’s decision.²⁵³ Accordingly, such a procedure should be found consistent with the Clause.

Although each of the above six theories will not be applicable in every case, these theories represent the arguments most likely to be persuasive to a court based on current law, and so these are the issues local stakeholders should be considering.

246. See *supra* Part II.A; *United States v. Katso*, 74 M.J. 273 (C.A.A.F. 2015).

247. See *supra* Part II.A; *United States v. Katso*, 74 M.J. 273 (C.A.A.F. 2015).

248. See *supra* Part II.A; *United States v. Katso*, 74 M.J. 273 (C.A.A.F. 2015).

249. See *Melendez-Diaz v. Massachusetts*, 557 U.S. 305, 325–27 (2009) (citing to provisions in Georgia, Texas, and Ohio).

250. See *id.*

251. See *id.*

252. See *id.*

253. *Id.* at 325.

CONCLUSION

The purpose of this Article is to analyze modern Confrontation Clause and forensic analysis case law and to present six theories through which to argue that forensic analysis evidence is admissible consistent with the Clause. Eventually, it will be important for local stakeholders to have true clarity and certainty on this developing, but confused, area of law.

Producing the analyst who actually conducted a forensic test can be costly and extremely difficult for local prosecutors and laboratories. As use of artificial intelligence, blockchain, and smart technology becomes increasingly pervasive,²⁵⁴ it will only become more difficult to identify who should be a “witness” for purposes of the Clause (assuming human intervention is still necessary). At the same time, the law must continue to safeguard the constitutional rights of criminal defendants, even where it may not always be easy or convenient to do so. One day soon, the Supreme Court may need to again face these issues, but until then, it is hoped that the theories presented here will arm local stakeholders with arguments to consider when playing the admissibility game of “cat and mouse.”

254. See, e.g., PRIMAVERA DE FILIPPI & AARON WRIGHT, BLOCKCHAIN AND THE LAW: THE RULE OF CODE (2018); Karl Manheim & Lyric Kaplan, *Artificial Intelligence: Risks to Privacy and Democracy*, 21 YALE J. L. & TECH. 106 (2019); João Pedro Quintais et al., *Blockchain and the Law: A Critical Evaluation*, 2 STAN. J. BLOCKCHAIN L. & POL'Y 86 (2019); Kevin P. Lee, *A Preface to the Philosophy of Legal Information*, 20 SMU SCI. & TECH. L. REV. 277, 321–23 (2017).