



2-25-2014

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Merritt Baer, *Who is the Witness to an Internet Crime: The Confrontation Clause, Digital Forensics, and Child Pornography*, 30 SANTA CLARA HIGH TECH. L.J. 31 (2014).

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WHO IS THE WITNESS TO AN INTERNET CRIME: THE CONFRONTATION CLAUSE, DIGITAL FORENSICS, AND CHILD PORNOGRAPHY

Merritt Baer†

The ideal society is not outside of the real society; it is part of it. Far from being divided between them as between two poles which mutually repel each other, we cannot hold to one without holding to the other . . . [T]hese conflicts which break forth are not between the ideal and reality, but between two ideals, that of yesterday and that of to-day.

—Jurgen Habermas¹

Abstract

The Sixth Amendment’s Confrontation Clause guarantees the accused the right to confront witnesses against him. In this article I examine child pornography prosecution, in which we must apply this constitutional standard to digital forensic evidence. I ask, “Who is the witness to an Internet crime?”

The Confrontation Clause proscribes the admission of hearsay. In Ohio v. Roberts, the Supreme Court stated that the primary concern was reliability and that hearsay might be admissible if the reliability concerns were assuaged. Twenty-four years later, in Crawford v. Washington, the Supreme Court repositioned the Confrontation Clause of the Sixth Amendment as a procedural right. Even given assurances of reliability, “testimonial” evidence requires a physical witness.

This witness production requirement could have been sensible in an era when actions were physically tied to humans. But in an

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1. 2 JURGEN HABERMAS, THE THEORY OF COMMUNICATIVE ACTION: LEFWORLD AND SYSTEM 71 (Thomas McCarthy trans., Beacon Press 3d ed. 1989).

Internet age, actions may take place at degrees removed from any physical person.

The hunt for a witness to digital forensic evidence involved in child pornography prosecution winds through a series of law enforcement protocols, on an architecture owned and operated by private companies. Sentencing frameworks associated with child pornography similarly fail to reflect awareness of the way that actions occur online, even while they reinforce what is at stake.

The tensions I point to in this article are emblematic of emerging questions in Internet law. I show that failing to link the application of law and its undergirding principles to a digital world does not escape the issue, but distorts it. This failure increases the risk that our efforts to preserve Constitutional rights are perverted or made impotent.

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INTRODUCTION

In this paper I argue that as digital information becomes more prolific and data gathering operates yet more independently of human control, we will need to reconsider the Sixth Amendment's Confrontation Clause rights. The Court has attempted to untangle Confrontation Clause implications in the areas of lab forensics, including urinalysis results and DNA testing.² However, child pornography prosecution represents a new manifestation of constitutional questions regarding digital forensic evidence, and as an Internet crime, it forms a case study for the difficulty in applying constitutional case law to Internet evidence.³ Child pornography prosecution involves fairly traditional business records collected in the ordinary course of Internet business, and it also includes data collected or aggregated in response to a reported suspicion of criminality. Specific questions arising from these forms of digitized, aggregated evidence prompt broad questions—Who is the witness to an Internet crime? How is that witness to be examined? Ultimately, how do we preserve the guarantees of process that foster a sense of justice in trials?

I begin in Part I with a general review of developments leading to the current landscape of the Sixth Amendment's Confrontation Clause protections, including factors informing determinations of what is testimonial and what it means to require confrontation of a witness. In Part II, I offer examples in current case law involving forensic evidence and the Confrontation Clause, which has been in urinalysis cases and the use of DNA evidence. In Part III, I delve into the fairly new questions raised by the use of Internet records in child pornography prosecution, looking at the First Circuit's holding in *United States v. Cameron* in particular.⁴ Finally, in Part IV, I explore

2. See generally *Bullcoming v. New Mexico*, 131 S. Ct. 2705 (2011) (involving urinalysis reports); *Williams v. Illinois*, 132 S. Ct. 2221 (2012) (involving DNA evidence).

3. Recognized, that many in the community seeking to address child sexual abuse do not find the term child pornography appropriate because of the possibility that it normalizes the sexual abuse by categorizing it in terms applied to adult pornography. However, since the statutory language refers to this category of illegal images as child pornography, I too use this terminology. See Memorandum from John C. Keeney, Acting Assistant Attorney Gen., Dep't of Justice, to all U.S. Attorneys, (Jan. 1998), available at http://www.justice.gov/usao/eousa/foia_reading_room/usam/title9/crm02467.htm ("Prior to the enactment of the Act . . . [t]he term 'child pornography,' was only a lay term and not a term of art. The Act, however, amends [S]ection 2256 and uses the term 'child pornography'") (last visited Jan. 28, 2013).

4. *United States v. Cameron*, 699 F.3d 621 (1st Cir. 2012).

some of the broader questions that the transition to digital records raises and I argue that we need to make a decision as to the intent and therefore the substance of the Confrontation Clause in the context of digital evidence.

I. THE EVOLUTION AND CURRENT LANDSCAPE OF THE SIXTH AMENDMENT'S CONFRONTATION CLAUSE

A. *The Confrontation Clause: General Background*

The Confrontation Clause of the Sixth Amendment guarantees, “In all criminal prosecutions, the accused shall enjoy the right to . . . be confronted with the witnesses against him”⁵ That is, it proscribes the admission of hearsay statements.⁶ The Supreme Court clarified that the right is one of “face-to-face” confrontation.⁷

Despite the blanket phrasing of the Confrontation Clause’s guarantee, the Supreme Court recognized explicitly as early as 1895 that the right of confrontation is “subject to exceptions, recognized long before the adoption of the Constitution.”⁸ In *Mattox*, the Court upheld the use of testimony at a second trial when the witness had died after testifying in the first trial, explaining that “A technical adherence to the letter of a constitutional provision may occasionally be carried further than is necessary to the just protection of the accused, and further than the safety of the public will warrant.”⁹ Accordingly, the rules of evidence recognize a number of exceptions to the prohibition on hearsay. In this section I explore the trajectory of the Court’s definitions as to what evidence the Confrontation Clause’s prohibition on hearsay does or does not reach.

B. *What Triggers Confrontation Clause Protections?*

In *Ohio v. Roberts*, the Supreme Court established that the

5. U.S. CONST. amend. VI. (The Clause was incorporated to states by the Fourteenth Amendment and applied to states in *Pointer v. Texas*, 380 U.S. 400 (1965)).

6. FED. R. EVID. 801(c) (2011) (hearsay is a statement, other than one made by the declarant while testifying at trial or hearing, offered in evidence to prove the truth of the matter asserted).

7. *Coy v. Iowa*, 487 U.S. 1012, 1016 (1988) (citation omitted). This right, however, is not absolute. See *Maryland v. Craig*, 497 U.S. 836 (1990) (the Sixth Amendment does not categorically prohibit a child witness in a child abuse case from testifying against a defendant outside of the defendant’s physical presence, by one-way closed circuit television).

8. *Mattox v. United States*, 156 U.S. 237 (1895).

9. *Id.* at 243.

primary concern surrounding hearsay evidence was reliability.¹⁰ However, even absent the cross-examination provided by the Confrontation Clause as a safeguard of reliability, hearsay might be admissible nevertheless, over a Confrontation Clause objection, if it met sufficient “indicia of reliability.”¹¹ This included evidence admitted under a “firmly rooted exception” to the hearsay rule,¹² but could also apply if the party presenting the evidence could meet the standard of showing “particularized guarantees of trustworthiness.”¹³

A few decades later, *Crawford v. Washington* reconceived both the reasoning behind the admissibility of certain hearsay statements, and the criteria for determining those statements that might form exceptions to the Confrontation Clause’s particularized protection.¹⁴ The Court rejected reliability as the basis for the analytical framework and instead postured the Clause as a procedural right. Rather than merely existing as one form of guarantee as to the reliability of hearsay evidence, the *Crawford* Court held that the purpose of the Clause is to guarantee the accused the opportunity to confront accusers whose statements are the result of government efforts to gather evidence for prosecution.¹⁵

10. *Ohio v. Roberts*, 448 U.S. 56 (1980). In *White v. Illinois*, Justice Thomas termed cross-examination “the greatest legal engine ever invented for the discovery of truth.” 502 U.S. 346, 361-63 (1992) (citation omitted) (Thomas, J., concurring in part and concurring in judgment, noting that this rule applies even if the confession is “found to be reliable”). Note that in *White*, Justice Thomas (joined by Justice Scalia) voiced originalist concerns, 502 U.S. 346, 358 (Thomas, J., concurring in judgment), that would later manifest in Justice Scalia’s opinion for the majority in *Crawford v. Washington*, 541 U.S. 36 (2004).

11. *Roberts*, 448 U.S. 56, 66.

12. *Id.* See also FED. R. EVID. 803, 804(b); *White v. Illinois*, 502 U.S. 346 (1992) (permitting the spontaneous declaration and medical treatment exceptions); *United States v. Inadi*, 475 U.S. 387 (1986) (hearsay exceptions include the co-conspirator exception to the hearsay prohibition). The Court did not include the statements made by a 2-year-old girl in *Idaho v. Wright* regarding abuse by her mother and mother’s boyfriend. 497 U.S. 805 (1990). Because the statements were not made spontaneously or to obtain medical treatment, and particularly in light of the interviewer’s suggestive interview technique, the Court held that the statements by the young girl did not fall into one of the recognized exceptions and lacked sufficient indicia of trustworthiness. *Id.* at 827. Particularly before *Crawford v. Washington*, the Court acknowledged that these “firmly rooted exceptions” still included a judgment on the reliability of the statements: “Established practice, in short, must confirm that statements falling within a category of hearsay inherently ‘carr[y] special guarantees of credibility’ essentially equivalent to, or greater than, those produced by the Constitution’s preference for cross-examined trial testimony.” *Lilly v. Virginia*, 527 U.S. 116, 124 (1999) (citation omitted).

13. *Roberts*, 448 U.S. at 66.

14. 541 U.S. 36 (2004).

15. See *id.* at 55-56 (opportunity for cross-examination is “dispositive, and not merely one of several ways to establish reliability.”).

In *Crawford*, Justice Scalia referenced the trial of Sir Walter Raleigh in 1603. Raleigh was sentenced to death based on Lord Cobham's statements to the Privy Council, without opportunity for cross-examination. Justice Scalia concluded, "[t]he constitutional text, like the history underlying the common-law right of confrontation . . . reflects an especially acute concern with a specific type of out-of-court statement,"¹⁶—and these are "testimonial" statements.

C. What is Testimonial?

Crawford therefore established as the crux of admissibility the question of whether a statement is *testimonial*; testimonial statements are inadmissible until and unless the Confrontation Clause can be satisfied. How to determine what is testimonial remained unclear. *Crawford* listed three categories that would qualify as testimonial statements, the third and most expansive of which is, "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."¹⁷ The hearsay at issue in *Crawford* was certainly testimonial, as it was a statement made during police interrogation.

In companion cases *Davis v. Washington* and *Hammon v. Indiana*¹⁸ the Court attempted to define further what is testimonial: statements are non-testimonial (admissible without raising Confrontation Clause objection) "when made in the course of police interrogation under circumstances objectively indicating that the primary purpose of the interrogation is to enable police assistance to meet an ongoing emergency."¹⁹ Meanwhile, statements made during police questioning are testimonial (raising Confrontation Clause objection) when "the circumstances objectively indicate that . . . the primary purpose of the interrogation is to establish or prove past

16. *Id.* at 51.

17. *Id.* at 52. The first two categories are: (1) "extrajudicial statements . . . contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions," (2) "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." *Id.*

18. *Hammon v. Indiana*, 546 U.S. 1213 (2006); *Davis v. Washington*, 547 U.S. 813 (2006) (the Court heard *Davis* and *Hammon* in tandem).

19. *Davis*, 547 U.S. at 822.

events potentially relevant to later criminal prosecution.”²⁰ Based on this distinction, the statements in *Davis* (a victim telling a 911 operator that Davis, the accused, was beating her) were non-testimonial as they described ongoing events, while the statement in *Hammon* was testimonial and triggered Confrontation Clause protection because it “took place some time after the events described were over,” thus its primary purpose was to prove past events potentially relevant to later criminal prosecution.²¹

The *Crawford* opinion did not clearly define “testimonial.”²² It laid out a number of situational factors that may enter into a determination of whether a statement is testimonial. While formality is “essential” to a testimonial utterance, “interrogation” is not essential to formality.²³

Statements to someone other than a government employee in the course of an investigation are much less likely to be testimonial²⁴—though the Court also accepted that the 911 operator in *Davis* was committing “acts of the police.”²⁵

Indicia of “solemnity”²⁶ may be relevant, reinforced by the fact that making false statements to a government official is usually a crime. The *Crawford* Court affirmed that statements made to a co-conspirator turned FBI informant in *Bourjaily v. United States* were non-testimonial.²⁷

Crawford also outlined exceptions in which testimonial hearsay is nevertheless admissible: (1) when the declarant was subjected to cross-examination at the time of the statement and is unavailable for

20. *Id.*

21. *Id.* at 830 (the Court further clarified that statements might evolve from non-testimonial to testimonial as the urgency of the situation changed, implying that the primary purpose had changed from emergency assistance to evidence collection).

22. *Crawford*, 541 U.S. at 75 (citation omitted) (Chief Justice Rehnquist, joined by Justice O’Connor, expressed as much in his concurrence, stating, “[T]he thousands of federal prosecutors and the tens of thousands of state prosecutors need answers as to what beyond the specific kinds of ‘testimony’ the Court lists is now covered by the new rule.”).

23. *Davis*, 547 U.S. at 822, 823 (the Court maintained, “[T]he Framers were no more willing to exempt from cross-examination volunteered testimony or answers to open-ended question than they were to exempt answers to detailed interrogation.”).

24. For instance, in *Crawford*, the Court reexamined the statements from the victim to the police officer in *White v. Illinois*, even though the victim made identical statements to her babysitter, mother, and a nurse and doctor; presumably, the focus was on statements made to law enforcement because the others were nontestimonial. *Crawford*, 541 U.S. at 58.

25. *Davis*, 547 U.S. at 817.

26. *Id.* at 836-37, 840.

27. *Crawford*, 541 U.S. at 58.

cross-examination despite diligent efforts of the prosecution;²⁸ (2) where the declarant is unavailable because of misconduct by the defendant;²⁹ (3) where the defendant has opportunity at trial to cross-examine the declarant;³⁰ (4) where the statements were not offered for the truth of the matter asserted.³¹

D. What Is a Witness?

While some legal scholars anticipated challenges arising out of forensic lab reports or other types of potentially-testimonial records,³² the *Crawford* Court did not address the application of the (post-*Crawford*) Confrontation Clause to medical, business or other types of records. Case law was ad hoc³³ until 2009, when the Court applied the Confrontation Clause to forensic evidence in *Melendez-Diaz v. Massachusetts*.³⁴

Luis Melendez-Diaz was arrested making a cocaine sale in a Kmart parking lot in Massachusetts. At trial, the prosecution introduced bags of the cocaine he was distributing as well as drug analysis certificates prepared by a lab technician who had analyzed the drugs and identified them as cocaine.³⁵ In a contested 5-4 decision, the *Melendez-Diaz* Court held that introduction of forensic evidence in the form of lab reports is testimonial. Rejecting contentions that lab reports are non-testimonial business records under Federal Rule of Evidence 803(6), or that they are not accusatory because they contain scientific data, Justice Scalia wrote for the majority that toxicology reports “are incontrovertibly ‘a solemn declaration or affirmation made for the purpose of establishing or proving some fact.’”³⁶

28. *Id.* at 54-69.

29. *Id.* at 61-62; *see also* FED. R. EVID. 804(b)(6).

30. *See id.*

31. This is the basic threshold for the definition of hearsay. FED. R. EVID. 801(c) (2011).

32. *See, e.g.,* Jennifer L. Mnookin, *Expert Evidence and the Confrontation Clause After Crawford v. Washington*, 15 J.L. & POL’Y 791 (2007).

33. *See, e.g.,* United States v. Garcia, 452 F.3d 36 (1st Cir. 2006) (warrants of deportation signed by an immigration official are not testimonial); United States v. Jamieson, 427 F.3d 394 (6th Cir. 2005) (business records are not testimonial); State v. Campbell, 719 N.W.2d 374, 377 n.1 (N.D. 2006) (surveying differing judicial views on whether lab reports are testimonial).

34. *Melendez-Diaz v. Massachusetts*, 557 U.S. 305 (2009).

35. *Id.* at 308.

36. *Id.* at 310 (quoting *Crawford*, 541 U.S. at 51). It is interesting to note that the military jurisprudence regarding Confrontation Clause triggers in urinalysis cases involves different factors. While the U.S. Court of Appeals for the Armed Forces has held consistent with *Melendez-Diaz*, there are a number of military-specific circumstances that affect the

The *Melendez-Diaz* majority characterized their determination to be “little more than the application of our holding in *Crawford v. Washington*.”³⁷ This dismissal seems disingenuous; the holding in *Melendez-Diaz* necessarily included a number of determinations.

For one, the *Melendez-Diaz* holding implied a judgment about what a witness could be—without a witness to call to the stand, the text of the Confrontation Clause is nonsensical or inapplicable. The *Melendez-Diaz* Court held that Melendez-Diaz’s Confrontation Clause rights were violated when the prosecution introduced over his objection “certificates of state laboratory analysts” that identified cocaine at his state-court drug trial. The determination seems to have revolved around the posture of the evidence at issue—the fact that the certificates consisted of evidence “*against him*,” and Justice Scalia specifically pointed to the language of the Confrontation Clause’s guarantee.³⁸

Justice Scalia wrote, “To the extent the analysts were witnesses. . . they certainly provided testimony *against* petitioner, proving one fact necessary for his conviction—that the substance he possessed was cocaine.”³⁹ Since the level of alertness or sleepiness of the lab technicians was never introduced as a factor in *Melendez-Diaz*, it seems fair to assume that one can be considered a witness even when mindlessly collecting information as part of one’s job. Is there a consciousness requirement in witnessing, and if not, where is the distinct line between that information captured by a machine—or the Internet—and that information which has a human component?⁴⁰

determination. Unlike civilian contexts, military urinalysis is performed routinely, not only in the context of an investigation; the samples are identified only by social security number rather than name; and there is presumably less risk of a forensic analyst “responding to a request from a law enforcement official [feeling] pressure—or [i]ncentive—to alter the evidence in a manner favorable to the prosecution.” *Id.* at 318; *see, e.g.*, *United States v. Blazier*, 68 M.J. 439, 444 (C.A.A.F. 2010).

37. *Melendez-Diaz*, 557 U.S. at 327.

38. *Id.* at 314.

39. *Id.* at 313.

40. The Eleventh Circuit has held explicitly that “[i]n light of the constitutional text and the historical focus of the Confrontation Clause, we are persuaded that the witnesses with whom the Confrontation Clause is concerned are *human* witnesses.” *United States v. Lamons*, 532 F.3d 1251, 1263 (11th Cir. 2008). *See also* *United States v. Moon*, 512 F.3d 359, 362 (7th Cir. 2007); *United States v. Hamilton*, 413 F.3d 1138, 1142-43 (10th Cir. 2005); *United States v. Khorozian*, 333 F.3d 498, 506 (3d Cir. 2003); 4 CHRISTOPHER B. MUELLER & LAIRD C. KIRKPATRICK, *FEDERAL EVIDENCE* § 380, at 65 (2d ed. 1994) (“[N]othing ‘said’ by a machine . . . is hearsay”). However, the qualities of machines are becoming more blurred as evidence produced through a human-derived process such as software may have the qualities of a human-generated document without any action that directly involves human hands.

Ought we to consider as witness the hardware or software engineer if that hardware or software was later involved in data collection or analysis that produced damning evidence?⁴¹ The Court seems to have asserted a right to call a witness without fully considering whom that witness will be in cases that involve digital forensic evidence.

E. Post-Melendez-Diaz Forensic Evidence

In the years following *Melendez-Diaz* and the application of the Confrontation Clause to toxicology reports, the Supreme Court applied post-*Crawford* Confrontation Clause jurisprudence to other forms of forensic evidence, including blood alcohol level results in *Bullcoming v. New Mexico*⁴² and DNA evidence in *Williams v. Illinois*.⁴³ In both of these cases, the evidence itself was collected in the course of an investigation that included the possibility of later prosecution. Like *Melendez-Diaz*, they involved unfavorable evidence in the form of forensic test results produced by a machine and certified by a person.

In *Bullcoming*, as in *Melendez-Diaz*, the Court held that introduction of the evidence over a Confrontation Clause exception violated the petitioner's right to confront witnesses against him.⁴⁴ In *Williams*, the Court held that an expert witness could testify as to "others' testimonial statements if those statements are not themselves admitted as evidence."⁴⁵ Thus, the Court made the dubious claim that the inadmissibility of the underlying testimonial evidence could be isolated from the expert's reliance upon them and escaped the question for the time by hinging the holding on expert witness law rather than a testimonial-ness determination.

Child pornography forces us to re-confront and reevaluate the Confrontation Clause questions that arose in these recent cases, and it also raises new ones. Child pornography possession or distribution cases force the issue because the evidence in a child pornography

41. In a recent child pornography appeal, the Ninth Circuit agreed that an accused has the right to inspect software used to prosecute him if "functions of the program were relevant to his defense," rather than to accept the FBI's affidavits of how the filesharing program works. *United States v. Budziak*, 697 F.3d 1105, 1112 (9th Cir. 2012). The movement toward increasingly particularized levels of forensic evidence in e-discovery seems tied to a general reconsideration of the level of relevance that courts view in software and hardware characteristics to cybercrime cases.

42. *Bullcoming v. New Mexico*, 131 S. Ct. 2705 (2011).

43. *Williams*, 132 S. Ct. 2221.

44. *Bullcoming*, 131 S. Ct. at 2716.

45. *Williams*, 132 S. Ct. at 2223.

prosecution consists of a range of evidence types, most of which include business records in the colloquial sense but many of which are not business records that meet the legal standard of the evidentiary exemption. These range from digital data collected routinely in the course of business and without targeting a particular user, to digital evidence collected, labeled, and assembled in preparation for prosecution. The first seems to be textbook business record exception; the second sounds like testimonial evidence that triggers a Confrontation Clause right. In practice, drawing the line between the two is not so clear, and the determinations raise fundamental questions that will apply to digital evidence standards more broadly.

II. CHILD PORNOGRAPHY PROSECUTION COMPELS US TO REEXAMINE THE CONFRONTATION CLAUSE

A. *Child Pornography Is Cyber Crime*

As the days of back-alley or mail-order exchanges of child pornography⁴⁶ photographs in paper bags are largely over, child pornography today is an area of cyber crime, and its enforcement relies upon digital forensic data as evidence.⁴⁷ I take it as an example because of the range of Internet data that is necessarily involved in a child pornography prosecution, particularly in child pornography possession or distribution cases.

Child pornography is a unique area of First Amendment jurisprudence: the Supreme Court has held since 1982 that constitutional speech protections do not apply to child pornography, even when the material does not meet the obscenity test outlined in *Miller*.⁴⁸ The rationales for criminalizing child pornography are distinct. In *New York v. Ferber*, the Supreme Court held that the state's interest in preventing sexual exploitation of minors is a compelling "government objective of surpassing importance," and the law in question carefully drawn to protect children from the mental, physical, and sexual abuse associated with child pornography, thus its proscription of child pornography did not violate the First

46. The legal definition of the term "child pornography" can be found in 18 U.S.C. § 2256 (2008).

47. See, e.g., Richard Wortley & Stephen Smallbone, *Child Pornography on the Internet*, U.S. DEP'T OF JUSTICE, OFFICE OF CMTY. ORIENTED POLICING SERV. (May 2006), <http://www.cops.usdoj.gov/files/ric/Publications/e04062000.pdf> (last updated May 2012).

48. *Miller v. California*, 413 U.S. 15 (1973).

Amendment.⁴⁹

While the precedent for criminalizing child pornography is well established since *Ferber* in 1982, child pornography jurisprudence encapsulates many of the dilemmas of applying constitutional law online. Unsurprisingly, therefore, it results in a significant number of appeals—one researcher noted that “[a]lmost 70 percent of all reported appellate decisions involving the search or seizure of digital evidence are concerned with the recovery of child pornography.”⁵⁰ In the United States, child pornography possession, distribution, and receipt are prosecuted through 18 U.S.C. Section 2252,⁵¹ “Certain activities relating to material involving the sexual exploitation of minors,” and Section 2252A, “Certain activities relating to material constituting or containing child pornography.”⁵² Federal law defines child pornography as “any visual depiction of sexually explicit conduct involving a minor,”⁵³ and they are perhaps more accurately described as “child sexual abuse images.”⁵⁴

B. *The Convictions in United States v. Cameron*

The National Center for Missing and Exploited Children (NCMEC) houses a database of known child victims and runs a “CyberTipline” for entities to report suspected child pornography. There is a statutory duty for any organization “engaged in providing an electronic communication service or a remote computing service to the public, through a facility or means of interstate or foreign commerce” to report apparent violations of federal child pornography law.⁵⁵

On March 15, 2007, Yahoo! received an anonymous report of

49. *New York v. Ferber*, 458 U.S. 747, 757 (1982). The *Ferber* Court also identified an impetus for the criminalization of child pornography to be drying up the market for child pornography. *Id.* at 761-62 (“The advertising and selling of child pornography provide an economic motive for and are thus an integral part of the production of such materials.”). See also *Osborne v. Ohio*, 495 U.S. 103, 110 (1990) (one should go through levels in the distribution chain).

50. Thomas K. Clancy, *Digital Child Pornography and the Fourth Amendment*, THE UNIV. OF MISS. SCHOOL OF LAW, <http://www.olemiss.edu/depts/ncjrl/pdf/Clancy,%20Digital%20Child%20Pornography%20and%20the%204th%20Amendment%2007.14.10.pdf> (last visited Oct. 4, 2013).

51. 18 U.S.C. § 2252 (2012).

52. *Id.*

53. *Id.*

54. *Id.*

55. *United States v. Cameron*, 699 F.3d 621, 628 (1st Cir. 2012) (citing 18 U.S.C. § 2258A(a)(1) (2012)).

child pornography images housed in one of its user's accounts named "lilhottee0000."⁵⁶ Yahoo! protocol established a series of actions which included removing the account, searching it, and if the search indicated child pornography, generating a report for the NCMEC CyberTipline (CP Report or CyberTipline Report) and keeping a receipt of the report. On August 3, 2007, NCMEC sent a report of child pornography that Yahoo! had documented to the Maine State Police Internet Crimes Against Children (ICAC) unit.⁵⁷ Later, NCMEC sent another report regarding another set of child pornography images, housed in the Yahoo! Photo account of user "harddude0000."⁵⁸ Both CyberTipline Reports listed the same Internet protocol (IP) address, 76.179.26.185, in a section of the report titled "Suspect Information."⁵⁹

An ICAC detective traced the IP address to the provider Time Warner.⁶⁰ Subpoenaing Time Warner, the detective determined that the IP address led to the Cameron residence in the relevant time periods.⁶¹ ICAC seized four computers at the Cameron residence, and a forensic examiner examined them in March 2008.⁶² Forensic examination of Cameron's seized computers showed child pornography stored on two of the machines.⁶³ It also showed that someone executed Internet searches for terms related to child pornography, and that someone had signed into a service (now defunct) called "Google Hello" and used usernames to send and receive child pornography.⁶⁴ ICAC served search warrants on Yahoo! for activity logs related to the accounts accessed from Cameron's computers, and on Google for activity logs related to the Google Hello account.⁶⁵

The data recovered by those activity logs included emails in which Cameron sent and received child pornography images.⁶⁶ A federal grand jury indicted Cameron on sixteen counts of child pornography-related crimes, each of which included a specific date on

56. *Id.* at 627.

57. *Id.* at 629.

58. *Id.*

59. *Id.*

60. *Cameron*, 699 F.3d at 629.

61. *Id.* at 629-30.

62. *Id.* at 630.

63. *Id.*

64. *Id.*

65. *Id.* at 630-31.

66. *Cameron*, 699 F.3d at 630.

which Cameron either sent or received child pornography.⁶⁷ Cameron “contended that Yahoo! acted as an agent of the government when it searched password-protected accounts for child pornography before reporting to NCMEC,” therefore they triggered his Confrontation Clause rights.⁶⁸

The district court held that the searches were valid because Yahoo! voluntarily searched the accounts without direction from the government.⁶⁹ Further, the district court held that so long as the government established that the Yahoo! records were kept in the ordinary course of business, they were non-testimonial and could be admitted as “business records” under Federal Rule of Evidence 803(6) if they were authenticated.⁷⁰ The NCMEC reports and attached images were also admissible as business records, the court held, because NCMEC “simply forwarded information it received from Yahoo!, information which itself consisted of business records.”⁷¹

At trial, the government introduced the Yahoo! evidence and the Google Hello evidence via testimony of legal assistants in the companies’ respective Legal Compliance Departments. The legal assistants were familiar with Yahoo!’s and Google’s data retention practices but had no technical training.⁷² The government also introduced evidence related to the NCMEC CyberTipline reports through testimony of the executive director of NCMEC.⁷³

The First Circuit reviewed the Internet forensic data by creating three separate categories: (1) Internet account information and activity records, (2) “electronic receipts of Yahoo’s CP Reports to . . . produced by Yahoo! in response to search warrants,”⁷⁴ and (3) NCMEC’s CyberTipline Reports.

1. Internet Account Information and Activity Records

Not every business record falls within the business record

67. *Id.* at 630-31.

68. *Id.* at 631.

69. *Id.* at 631-32 (citing *United States v. Cameron*, 729 F. Supp. 2d 418, 423-24 (D. Me. 2010) [hereinafter *Cameron II*]).

70. *Cameron*, 699 F.3d at 641 (citing *United States v. Cameron*, 733 F. Supp. 2d 182, 188-89 (D. Me. 2010) [hereinafter *Cameron III*]).

71. *Id.* at 632.

72. *Id.*

73. *Id.* at 629.

74. *Id.* at 638.

exception to the hearsay prohibition. The First Circuit acknowledged this, citing the affidavits in *Melendez-Diaz* as evidence.⁷⁵ However, these account information and activity logs were all made at or near the time of the event, and created and kept in the regular course of business,⁷⁶ “totally unrelated to any trial or law enforcement purpose.”⁷⁷ Thus the court held that they were properly introduced as non-testimonial business records.⁷⁸ It included the Yahoo! Account Management Tool, Yahoo! Login Tracker data, and Google Hello Connection logs.⁷⁹

2. Receipts of Yahoo! CP

While the receipts of the CP reports are also business records, the First Circuit wrote, “there is strong evidence that the CP reports were prepared with the primary purpose of establishing or proving past events potentially relevant to a later criminal prosecution.”⁸⁰ Yahoo! created these reports in response to the statutory duty to report apparent violations of child pornography law.⁸¹ They contained Internet records and employee notes, including hearsay statements by Yahoo! employees that linked the Internet Service Provider (ISP) to the suspected child pornography. The First Circuit weighed the fact that the reports were only made in response to suspected child pornography, that they used the term “suspect” repeatedly to identify Cameron, and that once created, Yahoo! sent the CP Report to NCMEC, knowing that NCMEC would forward them to law enforcement.⁸² Thus, the “objective test” of the “primary purpose” led the court to consider this evidence testimonial.⁸³

Comparing these reports to the evidence generated in *Davis*,⁸⁴ the First Circuit stated that “NCMEC effectively acted as an agent of law enforcement,” and concluded that “the CP reports at issue here. . . fall somewhere in the range between volunteered testimony and

75. *Id.* at 640.

76. *Cameron*, 699 F.3d at 641. (citing FED. R. EVID. 803(6)).

77. *Id.* at 642.

78. *Id.*

79. *Id.*

80. *Id.* at 643 (citation omitted).

81. 18 U.S.C. § 2258(A)(1).

82. *Cameron*, 699 F.3d at 644.

83. *See Palmer v. Hoffman*, 318 U.S. 109 (1943) (statements made by a train engineer in earlier investigation were inadmissible hearsay at the trial that occurred after the engineer died because the “primary utility” of the report was “in litigating, not in railroading”).

84. *Davis v. Washington*, 547 U.S. 813 (2006)

responses to an interrogation.”⁸⁵

3. NCMEC’s CyberTipline Reports

The Circuit Court ruled that the NCMEC CyberTipline Reports were also testimonial. They were “introduced—and admitted—into evidence to prove the truth of the assertions contained therein, most importantly: that child pornography images were uploaded onto a particular Yahoo! account, and that the most recent one of those images was uploaded from a specific IP address on a specific date and time.”⁸⁶ These reports were the link between the specific dates of individual criminal counts, and the accused’s IP address.

The Court conducted a harmless error analysis and concluded that while some of the counts could be affirmed as based on properly admitted evidence, other counts relied primarily on inadmissible evidence and required reversal.⁸⁷

III. CONFRONTATION CLAUSE QUESTIONS FOR THE DIGITAL AGE

A. *How Should We Weigh Logistical Concerns?*

On the one hand, the idea that we abridge constitutional rights based on (in)convenience seems appalling; what’s more, the Court has plainly stated that the Confrontation Clause right is a “*particular*” one: “testing in the crucible of cross-examination.”⁸⁸ On the other hand, as Justice Breyer emphasized in his *Melendez-Diaz* concurrence, in the current day requiring lab technician testimony for all data would create insurmountable logistical problems.⁸⁹

Justice Kennedy wrote that hinging prosecution on the practicality of requiring an FBI analyst (of which there are 500 employees, conducting more than one million tests annually) to “board a plane, find his or her way to an unfamiliar courthouse, and

85. *Id.* at 46. *See infra* Part III.A.

86. *Cameron*, 699 F.3d at 651.

87. *Id.* at 652-53.

88. *Crawford v. Washington*, 541 U.S. 36, 61 (2004). The *Crawford* Court stated explicitly, “Dispensing with confrontation because testimony is obviously reliable is akin to dispensing with jury trial because a defendant is obviously guilty. This is not what the Sixth Amendment prescribes.” *Id.* at 62.

89. Judge G. Ross Anderson Jr., a District Court Judge for the District of South Carolina, recently bemoaned, “[T]he decisions in *Melendez-Diaz* and *Bullcoming* threaten to overwhelm the justice system by constantly requiring the country’s limited number of forensic analysts to appear at trial.” G. Ross Anderson Jr., *Returning to Confrontation Clause Sanity*, THE FEDERAL LAWYER, Mar. 2013, at 71, available at <http://www.fedbar.org/PDFs/march13-entire.pdf.aspx>.

sit there waiting to read aloud notes made months ago” for each test would be, in practice, “a windfall to defendants” as it would surely result in fewer prosecutions and convictions.⁹⁰

Regardless of what *ought* to be a consideration, the proliferation of data makes logistical issues increasingly prominent. The government has limited resources, and we are swimming in data. Often that data might be somewhere in middle ground, as the Yahoo! CP Reports were in *Cameron*: data assembled and lightly annotated with obvious notes. In time, that stage of analysis might be executed by software programmed by humans but not directly by human analysts. Would that change the outcome entirely?⁹¹

Moreover, if the criminal justice community refuses to confront the logistical realities, the obvious solution for laboratories, ISPs or other entities that generate forensic data will be to simply produce unsigned reports that do not identify the technician who ran the test or analyst who compiled the data.⁹² Justice Alito dodged this in *Williams* when he accepted expert testimony under the shady claim that the expert was not testifying to the truth of the reports but on the hypothetical question, ‘if the report was accurate, would it match the defendant’s DNA?’⁹³

Justice Alito also wrote for the plurality that the report was not intended to be used as evidence against the defendant, so there was no right of confrontation involved.⁹⁴ In distinguishing the “formality” (and therefore testimonial nature) of the Yahoo! receipts of the reports it sent to NCMEC from the Cellmark DNA results in *Williams*, the First Circuit cited the *Williams* plurality: “the technicians who prepare a DNA profile generally have no way of knowing whether it will turn out to be incriminating or exonerating—or both.”⁹⁵ In contrast,

90. *Melendez-Diaz*, 557 U.S. at 343.

91. See Karen Neville, *Programmers and Forensic Analyses: Accusers Under the Confrontation Clause*, DUKE L. & TECH. REV. 10, 18 (2011) (Neville identifies the potential for fraud and error in forensic lab tests and the weaknesses in analyst testimony, and advocates requiring the programmer to testify, as “[T]he programmer [is] the true accuser—not the machine merely following the protocols he created”).

92. As Justice Kagan wrote in her *Williams* dissent, “The prosecution could avoid its demands by using the right kind of forms with the right kind of language. (It would not take long to devise the magic words and rules—principally, never call anything a ‘certificate.’)” *Williams v. Illinois*, 132 S. Ct. 2221, 2276 (2012). Moreover, “The new conventions, precisely by making out-of-court statements less ‘sole[m]n,’ would also make them less reliable—and so turn the Confrontation Clause upside down.” *Id.* (citations omitted).

93. *Id.* at 2223-24.

94. *Id.* at 2226.

95. *Cameron*, 699 F.3d at 647 (quoting *Williams*, 132 S. Ct. at 2244).

“[n]obody at Yahoo! who was involved in creating the CP Reports could possibly have believed the CP Reports could be other than incriminating.”⁹⁶ This distinction seems dubious.

To begin, the DNA test would not arrive at a lab if there were not a suspicion, which is to say, a real possibility that the DNA evidence would be incriminating. Additionally, the DNA report was generated by a laboratory that fulfills government forensic lab work; Cellmark might not be “an agent of law enforcement” in every context, but it was certainly an agent of the government here.⁹⁷ Finally, as the facts played out, the DNA report *was* incriminating; presumably the prosecution would not have sought to use it if it had not been. There may be valid reasons to explain a court’s decision to find DNA evidence not to require cross-examination, but the idea that it is not linked directly enough to the production of incriminating evidence does not seem viable.

B. Is a Surrogate Witness Sufficient?

Much more credible might be the contention that there are logistical hurdles to producing the particular lab technician who generated the lab results. This, of course, is also the root of the questions about “surrogate” witnesses or expert witnesses that effectively, if not legally, stand in.⁹⁸ If it were easy to produce the technician who created the lab reports, there would need be no discussion of surrogates.

Yet the Court has explicitly rejected the concept of a “surrogate” witness.⁹⁹ While there may be varying definitions as to what constitutes a “surrogate” witness, I reject the notion generally because the Supreme Court made clear that the Confrontation Clause is “a procedural rather than a substantive guarantee.”¹⁰⁰ Thus either there is a Confrontation Clause requirement present or there is not; to my mind, there can be no faithfully constitutional “surrogate witness.” (Note that the Court’s reasoning in *Williams* for accepting expert witness’ testimony hinged on the inadmissibility of the underlying testimonial evidence; it did not recognize the idea of surrogate

96. *Id.*

97. *Williams*, 132 S. Ct. 2221.

98. See FED. R. EVID. 703 for rules on expert witnesses.

99. *Bullcoming v. New Mexico*, 131 S. Ct. 2705, 2710 (2011).

100. *Crawford v. Washington*, 541 U.S. 36, 61 (2004). It “commands, not that the evidence be reliable, but that reliability be assessed in a particular manner: by testing in the crucible of cross-examination.” *Id.*; see generally Mnookin, *supra* note 32.

witnessing.¹⁰¹)

Rather than a viable legal proposition, the notion of a surrogate witness seems to be a reaction to the logistical realities that now confront Sixth Amendment applications.¹⁰² I recognize these logistical realities and suggest that we have the conversation outright about what we aim to accomplish in guaranteeing a right to confront witnesses, and what the limitations of our system mean for that right. It is a question that digital evidence will only exacerbate, as we collect and retain drastically more data, and rely more heavily upon intelligent Internet-based analysis systems to process that data. Criminal forensic evidence just isn't what it used to be.

C. Is the Confrontation Clause Insulation Against Error, or Is It Something Else?

The *Melendez-Diaz* holding was penned by an originalist,¹⁰³ and yet it seems that the holding in *Melendez-Diaz* may have been motivated more by the broad pursuit of the trappings of justice than textualist adherence to a process-focused constitutional right. If a lab technician's signature does not trigger the requirement of a lab technician's testimony, lab reports might simply venture unaccompanied into a court room. As such, while there may not be much value in cross-examining a lab technician who may or may not recall pressing the button on a particular set of samples, the Court has leaned toward requiring the technician to testify (and it then employed the "expert witness" dodge in *Williams*).

Justice Scalia voiced concern that "[f]orensic evidence is not uniquely immune from the risk of manipulation."¹⁰⁴ While true, it is not clear that a 'witness's testimony immunizes forensic evidence from the risks of manipulation or error, either. It is especially unclear what is added in the way of verifiability or truthfulness if the witness is a member of the Google legal department who never had a technical understanding of the process nor participated in the

101. *Williams*, 132 S.Ct. 2221, 2222.

102. Even those who recognize "surrogate witnesses" as though they are a real alternative in the confrontation clause context seem to do so in tacit or explicit acknowledgement that it is a reaction to logistical constraints. See, e.g., Nicholas Klaiber, *Confronting Reality: Surrogate Forensic Science Witnesses Under the Confrontation Clause*, 97 VA. L. REV. 199 (2011).

103. See, e.g., ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* (Thomson West, 2012).

104. *Melendez-Diaz*, 557 U.S. at 318.

collection or retention of the data.¹⁰⁵ By the same token, it is not particularly clear that it would be useful to call in the computer scientist who can testify to the process by which he developed a computer program to operate, but has no specific knowledge of how it may have been used by a defendant for a particular crime.

Before *Crawford*, the Court considered the need for Confrontation Clause rights in terms of how reliable the evidence was. This meant that the exceptions were instances in which the Court found that certain “statements were so inherently reliable that cross-examination would have been superfluous”¹⁰⁶ It also meant that the Court explicitly held that Confrontation Clause rights had a “truthfinding function.”¹⁰⁷ This function undergirded the right—witnesses were there to provide more information to the jury and those witnesses that were to be called were to be those that knew something about the crime.

It is significant that the Confrontation Clause was conceived at a time when testimonial evidence against an accused consisted of human testimony; requiring that same human to appear in court might reasonably lead to guarantees of trustworthiness that went to the truth of their accusations. (This is presumably why “demeanor of the witness”¹⁰⁸ is one value the Court found to be conferred by the confrontation right.) In the case of digital evidence that did not originate with human authorship, the value of having a human testify to verify hearsay that she did not create is not as easy to track. Moreover, the Court no longer includes determinations of reliability in evidence to be part of the reason for calling a witness anyway.¹⁰⁹

The Court’s holding in *Melendez-Diaz* and *Bullcoming* that a lab technician still must submit to cross-examination to satisfy the Confrontation Clause seems to show intent to preserve the Confrontation Clause as a procedural right. The procedural right to confront one’s accuser makes sense on a human level, especially when the person’s freedom is at stake; the idea of depriving liberty

105. As one scholar observed, “If physical presence alone truly meets the standard then the reinvigorated Confrontation Clause has reach but no force.” Lisa K. Griffin, *Circling Around the Confrontation Clause: Redefined Reach but Not a Robust Right*, MICH. L. REV. FIRST IMPRESSIONS, 2006, at 16, 21, <http://www.michiganlawreview.org/articles/circling-around-the-confrontation-clause>.

106. *Lilly v. Virginia*, 527 U.S. 116, 139 (1999).

107. *Bruton v. United States*, 391 U.S. 123, 141 (1968).

108. *Barber v. Page*, 390 U.S. 719, 725 (1968).

109. *Crawford v. Washington*, 541 U.S. 36, 61 (2004).

without affording opportunity for confrontation is disturbing.¹¹⁰ The pre-*Crawford* Court acknowledged this intuitive aspect and described its “ancient origins that pre-date the hearsay rule.”¹¹¹ This procedural rationale holds meaning because it exists in tandem with the truth-verification purpose of the witness. We do not call witnesses for an empty procedural dance, even if the Confrontation Clause guarantees confrontation and not verification. (In this, it resembles other procedural rights—not every witness will contribute meaningfully to the truth-finding mission of a trial, but there is a guarantee to the basic right of confrontation—and “[t]he Constitution entitles a criminal defendant to a fair trial, not a perfect one.”¹¹²).

Witnesses who take the stand merely to recite company policy or generalized probabilities of error seem unlikely to impact meaningfully the credibility of the evidence presented. When we as criminal justice practitioners call in witnesses merely for satisfaction of our own nagging consciences but without a good-faith expectation of information that may contribute to exonerate or incriminate, does not the Confrontation Clause look a ritualistic dance performed to sate the judiciary’s desire for some trappings of justice in the system, even if the trappings are hollow?¹¹³

110. The Confrontation Clause does not apply to civil cases, or to preliminary hearings (though hearsay statements in preliminary hearings would not be admissible at trial without the opportunity for testimony and cross-examination of the witness). See *Barber*, 390 U.S. at 725 (“The right to confrontation is basically a trial right. It includes both the opportunity to cross-examine and the occasion for the jury to weigh the demeanor of the witness.”).

111. The Court wrote in *Lilly v. Virginia*, “The Court’s effort to tie the Clause so directly to the hearsay rule is of fairly recent vintage, compare *Roberts* . . . with *California v. Green*, while the Confrontation Clause itself has ancient origins that predate the hearsay rule.” *Lilly v. Virginia*, 527 U.S. 116 at 140 (citation omitted). In many of the Court’s earlier opinions, the Court wrote from the foundational assumption that the Confrontation Clause is rooted in principles older than the U.S. Constitution and derives its hearsay exceptions from principles of justice. For instance, in 1898, the Court wrote in *Reynolds v. United States* that the forfeiture rule “has its foundation in the [equitable] maxim that no one shall be permitted to take advantage of his own wrong.” 98 U.S. 145, 158-59 (1878). The Court noted that “this long-established usage . . . has rarely been departed from” and is an “outgrowth of a maxim based on the principles of common honesty.” *Id.*

112. *Delaware v. Van Arsdall*, 475 U.S. 673, 681 (1986).

113. In *Williams v. Illinois*, Justice Thomas proposed “limited application [of the clause] to a narrow class of statements bearing indicia of solemnity,” which did not include the Cellmark DNA report at issue. 132 S. Ct. 2221, 2264 (2012) (Thomas, J., concurring). Precisely because limited application lends itself to runarounds from the prosecution, Justice Kagan responded in her dissent that this “would turn the Confrontation Clause into a constitutional geegaw—nice for show, but of little value.” *Id.* at 2276.

IV. CONCLUSION AND WHY THIS MATTERS

A. *What's at Stake?*

As I have shown, there are snags at many different levels when applying the Confrontation Clause to digital forensic evidence. I have taken child pornography prosecution as a case study, but these impediments apply to evidence surrounding other cyber crimes, and to Internet evidence in kinetic world crime. Moreover, because other constitutional rights are intertwined with Fourth Amendment determinations, our confused case law concerning digital forensic data can continue to reverberate in other contexts for the future.

For instance, the Fourth Amendment revolves around a “reasonableness” standard for privacy. While judges educate themselves on digital technology, practices such as Internet vigilantism could affect our future expectations of privacy in digital data.¹¹⁴ Companies’ data policies are delineating our expectations and defining what evidence is available and in what context. Google reported in its latest “Transparency Report”¹¹⁵ that U.S. agencies made 8438 requests in the six-month period ending December 2012, regarding 14,791 accounts. In keeping with Google’s stated policy, the company provides envelope information without probable cause, including the IP address where a Gmail account was created and email headers such as “to,” “from” and “date” fields.¹¹⁶ Because Internet crime is conducted on a landscape of privately-owned cyber property, from domains to ISPs to cloud storage, the data policies that companies adopt will continue to shape our expectations for what Internet evidence is available and what is not.

The way in which we treat digital forensic data will also resonate in the scope of the First Amendment. For instance, Cameron cited

114. This is especially likely in the case of crimes like child pornography where the Internet community has a strong urge to self-regulate. In October 2011, prominent hacker group Anonymous announced the launch of “Operation DarkNet,” in which it took down a server hosting 40 child pornography sites and published the names of more than 1500 people who visited “Lolita City,” the largest of the sites, which according to Anonymous contained more than 100GB of child pornography. Press Release, Anonymous, OpDarkNet (Oct. 15, 2011), available at <http://pastebin.com/T1LHzEW>. Recall Anonymous’ enactment in 2007 of the first instance of Internet vigilantism toward pedophiles, leading to the Chris Forcand arrest. See *Chris Forcand*, ENCYCLOPEDIA DRAMATICA, https://encyclopediadramatica.es/Chris_forcand (last modified Sept. 29, 2013).

115. *Transparency Report: User Data Requests*, GOOGLE, <http://www.google.com/transparencyreport/userdatarequests/> (last visited Oct. 4, 2013).

116. David Kravets, *Yahoo, Like Google, Demands Warrants for User E-mail*, WIRED, Jan. 25, 2013, <http://www.wired.com/threatlevel/2013/01/yahoo-demands-warrants/>.

*United States v. Jackson*¹¹⁷ in his motion to federal district court. In *Jackson* the Seventh Circuit had rejected the contention that Website content constituted business records of the ISPs.¹¹⁸ The *Cameron* district court rejected *Cameron's Jackson* claim with the statement, "the images are not hearsay to begin with . . . *Jackson's* holding, which affected postings—statements—on websites, does not extend to images."¹¹⁹ The First Circuit *Cameron* opinion never addressed *Jackson* or the district court's reasoning, but it is a useful prompt to consider the dimensions of Internet data as speech.

B. *The Need for a New Dialogue*

I have argued in previous work that Internet violence is not correctly conceived as a mere extension of kinetic world violence, but is a manifestation of the particular characteristics and vulnerabilities in our lives as Internet citizens.¹²⁰ Similarly, I find that the application online of evidentiary standards developed for kinetic world crime can lead to frustrated situations that are far from the justice that we seek.

For example, whereas child pornography distribution has long been criminalized for a variety of philosophical reasons, the determination to treat as a distinct criminal act each shared file as an instance of distribution and each stored image as an act of possession seems inappropriate in the Internet age of file-sharing applications. It is unwieldy and leads to distorted outcomes. (It is also inefficient to the extent that distribution prosecution requires the government to navigate a showing of intent to distribute; intent is inherently difficult to show in file-sharing, particularly when the accused is not a sophisticated computer user and given that many file-sharing applications have a default setting to share).

117. *United States v. Jackson*, 208 F.3d 633 (7th Cir. 2000).

118. The court held:

The fact that the Internet service providers may be able to retrieve information that its customers posted or email that its customers sent does not turn that material into a business record of the Internet service provider. Any evidence procured off the Internet is adequate for almost nothing, even under the most liberal interpretations of the hearsay exception rules.

Id. at 637. See Susan Brenner, *Child Pornography Was Not Hearsay*, CYB3RCRIM3 (Feb. 4, 2011, 9:43 AM) <http://cyb3rcrim3.blogspot.com/2011/02/child-pornography-was-not-hearsay.html>.

119. *United States v. Cameron*, 762 F. Supp. 2d 152, 157 (D. Me. 2011).

120. See Merritt Baer, *Cyberstalking, and the Internet Landscape We Have Constructed*, 15 VA. J.L. & TECH. 154 (2010).

This in turn leads to problematic sentencing. Warranted societal revulsion at the sexual victimization of children leads to political tendency to continually strengthen sentences; also, there has been insufficient revision to the sentencing guidelines to reflect Internet as the forum for non-production child pornography crimes. Unsurprisingly, this has resulted in extreme sentencing for non-production child pornography offenses.¹²¹

The United States Sentencing Commission released a recent report on child pornography sentencing¹²² in which it characterized the existing child pornography sentencing structure as “in need of revision.”¹²³ This is because “most of the enhancements in 2G2.2 . . . were promulgated when the typical offender obtained child pornography in printed form in the mail.” Problematic sentencing in cyber crime often can be traced to policies that are not well-suited to Internet as a forum. The Sentencing Commission elaborated:

[A]s a result of recent changes in the computer and Internet technologies that typical non-production offenders use, the existing sentencing scheme in non-production cases no longer adequately distinguishes among offenders based on their degrees of culpability. Non-production child pornography offenses have become almost exclusively Internet-enabled crimes; the typical offender today uses modern Internet-based technologies such as peer-to-peer (“P2P”) file-sharing programs. . . . The typical offender’s collection not only has grown in volume but also contains a wide variety of graphic sexual images (including images of very young victims), which are now readily available on the

121. Child pornography sentencing is found at U.S. Sentencing Guidelines 2G2.1 and 2G2.2. See *Current Versions of the Primary Child Pornography Sentencing Guidelines*, U.S. SENTENCING COMM’N, Feb. 2013, app. B, available at http://www.ussc.gov/Legislative_and_Public_Affairs/Congressional_Testimony_and_Reports/Sex_Offense_Topics/201212_Federal_Child_Pornography_Offenses/Appendix_B.pdf (last visited Mar. 10, 2013).

122. U.S. SENTENCING COMM’N, REPORT TO THE CONGRESS: FEDERAL CHILD PORNOGRAPHY OFFENSES (2012), available at http://www.ussc.gov/Legislative_and_Public_Affairs/Congressional_Testimony_and_Reports/Sex_Offense_Topics/201212_Federal_Child_Pornography_Offenses/.

123. *Id.* at i-xxvi, available at http://www.ussc.gov/Legislative_and_Public_Affairs/Congressional_Testimony_and_Reports/Sex_Offense_Topics/201212_Federal_Child_Pornography_Offenses/Executive_Summary.pdf. The Commission identified factors that prompted their examination of these laws: (1) child pornography cases are increasing; (2) judges are increasingly departing from the applicable guidelines in non-production cases in the years since the sentencing guidelines became “effectively advisory” in 2006; (3) the guidelines do not account for the use of Internet and file-sharing in particular; and finally, social science and other criminal justice system stakeholders consider the sentencing mode outdated. *Id.* at ii-iii.

Internet.

As a result, four of the of six sentencing enhancements in 2G2.2—those relating to computer usage and the type and volume of images possessed by offenders, which together account for 13 offense levels—now apply to most offenders and, thus, fail to differentiate among offenders in terms of their culpability.¹²⁴

As a result of distorted outcomes, the Commission found that judges are frequently choosing to depart from the sentencing guidelines in child pornography cases.¹²⁵ This, of course, undermines the basic standardization purpose of sentencing guidelines.¹²⁶

It is not merely child pornography prosecutions and sentencing that will benefit from a broader reconsideration of the form and function of the Confrontation Clause. It raises general concerns as to the constitutional consequences when courts refuse to conceive of criminal justice rights and remedies in the context of emerging technologies. We ought to be concerned by allegiance to textualism that results in a shrouded version of judicial activism, and often yields bizarre or nonsensical results because it attempts to place eighteenth-century process upon twenty-first-century situations. There is no coherent “originalist” version of digital forensic evidence witnesses; one does not absolve oneself of interpretive decision-making by hinging it on dictionary definitions or one’s imagined version of eighteenth-century intent.¹²⁷

124. *Id.* at iii.

125. *See id.* “The average minimum of guideline ranges in non-production child pornography offenses in fiscal year 2004 was 50.1 months, and the average sentence imposed was 53.7 months; by fiscal year 2010, the average guideline minimum was 117.5 months, and the average sentence imposed was 95.0 months.” *See id.* at n. 10.

126. *See* Pete Yost, *Study: Sentencing in Child Porn Cases Uneven*, THE WASH. POST, Feb. 28, 2013, http://www.washingtonpost.com/politics/study-sentencing-in-child-porn-cases-uneven/2013/02/28/a97082b0-813e-11e2-a350-49866afab584_story.html.

127. Justice Souter made this point in his Harvard 2010 Commencement speech:

[T]he fair reading model has only a tenuous connection to reality . . . So much for the notion that all of constitutional law lies there in the Constitution waiting for a judge to read it fairly . . . the very opportunity for conflict between one high value and another reflects our confidence that a way may be found to resolve it when a conflict arises. That is why the simplistic view of the Constitution devalues our aspirations, and attacks that our confidence, and diminishes us.

Justice David H. Souter, Remarks at Harvard’s 359th Commencement, (May 27, 2010), in HARVARD GAZETTE, <http://news.harvard.edu/gazette/story/2010/05/text-of-justice-david-souters-speech/> (last visited Mar. 12, 2013). *See also* Richard A. Posner, *The Incoherence of Antonin Scalia*, NEW REPUBLIC, Aug. 24, 2012, available at <http://www.newrepublic.com/article/magazine/books-and-arts/106441/scalia-garner-reading-the-law-textual-originalism#> (last visited Mar. 13, 2013).

Whereas the Court has held that the Confrontation Clause is a particular right to confront the particular witness, in the case of child pornography it is not clear whom that witness is. The *Crawford* decision's emphasis upon the Confrontation Clause as a procedural right only exacerbates the inelasticity of applying it to new forms of media. And (provided that general best practices in forensics and rates of data error are available to introduce the average possibility of error), if the proper witness in child pornography prosecution is the forensic lab tech who printed out computer data, it is unclear what the benefit of that opportunity to cross-examine will be, other than to provide a logistical hurdle for the prosecution.

As we adjust to new manifestations of our selves online, we need to adjust to new manifestations of Internet crime and criminal justice responses. I do not suggest that the Confrontation Clause is irrelevant; I do, however, advocate for a coherent version of it for the digital world in which we use digital evidence. My impulse is conservative; I seek to conserve the protections of the Sixth Amendment. I suggest that we begin to have a functional conversation about what the Confrontation Clause right means in context, without which we may end up losing the essential preservation of justice for which it was written.