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Article

Quantifying *Katz*: Empirically Measuring "Reasonable Expectations of Privacy" in the Fourth Amendment Context

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I. Introduction

The word "privacy" is not used anywhere in the U.S. Constitution.[1] Yet, that document has been interpreted to provide various privacy rights for many years.[2] As Justice Brandeis wrote in his oft-quoted dissenting opinion in *Olmstead v. United States*:

> The makers of our Constitution undertook to secure conditions favorable to the pursuit of happiness. They recognized the significance of man's spiritual nature, of his feelings and of his intellect. They knew that only a part of the pain, pleasure and satisfactions of life are to be found in material things. They sought to protect Americans in their beliefs, their thoughts, their emotions and their sensations. They conferred, as against the government, the right to be let alone—the most comprehensive of rights and the right most valued by civilized men. To protect, that right, every unjustifiable intrusion by the government upon the privacy of the individual, whatever the means employed, must be deemed a violation of the Fourth Amendment.[3]

Both the constitutional bases of the right to privacy and the specific contours of the right have generated significant debate among scholars[4] and

1. Although this article is concerned with "reasonable expectations of privacy" under the Fourth Amendment to the U.S. Constitution, it should be noted that similar ambiguities exist in the law of other common law countries. For example, Section 8 of the Canadian Charter of Rights and Freedoms mirrors the language of the Fourth Amendment in its guarantee to Canadians "to be secure against unreasonable search and seizure . . . ." Yet, as in the United States, "there is no positive right to privacy protection in Canada[;] this section of the Charter is generally viewed as protecting reasonable expectations of privacy. What does it mean, however, to have a *reasonable* expectation? There is little if any literature in law directly on this question." Jacquelyn Burkell, *Deciding for Ourselves: Some Thoughts on the Psychology of Assessing Reasonable Expectations of Privacy*, 50 CAN. J. CRIMINOLOGY & CRIM. JUST. 307, 308 (2008).

2. RICHARD A. GLENN, THE RIGHT TO PRIVACY: RIGHTS AND LIBERTIES UNDER THE LAW (2003); ELLEN ALDERMAN & CAROLINE KENNEDY, THE RIGHT TO PRIVACY (2d ed. 2008); ALAN F. WESTIN, PRIVACY AND FREEDOM (1967); *see, e.g.*, Lawrence v. Texas, 539 U.S. 558 (2003); Planned Parenthood of Se. Pa. v. Casey, 505 U.S. 833 (1992); Ex rel. Cruzan v. Dir., Mo. Dep't of Health, 497 U.S. 261 (1990); Carey v. Population Servs. Int'l, 431 U.S. 678 (1977); Roe v. Wade, 410 U.S. 113 (1973); Stanley v. Georgia, 394 U.S. 557 (1969); Griswold v. Connecticut, 381 U.S. 479 (1965); Pierce v. Soc'y of Sisters, 268 U.S. 510 (1925); Meyer v. Nebraska, 262 U.S. 390 (1923).

3. 277 U.S. 438, 478 (1928) (Brandeis, J., dissenting).

4. *See, e.g.*, ALICE FLEETWOOD BARTEE, PRIVACY RIGHTS: CASES LOST AND CAUSES WON

the justices of the U.S. Supreme Court.[5] Indeed, commentators assert that the term "privacy" in the legal context refers to three distinct rights: one grounded in the Fourth Amendment's guarantee of "freedom from government intrusion into an individual's home or on to an individual's person";[6] one emanating from the "penumbras" of several amendments to the Constitution vis-à-vis the Fourteenth Amendment's Due Process Clause,[7] which concern the liberty and autonomy "to make certain crucial personal decisions";[8] and one stemming primarily from statutory enactments and the law of torts, which safeguard "the ability of a person to restrict dissemination of personal information."[9] The social sciences and humanities (primarily philosophy) have defined even more meanings of privacy.[10] Collectively, the multiplicity of meanings ascribed to privacy has caused it to become "a concept in disarray"; one that not only defies simple explication, but also which all-too-frequently provides a framework too vague "to guide adjudication and lawmaking."[11]

Whatever the sources and scope of the nebulous "right to privacy" may be, the Fourth Amendment to the U.S. Constitution provides a clear substantive right designed to protect people's privacy in their persons, homes, papers, and effects.[12] The contemporary framework for applying the protections of the Fourth Amendment was adopted in *Katz v. United States*.[13] Reasoning that the Fourth Amendment's Search and Seizure Clause "protects people, not places,"[14] Justice Harlan articulated a two-part test for determining whether the Amendment's protections applied in a given case: First, the person seeking the Fourth Amendment's protection must "have exhibited an actual (subjective) expectation of privacy"; and second, that subjective expectation of privacy must "be one that society is

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BEFORE THE SUPREME COURT (2006); BRANDON GARRETT, THE RIGHT TO PRIVACY (2001); Jamal Greene, *The So-Called Right to Privacy*, 43 U.C. DAVIS L. REV. 715 (2010).

5. *See, e.g.*, *Lawrence*, 539 U.S. at 564–79 (Kennedy, J., writing for the majority), 579–85 (O'Connor, J., concurring), 586–605 (Scalia, J., dissenting); *Roe*, 410 U.S. at 116–67 (Blackmun, J., writing for the majority), 171–78 (Rehnquist, J., dissenting); *Griswold*, 381 U.S. at 480–86 (Douglas, J., writing for the majority), 486–99 (Goldberg, J., concurring), 507–27 (Black, J., dissenting), 527–31 (Stewart, J., dissenting).

6. Erwin Chemerinsky, *Rediscovering Brandeis's Right to Privacy*, 45 BRANDEIS L.J. 643, 645 (2007).

7. *Griswold*, 381 U.S. at 484.

8. Chermerinsky, *supra* note 6, at 646.

9. *Id.* at 649; *see also* Ken Gormley, *One Hundred Years of Privacy*, 1992 WIS. L. REV. 1335 (1992) (arguing that the law embraces five distinct concepts of privacy: the privacy of Warren and Brandeis (tort privacy), Fourth Amendment privacy, First Amendment privacy, fundamental-decision privacy, and state constitutional privacy).

10. *See* Part II, *infra*.

11. Daniel J. Solove, *A Taxonomy of Privacy*, 154 U. PA. L. REV. 477, 477–78 (2006).

12. U.S. CONST. amend. IV; *see also* Mary Helen Wimberly, Note, *Rethinking the Substantive Due Process Right to Privacy: Grounding Privacy in the Fourth Amendment*, 60 VAND. L. REV. 283 (2007) (describing an approach to privacy rights based on the search and seizure provision of the Fourth Amendment).

13. Katz v. United States, 389 U.S. 347 (1967).

14. *Id.* at 351.

prepared to recognize as reasonable."[15]

Katz's approach to privacy suffers from numerous serious deficiencies. As Professor Chemerinsky points out, the "government seemingly can deny privacy just by letting people know in advance not to expect any."[16] But perhaps an even more significant problem with *Katz* is that the Court has never attempted to determine in any systematic way how "society" might objectively view privacy rights in a particular search and seizure context, even though the rationale of *Katz* explicitly rests on such societal judgments. *Katz*, therefore, invites scrutiny of the legitimacy of judicial decision-making by premising its application on an appeal to "objective," societal beliefs concerning the reasonability of privacy expectations while leaving the determination to judges. But *reasonable expectations* "are those supported by larger society or representative of the expectations held by larger society."[17]

Although constitutional decisions by the judiciary are guided by the text of the Constitution, history (especially original intent), precedent, constitutional scholarship, and, undoubtedly, the values and beliefs of the adjudicating judicial officers,[18] judges make no attempt to discern actual societal opinions when adjudicating Fourth Amendment disputes. The Supreme Court has not done so in any leading Fourth Amendment case. Of course, this situation is not unique to Fourth Amendment jurisprudence. Important societal concerns are often resolved by the judiciary, a fact that is often criticized since the judiciary is "a nonmajoritarian institution, whose guiding lights are neither popularly chosen nor even expected to express or implement the will of the people. Rather, its legitimacy rests on notions of honesty and fairness and, most importantly, on popular perceptions of the judicial decision-making process."[19] Empirical research could help inform the judiciary about how "society" conceptualizes privacy, thereby providing not only a more sound basis for determining whether an expectation of privacy is "objectively reasonable," but also increasing public perceptions of the legitimacy of judicial decision-making in the Fourth Amendment

15. *Id.* at 361 (Harlan, J., concurring).

16. Chemerinsky, *supra* note 6, at 650.

17. Burkell, *supra* note 1, at 308.

18. *See, e.g.*, DAVID NEUBAUER & HENRY F. FRADELLA, AMERICA'S COURTS AND THE CRIMINAL JUSTICE SYSTEM (10th ed. 2011); LIEF H. CARTER & THOMAS F. BURKE, REASON IN LAW (8th ed., Longman 2009); DAVID L. FAIGMAN, CONSTITUTIONAL FICTIONS: A UNIFIED THEORY OF CONSTITUTIONAL FACTS (2008); *see also* Chris Guthrie, Jeffrey J. Rachlinski, & Andrew J. Wistrich, *Blinking on the Bench: How Judges Decide Cases*, 93 CORNELL L. REV. 1 (2007); David L. Faigman, *"Normative Constitutional Fact-Finding": Exploring the Empirical Component of Constitutional Interpretation*, 139 U. PA. L. REV. 541 (1991); Sheldon D. Pollack, *Constitutional Interpretation as Political Choice*, 48 U. PITT. L. REV. 989 (1987).

19. THE POLITICS OF LAW: A PROGRESSIVE CRITIQUE 1 (David Kairys ed., 1982); *see also*, ALEXANDER BICKEL, THE LEAST DANGEROUS BRANCH 16–23 (1962) (explaining the counter-majoritarian difficulty); Barry Friedman, *The History of the Countermajoritarian Difficulty, Part One: The Road to Judicial Supremacy*, 73 N.Y.U. L. REV. 333, 343–56 (1998) (same); *cf.* Lindsay G. Robertson, *Neutral Principles and Judicial Legitimacy*, 54 OKLA. L. REV. 53, 55–57 (2001) (advocating new constitutional jurisprudence).

context. The present research aims to begin providing judges with data to do so. It is our hope that judges can use this study to improve their "best guesses" in the interpretive calculus that often comprises the process of constitutional interpretation,[20] especially since empirical data afford a far richer and more accurate framework for the process of constitutional fact-finding than the "suppositions that thoughtful reflection can provide."[21]

II. The Multidisciplinary Foundations Of Privacy

Although the concept of privacy is most often associated with legal rights, there is growing interest in privacy issues as they relate to various fields of inquiry in the social sciences and humanities—most especially philosophy, psychology, anthropology, and political science. In a comprehensive, interdisciplinary review of scholarly literature published in 1995, psychologist Patricia Brierley Newell identified at least seventeen discrete concepts of privacy, including those describing it as a phenomenal state or condition of the person, a quality of place, a space of refuge, a goal, a descriptor of personal space or territoriality, a level of close personal intimacy, a behavior, a process, a legal right, a descriptor of an interactive condition (such as an attitude, solitude, anonymity, and secrecy), and the ability to control information, among others.[22] Although the nature of each of these epistemological views on privacy is beyond the scope of this article, we review the major contributions from leading social scientific and humanistic disciplines to provide a holistic understanding of the concept of privacy.

A. Early Conceptualizations of Privacy

1. The Roots of Privacy in Select Ancient Civilizations

"The earliest record of a right to privacy is contained in the

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20. Faigman, *supra* note 18, at 546.

21. Henry F. Fradella, *A Content Analysis of Federal Judicial Views of the Social Science "Researcher's Black Arts,"* 35 RUTGERS L.J. 103, 105 (2003); *see also* James R. Acker, *Social Science in Supreme Court Criminal Cases and Briefs: The Actual and Potential Contribution of Social Scientists as Amici Curiae*, 14 LAW & HUM. BEHAV. 25 (1990); Richard Lempert, *"Between Cup and Lip": Social Science Influences on Law & Policy*, 10 LAW & POL'Y 167, 187–91 (1988); John Monahan & Laurens Walker, *Social Authority: Obtaining, Evaluating, and Establishing Social Science in Law*, 134 U. PA. L. REV. 477, 481 (1986); *cf.* Richard A. Leo & Jon B. Gould, *Studying Wrongful Convictions: Learning from Social Science*, 7 OHIO ST. J. CRIM. L. 7 (2009); Angelo N. Ancheta, *Science and Constitutional Fact Finding in Equal Protection Analysis*, 69 OHIO ST. L.J. 1115 (2008).

22. *See* Patricia Brierley Newell, *Perspectives on Privacy*, 15 J. ENVTL. PSYCHOL. 87 (1995); *see also,* Stephen T. Margulis, *Conceptions of Privacy: Current Status and Next Steps*, 33 J. SOC. ISSUES 5 (1977); *cf.* Ellen R. Foxman & Paula Kilcoyne, *Information Technology, Marketing Practice and Consumer Privacy: Ethical Issues*, 12 J. PUB. POL'Y & MARKETING 106 (1993) (exploring aspects of informational privacy); Richard A. Wasserstrom, *Privacy: Some Arguments and Assumptions*, *in* PHILOSOPHICAL LAW 148–66 (Richard A. Bronaugh ed., 1978).

Mishnah, a compilation of ancient Israeli Oral Law collected circa 200 [C.E.], which constitutes the core of the Talmud."[23] Several passages mention or connote an inherent need to be left alone, a conceptualization of privacy that prevails even to this day. However, privacy concepts date back millennia far before the relatively modern notion of a "right" to privacy.[24]

a. Code of Hammurabi

The Code of Hammurabi is a detailed set of principles that were meant to guide citizens of Babylonia with various activities such as agriculture, commerce, land rights, and contractual agreements.[25] For instance, with the help of surrounding landowners, the boundaries of land were specified and written on tablets—a process conducted in front of witnesses.[26] While this compendium of King Hammurabi's judgments contains several obscure rules with regard to land rights, the rules governing the sanctity of the home were very clear: "If a man makes a breach into a house, one shall kill him in front of the breach and bury him in it."[27] The Code also called for punishment by death for violent theft (e.g., robberies), kidnappings, and receiving stolen goods. It also contained similar provisions for nonviolent burglaries of the home, even though other nonviolent thefts were usually punished by restitution—often using a punitive damages multiplier.[28] Thus, even this early legal code recognized privacy in one's person, home, and possessions as a sacred interest.[29]

b. Privacy in Ancient Greece

Athenian concepts of privacy are best understood from the perspectives developed between the conclusion of the Peloponnesian War in 404 B.C.E. and the defeat of Athens in the battle of Chaeronea in 338 B.C.E.[30] During this time, Athenians experienced significant changes in politics and economics.[31] A country once blemished by tyrant rule finally

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23. Thane Josef Messinger, *A Gentle and Easy Death: From Ancient Greece to Beyond* Cruzan *Toward a Reasoned Legal Response to the Societal Dilemma of Euthanasia*, 71 DENV. U. L. REV. 175, 231 n.458 (1993).

24. WESTIN, *supra* note 2, at 11.

25. *See generally* Stanley Arthur Cook, THE LAWS OF MOSES AND THE CODE OF HAMMURABI (1903).

26. *Id.* at 183; *see also* Robert C. Ellickson & Charles Dia Thorland, *Ancient Land Law: Mesopotamia, Egypt, Israel*, 71 CHI.-KENT L. REV. 321, 380 (1995).

27. Art. 21, CODE OF HAMMURABI (1750–1700 B.C.E.) *quoted in* NELSON B. LASSON, THE HISTORY AND DEVELOPMENT OF THE FOURTH AMENDMENT TO THE UNITED STATES CONSTITUTION 14–15 n.5 (1937).

28. COOK, *supra* note 25, at 214; Edwin M. Good, *Capital Punishment and its Alternatives in Ancient Near Eastern Law*, 19 STAN. L. REV. 947, 962–64 (1967).

29. Robert J. McWhirter, *Molasses and the Sticky Origins of the 4th Amendment*, 43 ARIZ. ATT'Y 16, 18 (June 2007).

30. BARRINGTON MOORE, JR., PRIVACY: STUDIES IN SOCIAL AND CULTURAL HISTORY 81 (1984).

31. *Id.* at 81–82.

experienced a flourishing democracy.[32] It regained "much of its naval and commercial eminence," which provided the resources and time necessary to develop the "first democracy with a written language."[33]

Largely as a result of the acts perpetuated by the Thirty Tyrants in 404 B.C.E,[34] Athenians came to view intrusions "upon one's private existence, an attack upon whatever limited autonomy the individual has managed to achieve" as grave forms of injustice.[35] For this reason, laws were established to protect individuals from intrusions against private property and into personal information within the family setting.[36] However, Athenian notions of privacy were generally limited to these realms and, therefore, did not include expansive conceptualizations of liberty and autonomy within the public perception of privacy, largely in response to the influence of the prominent Athenian philosopher Plato.

Plato and many Athenians of his time were skeptical of personal autonomy because they viewed democracy "as a much more complete surrender of the individual to the whole. Theirs was a 'communitarian' and highly 'participatarian' ideal; the greatest mark of freedom was participation in public activity, to the exclusion of individual identity as Americans know it."[37] An Athenian who sought privacy as we think of it today rejected "the challenge and responsibilities of political action" and, therefore, did not live up to his duties as a citizen.[38] Moreover, Plato and other idealists of his time envisioned a society in which there was no need for privacy. As long as "social institutions work out perfectly and there is . . . an educational system that grinds out new personalities suited to the perfect social order, why should there be any need for privacy?"[39] Consequently, Plato did not perceive privacy as having a psychological or social purpose in a perfect society in which it would be an honor to be part of the public realm.

c. Privacy in Ancient Rome

According to legend, Rome was founded by Romulus in 753 B.C.E.[40] While serving as Rome's ruler, Romulus is credited with having established an advisory council comprised of the patriarchs of powerful

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32. *Id.*

33. *Id.* at 82.

34. *Id.* at 81–109.

35. *Id.* at 106.

36. *Id.* at 106–120; JOHN WALTER JONES, THE LAW AND LEGAL THEORY OF THE GREEKS: AN INTRODUCTION 155–57 (1956).

37. Gormley, *supra* note 9, at 1435–36.

38. MOORE, *supra* note 30, at 120 (arguing that Plato and his contemporaries believed a worthwhile life included political action).

39. *Id.* at 123.

40. Amir Aaron Kakan, *Evolution of American Law, from Its Roman Origin to the Present*, 48 ORANGE COUNTY L. 31, 32 (Feb. 2006).

families, a body which eventually was referred to as the *senatus* (senate).[41] The *senatus* advised monarchs for roughly 200 years until Rome became a republic in 509 B.C.E.[42] Even during the period of the Roman republic, the senate never gained legislative authority.[43]

In its earliest stages, Rome was a simple agricultural community, and its laws reflected the simplicity of such life.[44] By 451 B.C.E., Roman law was codified into the Twelve Tables, which was largely in response to "the class struggle between the patricians, the land-holding upper class, and the plebeians (everyone else including the merchants)."[45] Theft of personal property, including crops, was considered an offense punishable by death,[46] thereby illustrating the importance of ownership—a right which grew into the "most extensive right that a person can have in a corporeal thing" as Roman law evolved.[47] In no place did privacy matter more under Roman law than in the home. In his famous speech entitled *On His House*, Cicero, the famed Roman legal expert, stated:

> What is more sacred, what more inviolably hedged about by every kind of sanctity, than the home of every individual citizen! Within its circle are his altars, his hearths, his household gods, his religion, his observances, his ritual; it is a sanctuary so holy in the sight of all that it were sacrilege to tear an owner therefrom.[48]

Undeniably, to Cicero—and hence, to Romans—the home was a sacred place of refuge. To have this private sphere breached "was Cicero's anguish."[49]

d. Privacy in the Ancient Cultures of the Far East

By the third century B.C.E., and perhaps much earlier, the Chinese developed clear distinctions between concepts of public and private. "According to myth, when Ts'ang Chieh created the system of writing, he used the character for *private* to express the idea of self-centredness, and combined this character with that for *opposed to,* to create the character *public*, which often referred to the affairs of government."[50] There does not

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41. *Id.*

42. H. Edwin Anderson, III, *Risk, Shipping, and Roman Law*, 34 TUL. MAR. L.J. 183, 188 (2009).

43. *Id.* at 189.

44. *See* P.J. THOMAS, INTRODUCTION TO ROMAN LAW (1986).

45. Anderson, *supra* note 42, at 192.

46. Kakan, *supra* note 40, at 34; H.F. JOLOWIEZ & BARRY NICHOLAS, HISTORICAL INTRODUCTION TO THE STUDY OF ROMAN LAW 259 (1972).

47. THOMAS, *supra* note 44, at 36.

48. Cicero, *Domo de sua* 109; *quoted in* W. B. McDaniel, II, *Cicero and His House on the Palatine*, 23 *THE CLASSICAL J.* 651, 660 (1928).

49. McDaniel, *supra* note 48, at 660.

50. Newell, *supra* note 22, at 88.

appear to be any corresponding concept of privacy in ancient Japanese culture.[51] In fact, in 1984, Iwata reported that there was still no translation for the English word "privacy," although there were concepts related to western notions of privacy, such as "private life," "freedom," "solitude," and "secrecy."[52]

2. The Roots of Privacy in Religion

a. The Talmud

The Talmud is a collection of ancient oral law, comprised of teachings from the *Mishnah*, which recognized notions of privacy dating back to circa 200 C.E.[53] As Rabbi Alfred Cohen suggests, "Albeit we are concerned to prevent undue invasion of privacy[,] we find that our Sages wrote primarily on the many ways in which privacy is a desideratum in itself, an essential ingredient in the formation of the complete human being."[54] For instance, the Talmud notes that Jewish encampment must be set up so that no one's door faces the doorway of another person's tent; this ensured that each person had a private space.[55] If an individual's private sphere was visually breached, it was known as "hezek re'iyah," meaning damages incurred by visually looking into another person's private sphere.[56] In such cases, the Talmud teaches "that a neighbor is obligated to share the expense of building a privacy fence between two courtyards."[57] The importance of privacy in the home is also evident in the directive that, even if a court messenger had been given direct orders by a judge to seize money for a creditor, the messenger could not enter the debtor's home.[58] The Talmud also recognized a type of informational privacy. Judges were supposed to keep their debates and deliberations in the Sanhedrin private[59] because the "confidentiality of the deliberative process in judicial proceedings [was] absolutely essential if the members of the court [were] to act without constraint, without fear of reprisal from the guilty parties."[60]

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51. *Id.* at 89 (citing Osamu Iwata, *Similarities and Dissimilarities in the Japanese Semantic Structure of Privacy and Its Associated Concepts*, 31 PSYCHOLOGIA 198 (1988)).

52. *Id.*

53. Alfred S. Cohen, *Privacy: A Jewish Perspective*, 1 J. HALACHA & CONTEMP. SOC'Y 53, 62 (1981).

54. *Id.* at 54–55.

55. *See* Talmud, *Bava Bathra* 60a.

56. *Id.*

57. Cohen, *supra* note 53, at 62.

58. *See* Talmud, *Bava Metzia* 113.

59. *See* Talmud, *Sanhedrin* 31a.

60. Cohen, *supra* note 53, at 70–71.

b. The *Qur'an*

Like the Talmud, the *Qur'an* also addressed notions of privacy concerning both the home and personal information.[61] There are a number of verses pertaining to the sanctity of the home that not only clearly express the notion that a person's home is private, but also that the home should not be entered without permission or consent of the owners. For example: "O believers! Enter not the houses other than your own, until you take permission and salute the residents thereof. This is better for you, haply you may be heedful."[62] Even if there is no one home, "then also enter them not without the permission of the owners; and if you are told to go back, then go back, this is cleaner to you."[63] The *Qur'an* also places great emphasis on the private life and private information which "no one, not even the government, has the authority to inquire or investigate."[64] "O ye who believe! Avoid suspicion as much (as possible): for suspicion in some cases is a sin: and spy not on each other, nor speak ill of each-other behind their backs."[65] The *Qur'an* also forbids the dissemination of private, personal information because people are to exercise control over only their own information, not the affairs of others[66]: "Those who desire that scandal should spread among the Muslims, for them is the painful torment in this world and the Hereafter and Allah knows and you know not."[67]

c. The Bible

Although the word "privacy" does not appear in the King James version of the Bible, there are several passages in the Bible that scholars have linked to various conceptualizations of privacy. In the story of creation, the Bible states that, after granting humans life: "Unto Adam also and to his wife did the Lord God make coats of skins, and clothed them."[68] At least one scholar has referred to this passage as God's second gift—"the right to be reticent before the eyes of each other."[69] As Rosa Ehrenreich explained, this interpretation of bodily privacy is bolstered by Milton Konvitz's observation that "[a]lmost the first page of the Bible introduces us to the feeling of shame as a violation of privacy." He refers, of course, to Adam and Eve's sudden awareness, after eating the forbidden fruit, of their

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61. *See* Muhammad Aslam Hayat, *Privacy and Islam: From the Qur'an to Data Protection in Pakistan*, 16 INFO. & COMM. TECH. L. 137 (2007).

62. Qur'an, *Al-Nur* 27.

63. Qur'an, *Al-Nur* 28.

64. Hayat, *supra* note 61, at 141.

65. Qur'an, *Al-Hujurat* 12.

66. Hayat, *supra* note 61, at 142.

67. Qur'an, *Al-Nur* 19.

68. *Genesis* 3:21.

69. RICHARD F. HIXSON, PRIVACY IN A PUBLIC SOCIETY: HUMAN RIGHTS IN CONFLICT 17–18 (1987).

nakedness and their instant dash for the fig leaves. Konvitz observes, "[M]ythically, we have been taught that our very knowledge of good and evil—our moral nature as men—is somehow, by divine ordinance, linked with a sense and a realm of privacy." Similarly, when Ham sniggers over his father Noah's nakedness while Noah lies "uncovered in his tent," God sees to it that Ham's descendants are forever condemned to be servants and slaves.[70]

The Bible also contains passages which strongly support notions of private property. The Old Testament suggests that between approximately 1900 and 1000 B.C.E., tribes of ancient Israelites regulated their own existence: "In those days there was no king in Israel; every man did that which was right in his own eyes."[71] These tribes, however, were governed by a loose regulatory system that valued private property.

The solidarity of the tribe was preserved to a great extent by an institution know as the *go'el*. If misfortune or imminent loss threatened the lot, life, or property of an Israelite, this custom obliged a closely related male to act as redeemer, defender, or protector to ensure that the person or property not be lost.[72]

In fact, "it was the obligation of the *go'el* to exact blood vengeance" for transgressions against property, as well as those against the life of another.[73]

Once the ancient Hebrews evolved out of their semi-nomadic state and King Solomon began his rule (in about 970 B.C.E.), "the body of rules that govern[ed] the relationship of men with God" finally permeated "the social and legal order."[74] According to the Bible, the Ten Commandments became the primary regulatory system for upholding justice and the behavior of individuals.[75] Only the Eighth and Tenth Commandments, however, pertain to private property: "Thou shalt not steal"[76]; and "Thou shalt not covet thy neighbour's house, thou shalt not covet thy neighbour's wife, nor his manservant, nor his maidservant, nor his ox, nor his ass, nor any thing that is thy neighbour's."[77] Since it was forbidden not only to steal, but also to even desire another person's private property, the Eighth and Tenth Commandments strongly suggest a regime in Biblical times that placed high value on private property.[78] In contrast, the Sixth Commandment bars adultery,[79] a concept that is developed in the New

70. Rosa Ehrenreich, *Privacy and Power*, 89 GEO L.J. 2047, 2050–51 (2001) (quoting Milton R. Konvitz, *Privacy and the Law: A Philosophical Prelude*, 31 LAW & CONTEMP. PROBS. 272 (1966)).

71. *Judges* 21:25.

72. WESTIN, *supra* note 2, at 177.

73. *Id.*

74. *Id.* at 181.

75. *Id.* at 189.

76. *Exodus* 20:2–15.

77. *Exodus* 20:2–17.

78. WESTIN, *supra* note 2, at 174.

79. *Exodus* 20:2–14.

Testament beyond its ancient Jewish underpinnings as a sin that only women could commit[80] to be one that both sexes could commit: "The wife hath not power of her own body, but the husband: and likewise also the husband hath not power of his own body, but the wife."[81] This passage suggests sexual privacy as an exclusive property right within marriage.[82]

B. Bio-Psychological Constructs of Privacy

1. Examples of How Animals Seek Privacy

Although privacy is a concept that is often perceived as being a unique characteristic of human beings, several decades of growing evidence suggest humans and animals both share biological needs for privacy.[83] One of the first studies on privacy in the animal kingdom reported that animals need periodic seclusion either alone or in small groups.[84] For instance, although many species of birds migrate and work together in large groups in order to defend their territory from outsiders, they also seek time away from other birds to regulate resources (such as food), enhance mating selection, or provide a safe habitat for their offspring.[85] Many species of animals seek "private space to promote individual well-being and small-group intimacy," which is very similar to that which occurs in human society.[86] Conversely, when certain animals are able to achieve some privacy but are still able to interact with others of the same species when they so desire, there is a corresponding increase in their sociality[87] and time spent in affiliative behaviors, just as it is for humans.[88] Such behavior, in

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80. *See* Arnold N. Enker, *Error Juris in Jewish Criminal Law*, 11 J.L. & RELIGION 23, 42 (1994–1995).

81. 1 *Corinthians* 7:4.

82. It should be noted, however, that this passage has also been used to suppose sexist notions of wife as husband's property in ways that perpetuated laws which failed to punish marital rape. *See* Jill Elaine Hasday, *Contest and Consent: A Legal History of Marital Rape*, 88 CAL. L. REV. 1373, 1397 n.68 (2000).

83. WESTIN, *supra* note 2, at 8; Peter H. Klopfer & Daniel I. Robenstesin, *The Concept of Privacy and Its Biological Bases*, 33 J. SOC. ISSUES 52 (1977).

84. EDWARD HALL, THE HIDDEN DIMENSION 29 (1966).

85. *See* H. ELIOT HOWARD, TERRITORY IN BIRD LIFE (1920).

86. WESTIN, *supra* note 2, at 9; *see also, e.g.*, Tamara L. Hibler & Anne E. Houde, *The Effect of Visual Obstructions on the Sexual Behaviour of Guppies: The Importance of Privacy*, 72 ANIMAL BEHAV. 959 (2006) (reporting that sexual coupling among this breed of fish was increased in aquaria with barriers that allowed the guppies to mate in visually obstructed areas).

87. *See, e.g.*, Benjamin M. Basile, Robert R. Hampton, Amjad M. Chaudhry, & Elizabeth A. Murray, *Presence of a Privacy Divider Increases Proximity In Pair-housed Rhesus Monkeys*, 16 ANIMAL WELFARE 37 (2007).

88. *Compare* Viktor Reinhardt & Annie Reinhardt, *Impact of a Privacy Panel on the Behavior of Caged Female Rhesus Monkeys Living in Pairs*, 34 J. EXPERIMENTAL ANIMAL SCI. 55 (1991), *with* Stephen T. Margulis, *Privacy as a Social and Behavioral Concept*, 59 J. SOC. ISSUES 243, 246 (2003) ("At the psychological level, privacy supports social interactions which, in turn, provides feedback on our competence to deal with the world which, in turn, affects our self-definition." (citing IRWIN

turn, produces physiological benefits which include "enhanced immune response and lower blood pressure."[89]

Many animals also spatially distance themselves to the parameters of their territory, a concept known as personal distance.[90] By spacing themselves according to olfactory, optical, and acoustical means, species create buffer zones that protect them against predators and facilitate coexistence.[91] As explained in this next section, this is quite similar to the way that humans use space to define their "personal, intimate, and social distance in his [or her] interpersonal relationship."[92]

2. How Humans Seek Privacy

Like animals, humans need personal space for physiological autonomy. As Edward Hall first described the concept in 1959, "personal space" is a fluctuating zone around a person that regulates social interaction with the outside world.[93] By controlling the space around a person through verbal, nonverbal (e.g., body orientation and gestures), and environmental mechanisms, people attain a specified amount of territory that is desirable for their specific needs.[94] The amount of desirable space, however, is dependent on the relationship status, social context, and personality of the individual.[95] For instance, body orientation is more reserved toward strangers as opposed to friends and intimate partners.[96] Moreover, the social context or setting influences normative amounts of space. If a person were to encroach on someone's personal space at a bar, it would be more acceptable than in a library reading room because bars are, by their nature, social places.[97] In addition, a person's preferred amount of space is also affected by a number of personal characteristics, explored below.[98]

ALTMAN, THE ENVIRONMENT AND SOCIAL BEHAVIOR (1975)), *and* WESTIN, *supra* note 2, *passim* (concluding that privacy protects autonomy; supports healthy physiological functioning, especially by reducing stress and increasing coping mechanisms; and promotes relaxation, stable interpersonal relationships, and personal development).

89. Basile et al., *supra* note 87, at 37 (citing Anthony M. Coelho, K. Dee Carey, & Robert E. Shade, *Assessing the Effects of Social-Environment on Blood-Pressure and Heart-Rates of Baboons*, 23 AM. J. PRIMATOLOGY 257 (1991); Steven J. Schapiro, Mollie A. Bloomsmith, Leila M. Porter, & Scott A. Suarez, *Enrichment Effects on Rhesus Monkeys Successively Housed Singly, In pairs, and In Groups*, 48 APPLIED ANIMAL BEHAV. SCI. 159 (1996)).

90. HALL, *supra* note 84, at 16–37.

91. JOHN R. GOLD, AN INTRODUCTION TO BEHAVIOURAL GEOGRAPHY (1980); Henrik Høgh-Olesen, *Human Spatial Behaviour: The Spacing of People, Objects, and Animals in Six Cross-Cultural Samples*, 8 J. COGNITION & CULTURE 245 (2008).

92. WESTIN, *supra* note 2, at 9.

93. EDWARD HALL, THE SILENT LANGUAGE (1959).

94. *See* IRWIN ALTMAN & MARTIN M. CHEMERS, CULTURE AND ENVIRONMENT 75–76 (1980).

95. Høgh-Olesen, *supra* note 91, at 246.

96. *Id.* at 258; *see also* JONATHAN L. FREEDMAN, CROWDING AND BEHAVIOR (1975).

97. Høgh-Olesen, *supra* note 91, at 268.

98. *See generally* Catherine M.J. Beaulieu, *Intercultural Study of Personal Space: A Case Study*, 34 J. APPLIED SOC. PSYCHOL. 794 (2004).

Unlike animals, most humans no longer need to attain personal or private spaces by methods as primitive as defending territory. One way in which people set boundaries is through the personalization of the physical environment.[99] For example, a tenant does not physically own the building in which he or she resides, but through personalization of space using furniture, art, and other personal belongings, the tenant marks his or her territory. A more pronounced way to define one's space as private is by demarcating physical boundaries using such features as fences and landscaping. As has historically been the case, the most affluent (and, arguably, therefore the most dominant or powerful in society) often control the best or safest territories[100] and the means to make their territory private.[101]

Privacy was a treasured possession and a mark of status in many early civilizations. To protect themselves from unwanted intrusion, affluent Egyptians had vine hung gardens, Greeks used porticoes, Romans had various enclosures, and the wealthy British had country homes guarded by stone walls and parks. In poorer homes no such privacy existed.[102]

This type of territorial privacy among the wealthy still exists today as evidenced by large homes on spacious lots located in gated communities, many of which are protected by security personnel.

3. The Importance of Privacy

Although children need social interaction, they also need privacy to promote personal identity, growth, security, and trust.[103] As Marcus (1992) elaborates, "we need to claim a space where we can, when we choose, be physically alone, able to fantasize, to dream, to play roles, [and] to nurture emerging self-identity."[104] Just as privacy deprivations negatively impact child development, the loss of privacy has similar negative consequences for adults. For example, having the privacy of the home invaded by burglars "destroys an individual's inside/outside boundaries, damages

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99. JON LANG, CREATING ARCHITECTURAL THEORY: THE ROLE OF BEHAVIORAL SCIENCES IN ENVIRONMENTAL DESIGN (1987); Naz Kaya & Margaret J. Weber, *Territorial Behavior in Residence Halls: A Cross-Cultural Study*, 35 ENV'T & BEHAV. 400 (2003).

100. Eric Sundstrom & Irwin Altman, *Interpersonal Relationships and Personal Space: Research Review and Theoretical Model*, 4 HUM. ECOLOGY 47 (1976); Alton J. DeLong, *Territorial Stability and Hierarchical Formation*, 4 SMALL GROUP BEHAV. 55 (1973); A.H. Esser, *Interactional Hierarchy and Power Structure on a Psychiatric Ward: Ethological Studies of Dominance Behavior in a Total Institution*, *in* BEHAVIOR STUDIES IN PSYCHIATRY 25–59 (Sidney John Hutt & Connie Hutt eds., 1970).

101. Barry Schwartz, *The Social Psychology of Privacy*, 73 AM. J. SOC. 741 (1968); PHYLLIS MCGINLEY, PROVINCE OF THE HEART (1959).

102. Newell, *supra* note 22, at 93 (quoting MCGINLEY, *supra* note 101).

103. *See* CAROLE SIMON WEINSTEIN & THOMAS G. DAVID, SPACES FOR CHILDREN: THE BUILT ENVIRONMENT AND CHILD DEVELOPMENT (1987).

104. Clare Cooper Marcus, *Environmental Memories*, *in* HUMAN BEHAVIOR AND ENVIRONMENT: ADVANCES IN THEORY AND RESEARCH 87, 93 (Irwin Altman & Setha M. Low eds., 1992); *see also* ROGER A. HART, CHILDREN'S EXPERIENCE OF PLACE (1979).

social trust, converts private locations to public ones, and violates self-identity."[105]

Failure to be able to achieve privacy, such as when one is homeless or confined in psychiatric hospitals, prisons, or submarines, can have similar devastating psychological effects, such as deindividualization and dehumanization, "which undermine rehabilitation, and the loss of the ability, after release, to successfully reintegrate into ordinary life."[106] Even when people are not in total institutions, the inability to achieve privacy can take a serious psychological toll.[107] Consider, for example, celebrities like Lindsay Lohan and Sean Penn, who experience significant emotional breakdowns when they are unable to escape media scrutiny—especially the invasive cameras of the paparazzi. The often dysfunctional behaviors of those who live life in the spotlight are congruent with research which has demonstrated that a failure to meet privacy needs is "significantly related to antisocial behaviors and aggression."[108]

Another form of privacy loss concerns the public disclosure of highly personal information. Depending on the content of the information, this form of privacy loss can have negative social and psychological consequences. Disclosure of certain diagnoses, habits, sexual activities, and so on can subject people to stigmatization. Typically, those who are stigmatized have "been devalued, been accorded lower status, and been targets of negative stereotypes, prejudice, and discrimination."[109] For instance, Derlega and colleagues[110] found that individuals with HIV/AIDS often would not disclose such information to parents, friends, or significant others out of fear of being rejected even though concealing such a diagnosis produces great stress which, in turn, can lead to a faster progression of the disease.[111]

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105. Dorothy K. Kagehiro, Ralph B. Taylor, & Alan T. Harland, *Reasonable Expectation of Privacy and Third-Party Consent Searches*, 15 LAW & HUM. BEHAV. 121, 131 (1991).

106. Margulis, *supra* note 88, at 247; *see also* Newell, *supra* note 22, at 96–97 (citing, *inter alia*, Shawn M. Burn, *Loss of Control, Attributions, and Helplessness in the Homeless*, 22 J. APPLIED SOC. PSYCHOL. 1161 (1992); Roger Ingham, *Privacy and Psychology*, *in* PRIVACY 35–58 (James Baldwin Young ed., 1978); William H. Ittelson, Harold M. Proshansky, & Leanne G. Rivlin, *A Study of Bedroom Use on Two Psychiatric Wards*, 21 HOSP. & COMMUNITY PSYCHIATRY 177 (1970)); Jeffrey Reiman, *Privacy, Intimacy, and Personhood*, 6 PHIL. & PUB. AFF. 26 (1976); Paul Paulus, Verne Cox et al., *Some Effects of Crowding in a Prison Environment*, 5 J. APPLIED SOC. PSYCHOL. 86 (1975); Michael H. Heffron, *The Naval Ship as an Urban Design Problem*, 85 NAVAL ENGINEERS J. 49 (1973); ERVING GOFFMAN, THE PRESENTATION OF SELF IN EVERYDAY LIFE 97(1969); DANIEL GLASER, THE EFFECTIVENESS OF A PRISON AND PAROLE SYSTEM (1964).

107. Carl Anderson Johnson, *Privacy as Personal Control*, *in* MAN-ENVIRONMENT INTERACTIONS: EVALUATIONS AND APPLICATIONS 83–100 (Stephen T Margulis eds., 1974).

108. Darhl M. Pedersen, *Psychological Functions of Privacy*, 17 J. ENVTL. PSYCHOL. 147, 147 (1997) (citing GLASER, *supra* note 106; Heffron, *supra* note 106).

109. Margulis, *supra* note 88, at 247–48.

110. Valerian J. Derlega, Barbara A. Winstead, Kathryn Greene, Julianne Serovich, & William N. Elwood, *Perceived HIV-Related Stigmas and HIV Disclosure to Relationship Partners After Finding Out About the Seropositive Diagnosis*, 7 J. HEALTH PSYCHOL. 415 (2002).

111. *See, e.g.*, Mark R. Leary & Lisa Schreindorfer, *The Stigmatization of HIV and AIDS: Rubbing Salt in the Wound*, *in* HIV & SOCIAL INTERACTION 12–29 (Valerian J. Derlega & Anita P.

C. Socio-Cultural Constructs of Privacy

Most social scientists accept privacy as a nearly "universal need" even though the concept means different things to different people.[112] For example, Maxine Wolfe and Robert Laufer found that children ranging from 5 to 17 years old ascribed 39 different meanings to the concept of privacy.[113] Four common themes ran through these definitions: limited access to information, solitude, isolation, and controlling access to space.[114] Similar studies replicated these findings with adults, [115] although in some studies, six distinct dimensions surfaced by adding two forms of intimacy—one with friends and one with family.[116] Drawing on this research, Table 1 summarizes the six major themes that emerge in research on the social dimensions of privacy in terms of the variability in social settings (small group associations, larger social interactions, and by oneself).

Some scholars have interpreted these definitional disparities as reflecting the multidimensionality of privacy situations,[117] while others view such variability as a function of individual differences in privacy preferences.[118] Still others conclude that the meanings of privacy vary due to the interaction of differing cultural, behavioral, and legal notions concerning that which is "private."[119] Since behavioral and legal traditions vary across cultures, it should not be surprising that both conceptualizations of privacy and the mechanisms used to regulate privacy vary considerably across cultures.[120]

Barbee eds., 1998).

112. Patricia Brierley Newell, *A Cross-Cultural Comparison of Privacy Definitions and Functions: A Systems Approach*, 18 J. ENVTL. PSYCHOL. 357 (1998); Paul B. Harris, Carol M. Werner, Barbara B. Brown, & Dave Ingebritsen, *Relocation and Privacy Regulation: A Cross-Cultural Analysis*, 15 J. ENVTL. PSYCHOL. 311 (1995); Peter Kelvin, *A Socio-Psychological Examination of Privacy*, 12 BRIT. J. SOC. & CLINICAL PSYCHOL. 248 (1973).

113. Maxine Wolfe & Robert Laufer, *Privacy as a Concept and a Social Issue: A Multidimensional Developmental Theory*, 33 J. SOC. ISSUES 22 (1977).

114. *Id.* at 26–39.

115. *See, e.g.*, Pedersen, *supra* note 108, *passim*; Nancy J. Marshall, *Privacy and Environment*, 1 HUM. ECOLOGY 93 (1972).

116. Darhl M. Pedersen, *Dimensions of Privacy*, 48 PERCEPTUAL & MOTOR SKILLS 1291 (1979); Ahmet Rusteml & Dogan Kokdemir, *Privacy Dimensions and Preferences Among Turkish Students*, 133 J. SOC. PSYCHOL. 807 (1993).

117. *E.g.*, Margulis, *supra* note 22, at 8; Wolfe & Laufer, *supra* note 113, at 23–26.

118. *E.g.*, Marshall, *supra* note 115, at 108–10.

119. *E.g.*, Kelvin, *supra* note 112, at 249–50.

120. *See, e.g.*, ALTMAN, *supra* note 88, *passim*; ALTMAN & CHEMERS, *supra* note 94, *passim*.

Table 1: Variability in the Social Dimensions of Privacy

Social-Psychological Construct	Differences in Recurrent Themes	
Small-Group Privacy	Intimacy with Friends – Variability in the need for personal space and/or the disclosure of personal information when two or more friends are alone together.	Intimacy with Family – Variability in the need for personal space and/or the disclosure of personal information when two or more family members are alone together.
Privacy in Social Situations	Anonymity – The desire to blend-in anonymously in social situations with others.	Reserve – The desire to restrict interactions with others in a manner that limits communication about oneself.
Privacy of Self	Solitude – The desire to be alone for a given period of time.	Isolation – The desire to live a secluded life physically separated from others.

1. Differences Between Cultures

As explained above, there are biological and psychological dimensions to privacy needs. The ways in which those needs are conceptualized and acted upon, however, are dependent, to some degree, on culturally-specific norms and customs.[121] For example, cultural anthropologist Dorothy Lee (1959) found striking differences between views on privacy in the United States and people of Tikopia, a small Polynesian island at the southernmost tip of the Solomon Islands in the Pacific Ocean.[122] Lee documented how individualism and notions of private space in the United States were both culturally important and readily apparent in social behaviors:

> [T]he child grows up needing time to himself, a room of his own, freedom of choice, freedom to plan his own time and his own life .... He will spend his wealth installing private bathrooms in his house, buying a private car, a private yacht, private woods and a private beach, which he will then people with his privately chosen society. The need for privacy is an imperative one in our society, recognized by official bodies of our government.[123]

121. ALTMAN, *supra* note 88, *passim*.
122. DOROTHY LEE, FREEDOM AND CULTURE 1–3(1959).
123. *Id.* at 75.

In sharp contrast, the people of Tikopia place much greater emphasis on collective social values than on individualization.

> [T]he Tikopia help the self to be continuous with its society [rather than separate from it] . . . . They find it good to sleep side by side crowding each other, next to their children or their parents or brothers and sisters, mixing sexes and generations; and if a widow finds herself alone in her one-room house, she may adopt a child or a brother to alley her intolerable privacy.[124]

Lee also noted marked differences in the ways people worked. Among the Tikopia, if a man had to work alone, he often would bring a child to keep him company. Conversely, "[i]n our culture, the private office is a mark of status, an ideal; and a man has really arrived when he can have a receptionist to guard him from any social intrusion without his private consent."[125] Lee's findings mirrored those of Margaret Mead's famous and groundbreaking anthropological study of Samoa in which she reported a similar absence of privacy,[126] as well as studies of early Native-American cultures in North America.[127]

Of course, the works of pioneering anthropologists like Jones, Mead, and Lee compared isolated and arguably primitive cultures to those of then-present-day society in the United States, revealing stark differences on opposite ends of the spectrum. Contemporary studies, though, have documented similar cultural differences between North American and European societies and other modernized countries. The former continue to embrace individualism, autonomy, personal control, and private space; some countries in Asia and Africa, however, place much greater emphasis on collective social values, especially within the family.[128] Consider, for instance, what European researchers reported about living in Sri Lanka:

> [H]ouses and gardens are only sparsely separated, entry doors are open most of the time, and the personal bedrooms are merely separated from each other by simple curtains. This "open-hearted" way of life (without visible boundaries and privacy for the individual) requires that almost all excursions and activities are undertaken with family members (e.g., weekly shopping trips, visits to relatives, or visits to Buddhist temples). Times of

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124. *Id.* at 31.

125. *Id.* at 75.

126. MARGARET MEAD, COMING OF AGE IN SAMOA (1928).

127. *E.g.*, LIVINGSTON FRENCH JONES, A STUDY OF THE THLINGETS OF ALASKA (1914).

128. *See, e.g.*, Ying-Keung Chan, *Privacy in the Family: Its Hierarchical and Asymmetric Nature*, 31 J. COMP. FAM. STUD. 1 (2000) (emphasis in original); Jeffry H. Larson & Nilufer Medora, *Privacy Preferences: A Cross-Cultural Comparison of Americans and Asian Indians*, 22 INT'L J. SOC. FAMILY 55 (1992); Newell, *supra* note 112, at 364.

> solitude, withdrawal in the sense of *physical privacy* are obviously not planned—this is expressed even in domestic architecture.[129]

These ethnographers studying health care in Sri Lanka found similar openness with respect to informational privacy when applying Western ethical research standards, which required "one-on-one conversations within a guarded setting to provide physical privacy"; this "confronted Sri Lankan participants with a strange and uncomfortable situation."[130] Similar socio-cultural differences in privacy concepts and needs have also been noted in studies of students living in residence halls on Turkish and U.S. college campuses,[131] Somalis living in Norway,[132] and Chinese students and visiting scholars studying in Canada.[133]

Cross-cultural differences have also been observed with respect to peoples' desires for personal space.[134] Building on his original research in which he coined the term, Hall later opined (even though he took no measurements) that "contact cultures" (e.g. Arab, Asian, Mediterranean, and South American countries) prefer less personal space than "noncontact cultures" (e.g., those in North America and Northern Europe).[135] Research since then has provided empirical support for most of Hall's intuitive conclusions that "participants from northern [noncontact] countries such as Greenland, Finland, and Denmark systematically kept a significantly larger distance to strangers than the participants from Italy, India, and Cameroon [contact countries]."[136] Another study which supported Hall's observations concluded that: "Whites in the United States, Canada, and England stand far apart[;] Europeans stand somewhat close[ly;] and South Americans stand closer still."[137] Hall's suppositions with regard to Asians, however, have been documented in the literature with respect to crowding,[138] but not with

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129. Bardia Monshi & Verena Zieglmayer, *The Problem of Privacy in Transcultural Research: Reflections on an Ethnographic Study in Sri Lanka*, 14 ETHICS & BEHAV. 305, 309–10 (2004).

130. *Id.* at 310. Similar attitudes toward privacy have been documented in Turkey. *See* Rustemli & Kokdemir, *supra* note 116, at 813; Ahmet Rustemli, *Crowding Effects of Density and Interpersonal Distance*, 132 J. SOC. PSYCHOL. 51 (1992).

131. Naz Kaya & Margaret J. Weber, *Cross-Cultural Differences in the Perception of Crowding and Privacy Regulation: American and Turkish Students*, 23 J. ENVTL. PSYCHOL. 301 (2003); Egbe E. Idehen, *The Influence of Gender and Space Sharing History on the Conceptions of Privacy by Undergraduates*, 5 IFE PSYCHOLOGIA 59 (1997).

132. Pauline Garvey, *Domestic Boundaries: Privacy, Visibility, and the Norwegian Window*, 10 J. MATERIAL CULTURE 157 (2005).

133. X. Zheng & John W. Berry, *Psychological Adaptation of Chinese Sojourners in Canada*, 26 INT'L J. PSYCHOL. 451 (1991).

134. Beaulieu, *supra* note 98, at 796; Kaya & Weber, *supra* note 131, at 307.

135. HALL, *supra* note 84, at 12; ALTMAN & CHEMERS, *supra* note 94, at 114–15.

136. Høgh-Olesen, *supra* note 91, at 268; *see also* Beaulieu, *supra* note 98, at 796; Kaya & Weber, *supra* note 131, at 308.

137. FREEDMAN, *supra* note 96, at 72.

138. John R. Aiello, *Human Spatial Behavior*, *in* HANDBOOK OF ENVIRONMENTAL PSYCHOLOGY 389–504 (Daniel Stokols & Irwin Altman eds., 1987); John R. Aiello & Donna E. Thompson, *Personal*

regard to personal space during interpersonal communications. Quite the contrary, Asians maintain significant amounts of personal space, a finding noted both in dyads of Japanese people and when Chinese, Japanese, or Thai people engage in conservation with people from European or Latino cultures. [139]

2. Differences Within Cultures

Studies examining differences in privacy conceptualizations within a given culture tend to focus on one of three areas: personal space (which include matters of proximal privacy around the person and his/her territory, such as the home); information privacy (especially with respect to consumer and health care matters); and communication privacy (especially with respect to digital communications via cell phones and the Internet).

a. Personal Space: Bodily and Territorial Privacy

Unsurprisingly, the dimensions of personal space vary according to the interactional setting. For example, the space available in the room and the number of people in it necessarily affect the distance between people.[140] The nature of the interaction is also an important determinant of the need for personal space. When we know the people with whom we are interacting and are comfortable, personal space needs decrease; conversely, when interacting with strangers or with people whom we dislike, personal space needs increase.[141] Similarly, people tend to decrease personal space between themselves and those whom they find attractive or who are similar "in relation to age, political orientation, race, sexual preference, and status."[142]

The distance that people require between themselves and others also varies according to a number of personal characteristics of the actors, such as ethnic or cultural heritage, age, gender, and personality.[143] In terms

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Space, Crowding, and Spatial Behavior in a Cultural Context, *in* 4 HUMAN BEHAVIOR AND ENVIRONMENT: ADVANCES IN THEORY AND RESEARCH: ENVIRONMENT AND CULTURE 107–178 (Irwin Altman, Amos Rapoport, & Joachim F. Wohlwill eds., 1980).

139. Beaulieu, *supra* note 98, at 801–803; *see also* Nan M. Sussman & Howard M. Rosenfeld, *Influence of Culture, Language, and Sex on Conversational Distance*, 42 J. PERSONALITY & SOC. PSYCHOL. 66 (1982) (finding that Japanese dyads sat further apart than both U.S. Americans and Venezuelans).

140. *See, e.g.*, FREEDMAN, *supra* note 96; Maxine Wolfe, *Room Size, Group Size, and Density: Behavior Patterns in a Children's Psychiatric Facility*, 7 ENV'T & BEHAV. 199 (1975); Daniel Stokols, *On the Distinction Between Density and Crowding: Some Implications for Future Research*, 79 PSYCHOL. REV. 275 (1972).

141. Beaulieu, *supra* note 98, at 795 (citing FREEDMAN, *supra* note 96).

142. Høgh-Olesen, *supra* note 91, at 246 (citing HALL, *supra* note 84; Dale O. Jorgenson, *Field Study of the Relationship Between Status Discrepancy and Proxemic Behavior*, 97 J. SOC. PSYCHOL. 73 (1975); Marshall P. Duke & Stephen Nowicki, Jr., *A New Measure and Social-Learning Model for Interpersonal Distance*, 6 J. EXPERIMENTAL RES. IN PERSONALITY 119 (1972)).

143. Beaulieu, *supra* note 98, at 795 (citing, *inter alia*, FREEDMAN, *supra* note 96; HALL, *supra*

of culture, the cross-cultural differences in the need for personal space noted earlier also manifest themselves in ethnic differences within the same broad culture, especially with regard to crowding. Within the United States, for instance, Latin-Americans and Asian-Americans perceived crowding differently than European-Americans and African-Americans.[144] Specifically, Mexican-Americans and Vietnamese-Americans, hailing from close contact or collectivist cultures, perceived their residential areas as less crowded than Anglo-Americans and African-Americans, both of whom are considered to be from noncontact or individualistic cultures.[145] It should be noted, however, that none of these groups differed in the negative psychological distress they experienced from what they perceived to be crowding in high-density residential areas.[146] Thus, it may be "misguided to presuppose that some cultural groups can better tolerate high-density living space."[147]

Age, sex, and personality also affect the need for personal space. "Children tend to have shorter interactional distance than adults. From puberty and on, their spatial patterns start to resemble that of adults."[148] In terms of sex differences, males tend to maintain a greater amount of personal space than females during social interactions.[149] Specifically, "female dyads interact at a closer distance than do either mixed-gender dyads or male dyads [and m]ixed-gender dyads tend to be more proximate than do male dyads."[150] Men are also more territorial with their personal space, as they tend to "assert their territoriality through a higher degree of firmness of boundaries . . . [whereas] women employ expressive strategies to regulate self/other boundaries."[151] Finally, in terms of personality, people "with a high degree of extraversion, dominance, self-esteem, internal locus of control, and a 'secure adult attachment style' tend to have shorter

note 93).

144. Gary W. Evans, Stephen J. Lepore, & Karen Mata Allen, *Cross-Cultural Differences in Tolerance for Crowding: Fact of Fiction?*, 79 J. PERSONALITY & SOC. PSYCHOL. 204, 208 (2000).

145. *Id.* at 208.

146. *Id.*

147. *Id.* at 209.

148. Høgh-Olesen, *supra* note 91, at 246 (citing Aiello, *supra* note 138; J. Wesley Burgess, *Developmental Trends in Proxemic Spacing Behavior Between Surrounding Companions and Strangers in Casual Groups*, 7 J. NONVERBAL BEHAV. 158 (1983); Ana M. Fry & Frank N. Willis, *Invasion of Personal Space as a Function of Age of the Invader*, 21 PSYCHOL. REC. 385 (1971)).

149. Julian J. Edney & Nancy L. Jordan-Edney, *Territorial Spacing on a Beach*, 37 SOCIOMETRY 92, 97–98 (1974); Lynn Renee Cohen, *Nonverbal (Mis)communication Between Managerial Men and Women*, 26 BUS. HORIZONS 13, 15 (1983).

150. Beaulieu, *supra* note 98, at 795–96 (citing John R. Aiello & Stanley E. Jones, *Field Study of the Proxemic Behavior of Young School Children in Three Subcultural Groups*, 19 J. PERSONALITY & SOC. PSYCHOL. 351 (1971); Gary W. Evans & Roger B. Howard, *Personal Space*, 80 PSYCHOL. BULL. 334 (1973); Albert Mehrabian & Shirley G. Diamond, *Seating Arrangement and Conversation*, 34 SOCIOMETRY 281 (1971); James C. Baxter, *Interpersonal Spacing in Natural Settings*, 33 SOCIOMETRY 444 (1970); Mark Cook, *Experiments on Orientation and Proxemics*, 23 HUM. RELATIONS 61 (1970)).

151. Kaya & Weber, *supra* note 99, at 411.

interactional distance than persons low on these measures."[152]

b. Information Privacy

Information privacy is defined as the "claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others."[153] Information privacy in the United States has historically been concerned with tortious invasions of privacy using a framework formulated in an era dominated by print media.[154] Such torts occur when someone either "intentionally intrudes, physically or otherwise, upon the solitude or seclusion of another or his private affairs . . . if the intrusion would be highly offensive to a reasonable person,"[155] or when someone publishes facts "of a kind that (a) would be highly offensive to a reasonable person, and (b) is not of legitimate concern to the public."[156] Today, however, information privacy encompasses a much broader concept of private information. This is due in large part to the technological advancements of the Information Age and to the law of torts having been supplemented by privacy legislation at both the federal and state levels, as well as by case law applying the constitutional protections of the First, Fourth, and Fourteenth Amendments to privacy-related concerns.[157]

Even with the expansion of social controls for informational privacy beyond tort law, the Information Age has challenged information privacy in a number of ways—most notably with regard to consumer privacy as it applies to online shopping[158] and banking.[159] The Information

152. Høgh-Olesen, *supra* note 91, at 246 (citing Marsha Kaitz, Yair Bar-Haim, Melessa Lehrer, & Ephraim Grossman, *Adult Attachment Style and Interpersonal Distance*, 6 ATTACHMENT & HUM. DEV. 285 (2004); Aiello, *supra* note 138; Donald Karl Fromme & Donna Clegg Beam, *Dominance and Sex Differences in Nonverbal Responses to Differential Eye Contact*, 8 J. RES. IN PERSONALITY 76 (1974); ROBERT SOMMER, PERSONAL SPACE—THE BEHAVIOURAL BASES OF DESIGN (1969)).

153. Gaurav Bansal, Fatemeh "Mariam" Zahedi, & David Gefen, *The Impact of Personal Dispositions on Information Sensitivity, Privacy Concern and Trust in Disclosing Health Information Online*, 49 DECISION SUPPORT SYS. 138, 138 (2010) (quoting WESTIN, *supra* note 2, at 7).

154. Jisuk Woo & Jae-Hyup Lee, *The Limitations of "Information Privacy" in the Network Environment*, 7 U. PITT. J. TECH. L. & POL'Y 3, 5 (2006).

155. RESTATEMENT (SECOND) OF TORTS § 652B (1977).

156. *Id.* at § 652D.

157. *See* Neil M. Richards, *The Information Privacy Law Project*, 94 GEO. L.J. 1087, 1089 (2006).

158. Robert Sprague & Corey Ciocchetti, *Preserving Identities: Protecting Personal Identifying Information Through Enhanced Privacy Policies and Laws*, 19 ALB. L.J. SCI. & TECH. 91, 95 (2009); Corey A. Ciocchetti, *E-Commerce and Information Privacy: Privacy Policies as Personal Information Protectors*, 44 AM. BUS. L.J. 55, 56 (2007); James P. Nehf, *Shopping for Privacy Online: Consumer Decision-Making Strategies and the Emerging Market for Information Privacy*, 2005 U. ILL. J.L. TECH. & POL'Y 1, 1 (2005); Kim Bartel Sheehan & Mariea Grubbs Hoy, *Dimensions of Privacy Concern Among Online Consumers*, 19 J. PUB. POL'Y & MARKETING 62, 63 (2000). For a comparative analysis of such challenges outside of the United States, *see* Kanchana Kariyawasam, *Legal Issues and Challenges in Online Shopping: A Comparative Analysis of Australia and New Zealand*, 15 N.Z. BUS. L. Q. 176 (2009).

Age has also affected how "personal health information is used, disclosed, and protected, and the degree of control [consumers] have over the dissemination of this information."[160] It is not our aim to provide a comprehensive review of the multidisciplinary literature and social controls governing these areas. Rather, in this section, we present a short overview of these areas so that readers might develop a basic appreciation for the complexity of informational privacy concerns in the Information Age.

Consumer Privacy. Advances in computer technology, especially data-mining algorithms, permit advertisers to profile and personally target potential consumers whenever "warranty applications are completed, 800 numbers are dialed, submissions for and usage of credit cards occur, purchases are made with discount affinity cards, and Web sites are visited."[161] Because consumers often fail to grasp how these data are used, state and federal legislation have forced businesses in several sectors—ranging from "financial services, health services, cable television, telecommunications, children's online services, and video rental"—to report to consumers if, and under what circumstances, they disclose information about their clients or customers.[162] Even businesses that are not mandated to disclose their privacy practices do so on a voluntary basis because of consumer concerns over information privacy.[163]

As Justine Rapp and her colleagues explain, consumer concerns about information privacy fall into distinct, yet related, areas: "transparency and their levels of awareness when personal data are collected and disseminated; security and the protocols in place to ensure information is protected from outside intruders; liability and available remedies if data are improperly used or errors occur in records."[164] Empirical studies, largely from the field of economics, suggest that consumers' concerns about sharing personal information with businesses are both driven by and mediated by a number of factors, including:

> (1) the type of information requested, such as demographic, lifestyle interests, media habits, personal identifiers, or financial

159. *See, e.g.*, Sean C. Honeywill, *Data Security and Data Breach Notification for Financial Institutions*, 10 N.C. BANKING INST. 269, 271 (2006); Vincent R. Johnson, *Cybersecurity, Identity Theft, and the Limits of Tort Liability*, 57 S.C. L. REV. 255, 256 (2005).

160. Bansal et al., *supra* note 153, at 138; *see also* Deven McGraw, *Privacy and Health Information Technology*, 37 J.L. MED. & ETHICS 123 (2009).

161. Justine Rapp, Ronald Paul Hill, Jeannie Gaines & R. Mark Wilson, *Advertising and Consumer Privacy: Old Practices and New Challenges*, 38 J. ADVERTISING 51, 51 (2009).

162. Nehf, *supra* note 158, at 1.

163. *Id.* at 1–2 ("Market pressures encourage many businesses to at least appear sensitive to customers' privacy concerns. Most businesses would like to avoid the perception or implication that they harvest and sell the personal data they obtain either openly or surreptitiously from their customers. Indeed, business consulting firms now routinely encourage the adoption and promotion of privacy policies as a way to present a positive client image. Appearing concerned about customer privacy has become a standard marketing strategy." *Id.* at 1–2).

164. Rapp et al., *supra* note 161, at 51–52.

> data; (2) the amount of control the consumer has over the use of the information; (3) the potential consequences and benefits of the exchange (for instance, increased volume of junk mail or risk of identity theft versus shopping savings or convenience); and (4) characteristics of the individual consumer, including demographic characteristics, prior experiences, technical knowledge, and shopping habits. Controlled surveys and experimental studies show that people will (or will not) give up their personal information based upon the results of a "privacy calculus" that assesses whether their information will be used fairly and whether negative consequences might result in the future.[165]

Research demonstrates that most consumers are concerned about the ways companies use their personal information, especially if the data provided are used for purposes unrelated to the reasons it was originally gathered.[166] Yet, consumers seem to understand that information about them has value to business, and they are willing to disclose some of that data for some rewards.[167]

Health Care Privacy. Patients' medical records not only contain their medical histories, but also a wide variety of personal, financial and social information.[168] Prior to 1996, "medical records were not subject to specific privacy requirements and were only protected by the constitutional or common law right to privacy, which was overbroad and insufficient to protect the sanctity of medical records."[169] With the passage of the Health Insurance Portability and Accountability Act (HIPAA) of 1996,[170] Congress established a statutory and regulatory framework for increasing the protection of medical records.

Presumably, most if not all people have a significant interest in

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165. Nehf, *supra* note 158, at 18–19 (citing Joseph Phelps, Glenn Nowak & Elizabeth Ferrell, *Privacy Concerns and Consumer Willingness to Provide Personal Information*, 19 J. PUB. POL'Y & MARKETING 27 (2000); Nadia Olivero & Peter Lunt, *Privacy Versus Willingness to Disclose in E-commerce Exchanges: The Effect of Risk Awareness on the Relative Role of Trust and Control*, 25 J. ECON. PSYCHOL. 243 (2004); Sheehan & Hoy, *supra* note 158)).

166. *Id.* at 15–16 (citing Sheehan & Hoy, *supra* note 158, at 63; Joseph Phelps, Glenn Nowak, & Elizabeth Ferrell, *Privacy Concerns and Consumer Willingness to Provide Personal Information*, 19 J. PUB. POL'Y & MARKETING 27, 33 (2000); Eve M. Caudill & Patrick E. Murphy, *Consumer Online Privacy: Legal and Ethical Issues*, 19 J. PUB. POL'Y & MARKETING 7, 7 (2000); Frank V. Cespedes & H. Jeff Smith, *Database Marketing: New Rules for Policy and Practice*, SLOAN MGMT. REV. (Summer 1993), at 10).

167. *Id.* at 16–17 (citing Sheehan & Hoy, *supra* note 158, at 63, 64, 68; Robert McKim, *Information: The Newest Currency*, TARGET MARKETING (Jul. 1999), at 36, 39; Olivero & Lunt, *supra* note 165, at 245, 257; Caudill & Murphy, *supra* note 166, at 8).

168. Colin P. McCarthy, *Paging Dr. Google: Personal Health Records and Patient Privacy*, 51 WM. & MARY L. REV. 2243, 2245 (2010).

169. *Id.* at 2254 (citing WILLIAM H. ROACH ET AL., MEDICAL RECORDS AND THE LAW *32* (4th ed. 2006)).

170. Pub. L. No. 104-191, 110 Stat. 1936 (codified in scattered sections of 29 U.S.C. and 42 U.S.C. (2006)); *see also* 45 C.F.R. §§ 144, 146, 160, 162, 164 (2008).

keeping their medical records private. However, people who have a chronic disease or who are otherwise in poor health are particularly concerned about disclosing information related to their health since it potentially could "damage their status, employment opportunities, or social standing."[171] Similarly, people who have had their informational privacy violated in the past express significantly more concern about such privacy and, therefore, are less trustful of guardians of such information, including health care providers.[172] Additionally, certain personality characteristics are also linked to informational privacy concerns in the health care arena. Emotional instability, for example, "heightens the fears of possible negative outcomes, which leads to increased sensitivity."[173]

As with online banking and shopping, the movement of health care records from the traditional paper methods of record keeping to a digital format raises significant information privacy concerns.[174] These concerns are magnified when the records are stored on the Internet by online health services like Google Health and Microsoft HealthVault since, at their founding, the privacy protections of HIPAA did not apply to them—a situation which led some commentators to call for increased statutory and regulatory controls of such providers.[175] Congress took some steps to extend better protections to the privacy of electronically-stored health records when it enacted the American Recovery and Reinvestment Act ("ARRA," more commonly referred to as the stimulus package) in February of 2009.[176] Not only did ARRA provide significant funding to implement a nationwide movement to digitalize health information technologies, but AARA also extended and strengthened HIPAA's reach to make "electronic health records more secure and patient-accessible."[177] However, scholars and the public have not had time to digest the contours of these statutory changes.[178] Moreover, in the wake of the even more dramatic changes to the U.S. health care landscape that Congress enacted in 2010,[179] it seems clear

171. Bansal et al., *supra* note 153, at 145.

172. *Id.*

173. *Id.* at 144.

174. *See* McCarthy, *supra* note 168, *passim*.

175. *Id.*; *see also* Jenna Caldarella, *Privacy and Security of Personal Health Records Maintained by Online Health Services*, 20 ALB. L.J. SCI. & TECH. 203, 204 (2010).

176. Pub. L. 111-5, 123 Stat 115 .

177. Kathleen M. McCauley & Kristi L. VanderLaan, *Health Care Law*, 44 U. RICH. L. REV. 473, 479 (2009).

178. *See, e.g.*, Deven McGraw, *Privacy Law Showdown? Legal and Policy Analysis: Modifications to HIPPA Privacy Laws: Impact on Microsoft HealthVault, Google Health, and Other PHRs* (2009) http://e-caremanagement.com/privacy-law-showdown-legal-and-policy-analysis/. (last visited May 30, 2011) ("There has been considerable discussion lately about whether or not the stimulus legislation (ARRA) extends HIPAA coverage to commercial vendors of personal health records (PHRs) any time they contract with entities already covered by HIPAA like hospitals, health plans or physicians groups.").

179. *See* Patient Protection and Affordable Care Act of 2010, Pub. L. 111–148, 124 Stat 119 (Mar. 23, 2010); Health Care and Education Reconciliation Act of 2010, Pub. L. 111–152, 124 Stat 1029 (Mar. 30, 2010).

that concern over the privacy of medical records will not wane anytime in the near future.

c. Communications Privacy

Communications privacy concerns the ways in which people communicate with each other. For time and memoriam, the law has protected written communications between people. Consider, for example, that it has been a federal offense to open or tamper with another's mail for well over 100 years.[180] Indeed, the very text of the Fourth Amendment protects people's "papers" from unreasonable searches and seizures—a term that was specifically chosen to constitutionalize a "long-standing postal policy . . . motivated by fears of government officials prying into the thoughts of those sending letters through the post office."[181] Of course, both the constitutional and statutory privacy protections were later expanded to other means of mass communication, most notably telephone conversations.[182] Modern digital communications[183] pose special privacy concerns for users of cordless phones,[184] wireless/cellular phones,[185]

180. *See, e.g.*, 18 U.S.C. §§ 1341, 1701, 1702.

181. Anuj C. Desai, *Can the President Read Your Mail? A Legal Analysis*, 59 CATH. U. L. REV. 315, 344–45 (2010) (citing Anuj C. Desai, *Wiretapping Before the Wires: The Post Office and the Birth of Communications Privacy*, 60 STAN. L. REV. 553, 575–76 (2007); DAVID J. SEIPP, THE RIGHT TO PRIVACY IN AMERICAN HISTORY 33–35, 54 (1981)).

182. *See, e.g.*, Katz v. United States, 389 U.S. 347, 353 (1969) (holding "[t]he Government's activities in electronically listening to and recording the petitioner's words violated the privacy upon which he justifiably relied while using the telephone booth and thus constituted a 'search and seizure' within the meaning of the Fourth Amendment."); Title III of the Omnibus Crime and Safe Streets Act of 1968, 18 U.S.C. §§ 2510-2522 (1994); The Electronic Communications Privacy Act of 1986, 18 U.S.C. § 2511(1)(a) (1994).

183. *See generally* John Soma, Melodi Mosley Gates, & Michael Smith, *Bit-Wise but Privacy Foolish: Smarter E-Messaging Technologies Call for a Return to Core Privacy Principles*, 20 ALB. L.J. SCI. & TECH. 487 (2010) (arguing for a more consistent privacy policy in the advent of ever evolving communication technology).

184. *See* Walter Pincus, *No Expectation of Privacy: Disclosure of Electronic Communication and the First Amendment*, 6 GREEN BAG 2D 265 (2003); *c.f.* Edwards v. Bardwell, 632 F. Supp. 584 (M.D. La. 1986), *aff'd without published opinion*, 808 F.2d 54 (5th Cir. 1986) (ruling that because they can be overheard by anyone with a scanner, there is no reasonable expectation of privacy in conversations conducted using cordless phones); *See generally* Privacy Rights Clearinghouse, *Fact Sheet 2: Wireless Communications: Voice and Data Privacy* (2010), http://www.privacyrights.org/fs/fs2-wire.htm (last visted October 11, 2011).

185. *See, e.g.*, Matthew E. Orso, *Cellular Phones, Warrantless Searches, and the New Frontier of Fourth Amendment Jurisprudence*, 50 SANTA CLARA L. REV. 183 (2010); Nancy J. King, *When Mobile Phones are RFID-Equipped—Finding E.U.-U.S. Solutions to Protect Consumer Privacy and Facilitate Mobile Commerce*, 15 MICH. TELECOMM. & TECH. L. REV. 107 (2008); Derek D. Wood, *The Emergence of Cellular and Cordless Telephones and the Resulting Effect on the Tension Between Privacy and Wiretapping*, 33 GONZ. L. REV. 377 (1997–1998); *cf.* Henry F. Fradella & Marcus A. Galeste, *Sexting: The Misguided Penal Social Control of Teenage Sexual Behavior in the Digital Age*, 48 CRIM. L. BULL. Art. 4 (2011) (documenting how "sexting" using cell phones, instant messages, and email threaten privacy); Clay Calvert, *Sex, Cell Phones, Privacy, and the First Amendment: When Children Become Child Pornographers and the Lolita Effect Undermines the Law*, 18 COMMLAW CONSPECTUS 1 (2009) (same).

email,[186] and instant and text messaging.[187] The biggest challenge to communication privacy in the early part of the 21st Century, however, clearly concerns internet-based communications on online social networking sites.[188]

Early adopters of social networking sites like MySpace or Facebook were primarily college students who appear to have given little or no thought to the privacy of their communications through these media.[189] That, of course, has changed dramatically; not only do users span age groups, but most of these users have begun to understand that their online life is not truly private—although few truly understand the privacy risks involved.[190] For several years, researchers have documented digital communicators' apprehension about the risks associated with sharing personal information online, especially through social networking sites.[191] Such concerns, however, have not necessarily translated into changes in behavior for many people. Not only do approximately 90% of users not read the privacy policy or terms of service of the social networking sites they utilize,[192] but only a small percentage of social networking users actually change the default privacy settings to protect their information privacy better.[193]

Women appear to have greater informational privacy concerns than men and, as a result, tend to disclose less identity information, such as home addresses, phone numbers, and instant messaging addresses than men

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186. *See* Electronic Communications Privacy Act (ECPA) of 1986, Pub. L. No. 99–508, 100 Stat. 1848 (codified as amended in scattered sections of 18 U.S.C.); *see also* Monique Manhal-Baugus, *E-therapy: Practical, Ethical, and Legal Issues*, 4 CYBER PSYCHOL. & BEHAV. 551 (2001) (noting privacy concerns in E-therapy, the practice of a licensed therapist using e-mail to communicate with clients).

187. *See* City of Ontario, Cal. v. Quon, 130 S. Ct. 2619, 2628, 2630 (2010) (noting that, although "individuals do not lose Fourth Amendment rights merely because they work for the government instead of a private employer, . . . special needs, beyond the normal need for law enforcement, make the warrant and probable-cause requirement impracticable for government employers" who monitor the pages and/or text messages of their employees for "non-investigatory work-related purposes.").

188. *See, e.g.*, Mark Burdon, *Privacy Invasive Geo-Mashups: Privacy 2.0 and the Limits of First Generation Information Privacy Laws*, 2010 U. ILL. J.L. TECH. & POL'Y 1 (2010); Bernhard Debatin, Jennette P. Lovejoy, Ann-Kathrin Horn, & Brittany N. Hughes, *Facebook and Online Privacy: Attitudes, Behaviors, and Unintended Consequences*, 15 J. COMPUTER-MEDIATED COMM. 83 (2009).

189. Brian Kane, *Balancing Anonymity, Popularity, & Micro-Celebrity: The Crossroads of Social Networking & Privacy*, 20 ALB. L.J. SCI. & TECH. 327, 333–338 (2010); James Grimmelmann, *Saving Facebook*, 94 IOWA L. REV. 1137, 1144–45 (2009).

190. Grimmelmann, *supra* note 189, at 1160–175, 1195.

191. Alessandro Acquisti & Ralph Gross, *Imagined Communities: Awareness, Information Sharing, and Privacy on the Facebook*, *in* PRIVACY ENHANCING TECHNOLOGIES 36–56 (2006), *available at* http://www.heinz.cmu.edu/~acquisti/papers/acquisti-gross-facebook-privacy-PET-final.pdf (last visited May 30, 2011).

192. Harvey Jones & José Hiram Soltren, *Facebook: Threats to Privacy* 20–21 (Dec. 14, 2005), http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.112.3154&rep=rep1&type=pdf.

193. Ralph Gross & Alessandro Acquisti, *Information Revelation and Privacy in Online Social Networks*, 2005 ACM WORKSHOP ON PRIVACY IN THE ELECTRONIC SOC'Y 71, 77–78, *available at* http://delivery.acm.org/10.1145/1110000/1102214/p71-gross.pdf?key1=1102214&key2=1392357921&coll=DL&dl=ACM&CFID=8665972&CFTOKEN=74116766.

do on social networking sites.[194] Similarly, rural users, who tend to have fewer friends on social networking sites, express higher levels privacy concern than urban users—a difference even more pronounced among rural women.[195]

D. The Roots of Privacy Rights in the Philosophical Thought of the Enlightenment

The Age of Enlightenment is a movement characterized by a "restless spirit of inquiry."[196] The era was a time when many traditional or old beliefs, especially those concerning the authority of the church or the state (especially vis-à-vis a monarch), were investigated and scrutinized because they lacked any basis in reason.[197] In fact, "reason" emerged during the Enlightenment as a distinct epistemology grounded in logic, as opposed to the prevailing epistemologies of the time grounded in personal revelation or faith in institutional power.[198] Thus, the Enlightenment brought "protest against metaphysical speculation" and, indeed, "all attempts to explain the phenomena of human existence in any manner which transcends the ordinary processes of reason, and consequently

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194. Joshua Fogel & Elham Nehmad, *Internet Social Network Communities: Risk Taking, Trust, and Privacy Concerns*, 25 COMPUTERS IN HUM. BEHAV. 153, 159–60 (2009); *see also* Zeynep Tufekci, *Can You See Me Now? Audience and Disclosure Regulation in Online Social Network Sites*, 28 BULL. SCI., TECH., & SOC'Y. 20, 27 (2008).

195. Eric Gilbert, Karrie Karahalios, & Christian Sandvig, *The Network in the Garden: An Empirical Analysis of Social Media in Rural Life*, 2 CHI PROC. 1603, 1609 (2008), *available at* http://delivery.acm.org/10.1145/1360000/1357304/p1603-gilbert.pdf?key1=1357304&key2=7926357921&coll=DL&dl=ACM&CFID=867082.

196. JOHN GRIER HIBBEN, THE PHILOSOPHY OF THE ENLIGHTENMENT 3 (1910).

197. *See* Suzanna Sherry, *The Sleep of Reason*, 84 GEO. L.J. 453, 455 (1996).

198. *Id.*

> What distinguishes reason from alternative epistemologies is its general reliance on basic logic and the evidence of the senses (augmented by scientific discoveries). Certain types of questions are always in order in response to a reasoned argument: "Doesn't that contradict what you said earlier?"; "Is that consistent with the evidence?"; and "If that's true, wouldn't it follow that . . . ?" Other responses are always out of order: "This must be true (or false) because the ultimate source of authority (God, the Bible, or some other source) says so"; and "I have faith that this is true regardless of its internal contradictions or its inconsistency with the evidence."
>
> In some ways, it is easier to describe what reason is by explaining what it is not.
>
> To be reasonable, an argument need not depend solely on deductive reasoning, but it cannot be *illogical*. It need not be entirely provable by scientific experiment, but it cannot be *inconsistent* with everything science and the social sciences know about reality—until and unless that reality is experimentally proven wrong. Reasoned appeals need not be fully successful, but if they convince no one except those who are already believers, they are probably flawed. Nor are common human emotions entirely excluded. But neither appeals to power nor "strategic arguments designed to persuade [primarily] by their emotional effect on the listener" are consistent with reasoned argument. Reason also stands on its own: neither the identity of the speaker nor her institutional role should be relevant to the persuasiveness of an argument.

Id. at 455–56 (internal citations omitted).

possesses no firm foundation of reality."[199] The philosophy which emerged during this period transformed the landscape of human understanding and significantly influenced the Founders of the United States, the authors of the U.S. Constitution, and, as a result, modern jurisprudence.[200]

Pinpointing the exact dates of the Enlightenment is not an easy task because the period was "rather amorphous and diverse."[201] The works of Isaac Newton,[202] Rene Descartes,[203] John Milton,[204] and Thomas Hobbes[205] are generally considered to mark the period's start. John Locke,[206] David Hume,[207] Charles de Montesquieu,[208] Voltaire,[209] Jean-Jacques Rousseau,[210]

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199. HIBBEN, *supra* note 196, at 4.

200. *See* Sherry, *supra* note 197, at 465–72. This is not to say, however, that the Enlightenment does not have critics. Indeed, the Enlightenment is assailed by religious and critical post-modern scholars as having mistaken "a particular white male epistemology for a general truth." *Id.* at 458. These critics charge that "reason does not exist apart from its social and political hegemony. In other words, . . . the Enlightenment was a fraud: it merely replaced one socially constructed view of reality with another, mistaking power for knowledge." *Id.* at 457. Moreover, critical theorists argue that "reason" and its near-obsessive reliance on "nature" justified racism, slavery, the subjugation of women and sexual minorities, and the perpetuation of a caste system of socio-economic class in which the "haves" always triumph over the "have nots." *See generally* RICHARD DELGADO & JEAN STEFANCIC, CRITICAL RACE THEORY: AN INTRODUCTION (2001).

201. ROY PORTER, THE ENLIGHTENMENT 9 (2d ed. 2001).

202. ISAAC NEWTON, NEWTON'S PRINCIPIA, THE MATHEMATICAL PRINCIPLES OF NATURAL PHILOSOPHY (Andrew Motte trans., Daniel Adee 1846) (1687), *available at* http://www.archive.org/details/newtonspmathema00newtrich.

203. RENE DESCARTES, DISCOURSE ON METHOD AND MEDITATIONS ON FIRST PHILOSOPHY 6 (Donald A. Cress trans., Hackett Publ'g. Co. 4th ed. 1998) (1637) (asserting the importance of "learning to distinguish the true from the false").

204. JOHN MILTON, AREOPAGITICA (Chicago Encyclopedia Britannica 1955) (1644) (protesting censorship), *available at* http://econlib.org/library/Essays/miltA1.html.

205. THOMAS HOBBES, LEVIATHAN (Oxford, Oxford University Press 1998) (1651) (laying the groundwork for social contract theory by arguing that liberty and autonomy are natural rights), *available at* http://www.constitution.org/th/leviatha.htm.

206. JOHN LOCKE, ESSAY CONCERNING HUMAN UNDERSTANDING (New York, Dover Publications 1959) (1689) (rejecting the notion that humans are born with any innate knowledge and instead advocating the *tabula rasa* theory that the human mind is a blank slate at birth that is subsequently filled by experience which should be guided by empiricism—perception and rational thought), *available at* http://oregonstate.edu/instruct/phl302/texts/locke/locke1/Essay_contents.htm; JOHN LOCKE, TWO TREATISES OF GOVERNMENT (New York, Cambridge University Press 1988) (1690) (arguing that legitimate government exists only through the consent of the governed and, accordingly, government has no authority to restrict natural rights, such as free expression and a free press, but rather must exercise power to create liberty in society).

207. DAVID HUME, ESSAYS, MORAL, POLITICAL, AND LITERARY (New York, Nelson 1951) (1712) (advocating for a free press, separation of powers, and governments which promote free markets so that industry and the arts could flourish), *available at* http://econlib.org/library/LFBooks/Hume/hmMPL.html.

208. BARON DE MONTESQUIEU, THE SPIRIT OF LAWS (Chicago Encyclopedia Britannica 1955) (1748) (arguing for a government in which powers are separated into legislative, executive, and judicial branches to provide a system of checks and balances), *available at* http://www.constitution.org/cm/sol-02.htm.

209. FRANÇOIS-MARIE AROUET (VOLTAIRE), CANDIDE (New York, Modern Library 1956) (1759) (using satire, criticizing abuses of people by royalty, the aristocracy, and the clergy, especially intolerance fueled by religious dogma, and arguing in favor of civil rights, especially the right to a fair trial and freedoms of speech and religion), *available at* http://www.gutenberg.org/files/19942/19942-h/19942-h.htm; *see also* VOLTAIRE, TREATISE ON TOLERANCE (New York, Cambridge University Press

Cesare Beccaria,[211] Adam Smith,[212] Immanuel Kant,[213] and Jeremy Bentham[214] all wrote during the heart of the Enlightenment.[215]

Many of the Enlightenment philosophers expounded upon principles which form the basis of modern privacy concepts, such as "a certain degree of freedom from the scrutiny of others and a certain amount of autonomy in making life decisions."[216] The ways in which they conceptualized autonomy, however, varied greatly.

In *The Leviathan*, Hobbes, arguing against many of the practices of the English monarchy, wrote:

> The right of nature, which writers commonly call *jus naturale*, is the liberty each man hath to use his own power as he will himself

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2000) (1763) (same), *available at* http://ebooks.gutenberg.us/WorldeBookLibrary.com/treattol.htm.

210. JEAN JACQUES ROUSSEAU, THE SOCIAL CONTRACT, OR PRINCIPLES OF POLITICAL RIGHT (London, G.G.J. and J. Robinson 1791) (arguing that the only form of legitimate government is that which expresses the general will of its citizens), *available at* http://www.constitution.org/jjr/socon.htm.

211. CESARE BONESAN, MARCHESE DI BECCARIA, ON CRIMES AND PUNISHMENTS (New York, Cambridge University Press 1995) (1764) (exploring the legitimate purposes of punishment in a well-ordered state), *available at* http://www.constitution.org/cb/crim_pun.htm.

212. ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS (New York, The Modern Library 1937) (1776) (advocating for a free market economy and the division of labor within society, guided by the invisible hand of the market, to increase productivity), *available at* http://econlib.org/library/Smith/smWNCover.html.

213. IMMANUEL KANT, AN INTRODUCTION TO THE METAPHYSICS OF MORALS (New York, Cambridge University Press 1998) (1797) (asserting that the sources and limits of human knowledge can be understood through an epistemology of both "Reason"/rationality and through experience with cause and effect, and that the free pursuit of such thought would produce practical and moral laws which dictate what ought to be done), *available at* http://www.constitution.org/kant/ntrometa.htm.

214. JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION (London, Athlone Publishers 1970) (1789) (rejecting the notions of natural law and natural rights, and instead, using utilitarian philosophical principles, arguing in favor of: economic freedom; individual freedom, including for women, children, and sexual minorities; the separation of church and state; and the abolition of slavery, corporal punishment, and capital punishment), *available at* http://econlib.org/library/Bentham/bnthPML.html.

215. Given the fuzziness of the boundaries of the Enlightenment, John Stuart Mill may or may not be considered an enlightenment philosopher since he wrote in the 19th century. Some scholars believe the period ended with the American and French Revolutions while others argue that the Enlightenment continued through the mid-1800s. *See, e.g.*, PETER GAY, 1 THE ENLIGHTENMENT: AN INTERPRETATION (1966). This debate notwithstanding, Mill's works built significantly upon Enlightenment principles, often within the context of the common law tradition. They are, therefore, worthy of special mention for their contribution to our modern understanding of privacy concepts. *See* JOHN STUART MILL, ON LIBERTY (Princeton, N.J., Princeton University Press 1999) (1859) (arguing that legitimate government should not regulate morality, but rather should only exercise the restrictive power of the state to prevent an actor from causing harm to others), *available at* http://www.constitution.org/jsm/liberty.htm; JOHN STUART MILL, THE SUBJUGATION OF WOMEN (Prometheus Books 1986) (1861) (perhaps co-authored with his wife, Harriet Taylor Mill) (arguing, on utilitarian grounds, for the emancipation of women on three primary grounds: the greater good of society through the establishment of a free market for women's services; the enrichment of relationships for men by having educated women engage them on their intellectual level; and the natural rights of women to pursue their individual development), *available at* http://www.constitution.org/jsm/women.htm.

216. Francesca Bignami, *European versus American Liberty: A Comparative Privacy Analysis of Antiterrorism Data Mining*, 48 B.C. L. REV. 609, 680 (2007) (noting that both concepts—freedom from scrutiny of others and autonomy to make decisions—stem from the common Enlightenment heritage).

> for the preservation of his own nature; that is to say, of his own life; and consequently, of doing anything which, in his own judgement and reason, he shall conceive to be the aptest means thereunto.[217]

Hobbes's focus was on the ability to preserve one's life. He viewed the state of nature (the hypothetical, primitive condition of people before government) as being a state of pure liberty—a condition of lawlessness in which each person exercised unconstrained freedom to preserve his own life and maximize his own happiness, even if at the expense of the life and happiness of others.[218] Life in the state of nature was, therefore, "solitary, poore, nasty, brutish, and short."[219] Hobbes saw the formation of the state as a solution to living in the chaotic state of nature. Being rational, man surrendered unfettered liberty and autonomy to the sovereign as part of a social contract in which the government acts to preserve the lives of its citizens, thereby serving the common good.[220] It should be noted, however, that to Hobbes, the social contract established the sovereign's power without question; thus, "rebellion or revolution is always wrong, regardless of government provocation."[221] Clearly, later Enlightenment philosophers strongly disagreed with the Hobbesian view of man's moral obligation to obey the sovereign no matter what.

Locke also believed that all people were endowed with inalienable rights from nature, which included individual autonomy to act to preserve life. Unlike Hobbes, though, Locke also considered private property to be an important natural right.[222] Locke viewed these rights much more expansively than Hobbes.[223] For example, Locke viewed the right to life not just as granting one the ability to defend one's life in the name of self-preservation, but as creating a corresponding responsibility not "to harm another in his life, health, liberty, or possessions . . . ."[224] Given the reciprocal nature of these rights and responsibilities, Locke viewed the sovereign's failure to protect life, liberty, and property as warranting rebellion.[225] Indeed, he viewed doing so as a duty, since failure to revolt under such circumstances would result in the renouncement of citizens' moral autonomy.[226] However, liberty, for Locke, was constrained by the

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217. HOBBES, *supra* note 205, at Ch. XIV, ¶ 1.

218. Sheldon Gelman, *"Life" and "Liberty": Their Original Meaning, Historical Antecedents, and Current Significance in the Debate Over Abortion Rights*, 78 MINN. L. REV. 585, 615–16 (1994).

219. HOBBES, *supra* note 205, at Ch. XIII, ¶ 9.

220. Gelman, *supra* note 218, at 616–17.

221. *Id.* at 615; *see also* HOBBES, *supra* note 205, at Ch. XVIII (arguing that citizens are bound to their ruler).

222. *See* Arthur Kuflik, *The Inalienability of Autonomy*, 13 PHIL. & PUB. AFF. 271, 277 (1984).

223. Gelman, *supra* note 218, at 621–22.

224. LOCKE, TWO TREATISES OF GOVERNMENT, *supra* note 206, at 98 (Ch. II, § 6).

225. Gelman, *supra* note 218, at 621.

226. *See* LOCKE, TWO TREATISES OF GOVERNMENT, *supra* note 206, at 186–200 (Ch. XIX).

positive laws enacted by a duly elected legislative body.[227]

As more philosophers of the Enlightenment expanded upon each other's work, conceptualizations of the rights to life, liberty, and property were extended. Thus, for instance, Rousseau and Kant argued against slavery as a violation of the concept of liberty just as Locke did, but they also broadened the concept of liberty by connecting it to notions of autonomy to be one's "self" or one's own "person."[228] John Stuart Mill later used these ideas to argue that "individuality" was one of the core "elements of well-being."[229]

Advocates of revolution in the American colonies drew heavily from Enlightenment philosophy.[230] In his pamphlet *Common Sense*, Thomas Paine advocated for the legal recognition of specific rights at the time of the birth of the United States, stressing that "[s]ecuring freedom and property" for all men should be core values of a free nation.[231] Paine's writings, along with those of the Enlightenment philosophers, strongly influenced Benjamin Franklin, Thomas Jefferson, John Adams, and other Founders.[232] This is evident in the text of both the Declaration of Independence and the U.S. Constitution, both of which draw on not only the ideas of, but also the language used by, various Enlightenment writers.[233]

III. Privacy in Jurisprudential Thought

As the review of the bio-psychological, socio-cultural, and philosophical literature in Part II should make clear, privacy is conceptualized in a multiplicity of ways. The same is true in the law. Today, privacy is protected by constitutional doctrines as well as "hundreds of statutes in the United States and thousands of laws worldwide," resulting in privacy being described as "a concept in disarray."[234] Nevertheless, scholars have attempted to bring some semblance of order to the often

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227. Gelman, *supra* note 218, at 636; *see also* LOCKE, TWO TREATISES OF GOVERNMENT, *supra* note 206, at 132–35 (Ch. VII, §§ 88–94) (noting how laws enacted by governments infringe on an individual's liberty).

228. *See, e.g.*, J.L. Hill, *The Five Faces of Freedom in American Political and Constitutional Thought*, 45 B.C. L. REV. 499, 564–65 (2004).

229. *Id.* at 568; *see* MILL, ON LIBERTY, *supra* note 215, at Ch. III.

230. *See, e.g.*, Stanley Elkins & Eric McKitrick, *The Founding Fathers: Young Men of the Revolution*, 76 POL. SCI. Q. 181 (1961).

231. THOMAS PAINE, COMMON SENSE § 3 ¶ 47 (1776), *available at* http://www.ushistory.org/paine/commonsense/singlehtml.htm.

232. *See generally* CRAIG NELSON, THOMAS PAINE: ENLIGHTENMENT, REVOLUTION, AND THE BIRTH OF MODERN NATIONS (2006).

233. *See generally* MORTON WHITE, THE PHILOSOPHY OF THE AMERICAN REVOLUTION (1978).

234. Danielle Keats Citron & Leslie Meltzer Henry, *Visionary Pragmatism and the Value of Privacy in the Twenty-First Century*, 108 MICH. L. REV. 1107, 1109–10 (2010) (quoting DANIEL J. SOLOVE, UNDERSTANDING PRIVACY 1 (2008)); *see also* Solove, *supra* note 11, at 477–78 ("Privacy is a concept in disarray. Nobody can articulate what it means. As one commentator has observed, privacy suffers from 'an embarrassment of meanings.'").

disjointed jurisprudence of privacy.[235]

In his 1992 article *One Hundred Years of Privacy*, Professor Ken Gormley, argued that the law recognizes five distinct legal "species" of privacy:

> 1) Tort privacy (Warren and Brandeis's original privacy);
> 2) Fourth Amendment privacy (relating to warrantless governmental searches and seizures);
> 3) First Amendment privacy (a "quasi-constitutional" privacy which exists when one individual's free speech collides with another individual's freedom of thought and solitude);
> 4) Fundamental-decision privacy (involving fundamental personal decisions protected by the Due Process Clause of the Fourteenth Amendment, often necessary to clarify and "plug gaps" in the original social contract);
> 5) State constitutional privacy (a mish-mash of the four species, above, but premised upon distinct state constitutional guarantees often yielding distinct hybrids).[236]

In this Part of our article, we explore these five approaches to privacy with slight modifications to accommodate changes in the law since the time Gormley developed his typology.

A. Privacy in Tort Law

In 1890, former Harvard Law School classmates Samuel Warren and Louis Brandeis published one of the most influential law review articles of all time. In this work, simply titled *The Right to Privacy*, they argued that the law needed to recognize "the right to enjoy life, — the right to be let alone."[237] It should be noted that the oft-quoted phrase, "the right to be let alone" was actually coined by Judge Thomas Cooley in his treatise on torts at least two years prior to the publication of Warren and Brandeis's article[238]—a fact the authors acknowledged in their article.[239]

Warren and Brandeis traced the evolution of the common law in its expansion of the rights to life, liberty, and property in ways that mirrored the expansion of these notions in the writings of the Enlightenment philosophers.[240] They then called for the law to recognize a right to privacy to protect people from the then-growing interference of press:

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235. SOLOVE, *supra* note 234, *passim*; Gormley, *supra* note 9, *passim*.

236. Gormley, *supra* note 9, at 1340.

237. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 193 (1890).

238. *See* THOMAS M. COOLEY, COOLEY ON TORTS 29 (2d ed. 1888).

239. Warren & Brandeis, *supra* note 237, at 195.

240. *Id.* at 193–95.

> Instantaneous photographs and newspaper enterprise have invaded the sacred precincts of private and domestic life; and numerous mechanical devices threaten to make good the prediction that "what is whispered in the closet shall be proclaimed from the house-tops." For years there has been a feeling that the law must afford some remedy for the unauthorized circulation of portraits of private persons; and the evil of the invasion of privacy by the newspapers, long keenly felt, has been but recently discussed by an able writer. The alleged facts of a somewhat notorious case brought before an inferior tribunal in New York a few months ago, directly involved the consideration of the right of circulating portraits; and the question whether our law will recognize and protect the right to privacy in this and in other respects must soon come before our courts for consideration.[241]

Brandeis and Warren went on to explain the different ways in which the common law protects life, liberty, and property. Next, they illustrated how then-existing legal doctrines, particularly in tort law, failed to adequately protect people from invasions of privacy that cause legal injury.[242]

Shortly after the publication of this article, judges began to take a more expansive view of privacy in tort litigation; but appellate courts, for the most part, did not embrace these attempts.[243] In response to public criticism of an appellate decision failing to recognize a tort for invasion of privacy, the New York legislature enacted a statute in 1903 allowing people to sue for privacy invasions "where their 'name, portrait, or picture' was used without consent 'for purposes of trade.'"[244] In 1905, however, the Supreme Court of Georgia recognized a common law tort for the types of privacy invasions about which Warren and Brandeis complained in their 1890 article.[245] Notably, the court's rationale rested, in part, on the Enlightenment concepts of natural rights and the social contract:

> The individual surrenders to society many rights and privileges which he would be free to exercise in a state of nature, in exchange for the benefits which he receives as a member of

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241. *Id.* at 195–96.

242. *Id.* at 196–213 ("We must therefore conclude that the rights, so protected, whatever their exact nature, . . . are rights as against the world. . . . The principle which protects personal writings and any other productions of the intellect or of the emotions, is the right to privacy, and the law has no new principle to formulate when it extends this protection to the personal appearance, sayings, acts, and to personal relations, domestic or otherwise.").

243. Neil M. Richards & Daniel J. Solove, *Privacy's Other Path: Recovering the Law of Confidentiality*, 96 GEO. L.J. 123, 146–47 (2007) (citing Roberson v. Rochester Folding Box Co., 64 N.E. 442 (N.Y. 1902)).

244. *Id.* at 147 (quoting NEW YORK CIV. RIGHTS LAW §§ 50–51 (McKinney 1976 & Supp. 1990)).

245. *See* Pavesich v. New England Life Insurance Co., 50 S.E. 68 (Ga. 1905).

> society. But he is not presumed to surrender all those rights, and the public has no more right, without his consent, to invade the domain of those rights which it is necessarily to be presumed he has reserved, than he has to violate the valid regulations of the organized government under which he lives. The right of privacy has its foundation in the instincts of nature. It is recognized intuitively, consciousness being the witness that can be called to establish its existence. Any person whose intellect is in a normal condition recognizes at once that as to each individual member of society there are matters private, and there are matters public so far as the individual is concerned. Each individual as instinctively resents any encroachment by the public upon his rights which are of a private nature as he does the withdrawal of those of his rights which are of a public nature. A right of privacy in matters purely private is therefore derived from natural law.[246]

The tort of invasion of privacy slowly spread throughout the United States, starting primarily in cases in which people had not consented to their photographs being taken and used in advertising, but later spreading to embrace the broader concept of privacy advocated by Warren and Brandeis.[247] By the 1950s, most states had embraced some concept of a privacy tort.[248] In his famous review of more than 300 such tort cases, Professor William Prosser discerned four distinct privacy torts had emerged, all of which impinged upon a plaintiff's right to be let alone:

> (1) [i]ntrusion upon the plaintiff's seclusion or solitude, or into his private affairs. (2) [p]ublic disclosure of embarrassing private facts about the plaintiff. (3) [p]ublicity which places the plaintiff in a false light in the public eye. (4) [a]ppropriation, for the defendant's advantage, of the plaintiff's name or likeness.[249]

Prosser incorporated these four torts into the *Second Restatement of Torts* and, as a result, they are accepted as valid causes of action by "virtually all courts and commentators to the present day."[250]

Notably, Prosser's taxonomy of privacy torts did not include a cause of action for breaches of confidentiality, even though a handful of courts recognized the tort by the time he published his law review article on privacy in 1960.[251] Richards and Solove explain that Prosser did not do so because the breach of confidentiality cases had not cited Warren and

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246. *Id.* at 69–70.

247. Richards & Solove, *supra* note 243, at 147–48; Gormley, *supra* note 9, at 1354.

248. Richards & Solove, *supra* note 243, at 148.

249. *Id.* at 148–49 (citing William L. Prosser, *Privacy*, 48 CAL. L. REV. 383, 389 (1960)); *see also* Gormley, *supra* note 9, at 1356.

250. Richards & Solove, *supra* note 243, at 150.

251. *Id.* at 151.

Brandeis in support of their origin and because these cases often involved contractual duties.[252] Although Prosser eventually included the tort of breach of confidentiality in both the third and fourth editions of his treatise on torts, they were never adopted into the Restatement.[253] As a result, breach of confidence torts "remained ignored and underdeveloped."[254] Although confidentiality breaches did experience somewhat of a rebirth in the 1980s and 1990s, "it remains in a relatively obscure and frequently overlooked corner of American tort law."[255]

B. Fourth Amendment Privacy

Thirty-eight years after the publication of Warren and Brandeis's article, Louis Brandeis, in his role as an Associate Justice of the U.S. Supreme Court, authored another highly influential piece on the right to privacy: his dissent in *Olmstead v. United Stated*.[256] *Olmstead* upheld the admissibility of wiretapped phone conversations that were obtained by federal law enforcement officers without warrant. The majority rested its decision on the premise that since the wiretapping involved no physical trespass onto the defendants' property, there had been no Fourth Amendment violation.[257] Using the same language in his dissent that he did in his 1890 article, Brandeis argued:

> The makers of our Constitution undertook to secure conditions favorable to the pursuit of happiness. They recognized the significance of man's spiritual nature, of his feelings, and of his intellect. They knew that only a part of the pain, pleasure and satisfactions of life are to be found in material things. They sought to protect Americans in their beliefs, their thoughts, their emotions and their sensations. They conferred, as against the government, the right to be let alone—the most comprehensive of rights, and the right most valued by civilized men. To protect that right, every unjustifiable intrusion by the government upon the privacy of the individual, whatever the means employed, must be deemed a violation of the Fourth Amendment.[258]

Thus, the fact that there was no physical trespass to the defendants' home was not particularly relevant to Brandeis. Nearly forty years later in

252. *Id.* at 152.

253. *Id.* at 152–53.

254. *Id.* at 157.

255. *Id.*

256. 277 U.S. 438 (1928), *overruled by* Katz v. United States, 389 U.S. 347 (1967).

257. *Olmstead*, 277 U.S. at 457 ("The insertions were made without trespass upon any property of the defendants.").

258. *Id.* at 478 (Brandeis, J., dissenting).

Katz v. United States,[259] Brandeis's views prevailed when the Supreme Court overruled *Olmstead*'s property-based approach to the Fourth Amendment and replaced it with the "reasonable expectation of privacy" approach that is still used today.

The adoption of Brandeis's view of the Fourth Amendment in *Katz* did not, however, fully embrace a "right to be let alone." Indeed, commentators still debate the vagueness of this concept and critique its lack of substantive guidance. For example, being "let alone" does not help law enforcement or the judiciary determine the areas that are constitutionally protected by the Fourth Amendment.[260] Moreover, the concept does not really help the law discern the scope of privacy beyond Fourth Amendment search and seizure concerns. "If privacy simply meant 'being let alone,' any form of offensive or harmful conduct directed toward another person could be characterized as a violation of personal privacy. A punch in the nose would be a privacy invasion as much as a peep in the bedroom."[261] Hence, the jurisprudence of the Fourth Amendment is significantly narrower than the language of Brandeis' dissent in *Olmstead*.

The most explicit expression of privacy rights in early American law are from criminal procedure "where even in the early days of colonial life there existed a strong principle, inherited from English law, that a 'man's house is his castle; and while he is quiet, he is well guarded as a prince in his castle.'"[262] The English common law notion of one's home as "castle" can be traced back to at least 1505 in an opinion written by John Fineux, Chief Justice of the King's Bench.[263] In spite of the castle doctrine, the British eventually developed laws and policies that assaulted the privacy of the dwelling, particularly when it involved taxes, as the king's customs office became authorized "to search wherever they wanted and to seize whatever they wanted, with few exceptions."[264]

Although the British people were victims of these encroachments, American colonists were even more susceptible to unreasonable searches and seizures because colonial magistrates were obliged to authorize general warrants requested by crown officers based on nothing more than mere suspicion.[265] After the American Revolution, the Founders' disgust for abuses of general warrants (that were unsworn, unsupported by any particularized suspicion, and lacked any degree of specificity with regard to the person or place to be searched or the item(s) to be seized) led them first

259. 389 U.S. 347 (1967).

260. Daniel J. Solove, *Conceptualizing Privacy*, 90 CAL. L. REV. 1087, 1102 (2002) ("[W]hile the right to be let alone has often been invoked by judges and commentators, it still remains a rather broad and vague conception of privacy.") (citation omitted).

261. ANITA L. ALLEN, UNEASY ACCESS: PRIVACY FOR WOMEN IN A FREE SOCIETY 7 (1988).

262. Gormley, *supra* note 9, at 1358 (quoting Paxton's Case, Superior Ct. 1761, *as reprinted in* Quincy's Mass. Rep. 1761–62, 51 (1865)).

263. Leonard W. Levy, *Origins of the Fourth Amendment*, 114 POL. SCI. Q. 79, 80 (1999).

264. *Id.* at 82.

265. *Id.*

to adopt requirements for warrant specificity based on sworn, particularized suspicion or probable cause in the charters or declaration of rights of several of the new states and, later, in the text of the Fourth Amendment.[266] Another protection of the home was also enshrined in the Third Amendment to the U.S. Constitution: a prohibition on the quartering of soldiers.[267]

In 1868, Judge Thomas Cooley published a treatise on constitutional law. In it, he specifically connected the text of the Fourth Amendment to a constitutional notion of privacy when he described privacy as:

> [the] maxim of the common law which secures to the citizen immunity in his home against the prying eyes of the government, and protection in person, property, and papers even against the process of law, except in a few specified cases. The maxim that "every man's house is his castle" is made a part of our constitutional law in the clause prohibiting unreasonable searches and seizures.[268]

Eighteen years later in *Boyd v. United States*,[269] a similar connection was made by the U.S. Supreme Court.

C. First Amendment Privacy

The right to be let alone manifests itself in strange and bizarre ways when it intersects with the First Amendment. Gormley describes this conceptualization of privacy as "a parasite"—"a counterweight which has latched itself onto" the First Amendment to restrict free speech and expression.[270]

In *Gilbert v. Minnesota*,[271] decided eight years before *Olmstead*, Justice Brandeis dissented from the Supreme Court's decision which upheld a law that criminalized the practice of discouraging men from enlisting in the military. The defendant had been convicted of violating the law after he criticized World War I.[272] Brandeis would have invalidated the law since it sought to control what people said, even in "the privacy and freedom of the

266. *Id.* at 93–94.

267. "No soldier shall, in time of peace be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law." U.S. CONST. amend. III.

268. Gormley, *supra* note 9, at 1359–60 (alterations in original) (citing THOMAS M. COOLEY, A TREATISE ON THE CONSTITUTIONAL LIMITATIONS WHICH REST UPON THE LEGISLATIVE POWER OF THE STATES OF THE AMERICAN UNION 299–300 (1st ed. 1868)).

269. 116 U.S. 616, 630 (1886) (describing the "sanctity of a man's home and the privacies of life" when condemning an unlawful seizure).

270. Gormley, *supra* note 9, at 1375.

271. 254 U.S. 325 (1920).

272. *Id.* at 327.

home."[273] Although Brandeis was likely attempting to lay the groundwork for the subsequent adoption of his "right to be let alone,"[274] Professor Gormley persuasively argues that Brandeis's view that privacy had "some place among the shade of the First Amendment was swiftly resurrected."[275]

In support of his argument, Gormley points to *Martin v. City of Struthers*, [276] a case which invalided a city ordinance barring door-to-door leafleting by Jehovah's witnesses. The concurring and dissenting opinions in the case express the beliefs that the interests of privacy in one's home need to be balanced against the freedom of speech.[277] This was exactly the rationale used in *Breard v. City of Alexandria*, [278] in which the Court upheld an ordinance barring door-to-door solicitations. Justice Reed, applying the logic of his dissent in *Gilbert v. Minnesota*, this time wrote for the majority, reasoning that the case called for balancing "the conveniences between some householders' desire for privacy and the publisher's right to distribute publications in the precise way that those soliciting for him think brings the best results."[279] The same type of balancing test was also applied to curb speech, even outside the home, such as on billboards, in cases applying the "captive audience" doctrine.[280]

Perhaps the case that makes it most clear that the First Amendment encompasses some notion of privacy related to freedom of thought is *Stanley v. Georgia*.[281] In invaliding a conviction for possession of obscene materials in the home, Justice Marshall wrote:

> If the First Amendment means anything, it means that a State has no business telling a man, sitting alone in his own house, what books he may read or what films he may watch. Our whole constitutional heritage rebels at the thought of giving government the power to control men's minds.[282]

Gormley acknowledges that free speech and expression sometimes prevail over privacy claims.[283] However, the fact that the courts

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273. *Id.* at 335 (Brandeis, J., dissenting).

274. *See supra* notes 237–42 and accompanying text.

275. Gormley, *supra* note 9, at 1377.

276. 319 U.S. 141 (1943).

277. Gormley, *supra* note 9, at 1377–78 (citing *Martin*, 319 U.S. at 150 (Murphy, J., concurring); *Id.* at 152–53 (Frankfurter, J., dissenting); *Id.* at 154–57 (Reed, J., dissenting)).

278. 341 U.S. 622 (1951).

279. *Id.* at 644.

280. Gormley, *supra* note 9, at 1379–81 (citing Packer Corp. v. Utah, 285 U.S. 105 (1932); Kovacs v. Cooper, 336 U.S. 77 (1949)).

281. 394 U.S. 557 (1969).

282. *Id.* at 565.

283. Gormley, *supra* note 9, at 1383 (citing Cohen v. California, 403 U.S. 15 (1971) (upholding the right of a war protestor to display a swear word on his jacket); Org. For a Better Austin v. Keefe, 402 U.S. 415 (1971) (upholding peaceful distribution of leaflets advocating racial equality); Erznoznik v. City of Jacksonville, 422 U.S. 205 (1975) (upholding the showing of an R-rated movie in a drive-in

automatically resort to a balancing test in which they weigh the speaker's rights to free expression against the privacy rights of an unwilling listener (or viewer) in First Amendment cases is strong proof that the First Amendment embodies a distinct conceptualization of the right to be let alone. For private persons, this right is strongest in the home.[284] In contrast, when public figures seek privacy from the often-invasive press, "the weighty guns of the First Amendment" typically trump privacy concerns.[285]

D. Substantive Due Process Protection of Private Liberty Interests

The most controversial of the privacy concepts is the one arising out of the nebulous contours of the liberties protected by substantive due process. In 1992, Gormley referred to this species of privacy as "fundamental decision privacy."[286] At the time he did so, that descriptor was appropriate, especially in light of the Supreme Court's decision in *Bowers v. Hardwick*.[287] In the years since Gormley developed his typology, the Supreme Court has backed away from its reliance on fundamental rights in adjudicating the scope of privacy as guaranteed by substantive due process and has embraced a broader concept of liberty more akin to the autonomy concepts espoused by the philosophers of the Enlightenment, especially in its decision in *Lawrence v. Texas*.[288] Accordingly, this approach to privacy is better conceptualized in the post-*Lawrence* era as protecting Fourteenth Amendment liberty interests through the operation of substantive due process.[289]

Most commentators, like Gormley,[290] begin their study of this form

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theater even though partial nudity could be viewed by passers-by)).

284. *See id.* at 1387 (noting that privacy trumps free speech interests "where the privacy interest of the listener is the strongest (i.e., in the home)").

285. *Id.* For a discussion of the priority of the First Amendment rights of the press over the priority interests of public figures, *see id.* at 1387–91 (citing, Florida Star v. B.J.F., 491 U.S. 524 (1989); Gertz v. Robert Welch, Inc., 418 U.S. 323 (1974); Curtiss Publishing Co. v. Butts, 388 U.S. 130 (1967); New York Times v. Sullivan, 376 U.S. 254 (1964)). *See generally* Peter B. Edelman, *Free Press v. Privacy: Haunted by the Ghost of Justice Black*, 68 TEX. L. REV. 1195 (1990); Diane L. Zimmerman, *Requiem for a Heavyweight: A Farewell to Warren and Brandeis's Privacy Tort*, 68 CORNELL L. REV. 291 (1983).

286. Gormley, *supra* note 9, at 1391.

287. 478 U.S. 186, 190–92 (1986) (upholding the constitutionality of sodomy laws despite the Court having previously invalided laws that impinged fundamental rights related to procreation and family life, because sodomy was not a fundamental right).

288. 539 U.S. 558, 577 (2003) (overruling *Bowers v. Hardwick* and finding sodomy laws unconstitutional); *see also* Henry F. Fradella, Lawrence v. Texas: *Genuine or Illusory Progress for Gay Rights in America*, 39 CRIM. L. BULL. 597 (2003) (explaining how the *Lawrence* decision did not fit into the "fundamental rights" framework of prior privacy decisions of the U.S. Supreme Court).

289. *See, e.g.*, Helen J. Knowles, *From a Value to a Right: The Supreme Court's Oh-So-Conscious Move from 'Privacy' To 'Liberty'*, 33 OHIO N.U. L. REV. 595 (2007); Erin Daly, *The New Liberty*, 11 WIDENER L. REV. 221 (2005).

290. Gormley, *supra* note 9, at 1391; *see also,* Jamal Greene, *The So-Called Right to Privacy*, 43 U.C. DAVIS L. REV. 715, 720 (2010) (using the heading, "*A Right Is Born:* Griswold v. Connecticut").

of privacy with the landmark 1965 case: *Griswold v. Connecticut*.[291] However, the early roots of the interplay between privacy, liberty, and substantive due process can be traced back long before *Griswold* to two cases which have been described as the "direct judicial antecedents" of the contemporary right to privacy grounded in substantive due process.[292]

1. The Harbingers of *Griswold*

Forty-two years before *Griswold*, the Supreme Court decided *Meyer v. Nebraska*.[293] In 1919, Nebraska enacted a statute prohibiting teaching any subject in a language other than English and prohibiting foreign language instruction until after the completion of the eighth grade, with the exception of Greek, Latin, or Hebrew.[294] The statute purportedly targeted two aims: "to promote civic development by inhibiting training and education of the immature in foreign tongues and ideals before they could learn English and acquire American ideals" and to insure that "the English language should be and become the mother tongue of all children reared" in Nebraska.[295] The historical context of the law, however, suggests that its true purpose may have been less noble, as it was likely a xenophobic response to immigration in the World War I era, especially against German-Americans.[296]

In reserving a teacher's conviction for violating the law by having taught German in a parochial school affiliated with the Lutheran Church, the Court held that the statute violated the "liberty guaranteed . . . by the Fourteenth Amendment."[297] Citing a string of more than a dozen cases, the Court reasoned:

> While this [C]ourt has not attempted to define with exactness the liberty thus guaranteed, the term has received much consideration and some of the included things have been definitely stated. Without doubt, it denotes not merely freedom from bodily restraint but also the right of the individual to contract, to engage

But see Cass R. Sunstein, *Liberty after* Lawrence, 65 OHIO ST. L.J. 1059, 1061–63 (2004) (arguing that *Lawrence* could be viewed not as embracing autonomy as liberty, but rather as the simple invalidation of sodomy laws on desuetude grounds, thereby implicating more of a procedural process holding than a substantive one).

291. 381 U.S. 479 (1965).

292. G. Sidney Buchanan, *The Right of Privacy: Past, Present, and Future*, 16 OHIO N.U. L. REV. 403, 415 (1989).

293. 262 U.S. 390 (1923).

294. *Id.* at 400. It should be noted that twenty-one other states passed similar laws in the wake of World War I. *See* Susan E. Lawrence, *Substantive Due Process and Parental Rights: From* Meyer v. Nebraska *to* Troxel v. Granville, 8 J. L. & FAM. STUD. 71, 73–74 (2006).

295. *Meyer*, 262 U.S. at 401.

296. *See* William G. Ross, *A Judicial Janus:* Meyer v. Nebraska *in Historical Perspective*, 57 U. CIN. L. REV. 125, 130–34 (1988) (discussing the relationship between language laws and the increasing hostility toward German immigrants).

297. *Meyer*, 262 U.S. at 399.

> in any of the common occupations of life, to acquire useful knowledge, to marry, establish a home and bring up children, to worship God according to the dictates of his own conscience, and generally to enjoy those privileges long recognized at common law as essential to the orderly pursuit of happiness by free men.[298]

Meyer v. Nebraska is significant because it was the first case in which the U.S. Supreme Court determined that people had non-economic liberty rights not specifically listed in the Constitution.[299] The Court applied *Meyer* in *Bartels v. Iowa*[300] to invalidate similar English-only language instruction laws.[301] Two years later, the Court relied on *Meyer* when it decided *Pierce v. Society of Sisters of the Holy Names of Jesus and Mary*—another significant case in the development of privacy rights in a substantive due process framework.[302]

Again in the wake of World War I, Oregon enacted a law which required "every parent, guardian, or other person having control or charge or custody of a child between [eight] and [sixteen] years to send him 'to a public school for the period of time a public school shall be held during the current year' in the district where the child resides."[303] A corporation formed by a group of Roman Catholic nuns dedicated to providing parochial education within the tenants of that faith challenged the law on the grounds that it conflicted "with the right of parents to choose schools where their children will receive appropriate mental and religious training, the right of the child to influence the parents' choice of a school, [and] the right of schools and teachers therein to engage in a useful business or profession . . . ."[304] Citing *Meyer*, the Court invalidated the law, explaining that it "unreasonably interfere[d] with the liberty of parents and guardians to direct the upbringing and education of children under their control."[305]

The Supreme Court's reliance on the Fourteenth Amendment in the privacy context continued with *Skinner v. Oklahoma*.[306] In that case, the Court invalidated a law which required the sterilization of habitual criminal offenders.[307] Although decided primarily on Equal Protection Clause grounds because of the disparate nature of the offenses which qualified under the terms of the statute,[308] the Court made it clear that the law raised

298. *Id.*
299. Ross, *supra* note 296, at 185.
300. 262 U.S. 404 (1923).
301. *Id.* at 409.
302. 268 U.S. 510 (1925).
303. *Id.* at 530 (quoting Or. L. § 5259 (1923)).
304. *Id.* at 532.
305. *Id.* at 534–35.
306. 316 U.S. 535 (1942).
307. *Id.* at 536, 538.
308. *Id.* at 538.

significant liberty concerns as well:

> We are dealing here with legislation which involves one of the basic civil rights of man. Marriage and procreation are fundamental to the very existence and survival of the race. The power to sterilize, if exercised, may have subtle, farreaching and devastating effects. In evil or reckless hands it can cause races or types which are inimical to the dominant group to wither and disappear. There is no redemption for the individual whom the law touches. Any experiment which the State conducts is to his irreparable injury. He is forever deprived of a basic liberty.[309]

Two cases decided in the Warren Court era embraced a substantive due process rationale when applying the Fifth and Fourteenth Amendments' guarantees of liberty to the unenumerated right to travel. In both *Kent v. Dulles*[310] and *Aptheker v. Secretary of State*,[311] the Court invalidated restrictions on the issuance of passports to suspected communists, explaining that the "right to travel is a part of the 'liberty' of which [a] citizen cannot be deprived without due process of law . . . ."[312]

2. *Griswold* and Subsequent Substantive Due Process Privacy Cases

In the 1950s and 1960s, several states enacted statutes[313] which, like Connecticut, criminally prohibited any person from using "any drug, medicinal article or instrument for the purpose of preventing conception."[314] Moreover, Connecticut's inchoate liability statute applied in such a way as to create criminal liability for physicians and family planning counselors who provided information regarding the use of contraceptives.[315] Two such health-care providers were arrested and charged with providing "information, instruction, and medical advice to *married persons* as to the means of preventing conception."[316]

In striking down the anti-contraceptive law at issue in *Griswold*, the Supreme Court discussed both *Meyer* and *Pierce*, and "reaffirm[ed] the

309. *Id.* at 541.

310. 357 U.S. 116 (1958).

311. 378 U.S. 500 (1964).

312. *Kent*, 357 U.S. at 125; *see also Aptheker*, 378 U.S. at 505 (quoting *Kent* to invalidate a statute restricting the right of travel).

313. *See Connecticut's Birth Control Law: Reviewing a State Statute Under the Fourteenth Amendment*, 70 YALE L. J. 322, 322 (1960) (noting that "thirty-four states and the federal government [had enacted] some form of birth control legislation"); *see also* Debora Spar & Anna Harrington, *Selling Stem Cell Science: How Markets Drive Law Along the Technological Frontier*, 33 AM. J.L. & MED. 541, 544 (2007) ("[T]wenty-four states explicitly passed laws forbidding contraception and advertising or information related to birth control.").

314. Griswold v. Connecticut, 381 U.S. 479, 480 (1965) (quoting CONN. GEN. STAT. REV. § 53–32 (1958)).

315. *Id.* at 480.

316. *Id.*

principle" of the holdings of those cases.[317] The Court also discussed several First Amendment cases which had embraced the "peripheral" rights of "freedom to associate and privacy in one's associations."[318] The Court cited the protections of the Third, Fourth, Fifth, and Ninth Amendments as well to support the proposition "that specific guarantees in the Bill of Rights have penumbras, formed by emanations from those guarantees that help give them life and substance" and that these penumbral guarantees create zones of privacy.[319] The Court then stated:

> The present case, then, concerns a relationship lying within the zone of privacy created by several fundamental constitutional guarantees. And it concerns a law which, in forbidding the *use* of contraceptives rather than regulating their manufacture or sale, seeks to achieve its goals by means having a maximum destructive impact upon that relationship. Such a law cannot stand in light of the familiar principle, so often applied by this Court, that a "governmental purpose to control or prevent activities constitutionally subject to state regulation may not be achieved by means which sweep unnecessarily broadly and thereby invade the area of protected freedoms." Would we allow the police to search the sacred precincts of marital bedrooms for telltale signs of the use of contraceptives? The very idea is repulsive to the notions of privacy surrounding the marriage relationship.[320]

Notably, the *Griswold* decision was limited to protecting a right to privacy in the marital setting, a fact key to the Court's rationale.[321] Seven years later, the Court extended *Griswold*'s protections to unmarried persons in *Eisenstadt v. Baird*[322] on equal protection grounds.[323] "If the right of privacy means anything, it is the right of the *individual*, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a

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317. *Id.* at 482–83.

318. *Id.* at 483 (quoting NAACP v. Alabama, 377 U.S. 288, 307 (1964) (citation omitted)).

319. *Id.* at 484.

320. *Id.* at 485–86 (quoting NAACP v. Alabama, 377 U.S. 288, 307 (1964) (citation omitted)).

321. *Id.* at 486.

> We deal with a right of privacy older than the Bill of Rights—older than our political parties, older than our school system. Marriage is a coming together for better or for worse, hopefully enduring, and intimate to the degree of being sacred. It is an association that promotes a way of life, not causes; a harmony in living, not political faiths; a bilateral loyalty, not commercial or social projects. Yet it is an association for as noble a purpose as any involved in our prior decisions.

Id.

322. 405 U.S. 438 (1972).

323. *Id.* at 438.

child."[324] The Court further extended the right to privacy in this area in *Carey v. Population Services, International* when it invalidated a law that permitted distributions of contraceptives only by licensed pharmacists.[325]

In 1967, the U.S. Supreme Court invalided all remaining laws in the United States barring inter-racial marriage in *Loving v. Virginia*.[326] The Court based its decision on both the Equal Protection and Due Process Clauses of the Fourteenth Amendment.[327] In support of the latter rationale, the Court offered only a single paragraph which read:

> Marriage is one of the 'basic civil rights of man,' fundamental to our very existence and survival. To deny this fundamental freedom on so unsupportable a basis as the racial classifications embodied in these statutes, classifications so directly subversive of the principle of equality at the heart of the Fourteenth Amendment, is surely to deprive all the State's citizens of liberty without due process of law. The Fourteenth Amendment requires that the freedom of choice to marry not be restricted by invidious racial discriminations. Under our Constitution, the freedom to marry or not marry, a person of another race resides with the individual and cannot be infringed by the State.[328]

Thus, although *Loving* made it clear that the unenumerated right to marry is protected by substantive due process, it "did not expressly tie this right to the right of privacy recognized two years earlier in *Griswold*, nor did the Court even cite *Griswold* in its analysis of the" miscegenation statutes at issue in the case.[329] It did, however, expressly tie marriage and privacy in *Zablocki v. Redhail*[330] when the Court invalided a Wisconsin statute that prohibited noncustodial parents from marrying without first obtaining court approval that could only be granted upon a showing that the petitioner was current with child support payments.[331]

Undoubtedly the most famous and controversial of the substantive due process privacy cases is *Roe v. Wade*.[332] The analysis in *Roe* began with an articulation of privacy grounded in substantive due process expressed more clearly than in prior cases when it stated "the Court has recognized that a right of personal privacy, or a guarantee of certain areas or zones of

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324. *Id.* at 453.

325. 431 U.S. 678, 681–82 (1977).

326. 388 U.S. 1 (1967).

327. *Id.* at 2.

328. *Id.* at 12 (quoting Skinner v. State of Oklahoma, 316 U.S. 535, 541 (1942) (citation omitted)).

329. Buchanan, *supra* note 290, at 454.

330. 434 U.S. 374 (1978).

331. *Id.* at 383.

332. 410 U.S. 113 (1972).

privacy, does exist under the Constitution."[333] The Court then went on to hold that this right to privacy was "broad enough to encompass a woman's decision whether or not to terminate her pregnancy."[334] The Court made clear, however, that this right was limited by the way in which it balanced the rights of the fetus, the pregnant woman, and state within a trimester framework.[335] Years later, the Supreme Court reaffirmed the right to privacy as it applies in the abortion context in *Casey v. Planned Parenthood of Southeastern Pennsylvania*,[336] although *Casey* clearly did away with the trimester framework announced in *Roe*. In its place, *Casey* set forth a different framework for examining whether a state-imposed restriction on abortion is constitutional: whether the restriction poses an "undue burden" on the ability to have an abortion.[337] Although many cases have fleshed out the parameters of the right to privacy as it applied to abortion rights within the confines of *Roe*[338] and *Casey*,[339] *Roe*'s central holding placing the decision whether to have an abortion within the liberty protection of the Due Process Clause remains viable as of the date of this writing.

In the wake of privacy cases discussed above—most especially *Griswold* and *Roe*—the Supreme Court's decision in *Bowers v. Hardwick*[340] came as a surprise to many. *Bowers*' upholding of sodomy laws represents the "only major area in which the Court has erected a clear barrier against expansion of the right of privacy."[341] Key to the Court's rationale in *Bowers* was that sodomy did not involve any "fundamental right," [342] such as child-rearing and education,[343] marriage,[344] or procreation.[345]

The majority opinion in *Bowers* was sharply criticized by the dissenting justices[346] and many commentators[347] for having framed the

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333. *Id.* at 152.

334. *Id.* at 153.

335. *Id.* at 163–66.

336. 505 U.S. 833 (1992).

337. *Id.* at 874.

338. *E.g.*, Hodgson v. Minnesota, 497 U.S. 417 (1990); Ohio v. Akron Ctr. for Reprod. Health, 497 U.S. 502 (1990); Webster v. Reprod. Health Servs., 492 U.S. 490 (1989); Thornburgh v. Am. Coll. of Obstetricians and Gynecologists, 476 U.S. 747 (1986); , Simopoulos v. Virginia, 462 U.S. 506 (1983); Planned Parenthood Assn. v. Ashcroft, 462 U.S. 476 (1983); Harris v. McRae, 297 U.S. 323 (1980); Bellotti v. Baird II, 443 U.S. 662 (1979); Planned Parenthood v. Danforth, 428 U.S. 52 (1976).

339. *E.g.*, Gonzales v. Carhart, 550 U.S. 124 (2007); Ayotte v. Planned Parenthood, 546 U.S. 320 (2006); Stenberg v. Carhart, 530 U.S. 914 (2000).

340. Bowers v. Hardwick, 478 U.S. 186 (1986).

341. Buchanan, *supra* note 290, at 486.

342. *Bowers*, 478 U.S. at 190.

343. Pierce v. Soc'y of Sisters of the Names of Jesus and Mary, 268 U.S. 510 (1925); Meyer v. Nebraska, 262 U.S. 390 (1923).

344. Loving v. Virginia, 388 U.S. 1 (1967).

345. Skinner v. Oklahoma *ex rel.* Williamson, 316 U.S. 535 (1942).

346. *Bowers*, 478 U.S. at 199–214 (Blackmun, J., dissenting); *Id.* at 214–20 (Stevens, J., dissenting).

347. *E.g.*, Henry F. Fradella, *Legal, Moral, and Social Reasons for Decriminalizing Sodomy*, 18 J. CONTEMP. CRIM. JUST. 279 (2002); Harvard Law Review, Note, *Right to Privacy and Consensual Sodomy*: Bowers v. Hardwick, 100 HARV. L. REV. 210, 218–19 (1986).

issues much too narrowly, especially since *Griswold, Eisenstadt,* and *Roe* could have been interpreted as guaranteeing that adults had a privacy right "to engage in non-procreative sexual relations, even outside the traditional setting of marriage."[348] But *Bowers* was overruled—less than twenty years after it was decided—by *Lawrence v. Texas*,[349] albeit using a very different approach than that used in the line of privacy cases leading up to *Bowers*.

3. *Lawrence v. Texas*: Privacy as Protected Liberty Interest

The *Lawrence* majority acknowledged that the framing of the issue in *Bowers* was mistaken because it failed to "appreciate the extent of the liberty at stake" because sodomy laws regulated "the most private human conduct, sexual behavior, and in the most private of places, the home."[350] The Court used broad and sweeping language in *Lawrence* in its discussion of liberty, drawing heavily on Enlightenment principles of autonomy:

> Liberty protects the person from unwarranted government intrusions into a dwelling or other private places. In our tradition the State is not omnipresent in the home. And there are other spheres of our lives and existence, outside the home, where the State should not be a dominant presence. Freedom extends beyond spatial bounds. Liberty presumes an autonomy of self that includes freedom of thought, belief, expression, and certain intimate conduct. The instant case involves liberty of the person both in its spatial and in its more transcendent dimensions.[351]

The Court even made passing mention of the utilitarian "harm principle" when it wrote that the government should not proscribe conduct on the basis of morality "absent injury to a person or abuse of an institution the law protects."[352]

Lawrence's embrace of "liberty"—a word used in the actual text of the Fourteenth Amendment—has caused some to question whether the Supreme Court moved away from the substantive due process protection of privacy.[353] Even if the Court purposely retrenched from an analytical framework that tied a right to privacy to the Due Process Clause (something that will only become clear in time), *Lawrence* makes clear that substantive due process remains a viable protector of a certain form of privacy by placing certain intimate conduct between consenting adults beyond the reach of state regulation.

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348. Brett J. Williamson, Note, *The Constitutional Privacy Doctrine After* Bowers v. Hardwick*: Rethinking the Second Death of Substantive Due Process*, 62 S. CAL. L. REV. 1297, 1317 (1989).

349. 539 U.S. 558 (2003).

350. *Id.* at 567.

351. *Id.* at 562.

352. *Id.* at 567.

353. *See, e.g.*, Knowles, *supra* note 287, *passim*; Daly, *supra* note 287, *passim*.

E. State Protection of Privacy Beyond Tort Law

Gormley named his final species of privacy "State Constitutional Privacy."[354] He did so because the "New Federalism" that emerged in the last quarter of the twentieth century led to other forms of privacy sometimes being even more strongly protected by state courts interpreting their own state constitutional protections.[355] As Gormley pointed out, several states "rewrote or amended their constitutions to guard against unreasonable 'invasions of privacy,' some making specific reference to interceptions of communications or electronic eavesdropping, inspired by *Katz*."[356] Other state courts built on the *Griswold* and *Roe* decisions by finding penumbras of privacy in their own state constitutions, often in ways that guaranteed more privacy protections than federal law.[357] This was especially the case with regard to the Fourth Amendment privacy rights once the Burger and Rehnquist courts began to scale back the rights of the criminally accused that were announced by the Warren Court.[358] Gromley explains:

> South Dakota, Montana and Alaska early on rejected the U.S. Supreme Court decision in *South Dakota v. Opperman*, finding that their own brands of privacy did not permit warrantless inventory searches of impounded vehicles. The highest courts of Michigan, New Hampshire, Montana, Alaska and Florida all declined to follow *United States v. White*, which had permitted wired government informants to monitor and record surreptitiously conversations with suspects without a warrant . . . . Several states swiftly denounced the Supreme Court's decision in *United States v. Ross*, which had permitted the warrantless search of closed containers as part of an automobile search. Idaho forbade the use of pen registers (devices used by the government to record numbers dialed on telephones), notwithstanding *Smith v. Maryland* which permitted such technology under the Fourth Amendment. North Carolina, Connecticut, New Jersey, and . . . Pennsylvania rejected the controversial decision of *United States v. Leon*, finding that the states' strong interest in privacy from unlawful searches and seizures precluded the adoption of a "good faith exception" to the exclusionary rule. [And, a] myriad of other miscellaneous state constitutional decisions appeared, constructing safe harbors for privacy where the federal Bill of Rights no longer offered a

354. Gormley, *supra* note 9, at 1422.

355. *Id.*

356. *Id.* at 1423-24 (internal citations omitted). Today, ten state constitutions specifically guarantee a right to privacy: ALASKA CONST. art. 1, § 22 (amended 1972); ARIZ. CONST. art. 2, § 8; CAL. CONST. art. 1, § 1; FLA. CONST. art. 1, § 23 (amended 1998); HAW. CONST. art. I, §6; ILL. CONST. art. I, § 6; LA. CONST. art. I, § 5; MONT. CONST. art. II, § 10 (amended 1971); S.C. CONST. art. I, § 10; WASH. CONST. art. I, § 7.

357. Gormley, *supra* note 9, at 1425.

358. *Id.* at 1425–26.

sanctuary.[359]

Since the time Gormley developed his typology, the states have continued to experiment with privacy rights, often in response to technological developments[360] or the ever-increasingly invasive nature of the press, especially the paparazzi.[361] While most of these developments involve the creation of new types of torts, states have also experimented with other forms of law to protect privacy, such as criminal laws against stalking, harassment, cyberbullying, and various computer crimes like hacking.[362] Privacy under state law is, therefore, not only far more robust than the basic privacy torts about which Prosser wrote in the final volume of his famed torts treatise,[363] but also broader than it was in 1992 when Gormley developed his typology of the different privacy species. Accordingly, we think it appropriate to rename his final, catch-all category "State Protection of Privacy Beyond Tort Law."

IV. Investigating Reasonable Expectations of Privacy

As the review of the literature and case law presented in Part III of this article illustrates, "the quest for a singular essence of privacy leads to a dead end."[364] In spite of the volumes that have been written about privacy in its various conceptualizations, scholars continue to call for more research on the topic—especially as the confluence of the Information Age and the War on Terror have the potential to erode the protections of the Fourth Amendment further.

Much more research also needs to be conducted to assess the impact of changes in U.S. surveillance and search and seizure jurisprudence on the privacy rights of citizens. Privacy advocates correctly warn against the erosion of civil liberties. As police surveillance authority expands its effect on both public safety and civil liberties, the effect on privacy must be measured to ensure that venerated democratic ideals are protected while promoting police efficacy.[365]

The present research is an attempt to answer this call by providing

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359. *Id.* at 1426–27.

360. *See, e.g.*, Paul M. Schwartz, *Preemption and Privacy*, 118 YALE L.J. 902 (2009) (discussing state laws designed to prevent data security breaches, restrict the use of social security numbers, assist identify theft victims, curtail surveillance, and more).

361. *See, e.g.*, Maya Ganguly, Comment, *Private Pictures, Public Exposure: Papparazzi, Compromising Images, and Privacy Law on the Internet*, 26 WIS. INT'L L.J. 1140 (2009); Patrick J. Alach, *Paparazzi and Privacy*, 28 LOY. L.A. ENT. L. REV. 205 (2007-2008).

362. *See, e.g.*, Susan W. Brenner & Megan Rehberg, *"Kiddie Crime"? The Utility Of Criminal Law in Controlling Cyberbullying*, 8 FIRST AMEND. L. REV. 1 (2009); Katherine T. Kleindienst, Theresa M. Coughlin & Jill K. Pasquarella, *Computer Crimes*, 46 AM. CRIM. L. REV. 315 (2009).

363. WILLIAM L. PROSSER, HANDBOOK ON THE LAW OF TORTS (4th ed. 1971).

364. SOLOVE, *supra* note 234, at ix.

365. William P. Bloss, *Transforming U.S. Police Surveillance in a New Privacy Paradigm*, 10 POLICE PRACT. & RES. 225, 236 (2009).

an empirical context for understanding different societal conceptualizations of privacy rights within *Katz*'s reasonable expectation of privacy framework.

A. Prior Empirical Research on Reasonable Expectations of Privacy

To our knowledge, the present study is only the second ever to investigate reasonable expectations of privacy from an empirical perspective. The first was conducted in 1993 by Professors Christopher Slobogin and Joseph Schumacher.[366] They asked 217 people to rank fifty activities on a scale from 0 to 100, with 0 representing a complete lack of intrusiveness and 100 representing extreme intrusiveness.[367] Respondents were told to assume that the suspect was innocent of any wrongdoing. Slobogin and Schumacher varied the way in which they asked the subjects to rank-order the behaviors between first-person and third-person questions (e.g., "a search of *your* garbage can" vs. "a search of *a* garbage can").[368] They also varied the presence or absence of an evidence condition (e.g., "a search of your garbage can *for evidence of forgery*" vs. "a search of your garbage can").[369] Based on the participants' responses, they rank-ordered the behaviors from least to most intrusive.[370] They also administered the twenty-two item "Attitudes Toward Crime Control Scale" to discern if respondents were more crime control or due process oriented.[371]

Slobogin and Schumacher tested four hypotheses. First, they expected that many of the U.S. Supreme Court's "conclusions about expectations of privacy and autonomy [did] not correlate with actual understandings of innocent members of society."[372] Second, by comparing the first- and third-person responses, they expected that "searches or seizures of one's own property or person are perceived as more intrusive than those of others."[373] Third, they expected that police actions tied to an evidentiary purpose would be viewed as less intrusive than searches or seizures without a clear investigatory aim.[374] Finally, they expected that respondents who subscribed to a more crime control perspective of the criminal justice system would view actions as less intrusive than those who

366. Christopher Slobogin & Joseph E. Schumacher, *Reasonable Expectations of Privacy and Autonomy in Fourth Amendment Cases: An Empirical Look at "Understandings Recognized and Permitted by Society,"* 42 DUKE L.J. 727 (1993).

367. *Id.* at 736.

368. *Id.*

369. *Id.*

370. *Id.*

371. *See* JOSEPH E. SCHUMACHER, MEASURING ATTITUDES TOWARD CRIME CONTROL: THE ATTITUDES TOWARD CRIME CONTROL SCALES, Paper Presented at the American Psychological Association Annual Conference (Aug. 1991).

372. Slobogin & Schumacher, *supra* note 366, at 733–34.

373. *Id.* at 734.

374. *Id.*

aligned themselves more with the due process model.[375] Their first hypothesis was partially supported, their second and third were supported, and their fourth was not.[376]

The ten most invasive police behaviors were the following: a body cavity search at the border; monitoring a phone for thirty days; reading a personal diary; searching a bedroom; needle in arm at work to get blood; searching a mobile home; boarding a bus and asking to search luggage; searching a college dormitory room; tapping into a corporation's computer; searching a high school student's purse; and hospital surgery on shoulder.[377] Other notable findings include several areas of seeming disagreement with U.S. Supreme Court precedent. For example, even though the Court has held that no reasonable expectation of privacy is violated by the use of undercover agents, survey respondents found the use of informants to be fairly invasive.[378] Similarly, although the Court ruled in *United States v. Miller* that a bank depositor has no reasonable expectation of privacy in commercial bank transactions, respondents ranked police "perusing bank records" as the twelfth most invasive activity on the survey.[379] Respondents also ranked both "police entry onto fenced-in private property outside the curtilage of the home" and dog sniffs of one's body as being in the top half of the invasive activities.[380] Yet, the U.S. Supreme Court has held that the former does not constitute a search for Fourth Amendment purposes[381] and has hinted that the latter may similarly not implicate the Fourth Amendment either, even though some U.S. Circuit Court of Appeals have held to the contrary when a dog sniff of a human body occurs under certain circumstances.[382]

Four limitations of Slobogin and Schumacher's study should be noted. First, more than half of the survey respondents were law students at two universities in the early 1990s. The homogeneity of this group may have limited the generalizability of the study, a limitation the authors acknowledge. This is a minor concern, however, as most social scientific studies of judicial decision-making involve surveys or simulations that may

375. *Id* at 735 (citing Herbert L. Packer, *Two Models of the Criminal Process,* 113 U. PA. L. REV. 1, 5–23 (1964)).

376. *Id.* at 738–74.

377. *Id.* at 738.

378. *Id.* at 740 (citing United States v. White, 401 U.S. 745, 751 (1971)).

379. Slobogin & Schumacher, *supra* note 366, at 740.

380. *Id.* at 740–41.

381. *Id.* (citing Oliver v. United States, 466 U.S. 170, 174 (1984)).

382. *Id.* (citing United States v. Place, 462 U.S. 696, 707–08 (1983)). *But compare* Horton v. Goose Creek Indep. School Dist., 690 F.2d 470, 479 (5th Cir. 1982), *cert. denied*, 463 U.S. 1207 (1983) (holding that close-contact random dog sniffs of children in schools constituted searches for Fourth Amendment purposes); B.C. v. Plumas Unified School Dist., 192 F.3d 1260, 1266 (9th Cir. 1999) (holding that close-proximity, but non-contact dog sniffs of students constituted searches for Fourth Amendment purposes), *with* United States v. Reyes, 349 F.3d 219, 224 (5th Cir. 2003) (holding that a non-contact dog sniff of a person from a distance of approximately four to five feet was not a close-proximity dog sniff and, therefore, did not implicate the Fourth Amendment).

or may not have external or ecological validity due to the plethora of difficulties researchers experience when trying to access judges.[383] Such studies, including those that use student-participants as substitutes for courtroom decision-makers, tend to provide reasonably accurate data concerning the behavior of actual courtroom participants.[384]

Second, the instructions directed survey respondents to rate "the extent to which they considered each method 'an invasion of privacy or autonomy.'"[385] Given that privacy includes domains that go beyond autonomy, the instructions may have caused the survey respondents to conflate distinct concepts of privacy with the one most frequently affiliated with liberty interests protected by substantive due process.[386] Admittedly, this limitation is minor, but because law students are likely to note distinctions between different conceptualizations of privacy under the First, Fourth, and Fourteenth Amendments as a function of their legal education, this threat to construct validity should be noted. Slobogin and Schumacher attempted to minimize this limitation by using 52 law students who had not yet taken a course in criminal procedure, 79 undergraduate students, 61 law students from Australia, and 25 members of the community from Gainesville, Florida.[387]

Third, the survey presented some respondents with short phrases, such as the ten listed above, without regard to any context. For example, the fifteenth most invasive behavior was "questioning on public sidewalk for 10 minutes."[388] Although a brief, limited investigative detention under *Terry v. Ohio*[389] may be considered intrusive in certain contexts, such as when a stop occurs for no apparent reason, it may not seem intrusive under other circumstances, such as when a person fits the profile of a missing person. Without additional context, the questions posed to survey respondents in the non-evidentiary group amount to abstractions that call into question the construct and predictive validity of the study.

Finally, and perhaps most importantly, given the study's methodology, it produced only relative findings; for instance, "perusing bank records" was ranked the thirteenth most invasive activity, while using

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383. *See, e.g.*, Kris Henning & Lynette Feder, *Criminal Prosecution of Domestic Violence Offenses: An Investigation of Factors Predictive of Court Outcomes*, 32 CRIM. JUST. & BEHAV. 612 (2005); Brian H. Bornstein, *The Ecological Validity of Jury Simulations: Is the Jury Still Out?*, 23 LAW & HUM. BEHAV. 75, 88 (1999) (highlighting the problems associated with generalizing behavior patterns from data received from mock jury simulations).

384. Bornstein, *supra* note 372, at 88; *see also* Crystal M. Beckham, Beverly J. Spray, & Christina A. Pietz, *Jurors' Locus of Control and Defendants' Attractiveness in Death Penalty Sentencing*, 147 J. SOC. PSYCHOL. 285 (2007); Geoffrey P. Kramer & Norbert L. Kerr, *Laboratory Simulation and Bias in the Study of Jury Behavior: A Methodological Note*, 13 LAW & HUM. BEHAV. 89 (1989).

385. Slobogin & Schumacher, *supra* note 366, at 736.

386. *Supra* Part III.D.3.

387. *Id.* at 737.

388. *Id.* at 738.

389. 392 U.S. 1 (1968).

personal assistants (like a secretary or a chauffeur) as informants ranked seventeenth and twentieth, respectively.[390] The results, therefore, do not help judges or scholars understand which of the intrusive behaviors should be viewed as infringing upon a reasonable expectation of privacy.

B. Comparison of the Present Study to Slobogin and Schumacher's

We attempt to improve upon Slobogin and Schumacher's methodology by using a larger, more diverse sample drawn from more geographic areas; by controlling for knowledge of constitutional criminal procedure; by omitting instructions that attempt to define privacy; by providing all respondents with more complete fact patterns to allow them to contextualize the police actions at issue in governing Fourth Amendment precedent; and by using Likert scales that measure levels of agreement or disagreement with case holdings so that the data provide an empirical understanding into when particular actions by law enforcement intrude upon reasonable expectations of privacy.

Our study also differs from Slobogin and Schumacher's in three other ways. First, we did not investigate the concept of intrusiveness. We focused on measuring levels of agreement or disagreement with leading Fourth Amendment precedent, primarily in the area of warrant exceptions. Second, rather than measuring crime control and due process dispositions, we used a series of thirteen demographic and attitudinal variables more commonly used in social scientific research to investigate relationships between the respondents and their opinions concerning reasonable expectations of privacy.[391] Finally, because we were interested in testing whether judicial assessments and societal perceptions concerning reasonable expectations of privacy aligned with each other, we did not investigate differences in first-person and third-person perceptions.

Still, the present study's research findings and conclusions must be viewed in congruence with the limitations of the research design. As with Slobogin and Schumacher's study, the external validity of the present study may be constrained by the population from which the research sample was drawn; college students and faculty comprise the overwhelming number of participants. However, to minimize this threat to the external validity, the present research uses a large sample drawn from twelve colleges and universities located in eleven different U.S. states, thereby increasing the representativeness of the sample. Additionally, steps were taken to minimize threats to the external validity of the study by soliciting survey responses from Facebook users, thereby further diversifying the population from which the sample was drawn.

In the next Part of this article, we explain the methods used to

390. Slobogin & Schumacher, *supra* note 373, at 738.

391. *Infra* Part V.A.1.

conduct this study and the specific research questions and hypotheses tested.

V. Methodology

A. Materials and Participants

1. Survey

This study uses primary data from the *Reasonable Expectations of Privacy Survey* constructed by the authors. The survey consists of thirteen demographic and attitudinal questions, eleven short fact-pattern questions, and ten longer fact-pattern questions, each of which consisted of several variations of a basic fact pattern.

The demographic and attitudinal questions asked respondents to identify their sex; their age; their racial or ethnic background; their relationship status; their political party affiliation; how liberal or conservative they considered themselves to be; their religion; how religious they considered themselves to be; how frequently they attended religious services; their annual income; the highest level of education they had completed; their major if they had attended college; and whether they had ever taken a course in constitutional criminal procedure.

All of the fact-pattern questions were formulated using leading Fourth Amendment cases, which included cases on each of the major zones of privacy identified in Part II. The specific types of intrusion and the precedent supporting a warrantless intrusion into that sphere of privacy are summarized in Table 2.

Table 2: Conceptualizations of Privacy Targeted by Survey

Privacy Construct	Survey Questions Targeting the Reasonableness of a State Actor's Ability to Do the Following Without a Warrant	Fact Pattern(s) Based Upon
Personal Space: Bodily Privacy	Force an individual to give a blood sample for purpose of alcohol level testing	Schmerber v. California, 384 U.S. 757 (1966).
	Surgically remove evidence for means of forensic testing	Rochin v. California, 342 U.S. 165 (1952); Winston v. Lee, 470 U.S. 753 (1985).

Table 2: Conceptualizations of Privacy Targeted by Survey (con't)

Personal Space: Bodily Privacy(con't)	Randomly drug test public transportation employees	Skinner v. Ry. Labor Executives' Ass'n, 489 U.S. 602 (1989); Nat'l Treasury Empl. Union v. von Raab, 489 U.S. 656 (1989).
	Search high school students, their lockers, and their personal effects	New Jersey v. T.L.O., 469 U.S. 325 (1985); Safford Unified Sch. Dist. v. Redding, 129 S. Ct. 2633 (2009).
	Randomly drug test high school athletes and other high school students	Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646 (1995); Board of Educ. of Ind. Sch. District 92 of Pottawatomie Cty. v. Earls, 536 U.S. 822 (2002).
	Search a person incident to arrest	Chimel v. California, 395 U.S. 752 (1969).
	Arrest someone for a minor traffic violation	Atwater v. City of Lago Vista, 532 U.S. 318 (2001).
Personal Space: Territorial Privacy	Search cars, car passengers, or personal belongings in cars	Carroll v. United States, 267 U.S. 132 (1995); California v. Acevedo, 500 U.S. 565 (1991); Wyoming v. Hoghton, 526 U.S. 295 (1999).
	Use the plain view or plain smell doctrines to enter and search a home	United States v. Taylor, 90 F.3d 903 (4th Cir. 1996); United States v. Humphries, 372 F.3d 653 (4th Cir. 2004); Illinois v. Caballes, 543 U.S. 405 (2005).
	Search a vehicle incident to arrest	Arizona v. Gant, 129 S. Ct. 1710 (2009).
	Conduct protective sweeps of homes	Maryland v. Buie, 494 U.S. 325 (1990).
	Search the curtilage of the home under a variety of circumstances, including variations in fencing, signage, and distance of outbuildings	Oliver v. United States 466 U.S. 170 (1984); State v. Ross, 4 P.3d 130 (Wash. 2000); United States v. Dunn, 480 U.S. 294 (1987).

Table 2: Conceptualizations of Privacy Targeted by Survey (con't)

Personal Space: Territorial Privacy (con't)	Search open fields under a variety of circumstances, including low fencing and signage	Oliver v. United States, 466 U.S. 170 (1984).
	Conduct aerial searches of homes and commercial property from various aircrafts at different heights	California v. Ciraolo 476 U.S. 207 (1986); Dow Chem. Co. v. United States, 476 U.S. 227 (1986).
	Use thermal imaging devices to search a residence	Kyllo v. United States, 533 U.S. 27 (2001).
Informational Privacy	Track a car's movement using an electronic tracking device	United States v. Knotts, 460 U.S. 276 (1983).
	Search garbage	California v. Greenwood, 486 U.S. 35 (1988).
	Obtain bank records	United States v. Miller, 425 U.S. 435 (1976).
	Search a computer hard drive at international boarders	United States v. Arnold, 523 F.3d 341 (9th Cir. 2008).
Communications Privacy	Use images teenagers "sext"/send to each other via cell phone as evidence in child pornography prosecutions	State v. Canal, 773 N.W.2d 528 (Iowa 2009).
	Wiretapping landlines, phone booths, and cell phones	Katz v. United States, 389 U.S. 347 (1967); Smith v. Maryland, 442 U.S. 735 (1979); Title III, codified as amended at 18 U.S.C. §§ 2510–22 (2010).

2. Procedures

After the survey was approved for administration by the Institutional Review Board at the authors' university, the survey was uploaded onto www.surveymonkey.com. Survey Monkey is an online database that allows its users to create and distribute surveys via the Internet. To minimize all possibilities of data piracy, Survey Monkey stores all data on a secure server with 24-hour surveillance, firewall restrictions, SSL encryptions, and hacker-safe scans, which are performed daily. In addition to securing all data, steps were taken to ensure a certain level of anonymity. By configuring the online survey so that it did not trace the participants Internet Portal (IP) address, it is nearly impossible to link survey results with the participants.

3. Participants

Participants were solicited in two ways. First, the lead author sent an email invitation to students and faculty at eleven U.S. colleges and universities asking prospective survey respondents to take the survey.[392] These institutions were selected for geographic diversity and for the sake of convenience, since the researchers had contacts at these universities who were willing to forward the email solicitation to students in various majors at their respective universities. Second, people were also solicited through Facebook, an online social networking community, by providing a brief explanation of the research and uploading a link to the online survey. The Facebook solicitation also encouraged participants to invite their friends to take the survey in hopes of creating a snowball effect.

A total of 589 people participated in this study: among those who stated their sex, 340 (61.9%) were female and 209 (38.1%) were male; 40 (6.8%) declined to state their sex. Among those stating their race, the diverse sample included 48 (8.8%) African-Americans, 182 (33.5%) Latinos/Hispanics, 62 (11.4%) Asian/Pacific Islanders, and 251 (46.3%) Whites; only 46 (7.6%) declined to state their racial/ethnic background. Participants ranged in age from 17 to 61, with a mean age of 23 years and a standard deviation of 7 years. Other demographic and attitudinal data are presented in Part V of this article.

B. Measures

The independent variables were measured using demographic and attitudinal questions. These included: sex, ethnicity, age, relationship status, political party affiliation, political views, religion, religiosity, religious attendance, income, level of education, major, and whether the respondent had ever taken a course in constitutional criminal procedure. Age was coded in years as a ratio-level variable. Five variables were coded as ordinal variables: levels of political conservativeness or liberality (1 = very liberal; 5 = very conservative); religiosity (1 = extremely, devoutly religious; 5 = not at all religious); religious attendance (1 = daily; 5 = never); income (1 = below $30,000; 7 = over $150,000); and education (1 = high school diploma or equivalent; 5 = completed graduate degree). Responses to the remaining demographic and attitudinal questions were all coded as nominal variables.

392. These institutions included: a large, public, urban, comprehensive university in southern California; a mid-size public, rural, comprehensive university in Virginia; a mid-size, public, urban research university in New York City; a large, public, suburban, research university in Arizona; a small, private, urban, liberal arts college in Massachusetts; a mid-size, public, suburban, liberal arts college in New Jersey; a small, public, rural, comprehensive university in Wisconsin; a large, private, urban, research university in Washington, D.C.; a small, Catholic, teaching college in Wisconsin; a large, Catholic, comprehensive university in Pennsylvania; and a mid-sized, public, comprehensive university in Michigan.

The dependent variables consisted of the respondents' level of agreement with the holding of leading Fourth Amendment cases after explaining the operable facts of the cases to participants, as well as some variations on the fact patterns to discern what changes in fact might alter the respondents' opinions. Respondents were asked to indicate their level of agreement with each of the privacy scenarios using a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree). For the purposes of chi-square analysis, these data were collapsed into dichotomous formats: agree (which included all agree and strongly agree responses) and disagree (which included all disagree or strongly disagree responses. Responses of "neither agree nor disagree" were excluded from the chi-square analysis.

C. Research Question and Hypotheses

Based upon Slobogin and Schumacher's study and the findings of empirical research summarized in Part II of this article, we approached our study seeking insight to a single, overarching research question, as well as four specific hypotheses. The primary research question we investigated was to test the degree to which the opinions of society members align with judicial rulings with regard to whether certain expectations of privacy are reasonable in the search and seizure context. We were particularly interested in learning how the ordinal rankings presented in Slobogin and Schumacher's landmark study aligned with actual judgments about the reasonable expectations of privacy.

In addition to investigating the primary research question, we were also interested in testing four specific hypotheses.

First, because the Judeo-Christian and Islamic traditions all embrace a various notions of privacy,[393] we expected that religion would not be significantly associated with any of the dependent variables.

Second, based on the leading anthropological studies of privacy,[394] we expected that race/ethnicity would be significantly related to opinions on reasonable expectations of privacy. Specifically, we hypothesized that people hailing from noncontact cultures would be more likely to disagree with precedent authorizing warrantless invasions of bodily, territorial, and information privacy than people from close-contact cultures.

Third, based on the leading social-psychological studies of privacy,[395] we expected that men's psychological needs for higher levels of bodily and territorial privacy would make them more likely to disagree with precedent authorizing warrantless invasions of bodily and territorial privacy than women.

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393. *Supra* Part II.A.2.

394. *Supra* Part II.B.1.

395. *Supra* Part II.B.2.

Fourth, based on the leading social-psychological studies of privacy,[396] we expected that women's greater desire for informational privacy would make them more likely to disagree with precedent authorizing warrantless invasions of informational or communications privacy than men.

D. Data Analyses

1. Overall Agreement with Leading Privacy Precedent

The research question was investigated by calculating the number and percentage of respondents agreeing or strongly agreeing with the outcome of a particular privacy fact-pattern and comparing that figure, using a one-way chi-square goodness of fit test, to the number and percentage of respondents disagreeing or strongly disagreeing with that outcome.

2. Scale Construction for Bivariate and Multivariate Analyses

The dependent variables for the bivariate and multivariate regression analyses were four privacy scales measuring expectations of bodily privacy, territorial privacy, informational privacy, and communications privacy as summarized above in Table 2. Each of the variables was computed by combining responses from multiple survey items into a single scale. The individual survey items were all scored using a five-point Likert-type scale with responses ranging from "Strongly Disagree" to "Strongly Agree." For most of the items, "agree" responses were indicative of support for protecting privacy (e.g. the police do NOT have a right to search without a warrant, schools are NOT permitted to drug test students randomly, etc.). Items that were presented in the opposite fashion were reverse coded prior to being included in the final scale. In order to make interpretations of the findings across the different privacy scales easier, each of the final scales was adjusted to have the maximum value equal 100, with higher values on each scale reflecting support for the protection of privacy rights. Information about each of the individual privacy scales is included in Table 3.

396. *Id.*

Table 3: Descriptive Statistics for Privacy Scale Variables

Statistic	Bodily Privacy	Territorial Privacy	Informational Privacy	Communications Privacy
Mean	61.69	67.10	68.57	74.26
Median	60.00	66.67	68.00	76.00
Mode	57.50	66.67	72.00	72.00
Standard Deviation	11.78	9.61	10.24	13.38
Minimum – Maximum Values	30.00 – 100.00	44.00 – 100.00	44.00 – 100.00	20.00 – 100.00
95% Confidence Interval	60.53 – 62.84	66.13 – 68.07	67.57 – 69.58	72.97 – 75.55
N	399	378	401	418
Reliability				
Number of Items in Scale	8	30	10	5
Cronbach's Alpha	.70	.86	.70	.60

As Table 3 demonstrates, three of the four scales had reliability levels of .70 or higher and, therefore meet the standard levels of reliability for internal consistency.[397] The communications privacy scale, however, had a Cronbach's alpha coefficient of .60, which is a bit lower than the generally-accepted standard of .70 for a scale's internal consistency. The low alpha value was likely due to the fact that only five items were used to create the scale. However, the mean inter-item correlation value between the items included in the scale was .233, which is a strong enough value to justify combining these items into one scale.[398]

397. *See, e.g.*, Stephen R. Briggs & Jonathan M. Cheek, *The Role of Factor Analysis in the Development and Evaluation of Personality Scales*, 54 J. PERSONALITY 106 (1986).

398. *Id.*

VI. Results

A. Demographic and Attitudinal Variables

Table 4 contains the frequency distributions for all categorical demographic and attitudinal variables.

Table 4: Frequency Distribution of Independent Variables

Independent Variables	Frequency	Percent
Sex (*N=549*)		
Male	209	38.1
Female	340	61.9
Ethnicity (*N=544*)		
African American	48	8.8
Latino	182	33.5
Asian	62	11.4
White	251	46.1
Marriage/Partnership (*N=541*)		
Yes	46	8.4
No	503	91.6
Political Affiliation (*N=541*)		
Democrat	294	54.3
Republican	121	22.4
Independent	88	16.3
Other	38	7.0
Political Views (*N=537*)		
Very Liberal	69	12.8
Somewhat Liberal	157	29.2
Politically Moderate	192	35.8
Somewhat Conservative	95	17.7
Very Conservative	24	4.5
Religion (*N=528*)		
Protestant Christian	147	27.8
Roman Catholic	193	36.6
Jewish	14	2.7
Muslim	2	0.4
Mormon	2	0.4
Agnostic or Atheist	81	15.3
Other	89	16.9

Table 4: Frequency Distribution of Independent Variables (con't)

Independent Variables	Frequency	Percent
Religiosity (*N=547*)		
Not at all Religious	122	22.3
A Little Religious	129	23.6
Somewhat Religious	183	33.5
Very Religious	102	18.6
Extremely, Devoutly Religious	11	2.0
Religious Attendance (*N=551*)		
Daily	4	0.7
Weekly	133	24.1
Monthly	49	8.9
Less than Monthly	140	25.4
Hardly Ever or Never	225	40.8
Income (*N=538*)		
Below $30,000	357	66.4
Between $30,001 and $75,000	82	15.2
Between $75,001 and $150,000	20	3.7
Over $150,001	8	1.5
Decline to State	71	13.2
Education (*N=551*)		
High School Diploma or GED	125	22.7
Some College	324	58.8
Completed Bachelor's Degree	36	6.5
Some Graduate School	48	8.7
Completed Graduate Degree	18	3.3
Major (*N=548*)		
Social Sciences	334	61.0
Humanities (History, English, Communications)	39	7.1
Other (Business, Nursing, Natural Science)	175	31.9
Studied Criminal Procedure (*N=550*)		
Yes	130	23.6
No	420	76.4

B. Research Question Results

1. Chi-Square Goodness-of-Fit Tests for Levels of Agreement with Precedent

The levels of agreement with judicial assessments concerning

reasonable expectations of privacy with respect to bodily, territorial, and information/communications privacy are presented in Tables 5, 6, and 7, respectively.

Table 5: Reasonable Expectations of Bodily Privacy

Summary of Case Holding	**Agree**	**Disagree**	N (neutral in parentheses) and Outcome
Searches of People and/or Their Bodies for Evidence of Criminal Activity			
Courts may order the forcible removal of a blood sample from a DUI suspect who refuses to give consent to have a blood sample drawn. Schmerber v. California, 384 U.S. 757 (1966).	205 41.8%	229 46.6%	434(57) Split $X^2_{(1)}=1.327; p=$ n.s.
Without consent of person to be operated upon, courts should not be able to order surgery to remove a bullet as evidence since surgery is an invasive intrusion of bodily privacy. Winston v. Lee, 470 U.S. 753 (1985).	239 48.9%	162 33.1%	401 (88) Agreement $X^2_{(1)}=14.786; p<.001$
The use of a dog to conduct a close-proximity "sniff" of a person for drugs or other contraband violates a reasonable expectation of privacy. Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470 (5th Cir. 1982); B.C. v. Plumas Unified Sch. Dist., 192 F.3d 1260 (9th Cir. 1999).	236 56.7%	107 25.7%	343 (73) Agreement $X^2_{(1)}=48.516; p<.001$
Police should be allowed to search the passenger of a vehicle without a warrant if they have probable cause to believe that the vehicle contains contraband. Owens v. Commonwealth, 244 S.W.3d 83 (Ky. 2008); People v. Hart, 86 Cal. Rptr. 2d 762 (App. 1999).	173 41.6%	172 41.3%	345 (71) Split $X^2_{(1)}=0.003; p=$ n.s.

Table 5: Reasonable Expectations of Bodily Privacy (con't)

Special Needs Searches for Health and Safety Reasons			
Random drug testing of certain types of employees (e.g., train conductors, airline pilots, and police) is permissible for safety reasons. Skinner v. Ry. Labor Exec. Ass'n, 489 U.S. 602 (1989); Nat'l Treasury Emp. Union v. Von Raab 489 U.S. 656 (1989).	389 80.0%	51 10.5%	440 (47) Agreement $X^2_{(1)}=259.645; p<.001$
Random drug testing of high school athletes is permissible even though such tests are conducted without individualized suspicion and a warrant. Veronia Sch. Dist. 47J v. Acton, 515 U.S. 646 (1995).	83 17.0%	367 75.1%	450 (39) Disagreement $X^2_{(1)}=179.263; p<.001$
School officials should not be permitted to conduct a strip search of a student for evidence of the possession of contraband without probable cause and a warrant since such a search constitutes as significant invasion of privacy. Safford Unified Sch. Dist. #1 v. Redding, 129 S. Ct. 2633 (2009).	330 79.3%	33 7.9%	363 (53) Agreement $X^2_{(1)}=243.000; p<.001$
Police may arrest someone for a minor traffic violation, such as not wearing a seatbelt. Atwater v. City of Lago Vista, 532 U.S. 318 (2001).	47 9.6%	405 83.2%	452 (35) Disagreement $X^2_{(1)}=283.549; p<.001$

Table 6: Reasonable Expectations of Territorial Privacy

Summary of Case Holding	**Agree**	**Disagree**	N (neutral in parentheses) and Outcome
Special Needs Searches for Health and Safety Reasons			
School officials are permitted to search students' lockers for evidence of the possession of contraband without probable cause or a warrant. New Jersey v. T.L.O., 469 U.S. 325 (1985).	262 62.5%	91 21.7%	353 (66) Agreement $X^2_{(1)}=82.836; p<.001$
School officials are permitted to search a student's backpack or purse for evidence of the possession of contraband without probable cause or a warrant. New Jersey v. T.L.O., 469 U.S. 325 (1985).	176 42.3%	169 40.6%	345 (71) Split $X^2_{(1)}=0.142; p= n.s$
Motor Vehicle Searches			
Without the vehicle owner's consent, police having probable cause to believe that the vehicle contains evidence of a crime or contraband may search the vehicle without a warrant issued by a court authorizing the search. Carroll v. United States, 267 U.S. 132 (1925).	150 35.8%	219 52.3%	369 (50) Disagreement $X^2_{(1)}=12.902; p<.001$
Police may search a car incident to a recent occupant's arrest only if it is reasonable to believe that the arrestee might access the vehicle at the time of the search or that the vehicle contains evidence of the offense of arrest. Arizona v. Gant, 556 U.S. 332 (2009).	206 42.0%	222 45.3%	428 (62) Split $X^2_{(1)}=0.598; p= n.s$

Table 6: Reasonable Expectations of Territorial Privacy (con't)

The police are able to search a passenger's personal belongings, such as a purse, without a warrant issued by a court authorizing the search. Wyoming v. Houghton, 526 U.S. 295 (1999).	160 38.6%	192 46.4%	352 (62) Split $X^2_{(1)}=2.909; p = n.s.$
Searches of the Home (Including Use of Plain View and Plain Smell Doctrines)			
When police lawfully enter a home to make an arrest pursuant to an arrest warrant, they should be able to conduct a protective sweep of the home and if contraband is visible in plain view, then that evidence should be admissible in a subsequent prosecution for possession of the contraband. Chimmel v. California, 395 U.S. 752 (1969).	255 52.2%	173 35.4%	428 (61) Agreement $X^2_{(1)}=15.71; p<.001$
Because thermal imaging exposes details of a private home that would be unknowable without a physical intrusion, police are required to obtain a warrant from a court authorizing the use of such a device. Kyllo v. United States, 533 U.S. 27 (2001).	249 59.9%	99 23.8%	348 (68) Agreement $X^2_{(1)}=64.655; p<.001$
A warrant is not required to look through a suspect's window to see what is inside his/her residence, even though police entered private property to be able to see though the window. Texas v. Brown 460 U.S. 730 (1983); United States v. Taylor, 90 F.3d 903 (4th Cir. 1996).	110 26.6%	228 55.1%	338 (76) Disagreement $X^2_{(1)}=41.195; p<.001$

Table 6: Reasonable Expectations of Territorial Privacy (con't)

Police may enter a private home to arrest the occupant and seize marijuana without first obtaining a warrant if they smell the marijuana emanating from the house when they ring a doorbell or knock on a front door and the occupant answers. United States v. Humphries, 372 F.3d 653 (4th Cir. 2004).	135 32.3%	209 50.0%	344 (74) Disagreement $X^2_{(1)}=15.919; p<.001$
Searches of Areas Surrounding the Home (Curtilage and Open Fields)			
Posting "no trespassing" signs around expansive areas of open property does not create a reasonable expectation of privacy in open fields. Accordingly, police do not need to obtain a search warrant before entering and searching such lands. Hester v. United States, 265 U.S. 57 (1924); Oliver v. United States, 466 U.S. 170 (1984).	101 21.4%	314 66.5%	415 (57) Disagreement $X^2_{(1)}=109.323; p<.001$
A barn or similar outbuilding that is not fenced-in and lies many yards from the house is not within the "curtilage" of the home. Accordingly, police do not need to obtain a search warrant before entering and searching such buildings. United States v. Dunn, 480 U.S. 294 (1987).	57 12.1%	340 72.0%	397 (75) Disagreement $X^2_{(1)}=201.736; p<.001$
A search warrant should not be required to conduct an aerial search of a homeowner's backyard from around 1000 feet. California v. Ciraolo, 476 U.S. 207 (1986).	9 96 44.4%	179 40.6%	375 (66) Split $X^2_{(1)}=0.771; p= n.s$

Table 6: Reasonable Expectations of Territorial Privacy (con't)

A search warrant should not be required to conduct an aerial search of a homeowner's backyard from a low-flying helicopter at around 400 feet. Florida v. Riley, 488 U.S. 445 (1989).	143 32.5%	222 50.5%	365 (75) Disagreement $X^2_{(1)}=17.099; p<.001$

Table 7: Reasonable Expectations of Information and Communication Privacy

Summary of Case Holding	**Agree**	**Disagree**	N (neutral in parentheses) and Outcome
Bank Records			
Police do not need a warrant to examine bank records because they are not protected by the Fourth Amendment; depositors have no reasonable expectation of privacy in such records because bank transactions are not confidential communications, but rather are commercial transactions. United States v. Miller, 425 U.S. 435 (1976).	23 5.5%	357 85.4%	380 (38) Disagreement $X^2_{(1)}=293.568; p<.001$
Garbage			
By placing trash on the curb for garbage collectors, a homeowner relinquishes any reasonable expectation that the contents of his/her garbage will remain private since anyone could easily go through the trash bags on the curb. Accordingly, police do not need a warrant to search garbage. California v. Greenwood, 486 U.S. 35 (1988).	247 55.1%	119 26.6%	366 (82) Agreement $X^2_{(1)}=44.765; p<.001$

Table 7: Reasonable Expectations of Information and Communication Privacy (con't)

Sexting			
When teenagers take digital pictures of themselves naked and send them to other teenagers using the multimedia text messaging service of a cell phone, they should not expect those photos to be kept private. Thus, if the pictures are discovered by school officials and/or police (who have no warrant to search the contents of a cell phone), the photos should nonetheless be admissible in an criminal prosecution for having transmitted images that might legally constitute child pornography. State v. Canal, 773 N.W.2d 528 (Iowa 2009).	100 20.5%	280 57.4%	380 (108) Disagreement $X^2_{(1)}=85.263; p<.001$
Tracking Beeper on Car			
The police placing an electronic tracking device on a private citizen's car so that they can track the car's movement is not an invasion of a reasonable expectation of privacy and, therefore, police should not need a warrant authorizing the installation of the tracking device to gather information about where the vehicle is driven. United States v. Knotts, 460 U.S. 276 (1983).	35 7.1%	419 85.5%	454 (36) Disagreement $X^2_{(1)}=324.793; p<.001$

Table 7: Reasonable Expectations of Information and Communication Privacy (con't)

Wiretaps of Telephones			
A warrant should be required before law enforcement can place a wiretap or other recording device on a phone, even a public phone. Katz v. United States, 389 U.S. 347 (1967).	268 63.1%	98 23.1%	366 (59) Agreement $X^2_{(1)} = 78.962; p<.001$
A warrant should be required before law enforcement can place a wiretap or other recording device on a cell phone. Title III codified as amended at 18 U.S.C. §§ 2510–22 (2010).	553 11.7%	30 7.1%	383 (42) Agreement $X^2_{(1)} = 272.399; p<.001$
Border Searches of Computer Hard Drives			
Customs officials may randomly search passengers' computers and memory devices for evidence of criminal activity, including evidence of possessing child pornography, as they enter the country at international borders. United States v. Arnold, 523 F.3d 941 (9th Cir. 2008).	110 22.5%	299 61.1%	409 (80) Disagreement $X^2_{(1)} = 87.337; p<.001$

2. Multivariate Analyses

Prior to constructing multivariate models for each of the privacy scales, individual bivariate linear regression analyses were conducted to examine associations between each of the independent variables and each of the four privacy scales. Of the thirteen different independent variables included in the models, seven were found to be significantly associated with one or more of the privacy scales. These included: age with territorial privacy ($F=5.496$, $r^2=.028$, $p<.01$); political affiliation with territorial privacy ($F=4.468$, $r^2=.024$, $p<.01$) and communications privacy ($F=4.907$, $r^2=.022$, $p<.01$); religion with bodily privacy ($F=5.562$, $r^2=.042$, $p<.01$); religious attendance with bodily privacy ($F=2.514$, $r^2=.019$, $p<.05$) and communications privacy ($F=4.258$, $r^2=.020$, $p<.05$); education with territorial privacy ($F=7.140$, $r^2=.037$, $p<.01$) and communications privacy

($F=8.120$, $r^2=.038$, $p<.001$); college major with bodily privacy ($F=4.757$, $r^2=.012$, $p<.05$), information privacy ($F=5.643$, $r^2=.014$, $p<.05$), and communications privacy ($F=5.323$, $r^2=.013$, $p<.05$); and whether the respondent had ever studied constitutional criminal procedure with informational privacy ($F=5.939$, $r^2=.015$, $p<.05$).[399] Sex, race, marriage/relationship status, political view, religiosity, and income were not significantly associated with any of the privacy scales.

Four different multivariate linear regression models were constructed (one for each of the privacy domains/scales). For each model, independent variables whose association with the privacy scale had a p-value of .05 or less in the bivariate analysis were included in the multivariate model. The results of the final models are presented in Table 8.

Table 8: Multivariate Linear Regression Models Predicting Expectations of Privacy across Multiple Privacy Domains[400]

Independent Variable	**Bodily Privacy**	**Territorial Privacy**	**Informational Privacy**	**Communications Privacy**
	b (SE)	**b (SE)**	**b (SE)**	**b (SE)**
Constant	64.43 (1.90)	69.99 (1.50)	70.04 (1.13)	76.20 (1.72)
Age (*Ref. = 20-23*) Under 20 Over 23		1.62 (1.30) -0.52 (1.47)		
Political Aff. (*Ref. = Dem.*) Republican Independent/Other	-2.09 (1.52) -0.30 (1.53)	-3.00 (1.23)* -2.03 (1.23)†		-4.06 (1.62)* -0.08 (1.65)

399. Because these bivariate analyses required fifty-two different regression models, the results are omitted here. Rather, all of these variables were then included in multivariate linear regression models predicting expectations of privacy across multiple privacy domains, the results of which are reported in Table 8.

400. After running the multivariate models presented in Table 8, other models were run in an attempt to increase the explanatory power and/or to improve upon the parsimony of the models. The first of these models were run with three demographic factors included (sex, age, and race/ethnicity), as well as the independent variables that had bivariate associations with the dependent variable measuring a p-value of .10 or less. However, none of those models had higher adjusted R-squared values, and they did not show significant differences in the slope coefficients values or p-values for the key covariates. The second set of models included only the independent variables that were at or near statistical significance in the original multivariate models. Once again, these models did not improve upon the explanatory power of the overall models. Therefore, the results of these additional models are not reported here.

Table 8: Multivariate Linear Regression Models Predicting Expectations of Privacy across Multiple Privacy Domains (con't)

Religion (*Ref. = Catholic*) Christian Agnostic/Atheist Other	2.24 (1.52) 5.27 (2.03)* 0.61 (1.74)			
Relig. Attend. (*Ref. = Rarely*) Daily/Weekly Monthly/Occasionally	-1.80 (1.71) -0.98 (1.59)			-1.02 (1.69) -2.70 (1.52)†
Education (*Ref. = H.S./GED*) Some college B.A./B.S. or higher degree	-2.95 (1.48)* -3.36 (1.88)†	-3.01 (1.34)* -2.12 (2.03)	-0.91 (1.24) 2.89 (1.62)†	0.17 (1.58) 6.74 (2.04)**
Major (*Crim. = 1*)	-1.48 (1.24)		-1.48 (1.08)	-2.04 (1.33)
Crim. Proc. Course (*Yes = 1*)		-0.17 (1.26)	-2.91 (1.33)*	
F	2.504**	3.311**	4.117**	4.785***
R-Squared	.064	.060	.040	.077
Adjusted R-Squared	.038	.042	.030	.061
N	378	372	399	408
*$p < 0.05$; ** = $p < 0.01$; *** = $p < .001$				

The two variables with the strongest impact on expectations of privacy across the four different domains were political affiliation and educational level. Republicans generally had lower support for the protection of privacy than Democrats and were significantly lower in two of the privacy domains (territorial and communications). Specifically, Republicans scored approximately three points lower on the territorial privacy scale and four points lower on the communications scale.

Education was an important factor across all four domains. In the domains of body and territory, individuals who had higher levels of education reported less support for privacy protections than individuals who had only a high school degree. However, more educated individuals reported stronger support for privacy protections in the areas of information and communications. Specifically, individuals with a bachelor's degree scored nearly seven points higher on the communications privacy scale than individuals with only the equivalent of a high school diploma.

Focusing on bodily privacy, five different factors had significant

bivariate associations with the bodily privacy scale and were included in the multivariate model. These included political affiliation, religion, religious attendance, educational level, and college major. However, in the multivariate model, only religion and educational level retained their significance. For religion, individuals who were agnostic/atheist reported higher levels of support for the protection of bodily privacy than Catholics (agnostic/atheists scored 5.27 points higher on the 100 point scale than Catholics). For education, individuals who had at least some level of college education reported lower levels of support for the protection of bodily privacy than individuals who only had a high school level education (individuals with some level of college education scored 2.95 points lower than individuals with only high school level education).

VII. Discussion

A. Views on Reasonable Expectations of Privacy

As stated above, the primary goal of this study was to investigate whether societal views on whether a subjective expectation of privacy was objectively reasonable aligned with judicial determinations concerning reasonable expectations of privacy as expressed in the holdings of leading Fourth Amendment cases.

1. Bodily Privacy

As Table 5 illustrates,[401] respondents concurred with precedent providing Fourth Amendment protection to bodily privacy while generally disagreeing with cases which upheld invasions of bodily privacy as "reasonable." Specifically, respondents agreed, by a roughly 49% to 33.1% margin ($X^2_{(1)}=14.786$; $p<.001$), with the holding of *Winston v. Lee*[402] that surgery, without the consent of the person being operated upon, constitutes such an invasion of privacy that it would be unreasonable even if likely to produce evidence of a crime. There was similar agreement with the holding in *Safford Unified School Dist. v. Redding*;[403] 79.3% of respondents agreed that a strip search of a student for evidence of contraband drugs, even upon particularized suspicion, is not "reasonable" under the Fourth Amendment—just 7.9% disagreed ($X^2_{(1)}=243.000$; $p<.001$). Further, by more than a two-to-one margin, respondents also agreed with various circuit court of appeals' precedents which held that close-proximity "dog sniffs" of people for evidence of contraband violate a reasonable expectation of

401. *See supra* Part VI.B.1.
402. 470 U.S. 753 (1985).
403. 129 S. Ct. 2633 (2009).

bodily privacy ($X^2_{(1)}=48.516; p<.001$).[404]

Conversely, there was overwhelming disagreement with two leading cases in which the U.S. Supreme Court held that the Fourth Amendment did not protect bodily privacy. First, more than 75% of respondents rejected the holding in *Veronia School Dist. 47J v. Acton*[405] that random (i.e., suspicionless) drug testing of high school student athletes is a reasonable intrusion of bodily privacy ($X^2_{(1)}=179.263; p<.001$). An even higher percentage of respondents, 83.2%, disagreed with *Atwater v. City of Lago Vista*'s[406] holding that an arrest for a minor traffic violation, such as not wearing a seatbelt, constitutes a reasonable seizure under the Fourth Amendment ($X^2_{(1)}=283.549; p<.001$).

Responders were split in their support for warrantless seizures of blood samples from DUI suspects as authorized in *Schmerber v. California*.[407] A plurality of 46.6% disagreed with the Court's holding, while 41.8% agreed; this difference, however, was not statistically significant ($X^2_{(1)}=1.327; p= n.s.$). Respondents were also divided, almost to the person, with respect to whether police should be able to conduct a warrantless search of a vehicle's passenger if they have probable cause to believe that the vehicle contains contraband ($X^2_{(1)}=0.003; p= n.s.$).[408]

The only bodily privacy cases in which respondents concurred, to a statistically significant degree, that invasions of bodily privacy were constitutionally reasonable were those upholding drug testing of certain types of employees whose unimpaired performance on the job is necessary to ensure public safety, such as train conductors, airline pilots, and police. In fact, 80% of respondents concurred with the holdings in *Skinner v. Railway Labor Executives' Association*[409] and *National Treasury Employees Union v. Von Raab* ($X^2_{(1)}=259.645; p<.001$).[410]

2. Territorial Privacy

As with bodily privacy, the results presented in Table 6 suggest that respondents embrace a more comprehensive scope of reasonable expectation of privacy in the realm of territorial privacy than the courts have.[411] In fact, societal conceptualizations of reasonable expectations of privacy concerning property run contrary to the overwhelming number of

404. *See* Horton v. Goose Creek Indep. Sch. Dist., 690 F.2d 470 (5th Cir. 1982); B.C. v. Plumas Unified Sch. Dist., 192 F.3d 1260 (9th Cir. 1999) (same for a close-proximity, but non-contact dog sniffs of students); *cf.* United States v. Reyes, 349 F.3d 219 (5th Cir. 2003).

405. 515 U.S. 646 (1995).

406. 532 U.S. 318 (2001).

407. 384 U.S. 757 (1966).

408. *Compare* Wyoming v. Houghton, 526 U.S. 295, 302 (1999), *with* Owens v. Commonwealth, 244 S.W.3d 83, 87–88 (Ky. 2008), *and* People v. Hart, 86 Cal. Rptr. 2d 762 (Cal. Ct. App. 1999).

409. 489 U.S. 602 (1989).

410. 489 U.S. 656 (1989).

411. *Supra* Part VI.B.1.

Fourth Amendment warrant exceptions.

a. Privacy in One's Vehicle

By a 52.3% to 35.8% margin, respondents rejected the so-called "automobile exception" to the Fourth Amendment's warrant requirement as set forth in *Carroll v. United States* ($X^2_{(1)}=12.902$; $p<.001$).[412] A plurality of 46.4% of respondents similarly disagreed with the outcome in *Wyoming v. Houghton*, although with 38.6% expressing agreement with the decision, the difference was not statistically significant ($X^2_{(1)}=2.909$; $p = n.s.$). There was marginally more support, 45.3%, for the U.S. Supreme Court's ruling in *Arizona v. Gant*, which rejected police authority to conduct a warrantless search of a motor vehicle incident to the arrest of its driver unless it is reasonable to believe that the arrestee might access the vehicle at the time of the search or that the vehicle contains evidence of the offense of arrest.[413] However, 42% disagreed with the *Gant* decision ($X^2_{(1)}=0.598$; $p = n.s.$). This lack of a significant difference suggests that even though the decision limited law enforcement's ability to conduct a warrantless search of a motor vehicle, it may not have gone far enough to protect the privacy interests that an arrestee maintains in his or her vehicle.

b. Privacy in One's Home

Respondents overwhelmingly disagreed with many of the warrant exceptions that allow law enforcement officers to conduct warrantless searches of private homes. Somewhat surprisingly, more than half of respondents rejected the use of both the plain view doctrine[414] ($X^2_{(1)}=41.195$; $p<.001$) and the plain smell doctrine[415] ($X^2_{(1)}= 15.919$; $p<.001$) as means of allowing law enforcement officers to search for or seize evidence inside a private residence without a warrant. Notably, although respondents rejected the applicability of the plain view doctrine as it applies to police officers looking through the windows of a residence, they agreed with the holding of *Chimmel v. California*[416] by a 52.2% to 35.4% margin that evidence found in plain view as a result of conducting a protective sweep of a home during the execution of a valid arrest warrant should be admissible ($X^2_{(1)}=15.71$; $p<.001$).

The only territorial privacy case with a fact pattern relevant to privacy within the home to garner significant support was *Kyllo v. United States*.[417] By a margin of nearly 60% to 24%, respondents overwhelmingly

412. 267 U.S. 132 (1925).
413. 556 U.S. 332 (2009).
414. Texas v. Brown, 460 U.S. 730 (1983); United States v. Taylor, 90 F.3d 903 (4th Cir. 1996).
415. *See* United States v. Humphries, 372 F.3d 653 (4th Cir. 2004).
416. 395 U.S. 752 (1969).
417. 533 U.S. 27 (2001).

agreed that police should not be able to use thermal imaging devices to "see" into a private home in a manner that would not have been possible without a physical intrusion prior to the advent of such technology ($X^2_{(1)}=64.655; p<.001$).

c. Privacy Around One's Home

The results from questions probing respondents' beliefs about curtilage and open fields provide further evidence of hostility to warrant exceptions that permit invasions of territorial privacy. Nearly three-quarters of respondents rejected the holding in *United States v. Dunn*[418] that barns, sheds, and similar outbuildings which are not fenced-in and lie many yards from a suspect's house are not within the "curtilage" of the home and, therefore, no warrant should be needed to search such structures ($X^2_{(1)}=201.736; p<.001$). Similarly, two-thirds of the respondents disagreed with the holding of *Oliver v. United States*[419] insofar as they believed that posting "no trespassing" signs around open fields created a reasonable expectation of privacy such that the warrantless search of such lands should not be legally permissible under the Fourth Amendment ($X^2_{(1)}=109.323; p<.001$). Although a plurality of 44.4% of respondents agreed with *California v. Ciraolo*[420] that a warrant should not be necessary to conduct an aerial search from an altitude of 1,000 feet, nearly as many people, 40.6%, disagreed—producing a lack of a statistically significant finding with respect to this practice ($X^2_{(1)}=0.771; p=$ *n.s.*). Moreover, when the height of the aerial observation is reduced to only 400 feet, a significant difference was found between the 32.5% of respondents who concurred with the holding in *Florida v. Riley*[421] which upheld such a search and the 50.5% who disagreed with the outcome of that case ($X^2_{(1)}=17.099; p<.001$).

d. Students' Territorial Privacy at School

Unlike the clear rejection of precedent upholding invasions of students' bodily privacy noted earlier, higher levels of agreement were found with cases which upheld invasions of students' territorial privacy. In fact, 62.5% of respondents agreed with the holding in *New Jersey v. T.L.O.*[422] that school officials should be permitted to search students' lockers for evidence of the possession of contraband without probable cause or a warrant, while only 21.7% disagreed ($X^2_{(1)}=82.836; p<.001$). However, when the search involves a purse or a backpack, support dropped 20 percentage points while opposition nearly doubled percentage points,

418. 480 U.S. 294 (1987).
419. 466 U.S. 170 (1984).
420. 476 U.S. 207 (1986).
421. 488 U.S. 445 (1989).
422. 469 U.S. 325 (1985).

rendering the difference between those agreeing and disagreeing with the case statistically insignificant ($X^2_{(1)}=0.142$; $p=$ *n.s.*).

3. Information and Communication Privacy

As Table 7 demonstrates,[423] respondents overwhelmingly expressed agreement with precedent limiting invasions of communications privacy. For example, consistent with the holding in *Katz v. United States*[424] and the requirements of Title III of the Omnibus Crime Control and Safe Streets Act,[425] 63.1% of respondents agreed that a warrant is required to record a phone conversation, even on a public telephone, compared to only 23.1% who disagreed ($X^2_{(1)}=78.962$; $p<.001$). The level of agreement rose to 91.7% when the question was altered to involve a person's private cell phone, rather than a public phone, while the level of disagreement plummeted to only 7.1% ($X^2_{(1)}= 272.399$; $p<.001$). Conversely, respondents disagreed with a key piece of precedent which upheld an intrusion of communications privacy. By a nearly three-to-one margin, 57.4% of the respondents disagreed with the Supreme Court of Iowa's decision in *State v. Canal*[426] which upheld the child pornography conviction of a teenager who had "sexted" a nude image of himself to a teenage girl ($X^2_{(1)}=133.067$; $p<.001$).

Consistent with bodily and territorial privacy, significant disagreement was found between survey respondents' views concerning reasonable expectations of both information privacy and precedent which upheld invasions into that realm, with one notable exception. A whopping 85.4% of respondents expressed disagreement with the Supreme Court's decision in *United States v. Miller*[427] that bank customers have no reasonable expectation of privacy in their banking transactions for Fourth Amendment purposes; a mere 5.5% of respondents agreed that law enforcement officials should be able to obtain bank records without a judicially-authorized warrant ($X^2_{(1)}=293.568$; $p<.001$).

A similarly high level of disagreement, 85.5%, was found with the decision in *United States v. Knotts*,[428] which upheld the warrantless installation of a tracking beeper for the purposes of tracking a vehicle; only

423. *See supra* Part VI.B.1.

424. 389 U.S. 347 (1967).

425. Codified as amended at 18 U.S.C. §§ 2510–22 (2010).

426. State v. Canal, 773 N.W.2d 528 (Iowa 2009). It should be noted that the *Canal* case did not involve a Fourth Amendment challenge. Rather, the issue before the court was whether the evidence was sufficient to support a finding that the "sexted" image was obscene. In the question asked of survey respondents, however, we altered the facts of *Canal* to mirror those of some reported cases in recent news stories in which school officials searched students' cell phones and turned over sexted images to police for use in criminal prosecutions. *See, e.g.*, Miller v. Skumanick, 605 F. Supp. 2d 634 (M.D. Pa. 2009). In doing so, our fact pattern created state action akin to that found in *New Jersey v. T.L.O.*, 469 U.S. 325 (1985), and its progeny.

427. 425 U.S. 435 (1976).

428. 460 U.S. 276 (1983).

7.1% of respondents agreed with the Court's reasoning that the electronic monitoring of a car's whereabouts did not constitute a "search" for Fourth Amendment purposes since no reasonable expectation of privacy was violated ($X^2_{(1)}=324.793$; $p<.001$).

Finally, by a nearly three-to-one margin, 61.1% of respondents disagreed with the Ninth Circuit's decision in *United States v. Arnold*[429] upholding random searches of computer hard drives at international borders. It is notable that only 22.5% of respondents agreed with the permissible scope of such searches even when they were being performed to search for evidence of child pornography ($X^2_{(1)}=87.337$; $p<.001$).

The only informational privacy question on our survey which generated high levels of agreement with precedent that had not protected informational privacy concerned abandoned property. More than half of respondents agreed with the U.S. Supreme Court's decision in *California v. Greenwood*[430] insofar as a person relinquishes his or her reasonable expectation of privacy in the information in garbage when it is placed on the curb where anyone, including police, could search through it ($X^2_{(1)}=44.765$; $p<.001$). Interestingly, though, when the facts of *Greenwood* were changed, so did opinions regarding what the police should be able to do. Anticipating agreement with *Greenwood*, we also asked people to indicate their level of agreement with the following question:

Assume, for this question only, that John put his trash bags next to his front door, rather than out on the curb. Under these circumstances, John would reasonably expect that only the trash collector would come up to his front door to take the trash bags; no one else should have the right to go through John's garbage.

Of the 454 respondents who answered this question, 292 (64.3%) agreed with it; 63 (13.9%) disagreed with it; and 99 (21.8%) neither agreed nor disagreed ($X^2_{(2)} = 200.410$, $p<.001$). This suggests that it is not the nature of the property at issue, namely the information that might be gleaned by going through someone's garbage, but rather the interplay between the abandonment of trash and its proximity to one's home, raising issues of territorial privacy as well.

B. Variables Predicting Views on Reasonable Expectations of Privacy

1. Multivariate Results

As Table 8 illustrates,[431] all four multivariate linear regression models reached statistical significance with p-values of less than .01, one of which reached significance with a p-value of less than .001. The two

429. 523 F.3d 941 (9th Cir. 2008).
430. 486 U.S. 35 (1988).
431. *Supra* Part VI.B.3.

variables that had the strongest impact on expectations of privacy across the different privacy domains were political affiliation and educational level. In addition, religion achieved significance in predicting support for bodily privacy, and whether someone had taken a course in criminal procedure achieved significance in predicting support for information privacy.

In spite of the statistical significance of the variables discussed in this section, it should be noted at the outset that, as the relatively low R-squared values reported in Table 8 indicate, the models explained only between 4.0% and 7.7% of the variance. Thus, many other factors beyond the demographic and attitudinal variables examined in the present study contribute to the complex belief system governing determinations of what constitutes a reasonable expectation of privacy.

a. Political Party Affiliation

Republicans express lower levels of support for the protection of privacy than Democrats, and significantly lower levels of support for territorial and communications privacy. Specifically, Republicans scored approximately three points lower on the territorial privacy scale and four points lower on the communications scale than Democrats. Although Democrats and liberals are commonly aligned with the so-called "right to privacy" embodied in substantive due process while Republicans and conservatives are generally hostile to such a conceptualization of privacy, neither territorial nor communications privacy are implicated by the substantive due process approach to privacy.[432] Accordingly, most of the literature on privacy does not offer any insights that might explain this finding. Perhaps lower expectations of privacy are directly related to the Republican political agenda to get tough on crime, which was first conceived by the Nixon administration to "appeal to voters who resent[ed] minorities."[433] The political agenda to get tough on crime eventually instilled itself in the Republican party and, as a result, numerous studies have found that Republican political strength is associated with harsher criminal punishment.[434] It is possible, then, that Republicans may express lower expectations of territorial and communications privacy because they believe that only the guilty have something to hide. But this conclusion is somewhat speculative; further empirical research is necessary to investigate why Republicans express significantly lower levels of support for territorial and communications privacy.

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432. *See generally* Lori A. Ringhand, *Judicial Activism: An Empirical Examination of Voting Behavior on the Rehnquist Natural Court*, 24 Const. Comment. 43 (2007) (examining so-called "liberal" and "conservative" voting trends on the Rehnquist Supreme Court).

433. David Jacobs & Jason T. Carmichael, *Ideology, Social Threat, and the Death Sentence: Capital Sentences across Time and Space*, 83 SOC. FORCES 249, 257 (2004).

434. *See, e.g., id.*; David Jacobs & Ronald Helms, *Collective Outbursts, Politics, and Punitive Resources: Toward a Political Sociology of Spending on Social Control*, 77 SOC. FORCES 1497 (1999).

b. Educational Level

Individuals who had higher levels of education reported less support for privacy protections than individuals who had only a high school diploma (or equivalent) in the domains of bodily and territorial privacy. However, individuals who had a bachelor's degree or higher reported stronger support for privacy protections than individuals with only the equivalent of a high school education in the areas of information and communications privacy. Specifically, individuals with bachelor's degrees scored nearly seven points higher on the communications privacy scale than individuals with only the equivalent of a high school diploma.

Although the literature does not offer an explanation for the role educational achievement plays in formulating beliefs across the various privacy domains, three factors may be partially responsible for this finding. First, individuals with only a high school level of education tend to be younger and, as research suggests, younger individuals come into contact with the law more often because they commit more crime, which, in turn, adversely affects their perception of the police.[435] Second, because "younger individuals value their freedom," they may express higher expectations of privacy as a way to limit the amount of negative contact with law enforcement.[436] Third, individuals with a bachelor's degree or higher may express lower expectations of privacy because they generally perceive low levels of police misconduct.[437] Accordingly, individuals may place more trust in police as their educational level increases and, therefore, have fewer objections to law enforcement encroachments into various privacy domains.

c. Religion

Individuals who self-identified as being either agnostic or atheist reported higher levels of support for the protection of bodily privacy than respondents who identified as being affiliated with a major organized religion. Because Catholics expressed the lowest levels of support for bodily privacy protections, they were used as the reference group. Protestant Christians scored 2.24 points higher than Catholics on the bodily privacy scale, while agnostic/atheists scored 5.27 points higher on the scale than Catholics, the latter difference being statistically significant. Further research is necessary to explain this finding.

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435. *See, e.g.*, Michael D. Reisig & Mark E. Correia, *Public Evaluations of Police Performance: An Analysis Across Three Levels of Policing*, 20 POLICING: INT'L J. POLICE STRATEGIES & MGMT. 311 (1997).

436. John Worrall, *Public Perceptions of Police Efficacy and Image: The "Fuzziness" of Support for the Police*, 24 AM. J. CRIM. JUST. 47 (1999).

437. Kenneth Dowler & Valerie Zawilski, *Public Perceptions of Police Misconduct and Discrimination: Examining the Impact of Media Consumption*, 35 J. CRIM. JUST. 193 (2007).

d. Knowledge of Criminal Procedure

Survey respondents who had taken a course in constitutional criminal procedure were significantly less likely than those who had never studied the subject matter to be supportive of informational privacy. Presumably, this is because students of criminal procedure likely had acquired a nuanced understanding of the law of search and seizure as it applies to issues such as tracking beepers, bank records, and border searches, and that knowledge may have affected their views concerning informational privacy. Yet, having taken a criminal procedure course did not have a similar effect on the three other privacy domains. Although future research should investigate this finding, we speculate that since the Fourth Amendment provides significant levels of protection to bodily, territorial, and communications privacy, the comparably low levels of protection for informational privacy under the Fourth Amendment may have affected their opinions as expressed on the survey.

2. Hypotheses

H_1. Because the Judeo-Christian and Islamic traditions embrace a variety of notions of privacy,[438] we expected that religion would not be significantly associated with any of the dependent variables. H_1 was largely supported, as there were no statistically significant differences between religious affiliation and any of the four privacy domains as predicted. A lack of any religious affiliation vis-à-vis self-identification as either an atheist or an agnostic, however, did reach statistical significance ($b=5.27$, $SE=2.03$, $p<0.05$).

H_2. Based on the leading anthropological studies of privacy,[439] we expected that race/ethnicity would be significantly related to opinions on reasonable expectations of privacy. Specifically, we hypothesized that people hailing from noncontact cultures would be more likely to disagree with precedent authorizing warrantless invasions of bodily, territorial privacy, and information privacy than people from close-contact cultures. H_2 was not supported by the data, as no statistically significant differences were found on the basis of race or ethnicity in either bivariate or multivariate regression models. This finding might be due to the lack of information in the data about participants' current level of cultural identification. Respondents from ethnic minority backgrounds may have already become well-assimilated into contemporary American culture; therefore, they may not be truly representative of their culture of origin.

H_3 and H_4. Based on the leading social-psychological studies of privacy,[440] we expected that men's psychological needs for higher levels of

438. *Supra* Part II.A.2.
439. *Supra* Part II.B.1.
440. *Supra* Part II.B.2.

bodily and territorial privacy would make them more likely to disagree with precedent authorizing warrantless invasions of bodily and territorial privacy than women; and that women's greater desire for informational privacy would make them more likely to disagree with precedent authorizing warrantless invasions of informational or communications privacy than men. Neither H_3 nor H_4 was supported by the data, as no statistically significant differences were found on the basis of sex in either bivariate or multivariate regression models.

VIII. Conclusion

The U.S. Supreme Court's ruling in *Katz v. United States*[441] set forth a privacy-based framework for determining the reach of the Fourth Amendment. The Court held that the Fourth Amendment only protects people when an actual, subjective expectation of privacy is one "that society is prepared to recognize as 'reasonable.'"[442] But determining societal views regarding that which constitutes a reasonable expectation of privacy is no easy task. The judiciary—a non-majoritarian institution neither popularly chosen nor expected to express or implement the will of the people—makes such determinations on a case-by-case basis without the benefit of empirical research which would lend insight into the actual views of society. As Slobogin and Schumacher's groundbreaking study concluded, judicial "conclusions about the scope of the Fourth Amendment are often not in tune with commonly held attitudes about police investigative techniques."[443] The data gathered and analyzed in the present study reinforce the finding that judges often fail to appreciate the degree to which "society" believes privacy should be protected from law enforcement intrusions.

Survey respondents in this study expressed significant levels of agreement with precedent protecting privacy rights under the Fourth Amendment.[444] Conversely, participants expressed significant levels of disagreement with case law upholding various types of invasions of privacy across the four privacy domains.[445] In fact, the only areas in which the

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441. 389 U.S. 347 (1967).

442. *Id.* at 361 (Harlan, J., concurring).

443. Slobogin & Schumacher, *supra* note 373, at 774.

444. For example, respondents agreed with cases holding that the Fourth Amendment protects against: ordering someone to undergo surgery for purpose of retrieving evidence ($X^2_{(1)} = 14.786$; $p < .001$); using thermal imaging devices to "see" inside a private residence without a warrant ($X^2_{(1)} = 64.655$; $p < .001$); conducting intrusive student searches, such as strip searches ($X^2_{(1)} = 243.000$; $p < .001$); wire-tapping of landline phones ($X^2_{(1)} = 78.962$; $p < .001$) or cell phones ($X^2_{(1)} = 272.399$; $p < .001$); searching outbuildings which lie outside the curtilage of a home ($X^2_{(1)} = 201.736$; $p < .001$); and using close-proximity dog sniffs of people to detect the presence of contraband ($X^2_{(1)} = 48.516$; $p < .001$).

445. Specifically, respondents disagreed with cases authorizing: random drug testing of student athletes ($X^2_{(1)} = 179.263$; $p < .001$); warrantless searches of computer hard-drives at international boarders ($X^2_{(1)} = 87.337$; $p < .001$); arrests for minor traffic violations ($X^2_{(1)} = 283.549$; $p < .001$); warrantless searches of motor vehicles ($X^2_{(1)} = 12.902$; $p < .001$); the applicability of the open fields

research sample agreed with decisions limiting the applicability of Fourth Amendment privacy protections concerned abandoned property,[446] special needs searches for health and safety reasons,[447] and the applicability of the plain view doctrine to contraband visible during a protective sweep.[448] Collectively, the results indicate that courts often misjudge what "society" is prepared to embrace as a reasonable expectation of privacy. This finding replicates those from Slobogin and Schumacher's study insofar as they concluded that "because of their distance from the world of police investigation and the effect of hindsight bias," judges "tend to underestimate the intrusiveness of police actions, at least if community values remain the linchpin of search and seizure jurisprudence."[449] Indeed, the judiciary appears to be much more willing to allow invasions of privacy across all four privacy domains than members of the general public.

The results of this study have significant policy implications because the Fourth Amendment serves significant social objectives beyond establishing the scope of evidence admissibility in a court of law. Slobogin and Schumacher illustrated this point at the end of the article by quoting Professor Monrad Paulsen:

> The basic . . . problem of a free society is the problem of controlling the public monopoly of force. All the other freedoms, freedom of speech, of assembly, of religion, of political action, presuppose that arbitrary and capricious police action has been restrained. Security in one's home and person is the fundamental without which there can be no liberty.[450]

In light of the fundamental importance of the various dimensions of privacy in our constitutional democracy, *Katz* embraced a framework in which societal values regarding the intrusiveness of police actions are supposed to "heavily influence, if not dictate" the scope of constitutional

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doctrine to lands when "no trespassing" signs have been posted ($X^2_{(1)} = 109.323$; $p < .001$); low-altitude aerial searches of lands close to private residences ($X^2_{(1)} = 17.099$; $p < .001$); warrantless searches and seizures at a private residence arising from application of either the plain view ($X^2_{(1)} = 41.195$; $p < .001$) or the plain small doctrines ($X^2_{(1)} = 15.919$; $p < .001$); warrantless access to bank records ($X^2_{(1)} = 293.568$; $p < .001$); and the warrantless use of tracking beepers to monitor where a car is driven ($X^2_{(1)} = 324.793$; $p < .001$).

446. For example, respondents agreed with the holding in *California v. Greenwood*, 486 U.S. 35 (1988), that the warrantless search of garbage placed curbside at a private residence is permissible since there is no reasonable expectation of privacy in such abandoned property ($X^2_{(1)} = 44.765$; $p < .001$).

447. For instance, respondents agreed with precedent upholding the random drug testing of certain types of employees, such as train conductors, airline pilots, and police officers, for safety reasons ($X^2_{(1)} = 259.645$; $p < .001$), as well as precedent upholding searches of student lockers for contraband ($X^2_{(1)} = 82.836$; $p < .001$).

448. Just over half ($X^2_{(1)} = 15.710$; $p < .001$) of respondents agreed with the holding in *Chimmel v. California*, 395 U.S. 752 (1969).

449. Slobogin & Schumacher, *supra* note 373, at 775.

450. *Id.* at 774 (quoting Monrad G. Paulsen, *The Exclusionary Rule and Misconduct by the Police*, *in* POLICE POWER AND INDIVIDUAL FREEDOM 87, 97 (Claude R. Sowle ed., 1962)).

privacy protections.[451] But the "quasi-scientific, objective nature of legal analysis"[452] does not provide a particularly accurate method of determining reasonable expectation of privacy for Fourth Amendment purposes within the framework of *Katz*. Accordingly, we join Slobogin and Schumacher in recommending that judges engage in the process of constitutional fact-findings (i.e., using empirical research) rather than basing their decision on the "suppositions of thoughtful reflection"[453] when deciding cases in which objective reasonability of a reasonable expectation of privacy is at issue. This, in turn, could provide for better alignment between Fourth Amendment jurisprudence and the actual, rather than supposed, beliefs regarding what "society is prepared to recognize as 'reasonable'" in the contexts of privacy invasions.[454] But, as both Fradella[455] and Slobogin and Schumacher[456] have pointed out, given judicial hostility to empirical research in the context of adjudicating constitutional claims relevant to criminal law and procedure, it is most likely that the courts will either "reject or ignore the data."[457] We therefore call upon judges to be more sensitive to the privacy and autonomy implications of their decisions in the Fourth Amendment context. Their assessments should "reflect realistic societal attitudes rather than their own."[458] We hope that the data from this study, and hopefully others which seek to build on our research, will help judges do just that.

451. *Id.*
452. KAIRYS, *supra* note 19 at 2.
453. Fradella, *supra* note 21, at 105.
454. Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).
455. Fradella, *supra* note 21, *passim*.
456. Slobogin & Schumacher, *supra* note 373, at 774.
457. *Id.*
458. *Id.* at 775.

Article

Who Can Testify About Lab Results after *Melendez-Diaz* and *Bullcoming*?: Surrogate Testimony and the Confrontation Clause

Jesse J. Norris*

Abstract

In *Melendez-Diaz v. Massachusetts*, the U.S. Supreme Court held that a certificate presenting forensic lab results was testimonial evidence and that defendants thus have the Sixth Amendment right to cross-examine the analyst. Despite this ruling, courts remain divided on the question of surrogate testimony: when can an expert witness, such as a lab supervisor or outside expert, testify in place of the analyst? How this question is answered has enormous consequences for the future of the Confrontation Clause and the criminal justice system more generally. Widespread surrogate testimony threatens to undermine confrontation rights and contribute to false convictions, yet banning it altogether could result in defendants going free whenever the forensic analyst is unavailable and the test cannot be repeated. The Supreme Court ruled against one type of surrogate testimony in *Bullcoming v. New Mexico*, but left open the possibility that other forms of surrogate testimony are constitutional. This Article rejects the main justifications for surrogate testimony. In doing so, it develops four arguments against the common claim that a surrogate's independent analysis of analyst-generated data precludes Confrontation Clause violations. The Article contends that most surrogate testimony likely violates the Confrontation Clause, and that this is clearest when the surrogate relies on analyst-produced data that is itself testimonial evidence. In addition, the Article presents a test for determining whether the data upon which the surrogate relies is testimonial.

The Article proposes an alternative standard for admitting surrogate testimony in some limited circumstances. Unlike previous proposals, this

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standard is consistent with the logic of *Crawford v. Washington* and faithful to the principles of the Confrontation Clause. Surrogate testimony should be admitted when the data relied upon by the surrogate are clearly nontestimonial, and excluded when the data are testimonial. Yet when the testimonial status of the data is ambiguous, the analyst is genuinely unavailable, and a second test is impossible, courts should consider several factors in deciding whether to admit the testimony. These include the trustworthiness of the evidence, the nature of the surrogate's analysis, the degree to which the data's validity is dependent on the analyst, and the possibility that failure to admit the evidence would endanger public safety by acquitting a factually guilty, dangerous defendant.

I. Introduction

Even before the U.S. Supreme Court decided *Melendez-Diaz v. Massachusetts*, the case had been described as "[t]he most important case for the future of our criminal justice system."[1] This is not surprising, given the case's potential to reinvigorate the Confrontation Clause, and thus our adversary system, in an era in which criminal convictions often turn on scientific testing.[2] The Supreme Court ruled in *Melendez-Diaz* that laboratory results were testimonial evidence, and thus could not be admitted into evidence without producing the forensic analyst for cross-examination, unless there was a prior opportunity for cross-examination and the analyst was unavailable.[3] Yet one of the key questions determining the impact of *Melendez-Diaz* is still unsettled. The question is that of surrogate testimony: must the analyst who actually performed the test testify, or may someone else—such as the lab supervisor or an outside expert—testify about, or based on, the lab results?[4] Two years after the *Melendez-Diaz* decision, the Supreme Court held in *Bullcoming v. New Mexico* that surrogate testimony was unconstitutional when the surrogate played no role in the test and did not offer an expert opinion.[5] But the Court did not rule on other forms of surrogate testimony, which have continued to be approved by lower courts.[6]

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1. Matthew G. Kaiser, *Lab Technicians, Too.* NAT'L L.J., July 14, 2008, http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202422896765&slreturn=1&hbxlogin=1.

2. The Confrontation Clause reads as follows: "In all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him." U.S. CONST. amend. VI.

3. Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2532 (2009); *see infra* note 26 and accompanying text.

4. The term surrogate testimony, as it is used in this Article, refers to testimony by someone other than the testing analyst, which is based on the surrogate's reliance on forensic data or a forensic report that the testing analyst prepared in the expectation that it would be used as evidence in a legal proceeding.

5. 131 S. Ct. 2705 (2011).

6. *See infra* Part II.D–E.

This issue will affect the impact of *Melendez-Diaz* because if only the testing analyst may testify, factually guilty defendants may often go free when the analyst is unavailable. For example, let us say a coroner analyzed a corpse and produced a report describing that the cause of death was strangulation. Years later, when a murder suspect is set for trial, the coroner has died. Unless independent means exist for proving that the victim was murdered—such as an eye witness—the suspect will likely be acquitted, if courts find that all surrogate testimony violates the Confrontation Clause.[7]

This question will also determine, to a great extent, the impact of the Court's Confrontation Clause jurisprudence on the rights of defendants. If lab supervisors or outside experts may testify in place of analysts with few restrictions, there is a real danger that defense counsel will be unable to expose errors or other problems with the laboratory tests. This could result in a weakening of confrontation rights and the conviction of innocent defendants.[8] The challenge for courts is to craft a doctrine that strikes an appropriate balance between the interest of the state and the public in convicting guilty defendants on the one hand and the need to maintain defendants' Sixth Amendment right to confrontation on the other. This will probably result in a test that allows surrogate testimony under certain circumstances. After all, few seriously believe that courts will allow murderers to go free merely because the coroner has died.[9]

However, as explained further below, available arguments in favor of surrogate testimony either have been completely discredited or are deeply flawed. The *Melendez-Diaz* Court itself ruled out several justifications for surrogate testimony arising from the claim that forensic results are not testimonial.[10] The contention that cross-examining a surrogate adequately compensates for the inability to cross-examine the original analyst is factually implausible and clearly inconsistent with *Crawford* and *Melendez-Diaz*.[11] The *Bullcoming* Court recognized this, rejecting such a justification for surrogate testimony.[12] Justice Anthony Kennedy's dissent in *Melendez-Diaz* suggests that the lab supervisor has as

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7. Crawford v. Washington, 541 U.S. 36 (2004); *see* United States v. De La Cruz, 514 F.3d 121, 132–35 (1st Cir. 2008) (discussing the application of hearsay rules to substitute testimony for autopsies); *see also* Carolyn Zabrycki, Comment, *Toward a Definition of "Testimonial": How Autopsy Reports Do Not Embody the Qualities of a Testimonial Statement*, 96 CALIF. L. REV. 1093, 1094, 1115 (2008) (claiming that considering autopsies to be testimonial statements could "effectively function[] as a statute of limitations for murder").

8. *See* Jennifer L. Mnookin, *Expert Evidence and the Confrontation Clause after* Crawford v. Washington, 15 J.L. & POL'Y 791, 834–35 (2007) (discussing the impact of surrogate testimony on defendants' confrontation rights).

9. Steven Yermish, Melendez-Diaz *and the Application of* Crawford *in the Lab*, 33 CHAMPION 28, Aug. 2009, at 31 (observing that "[i]t seems unlikely" that the Supreme Court will "permit homicide prosecutions to fail where the original medical examiner is no longer available and a substitute witness can utilize only nontestimonial evidence to support an opinion[.]").

10. *See* 129 S. Ct. at 2532–40.

11. *See infra* Part III.B.

12. Bullcoming v. New Mexico, 131 S. Ct. 2705, 2716 (2011).

good of a claim to being "the analyst" as does the testing analyst.[13] If this were true, the lab supervisor could unproblematically serve as a surrogate witness. Yet this rationalization for surrogate testimony is unconvincing, since the role of the supervisor in the test is typically quite limited, rarely including direct observation of the test.[14]

The most prominent contemporary argument for surrogate testimony, expressed in many court decisions before and after *Melendez-Diaz*, is that the Confrontation Clause permits lab supervisors or outside experts to testify as expert witnesses about their independent analysis of forensic test results generated by the original analyst.[15] As explained in Part III, there are four main problems with this argument. First, the emphasis in *Melendez-Diaz* on the importance of cross-examining the actual analyst suggests all surrogate testimony is unconstitutional, regardless of whether the surrogate applies independent analysis.[16] Second, even when some "independent analysis" is involved, surrogate witnesses will frequently serve as mere conduits for analysts' testimonial evidence, depriving defendants of their right to challenge the source of testimonial statements against them.[17] Third, surrogate testimony sits uneasily with the Rules of Evidence, which never contemplated an arrangement in which an expert witness relies solely on data produced by a nontestifying witness in anticipation of trial.[18] Finally, compelling policy considerations, such as the heightened risk of false convictions, surrogates' multiple incentives to reach the same conclusion as the analyst, and the existence of superior alternatives, suggest surrogate testimony is undesirable even if the surrogate applies independent analysis.[19]

Existing scholarship on the Confrontation Clause and forensic evidence includes relatively few and brief arguments about surrogate testimony.[20] The sharpest critiques of surrogate testimony do not distinguish between surrogates who merely describe the conclusions of the analyst and those who apply independent analysis to analyst-produced "raw data."[21] Scholars'

13. 129 S. Ct. at 2545 (Kennedy, J., dissenting).

14. *See infra* Part III.C.

15. *See infra* Part II.

16. *See infra* Part III.C.

17. *Id.*

18. *Id.*

19. *Id.*

20. *See* Mnookin, *supra* note 5, at 834; Julie A. Seaman, *Triangular Testimonial Hearsay: The Constitutional Boundaries of Expert Opinion Testimony*, 96 GEO. L.J. 827, 847–48 (2008); Yermish, *supra* note 6, at 31; Ross Andrew Oliver, Note, *Testimonial Hearsay as the Basis for Expert Opinion: The Intersection of the Confrontation Clause and Federal Rule of Evidence 703 After* Crawford v. Washington, 55 HASTINGS. L.J. 1539 (2004) (arguing that a court "must prohibit an expert from testifying to an opinion in those cases where the opinion relies upon testimonial hearsay to such an extent that it substantially transmits to the jury the content of the hearsay, unless the defendant has an opportunity to test the hearsay by cross-examination," but implying that when a surrogate "add[s] substantial expertise and analysis," this may not violate the Confrontation Clause.).

21. *See supra* note 16 and accompanying text.

proposals for doctrines governing the admission of surrogate testimony are too permissive to adequately protect defendants' confrontation rights, and fail to justify their exceptions to these rights in a principled fashion.[22]

This Article builds on, and addresses the lacunae of, the extant literature by arguing that most surrogate testimony violates the Confrontation Clause—even when the surrogate draws an independent conclusion from analyst-produced data—but that principled bases exist for allowing surrogate testimony under certain conditions.[23] If the data relied upon by the surrogate is testimonial, surrogate testimony would violate the Confrontation Clause, but if the data is clearly nontestimonial, surrogate testimony should be admitted. However, in many cases the testimonial status of the data may be ambiguous.[24] When ambiguity exists about whether the data is testimonial, the analyst is genuinely unavailable, and a second test is impossible, courts should consider several factors in deciding whether to admit the testimony.[25] These factors include the extent to which the data is dependent on the analyst's skill, the reliability of the forensic process, the nature of the surrogate's independent analysis, and the likelihood that excluding the testimony would free a factually guilty defendant and endanger public safety.[26] Each of these factors is consistent with the underlying principles of contemporary Confrontation Clause jurisprudence. Because this approach is limited to cases in which it is uncertain whether the underlying data is testimonial, it avoids results that would be unconstitutional under *Crawford*'s absolute requirements.[27] Moreover, by requiring a second test whenever possible, this proposed standard would reduce the number of possible Confrontation Clause violations and promote accuracy.[28]

In Part II, this Article outlines the holdings of *Crawford*, *Melendez-Diaz*, and *Bullcoming* and describes state and federal court decisions on surrogate testimony. In Part III, this Article undertakes two tasks. First, it rejects four arguments for surrogate testimony, including the contention that cross-examining the surrogate adequately compensates for not being able to cross-examine the analyst, the claim that the lab supervisor is really an "analyst," questionable interpretations of the *Melendez-Diaz* holding, and the argument that surrogates' independent analysis precludes Confrontation Clause violations. As noted above, this Article develops four arguments against the latter justification for surrogate testimony. Second, Part III addresses the question of when analyst-produced data qualifies as

22. *See infra* Part III.C.

23. *See infra* Part III.

24. See *infra* Part IV.B.1.

25. *See infra* Part IV.

26. As explained below, while this Article does not recommend the final factor without hesitation, it is included because it addresses a core concern voiced by courts. *See infra* note 298 and accompanying text.

27. *See infra* Part IV.

28. *Id.*

testimonial evidence. It concludes that such data will be testimonial when, as in most cases, it is produced in anticipation of litigation, sufficiently formalized, statement-like, and dependent on the skill and methodology of the analyst. In Part IV, the Article critiques previous proposals for allowing surrogate testimony, and presents an original standard for the admissibility of surrogate testimony that is faithful to the logic of *Crawford* and the Sixth Amendment.

II. Evading a Revived Confrontation Clause? Surrogate Testimony Survives *Crawford* and *Melendez-Diaz*

This Part describes the *Crawford* and *Melendez-Diaz* holdings, and demonstrates how courts have responded to these decisions in deciding whether to admit surrogate testimony. A review of federal and state cases following *Crawford* indicates that most courts continued to admit surrogate testimony. With few exceptions, federal and state cases after *Melendez-Diaz* have also found surrogate testimony to be consistent with the Confrontation Clause. Courts have justified these holdings by distinguishing *Melendez-Diaz* on several grounds and by pointing to Federal Rule of Evidence 703, which allows experts to rely on inadmissible evidence in some circumstances.

A. *Crawford v. Washington*: Testimonial Evidence Cannot be Admitted Without a Chance for Cross-Examination, but What is Testimonial Evidence?

Crawford enacted a revolution in Confrontation Clause jurisprudence.[29] Before *Crawford*, the balancing test of *Ohio v. Roberts* determined whether evidence could be admitted without producing the witness for cross-examination.[30] Under *Roberts*, an unavailable witness's statement against the defendant could be admitted when the statement had "adequate 'indicia of reliability,'" because it "[fell] within a firmly rooted hearsay exception," or bore "particularized guarantees of trustworthiness."[31]

Crawford overturned *Roberts*, replacing it with a completely different standard. Based on a historical analysis of the Confrontation Clause of the Sixth Amendment, the *Crawford* Court concluded that when evidence is "testimonial," it may not be admitted against the defendant, unless the original witness is unavailable and the defendant had a prior opportunity to cross-examine the witness.[32] However, the Court failed to

29. *See* Neil P. Cohen & Donald F. Paine, Crawford v. Washington*: Confrontation Revolution*, 40 TENN. B. J. 22 (May 2004).

30. Crawford v. Washington, 541 U.S. 36, 40 (2004); Ohio v. Roberts, 448 U.S. 56, 66 (1980).

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

32. *Crawford*, 541 U.S. at 51–57.

define "testimonial" in any precise way.[33] The Court did say that the term "applies at a minimum to prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and to police interrogations."[34] The opinion also cites three definitions of testimonial statements, which all "share a common nucleus."[35]

B. *Melendez-Diaz v. Massachusetts*: Forensic Analyses are Testimonial Evidence, but Who Can Testify About Them?

Melendez-Diaz answered in the affirmative a question left unanswered by *Crawford*: Are forensic tests testimonial evidence? Melendez-Diaz was convicted of distributing cocaine in Massachusetts.[36] At trial, the prosecution introduced certificates of analysis, which described the results of the forensic test indicating that the substance was cocaine.[37] Melendez-Diaz objected, arguing that under *Crawford* the analysts must testify in person for the certificates to be admitted.[38] The court overruled the objection, and the certificates were admitted under state evidence law.[39] Melendez-Diaz appealed from his conviction, arguing that his Sixth Amendment confrontation rights had been violated, but the appeals court upheld the decision, relying on state precedent.[40] The Supreme Judicial Court of Massachusetts denied review.[41] The U.S. Supreme Court reversed, in a majority opinion by Justice Scalia, joined by Justices Ginsburg, Souter, Thomas and Stevens.[42] Thomas concurred, joining the majority but clarifying that he would limit the term "testimonial" to formalized testimonial statements.[43]

The majority opinion found that the certificate was an affidavit, and since the affidavits are testimonial evidence, *Crawford* barred the admission of the certificate unless the analyst was unavailable and the defendant had a previous opportunity to cross-examine the analyst.[44] The Court described the certificates as affidavits because they were "declaration[s] of facts written down and sworn to by the declarant before an officer authorized to administer oaths"[45] and "'solemn declaration[s] or affirmation[s] made for

33. *Id.* at 68 ("We leave for another day any effort to spell out a comprehensive definition of 'testimonial.").
34. *Id.*
35. *Id.* at 51–52.
36. 129 S. Ct. at 2530–31.
37. *Id.* at 2531.
38. *Id.*
39. *Id.*
40. *Id.*
41. *Id.*
42. *Id.* at 2530.
43. *Id.* at 2543 (Thomas, J., concurring).
44. *Id.* at 2532.
45. *Id.* (quoting BLACK'S LAW DICTIONARY 62 (8th ed. 2004)).

the purpose of establishing or proving some fact.'"[46] Moreover, "'certificates' are functionally identical to live, in-court testimony, doing 'precisely what a witness does on direct examination.'"[47] The affidavits were testimonial evidence because affidavits were often mentioned as examples of testimonial statements, and because these affidavits fulfilled the *Crawford* standard in that they 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."[48] Indeed, use at trial was the certificate's sole purpose under Massachusetts law, and the affidavits themselves indicated this purpose.[49]

After this "straightforward" application of *Crawford*, the Court responded to the "potpourri" of arguments advanced by the state and dissent.[50] First, reacting to the claim that the certificates were not "accusatory" evidence, the Court stated that under the Constitution and the relevant case law, there are only two types of witnesses: those against the defendant, which the prosecution must produce at trial, and those for the defendant, which the defendant may choose to call.[51] Second, the Court rejected the idea that analysts were not "ordinary" witnesses because they were unlike witnesses whose *ex parte* testimony was used in the infamous case against Sir Walter Raleigh.[52] In the majority's view, the Raleigh case did not define the limits of the clause, only its core.[53] Third, the Court refuted the argument that the "near-contemporaneous" nature of the affidavits distinguishes them from other testimonial evidence, noting that the Court in *Washington v. Davis* excluded evidence despite the fact that it was near-contemporaneous.[54] Fourth, responding to the claim that neutral, scientific witnesses were different, in part because they would not change their story at trial, the Court remarked that accepting such an argument would return the Court to the reliability-based analysis of *Roberts*.[55] The Court also noted that analysts who lied may change their story at trial, and that erroneous or corrupt forensic analysis is common enough to contribute to many false convictions.[56] Fifth, the Court held that the certificates were not exempted from the Confrontation Clause because they were official or business records, since the exception does not apply if the records' purpose

46. *Id.* (quoting Crawford v. Washington, 541 U.S. 36, 51 (2004) (quoting 2 N. Webster, AN AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE (1828))).

47. *Id.* (quoting Davis v. Washington, 547 U.S. 813, 830 (2006) (emphasis deleted)).

48. *Id* (quoting *Crawford*, 541 U.S. at 52).

49. *Id.*

50. *Id.* at 2532–33.

51. *Id.* at 2533–34.

52. *Id.* at 2534.

53. *Id.*

54. *Id.* at 2535 (citing Davis v. Washington, 547 U.S. 813, 830 (2006)).

55. *Id.* at 2536.

56. *Id.* at 2536–37.

is to produce evidence for trial.[57] Sixth, the Court explained that it does not matter that the defendant could have subpoenaed the analysts, because of the substantial difference between the prosecutor having to produce witnesses and the defendant having the right to subpoena them.[58] Finally, the Court declined the respondent's invitation to relax the Confrontation Clause for the necessities of the trial process, because the clause is "binding, and we may not disregard it at our convenience."[59]

Justice Thomas wrote separately only to reiterate his understanding that "the Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions."[60] Since the certificates were plainly affidavits, *Crawford* applied.[61]

The dissent, authored by Justice Kennedy and joined by Chief Justice Roberts and Justices Alito and Breyer, argued that the Court should have limited *Crawford* to ordinary witnesses with "personal knowledge of some aspect of the defendant's guilt[.]"[62] Justice Kennedy described the Court as sweeping away a "rule [that] has been established for at least 90 years" and that "extends across at least 35 States and six Federal Courts of Appeals."[63]

The dissent noted that although the Court requires the "analyst" to be available for cross-examination, it does not clarify who the analyst is.[64] Describing four people involved in a hypothetical test—the person who retrieves a machine printout, the person who interprets the results, a technician who calibrates the machine, and a laboratory supervisor who certifies the results—Justice Kennedy argued that any of them could be the analyst.[65] The dissent even suggested that all of them might have to testify under the Court's holding, since all of them made representations about the test and could have introduced error.[66] Justice Kennedy also expressed concern that the "iron logic of which the Court is so enamored would seem to require in-court testimony from each human link in the chain of custody," and from a clerk who authenticates a copy of a document.[67]

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57. *Id.* at 2538.

58. *Id.* at 2540. In *Briscoe v. Virginia*, the U.S. Supreme Court reinforced its holding on this issue in a per curiam opinion directing the case to be decided consistent with *Melendez-Diaz*. Briscoe v. Virginia, 130 S. Ct. 1316 (2010). The Virginia Supreme Court had approved the State's practice of giving the defendant a right to subpoena the analyst instead of requiring the prosecution to present the analyst for cross-examination. Magruder v. Commonwealth, 657 S.E.2d 113, 122 (2008).

59. *Melendez-Diaz*, 129 S. Ct. at 2540.

60. *Id.* at 2543 (Thomas, J., concurring) (quoting White v. Illinois, 502 U.S. 346, 365 (1992) (Thomas, J., concurring)).

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.* at 2544.

65. *Id.*

66. *Id.* at 2545.

67. *Id.* at 2546–47.

The dissent observed that the Confrontation Clause was not meant to, and is not well-suited to, detect errors in scientific tests.[68] The defendant may always subpoena analysts when he or she wishes, and there are means to force a subpoenaed analyst to appear.[69] The Court's opinion will cause "[g]uilty defendants [to] go free, on the most technical grounds," whenever the analyst is unavailable and his or her testimony is necessary to prove an element of the offense.[70]

In response to the dissent's arguments, a footnote in the majority opinion clarified that "it is not the case[] that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case."[71] However, the Court never addressed the dissent's concerns about defining the analyst. Neither the majority nor dissent explicitly discusses surrogate testimony.

However, the dissent briefly mentioned a rule in Mississippi allowing a worker who played some role in the test to testify in place of the testing analyst, suggesting that the Court's ruling may overturn such doctrines.[72] Under the Mississippi rule, when the "testifying witness is a court-accepted expert in the relevant field who participated in the analysis in some capacity, such as by performing procedural checks, then the testifying witness's testimony does not violate a defendant's Sixth Amendment rights."[73] This rule certainly authorizes surrogate testimony.[74]

C. *Bullcoming v. New Mexico*: One Type of Surrogate Testimony is Unconstitutional, but What About All the Others?

In 2011, two years after *Melendez-Diaz*, the Supreme Court decided *Bullcoming v. New Mexico*, holding that surrogate testimony violates the Confrontation Clause when the analyst's report was admitted into evidence and the surrogate neither observed, nor offered an expert opinion on, the forensic test.[75] However, as Justice Sotomayor's concurrence noted, the Court's opinion did not rule on the constitutionality of surrogate testimony when the surrogate had played some role in or observed the test, or had offered an independent analysis of either an analyst's report that was not admitted into evidence, or machine-generated "raw data" that was admitted into evidence.[76]

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68. *Id.* at 2547.

69. *Id.*

70. *Id.* at 2550.

71. *Id.* at 2532 n.1.

72. *Id.* at 2558 (citing McGowen v. State, 2002-KA-00676-SCT (¶¶ 68–69) (Miss. 2003), 859 So. 2d 320, 339–40 (Miss. 2003)).

73. *McGowen*, 2002-KA-00676-SCT (¶ 68) (Miss. 2003), 859 So. 2d at 339 (Miss. 2003).

74. *See supra* note 3 and accompanying text.

75. 131 S. Ct. 2705 (2011).

76. *Id.* at 2719–23 (Sotomayor, J., concurring).

In Donald Bullcoming's trial for the crime of driving while intoxicated, an analyst's report recording his blood alcohol level was introduced into evidence.[77] Since the analyst who had performed the test was on unpaid leave, the state called another analyst as a witness.[78] This surrogate witness was familiar with the procedures of the lab but did not observe or play any role in the test of Bullcoming's blood.[79] Instead of offering an independent opinion of the defendant's blood alcohol content, the surrogate simply read from the analyst's report.[80]

The New Mexico Supreme Court upheld the conviction, finding that cross-examining the surrogate satisfied Bullcoming's right to confrontation.[81] The Court held that the defendant's "true accuser" was the machine, while the analyst was a "mere scrivener" who only transcribed the machine-generated results.[82] Because the surrogate was a qualified analyst who was available for cross-examination about the test results and the procedures of the lab, the court found that Bullcoming's "right of confrontation was preserved."[83]

In an opinion by Justice Ginsburg, the U.S. Supreme Court overturned the conviction, holding that the surrogate testimony violated the defendant's confrontation rights.[84] Justice Scalia joined the opinion in full, Justices Kagan and Sotomayor joined all of the opinion except for Part IV, and Justice Thomas joined the opinion with the exception of Part IV and footnote 6.[85] Justice Kennedy dissented, joined by Chief Justice Roberts and Justices Breyer and Alito.[86]

The Court's holding treated the case as a simple application of *Crawford* and *Melendez-Diaz*: the analyst's report was testimonial evidence, and thus could not be introduced into evidence without the analyst's testimony unless the analyst was unavailable and the defendant had a previous opportunity to cross-examine the analyst.[87] The Court held that since the state never claimed the analyst was unavailable or that the defendant had an opportunity to cross-examine him, the analyst's report should not have been introduced without producing the analyst for cross-

77. *Id.* at 2712.

78. *Id.* at 2715–16.

79. *Id.* at 2711–12.

80. *Id.* at 2712; *Id.* at 2721 (Sotomayor, J., concurring).

81. *Bullcoming v. New Mexico*, 226 P.3d 1, 10 (N.M. 2010).

82. *Id.* at 9.

83. *Id.* at 10.

84. *Bullcoming v. New Mexico*, 131 S. Ct. 2705, 2710 (2011). To be precise, Justice Ginsburg delivered the opinion of the Court except with respect to Part IV and footnote 6. *Id.* at 2709. Since Justice Scalia was the only other justice to join the opinion in full, he must have authored Part IV and footnote 6.

85. *Id.* at 2709.

86. *Id.*

87. The Court held that the analyst's report was testimonial, despite slight differences with the type of report found to be testimonial in *Melendez-Diaz*, because the "formalities attending" the report were "more than adequate to qualify" its contents "as testimonial." *Id.* at 2717.

examination at trial.[88]

Addressing the New Mexico Supreme Court's conclusion that the analyst was a "mere scrivener" who was not Bullcoming's "true accuser," the Court noted that the analyst made several representations "relating to past events and human actions not revealed in raw, machine-produced data."[89] The Court also rejected the notion that cross-examining the surrogate satisfied the defendant's confrontation rights, because the Confrontation Clause "does not tolerate dispensing with confrontation simply because the court believes that questioning one witness about another's testimonial statements provides a fair enough opportunity for cross-examination."[90] In addition, the Court found it significant that the surrogate "could not convey what" the analyst "knew . . . about the events his certification concerned," "expose any lapses or lies on the certifying analyst's part," nor explain why the analyst was placed on uncompensated leave.[91]

Part IV of the opinion, joined only by Justice Scalia, argued against the contention that applying the "Confrontation Clause to forensic evidence would impose an undue burden on the prosecution."[92] It noted that the prosecution could have avoided the confrontation violation by having the surrogate re-test the sample himself, reiterated the *Melendez-Diaz* conclusion that notice-and-demand statutes allowing defendants to forfeit confrontation rights are permissible, and observed that the "sky has not fallen" in jurisdictions already applying the right of confrontation to forensic reports.[93]

In her concurrence, Justice Sotomayor elaborated upon why the analyst's report was testimonial and noted the limited nature of the Court's holding.[94] Specifically, she wrote that this would be a different case if there were an "alternate purpose" for the analyst's report, if the surrogate were a lab supervisor had some other "personal . . . connection" to the "scientific test at issue," if the surrogate were an expert witness who was "asked for his independent opinion about underlying testimonial reports that were not themselves admitted into evidence," or if the prosecutor introduced into evidence only machine-generated test results (and not the analyst's report).[95]

Justice Kennedy's dissent argued that surrogate testimony used in Bullcoming's trial was "fully consistent with the Confrontation Clause and with well-established principles for ensuring that criminal trials are

88. *Id.* at 2713–14.
89. *Id.* at 2714.
90. *Id.* at 2716.
91. *Id.* at 2715.
92. *Id.* at 2717.
93. *Id.* at 2717–19.
94. *Id.* at 2719–23 (Sotomayor, J., concurring).
95. *Id.* at 2721.

conducted in full accord with requirements of fairness and reliability."[96] According to the dissent, because so many people are involved in each test, requiring the one who recorded the results to be available for confrontation is a "hollow formality."[97] The dissent also purported to identify "persistent ambiguities" in the Court's post-*Crawford* confrontation doctrine that are "symptomatic of a rule not amenable to sensible application."[98] Finally, Justice Kennedy contended that "*Crawford* itself does not compel" the majority's decision, and claims that *Melendez-Diaz* already caused an increase in subpoenas to analysts in New Mexico driving-while-intoxicated cases, using "scarce resources" that could have met other "urgent needs."[99]

D. Rulings on Surrogate Testimony After *Crawford* but Before *Melendez-Diaz*

This section reviews post-*Crawford* decisions on surrogate testimony, and the following section describes surrogate testimony holdings since *Melendez-Diaz* was decided. These sections, which are illustrative rather than comprehensive, set the stage for Part III, which critiques the arguments found in these cases and draws on some of their holdings and dissenting opinions in advancing this Article's arguments.

After *Crawford*, several federal and state appellate courts admitted surrogate testimony, though two state courts ruled against it. The Fourth Circuit, in *United States v. Washington*, ruled that printouts indicating the presence of alcohol and PCP in the defendant's blood were not testimonial evidence, and thus the lab supervisor, testifying as an expert, could base his conclusions on them even though the analysts did not testify.[100] The court held that the "lab technicians made no statements of any kind," since the machine, not the technician, made the statement about the contents of the defendant's blood.[101]

The dissent in *Washington* argued that the printouts were the testing analysts' testimonial statements, reasoning that since the printouts "were produced with the assistance and input of the technicians," they "must therefore be attributed to the technicians."[102] The dissent noted that the testing analysts underwent extensive training to perform the test, were expected to follow a detailed step-by-step procedure, and annotated and signed the results.[103] As argued below, the printouts would be testimonial

96. *Id.* at 2723 (Kennedy, J., dissenting).
97. *Id.* at 2724.
98. *Id.* at 2726.
99. *Id.* at 2728.
100. United States v. Washington, 498 F.3d 225, 229–30 (4th Cir. 2007).
101. *Id.* at 230.
102. *Id.* at 232–33 (Michael, J., dissenting).
103. *Id.* at 233.

evidence under *Melendez-Diaz*, since the analysts signed them, making them akin to affidavits, and prepared them to produce evidence at trial.[104]

In *United States v. De La Cruz*, the First Circuit ruled in favor of admitting surrogate testimony in a case in which the expert, the state chief medical examiner, testified about the results of an autopsy that he did not perform.[105] The court held that *Crawford* was inapplicable because an autopsy falls under the business record exception to the ban on hearsay evidence.[106] Because *Melendez-Diaz* ruled that forensic analyses were testimonial statements, specifically mentioned autopsies as an example of forensic analysis, and rejected the argument that the business records exception applies to forensic tests, *Melendez-Diaz* foreclosed this line of reasoning.[107]

In *United States v. Moon*, the Seventh Circuit held that although machine printouts were non-testimonial, the analyst's conclusion that a substance was cocaine was testimonial.[108] The court allowed the testimony of an expert witness who was a colleague of the testing analyst because any qualified scientist could reliably interpret the printouts or other "raw data."[109] The court reasoned that "[t]he vital questions—was the lab work done properly? what do the readings mean?—can be put to the expert on the stand."[110] The court agreed with *United States v. Washington* that "the Sixth Amendment does not demand that a chemist or other testifying expert have done the lab work himself."[111] The fact that the printout itself was inadmissible was not problematic, in the court's view, because the Federal Rules of Evidence permit expert testimony to draw on inadmissible materials.[112]

The Eighth Circuit, in *United States v. Richardson*, approved the surrogate testimony of an expert witness who had performed a peer review of the testing analyst's report.[113] The court found that the expert independently came to her own conclusions about the DNA evidence after reviewing the testing analyst's notes.[114] In support of its reasoning, the court

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104. *See Melendez-Diaz*, 129 S. Ct. at 2532; *see infra* Part III.C.

105. United States v. De La Cruz, 514 F.3d 121, 132 (1st Cir. 2008)

106. *Id.* at 133.

107. *See* State v. Locklear, 681 S.E.2d 293, 304–05 (N.C. 2009). That being said, it is possible that courts will continue to consider autopsies, or certain portions of autopsies, to be non-testimonial evidence. *See infra* Part III.D.

108. United States v. Moon, 512 F.3d 359, 361–62 (7th Cir. 2008) (stating that two recent cases "reach the same result: the Confrontation Clause does not forbid the use of raw data produced by scientific instruments, though the interpretation *of* those data may be testimonial."). As discussed in Part III.C, unless machines produced the data automatically, without human intervention, courts have considered the data to be a person's statement.

109. *Id.* at 362.

110. *Id.*

111. *Id.*

112. *Id.* at 361; FED. R. EVID. 703.

113. United States v. Richardson, 537 F.3d 951, 955–56 (8th Cir. 2008).

114. *Id.* at 956, 960.

cited a pre-*Crawford* case claiming that it was "firmly established that an expert may testify from another person's notes."[115]

In *State v. Barton*, the Wisconsin Court of Appeals held that "[a] defendant's confrontation right is satisfied if a qualified expert testifies as to his or her independent opinion, even if the opinion is based in part on the work of another." [116] In the court's view, *Crawford* does not "prevent[] a qualified expert from testifying in place of an unavailable expert when the testifying expert presents his or her own opinion."[117] However, as stated in the Wisconsin decision *State v. Williams*, "one expert cannot act as a mere conduit for the opinion of another," by merely summarizing another person's work.[118]

The Kansas Supreme Court, in *State v. Lackey*, held that "factual, routine, descriptive, and nonanalytical findings" of an autopsy were nontestimonial, but the "opinions and conclusions" drawn from the findings were testimonial.[119] For this reason, the Court ruled that surrogate witnesses are allowed to testify based on an autopsy's nontestimonial evidence.[120]

Some courts before *Melendez-Diaz* ruled against the admission of surrogate testimony. In *People v. Goldstein*, the Court of Appeals of New York held inadmissible a witness's expert testimony to the extent that she disclosed the testimonial hearsay from her interviews conducted as part of a forensic investigation.[121] The court concluded that the interviews were hearsay because they were used to demonstrate the truth of the psychiatrist's conclusions, and that the interviews were testimonial under *Crawford* because the interviewee's statements were formal responses to inquiries from an investigator.[122]

In *People v. Lonsby*, a Michigan appeals court held the testimony of a colleague of the testing analyst to be inadmissible.[123] The surrogate witness testified about the content of the analyst's laboratory report.[124] Because the analyst would reasonably expect the report to be used in trial, the report was testimonial evidence, and thus could not be admitted "through" the testimony of the surrogate witness.[125] The Court found it significant that the surrogate witness "had no firsthand knowledge about [the analyst's] observations or analysis of the physical evidence," making the defendant "unable, through the crucible of cross-examination, to

115. *Id.* at 961 (quoting United States v. Davis, 40 F.3d 1069, 1075 (10th Cir. 1994)).

116. State v. Barton, 2006 WI App 18, 20, 289 Wis. 2d 206, 709 N.W.2d 93.

117. *Id.* at 20.

118. State v. Williams, 2002 WI 58, 19, 253 Wis. 2d 99, 644 N.W.2d 919.

119. State v. Lackey, 120 P.3d 332, 351–52 (Kan. 2005) (overruled in part by State v. Davis, 158 P.3d 317, 322 (Kan. 2006)).

120. *Id.*

121. People v. Goldstein, 843 N.E. 2d 727, 730 (N.Y. 2005).

122. *Id.* at 732–33.

123. People v. Lonsby, 707 N.W.2d 610, 612–13 (Mich. Ct. App. 2005).

124. *Id.*

125. *Id.* at 619–21.

challenge the objectivity of [the analyst] and the accuracy of her observations and methodology."[126] In addition, since the surrogate "could only speculate regarding [the analyst's] reasoning, [the] defendant could not question or attack [the analyst's] preliminary test results . . . ."[127]

The holdings of post-*Crawford* but pre-*Melendez-Diaz* courts on surrogate testimony varied in their content, but tended to rule in favor of the testimony when surrogates analyzed "raw data," while ruling against it when the contents of the data were disclosed. The Fourth, Seventh and Eighth Circuits, and appellate courts in Wisconsin and Kansas, have approved of surrogate testimony when the surrogate independently analyzed analyst-produced data.[128] The First Circuit held that surrogate testimony was permissible because lab reports fell under the business records exception to hearsay rules.[129] New York's highest court and a Michigan intermediate appellate court ruled against surrogate testimony insofar as it communicated the contents of the analyst's data, since the data was testimonial.[130]

E. Surrogate Testimony After *Melendez-Diaz*

Several federal district court opinions since *Melendez-Diaz* have approved surrogate testimony. The Third Circuit ruled against it (unfortunately, in an non-precedential decision), and the Seventh Circuit ruled in favor. Most state court decisions since *Melendez-Diaz* have approved surrogate testimony, but appellate decisions in California and North Carolina have held that the practice violates the Confrontation Clause. The courts have justified their acceptance of surrogate testimony by distinguishing *Melendez-Diaz* and arguing that a surrogate's independent analysis precludes Confrontation Clause violations.

1. Federal Courts

In *Larkin v. Yates*, a district court in California ruled in favor of surrogate testimony.[131] First, the court distinguished *Melendez-Diaz* by noting that *Melendez-Diaz* did not involve expert testimony.[132] Second, the court claimed that the issue was unsettled, pointing to *People v. Geier*, a California Supreme Court decision allowing expert testimony based on inadmissible lab reports, and the four justices dissenting in *Melendez-*

126. *Id.* at 620.

127. *Id.*

128. *See supra* notes 69, 77, 82, 85, 88 and accompanying text.

129. *See supra* notes 74–76 and accompanying text.

130. *See supra* notes 90–96 and accompanying text.

131. Larkin v. Yates, No. CV 09-2034-DSF (CT), 2009 WL 2049991, at *1–*3 (C.D. Cal. July 9, 2009).

132. *Id.* at *2.

Diaz.[133] Third, the court cited Justice Thomas's concurrence limiting the *Melendez-Diaz* holding to formalized testimonial materials, noting that expert testimony, and not formalized materials, were at issue.[134]

In *United States v. Darden*, a district court in Maryland allowed expert testimony based on inadmissible lab reports, largely by relying on *United States v. Washington*.[135] In particular, the court focused on *Washington*'s reasoning that the expert witness did not rely on statements of the testing analysts, since the testing analysts did not produce their own conclusions but rather simply read the results of the machine-printed data indicating the presence of PCP and alcohol in the defendant's blood.[136] The court also noted that *Melendez-Diaz* did not address the issue of expert testimony, and likened the testing analysts—whom the court called "technicians"—to the various people involved somehow with the test or the sample who, according to the *Melendez-Diaz* majority, did not have to testify.[137]

In *United States v. Turner*, the Seventh Circuit Court of Appeals, in an opinion by Indiana District Judge Joseph Van Bokkelen, allowed an analyst who performed peer-review of the original analyst's results to testify at trial.[138] The court cited *United States v. Moon* for the proposition that the person testifying does not have to be the one who performed the test.[139] The court approved of the surrogate mentioning the original analyst's conclusion—even though *Moon* held such conclusions were testimonial evidence—because, unlike in *Moon*, the surrogate had performed peer-review and thus had been involved in the test.[140]

In addition, the Seventh Circuit concluded on several grounds that *Melendez-Diaz* did not apply to surrogate testimony. First, the court cited the footnote in *Melendez-Diaz* saying that the Court does not hold that "anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person."[141] Second, the court noted that *Melendez-Diaz* did not "do away with Federal Rule of Evidence 703," which allows experts to rely on inadmissible data.[142] Third, *Melendez-Diaz* related to affidavits entered into evidence, not expert testimony.[143]

In *Government of Virgin Islands v. Vicars*, a non-precedential decision, the Third Circuit Court of Appeals ruled that testimony "which

133. *Id.*
134. *Id. See infra* Part III.B for a critique of this argument.
135. United States v. Darden, 656 F. Supp. 2d 560, 562–64 (D.Md. 2009).
136. *Id.* at 562–63.
137. *Id.* at 563.
138. United States v. Turner, 591 F.3d 928, 932–33 (7th Cir. 2010).
139. *Id.*
140. *Id.*
141. *Id.* at 934 (quoting Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2532 n.1 (2009)).
142. *Id.*
143. *Id.*

consisted solely of [an expert witness] explaining what [the testing analyst] said in her report" was inadmissible.[144] Treating the case as a straightforward application of *Crawford* (after *Melendez-Diaz* established that forensic test results are testimonial evidence), the court did not explain its reasoning in depth.[145]

In *United States v. Johnson*, the Fourth Circuit Court of Appeals ruled in favor of admitting expert testimony, based on interviews with gang members, about code words for drugs.[146] While not a surrogate testimony case, the holding of *Johnson* is relevant to the issue. The court acknowledged "the risk that a particular expert might become nothing more than a transmitter of testimonial hearsay."[147] However, the court ruled that "[w]here, as here, expert witnesses present their own independent judgments, rather than merely transmitting testimonial hearsay, and are then subject to cross-examination, there is no Confrontation Clause violation."[148] Even if the surrogates' "expertise was in some way shaped by their exposure to testimonial hearsay," the fact that they made "independent assessments" means that they "did not become mere conduits for that hearsay."[149] More generally, the court said that "[a]s long as [the witness] is applying his training and experience to the sources before him and reaching an independent judgment, there will typically be no *Crawford* problem."[150] While this particular case was probably correctly decided, the broad principle that it articulates—that the existence of independent analysis necessarily means that the testimony is not a mere conduit for hearsay—is deeply problematic, as Part III demonstrates.

2. State Courts

Most state court decisions since *Melendez-Diaz* have approved of expert testimony based on inadmissible lab reports, but appellate decisions in California and North Carolina have held that the practice violates the Confrontation Clause. In *People v. Rutterschmidt*, the California Court of Appeals admitted surrogate testimony, reasoning that *Melendez-Diaz* did not explicitly prohibit it, and that Justice Thomas's concurrence limiting the holding to formalized testimonial materials meant that the opinion did not apply to expert testimony.[151] The court also cited California precedent and the Federal Rules of Evidence as allowing expert witnesses to present

144. Government of Virgin Islands v. Vicars, 340 F. App'x 807, 812 (3d Cir. 2009).

145. *See id.*

146. United States v. Johnson, 587 F.3d 625, 635–36 (4th Cir. 2009).

147. *Id.* at 635.

148. *Id.* at 636.

149. *Id.*

150. *Id.* at 635.

151. People v. Rutterschmidt, 98 Cal. Rptr. 3d 390, 412 (Cal. Ct. App. 2009), *review granted and opinion superseded*, 220 P.3d 239, 239 (Cal. 2009).

opinions that were based on inadmissible evidence.[152] The court held that since the report itself was not admitted, no Confrontation Clause violation occurred.[153]

In *People v. Gutierrez,* the California Court of Appeals upheld the admission of surrogate testimony.[154] Responding to the argument that *Melendez-Diaz* overturned *People v. Geier*, the court distinguished *Geier* in two ways. First, unlike in *Melendez-Diaz*, "the supervisor of the analyst who prepared the reports testified at trial."[155] Second, the reports in *Melendez-Diaz* were "near-contemporaneous," while the reports in this case were actually "contemporaneous."[156] However, the court ruled that the narrative portion of the report describing the victim's account of the assault was testimonial, and thus the nurse's supervisor's testimony about these narrative portions constituted a Confrontation Clause violation, albeit a harmless one.[157] The distinction was between the contemporaneous notations made by the nurse and the post-examination narrative description.[158]

In *Pendergrass v. State*, the Indiana Supreme Court approved surrogate testimony,[159] but a dissent argued vigorously against it.[160] The majority based its holding largely on the suggestions in *Melendez-Diaz* that not everyone who touches the evidence must testify, and that the prosecution chooses whom to call as a witness.[161] The court reasoned that the "laboratory supervisor who took the stand did have a direct part in the process by personally checking" the testing analyst's results.[162] For this reason, "she could testify as to the accuracy of the tests as well as standard operating procedure of the laboratory and whether" the testing analyst "diverged from these procedures."[163] The court also considered it significant that the prosecution called an additional witness—an expert witness not associated with the lab—to explain the results, giving the defendant the opportunity to cross-examine two witnesses.[164] The court claimed that "[i]f there were systemic problems with the laboratory processes," the supervisor "would be a competent witness, perhaps the ideal

152. *Id.* at 412–13.

153. *Id.* at 413.

154. People v. Gutierrez, 99 Cal. Rptr. 369, 370 (Cal. Ct. App. 2009), *review granted and opinion superseded*, 220 P.3d 239, 239 (Cal. 2009).

155. *Id.* at 376.

156. *Id.*

157. *Id.* at 377 (reasoning that "[T]he nurse practitioner who prepared the narrative portion of the report . . . was not subject to cross-examination at trial.").

158. *See id.* at 376–77.

159. Pendergrass v. State, 913 N.E.2d 703, 706–08 (Ind. 2009).

160. *See id.* at 709–11 (Rucker, J., dissenting).

161. *Id.* at 707–08.

162. *Id.* at 707.

163. *Id.* at 707–08.

164. *Id.* at 708.

witness, against whom to lodge such challenges."[165] Moreover, the supervisor "had personal knowledge of the laboratory's work on the specimens at issue as the person who performed the technical review."[166] The court also cited Indiana evidence law and precedent allowing experts to testify based on inadmissible evidence.[167]

The *Pendergrass* dissent observed that "[t]here is no evidence" that the supervisor "did anything more than rubber stamp the results" of the testing analyst's work.[168] Since the supervisor did not observe the tests, she "[o]bviously . . . could not testify whether" the analyst "diverged from standard laboratory procedures or how carefully or competently she performed the specific analyses."[169] The dissent argued that:

> Although a supervisor might be able to testify to her charge's general competence or honesty, this is no substitute for a jury's first-hand observations of the analyst that performs a given procedure; and a supervisor's initials are no substitute for an analyst's opportunity to carefully consider, under oath, the veracity of her results.[170]

The dissent asserted that despite some ambiguity in *Melendez-Diaz*'s holding, "the opinion is clear enough that a defendant has a constitutional right to confront at the very least the analyst that actually conducts the tests."[171] Ironically, though a federal district court in North Carolina admitted surrogate testimony in part because of favorable state precedent, North Carolina state courts have generally ruled against surrogate testimony.[172] The North Carolina Supreme Court held in *State v. Locklear* that because an autopsy report was testimonial evidence under *Melendez-Diaz*, expert testimony about the report was inadmissible absent testimony by the original analyst.[173] The court did not discuss whether the surrogate had applied independent analysis to the autopsy report, but it appears that the witness may have simply described the conclusion of the pathologist who performed the autopsy.[174] In a later case, *State v. Galindo*, the North Carolina Court of Appeals followed *Locklear* in ruling inadmissible a lab supervisor's testimony, which was based on the testing

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165. *Id.*

166. *Id.*

167. *Id.* at 708–09.

168. *Id.* at 711 (Rucker, J., dissenting).

169. *Id.*

170. *Id.*

171. *Id.* The plaintiffs filed a writ of certiorari to the U.S. Supreme Court, yet the Court denied the petition. Pendergrass v. Indiana, 130 S. Ct. 3409, 3409 (2010).

172. *Compare* Watts v. Thomas, No. 1:09CV206, 2009 U.S. Dist. LEXIS 88258, at *13–*16. (M.D.N.C. Sept. 25, 2009), *with infra* notes 146–150 and accompanying text.

173. State v. Locklear, 681 S.E.2d 293, 304–05 (N.C. 2009).

174. *See id.* at 304.

analyst's report indicating a substance was cocaine.[175] The court interpreted *Locklear*'s holding broadly: "[T]he defendant's right to confrontation was violated by the admission of the expert testimony based on the pathologist's and dentist's reports."[176] Noting that the surrogate witness in *Galindo* gave testimony based "'solely' on the absent analyst's lab report," the court found the case to be a straightforward application of *Locklear*.[177]

In *Wood v. State*, the Texas Court of Appeals approved of surrogate testimony, but only when the expert witness does not disclose the analyst's testimonial statements.[178] While acknowledging that "evidence rules cannot trump the Sixth Amendment," the court reasoned that since the expert is available for cross-examination, and the expert testimony is not itself hearsay, then expert testimony based on inadmissible testimonial statements was permissible.[179] However, the court found that under the facts of the case, the "disclosure of the out-of-court testimonial statements underlying [the expert witness's] opinions, even if only for the ostensible purpose of explaining and supporting those opinions, constituted the use of the testimonial statements to prove the truth of the matters stated in violation of the Confrontation Clause."[180]

While most California appeals court decisions have approved of surrogate testimony, one decision ruled against it.[181] In *People v. Dungo*, the California Court of Appeals ruled that an autopsy report was testimonial evidence, and thus an expert's testimony based on the report was inadmissible when the analyst who performed the autopsy did not testify.[182] Since the weight of the expert's opinion was "entirely dependent upon the accuracy and substantive content of" the analyst's report, the court rejected the argument that the expert's discussion of the analyst's report was not admitted for the truth of the report's contents.[183] As noted in Part III, the fact that surrogates' opinions completely depend on the validity of the analyst's data is a key insight that few courts have acknowledged in their surrogate testimony decisions.

The court also relied on law review articles arguing that *Crawford*'s holding "does not permit cross-examination of a surrogate when the evidence in question is testimonial,"[184] and that absent the opportunity to cross-examine the actual analyst, defendants have little chance of

175. State v. Galindo, 683 S.E.2d 785, 787–88 (N.C. Ct. App. 2009).

176. *Id.* at 788.

177. *Id.*

178. Wood v. State, 299 S.W.3d 200, 213–14 (Tex. App. 2009).

179. *Id.* at 212–13.

180. *Id.* at 213.

181. *Compare supra* notes 124–31 and accompanying text, *with* People v. Dungo, 98 Cal. Rptr. 3d 702, 705 (Cal. Ct. App. 2009), *review granted and opinion superseded*, 220 P.3d 240, 240 (Cal. 2009).

182. *Dungo*, 98 Cal. Rptr. 3d at 705.

183. *Id.* at 713.

184. *Id.* at 714 (quoting Mnookin, *supra* note 5, at 834).

challenging the analyst's qualifications, methodology, judgment, proficiency or trustworthiness.[185] The court demonstrated that this was in fact "the prosecution's intent" in using surrogate testimony.[186] The analyst had been fired in one county and allowed to resign in another, had falsified his resume, and had been accused of incompetence.[187] Because it would be "awkward" to present an analyst with such "baggage" as a witness, the prosecutor chose to call a substitute witness.[188] The court cogently notes that "this case illustrates the inadequacies of substitute cross-examination," given that the expert witness was "unable to respond to specific questions concerning [the analyst's] alleged incompetence in prior cases."[189]

In *People v. Williams*, the Illinois Supreme Court approved of surrogate testimony when the surrogate was an expert witness and the analyst's report was not admitted into evidence.[190] The Illinois Supreme Court based its decision on the argument that the surrogate's expert testimony about the forensic results was "not admitted for the truth of the matter asserted," but rather to explain "the underlying facts and data" the surrogate used to reach an independent conclusion.[191] Since the U.S. Supreme Court has granted certiorari in this case (to be known as *Williams v. Illinois*), the Court will finally have the opportunity to decide whether surrogate testimony ostensibly based on independent analysis violates the Confrontation Clause.[192]

F. Summary

After *Melendez-Diaz*, courts have employed a variety of arguments for and against surrogate testimony. Some courts have approved of surrogate testimony in part by noting that *Melendez-Diaz*'s holding did not rule on the practice, by pointing to statements in *Melendez-Diaz* that not everyone involved in the test must testify, and by interpreting Justice Thomas's concurrence as rendering the case inapplicable to surrogate testimony.[193] The Third Circuit, a North Carolina district court, and state appellate courts in Texas, California, and elsewhere ruled against surrogate testimony to the extent that it disclosed the actual contents of the analyst's reports.[194] The Indiana Supreme Court and the Texas Court of Appeals

185. *Id.* (citing Seaman, *supra* note 16, at 847–848).

186. *Id.*

187. *Id.*

188. *Id.*

189. *Id.*

190. 939 N.E.2d 268, 271, 279 (Ill. 2010).

191. *Id.* at 279.

192. Bullcoming v. New Mexico, 131 S. Ct. 2705, 2713 (2011); Williams v. Illinois, 939 N.E.2d 268 (Ill. 2010), *cert. granted*, 80 U.S.L.W. 3001 (U.S. June 28, 2011) (No. 10-8505).

193. *See supra* notes 105, 108, 114, 124, 128 and accompanying text.

194. *See supra* notes 117, 146, 153, 156 and accompanying text.

considered cross-examination of the surrogate to satisfy the Confrontation Clause.[195] A California appeals court and the dissent in *Pendergrass* both concluded that cross-examining the surrogate is not an acceptable substitute, because only by cross-examining the analyst can the defendant effectively challenge the test results.[196]

Despite differences in these courts' reasoning, most of the decisions (before and after *Melendez-Diaz*) have held that surrogate testimony is acceptable as long as the analyst's report is not admitted into evidence, and the surrogate does not recite, explain, or rely wholly on the conclusions of the analyst. Actually quoting or admitting the analyst's report is impermissible because it directly admits a testimonial statement without giving the defendant an opportunity to confront the witness. When the surrogate has done no independent analysis and bases his testimony on the analyst's conclusions, this violates *Crawford* because the surrogate is serving as a mere conduit for the inadmissible hearsay. Now that the Supreme Court has upheld this principle in *Bullcoming*, the most important remaining question—which the Court will soon address in *Williams v. Illinois*—is whether surrogate testimony violates the Confrontation Clause even when the surrogate presents an independent expert opinion based on the analyst's results.[197] The next section argues that it does and critiques other justifications for surrogate testimony.

III. Why Existing Rationales for Surrogate Testimony Fail

This Part first demonstrates that the four main justifications for admitting surrogate testimony are all unviable. Second, it presents a method for determining when analyst-produced data is testimonial evidence. Other potential justifications for surrogate testimony exist besides the ones discussed here—such as necessity, the business records exception to the ban on hearsay, and the idea that analysts are non-accusatory, unconventional, neutral and scientific or near-contemporaneous witnesses—but *Melendez-Diaz* foreclosed these arguments.[198] This Article does not include a critique

195. *See supra* notes 132, 151 and accompanying text.

196. *See supra* notes 143, 155 and accompanying text.

197. Williams v. Illinois, 939 N.E.2d 268 (Ill. 2010), *cert. granted*, 80 U.S.L.W. 3001 (U.S. June 28, 2011) (No. 10-8505).

198. *See* Melendez-Diaz, 129 S. Ct. 2527, 2533–40 (2009); *see generally* Pamela R. Metzger, *Cheating the Constitution*, 59 VAND. L. REV. 475 (2006) (arguing against admission of forensic certifications without an opportunity for cross-examination); Edward J. Imwinkelried, *"This is Like Déjà Vu All Over Again": The Third, Constitutional, Attack on the Admissibility of Police Laboratory Reports in Criminal Cases*, 38 N.M. L. REV. 303 (2008) (considering and rejecting various arguments that lab results are nontestimonial); David Mansfield, Case Commentary, *Melendez-Diaz v. Massachusetts: Laboratory Testing and the Confrontation Clause*, 4 DUKE J. CONST. L. & PUB. POL'Y SIDEBAR 161 (2009) (rejecting arguments that business records exceptions, the right to rebut the state's evidence, or the depiction of lab results as facts and not opinions would render the certificates in *Melendez-Diaz* nontestimonial); Mnookin, *supra* note 5, at 809–43 (rejecting various arguments that forensic evidence

of the argument that surrogates' testimony about lab results is not admitted for the truth of the matter because this approach has been convincingly rebutted by other authors.[199] The first approach to permitting surrogate testimony would be to argue, inspired by Kennedy's dissent in *Melendez-Diaz*, that because the supervisor is arguably an "analyst," either the supervisor or the testing analyst may testify at the prosecutor's discretion. This approach is flawed because only in exceptional circumstances is it realistic to describe the supervisor as the analyst for *Melendez-Diaz* purposes. Moreover, it would deprive defendants of the opportunity to cross-examine the testing analyst, whose methods and credibility could not otherwise be effectively examined. The second argument for surrogate testimony, which courts have sometimes articulated, is that cross-examining the surrogate compensates adequately for not being able to cross-examine the analyst. As *Bullcoming* recognized, this argument is invalid because it is inconsistent with *Crawford*'s absolute requirements and because it prevents defendants from cross-examining the only person who knows whether the test was conducted properly.[200] The third justification for surrogate testimony, found in several court decisions since *Melendez-Diaz*, relies on highly questionable or incorrect interpretations of *Melendez-Diaz*. These interpretations relate to the prosecutor's role in choosing witnesses, the significance of Justice Thomas's concurrence, the issue of whether the analyst's report was admitted into evidence, and the "contemporaneous" nature of the analyst's observations.

The final rationale for surrogate testimony—that the surrogate's independent analysis of analyst-produced data precludes Confrontation

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is not testimonial).

199. Indeed, there is much reason to reject the not-for-the-truth-of-the-matter argument altogether—outside of its narrow application in cases such as *Tennessee v. Street*. 471 U.S. 409 (1985). Cyrus P.W. Rieck, Note, *How To Deal with Laboratory Reports Under Crawford v. Washington: A Question with No Good Answer*, 62 U. MIAMI L. REV. 839, 888 (2008) (describing the truth of the matter exception as a mere pretext for admitting testimonial hearsay). This argument has at times produced "preposterous" results and "nonsense," "strain[ing] all credibility" by pretending that the truth of lab reports is not at issue. Mnookin, *supra* note 5, at 824–25. New York's highest court, in *People v. Goldstein*, rejected the truth-based argument, concluding that "[t]he distinction between a statement offered for its truth and a statement offered to shed light on an expert's opinion is not meaningful . . . ." People v. Goldstein, 843 N.E.2d 727, 732–33 (N.Y. 2005). As Kaye and co-authors in the *New Wigmore* hornbook argue, "(T)he factually implausible, formalist claim that experts' basis testimony is being introduced only to help in the evaluation of the expert's conclusions but not for its truth ought not permit an end-run around a Constitutional prohibition." David H. Kaye, David E. Bernstein, and Jennifer L. Mnookin, THE NEW WIGMORE: EXPERT EVIDENCE 3.10.1, at 45 (Supp. 2008). Similarly, Mnookin depicts the truth-based argument as "an effort to make an end run around a constitutional prohibition by sleight of hand." Mnookin, *supra* note 5, at 822.

Mnookin has also contended that, since the argument relies on an exception to the hearsay rule, it is irrelevant. Mnookin, *supra* note 5, at 818. This is because under *Crawford*, hearsay exceptions are no longer at issue: it only matters whether the statement is testimonial. *Id.* For this reason, Mnookin claims that the argument cannot be used to justify surrogate testimony. A potential problem with this argument is that, as noted by the Illinois Supreme Court in *Williams*, the *Crawford* Court mentioned that introducing testimonial evidence for "purposes other than establishing the truth of the matter asserted" would not violate the Confrontation Clause. 541 U.S. at 59 n. 9; *People v. Williams*, 939 N.E.2d at 277.

200. 131 S. Ct. 2705, 2715–16 (2011).

Clause violations—is the most prominent, and thus deserves the most attention. Accordingly, this Article develops four arguments against admitting surrogate testimony for this reason.

After presenting these arguments, this Part notes that the Confrontation Clause violation is clearest when the surrogate relies on analyst-produced data that is testimonial evidence. This Part contends that data is testimonial evidence when, as is likely true in most cases, the evidence is prepared with knowledge that it may be used at trial, sufficiently formalized, statement-like and dependent on the skill of the analyst.

A. The Lab Supervisor is Not An Analyst under *Melendez-Diaz*

One approach to allowing surrogate testimony would be to hold that lab supervisors count as "analysts" under *Melendez-Diaz*, and thus either the lab supervisor's or testing analyst's testimony can satisfy the defendant's confrontation rights. Kennedy's dissent speculates that perhaps the lab "director is also an analyst."[201] According to Kennedy, "[t]he [laboratory] director is arguably the most effective person to confront . . . as he or she is most familiar with the standard procedures, the office's variations, and problems in prior cases or with particular analysts."[202] Drawing on this claim, one could argue that both the testing analyst and supervisor are analysts because each played important roles in the overall process of preparing the sample, testing it, and interpreting the results. Either "analyst" would in effect be a stand-in for the collective process producing the evidence. The prosecutor could thus choose which participant to make available for cross-examination.

This approach fails for five reasons. First, while the *Melendez-Diaz* court failed to define the term "analyst," the holding contained no indication that by the term "analyst" the Court meant anyone other than the actual analyst who performed the test.[203] The claim that others—who did not witness the test but had some peripheral involvement in it—are also "analysts" under *Melendez-Diaz* is an excessively creative reading of the case.

Second, given supervisors' marginal role in tests, it is misleading to depict the supervisor as the true analyst. Typically, the testing analyst prepares the sample, performs the test, analyzes the results, and records his or her conclusions, while the supervisor merely reviews and approves the

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201. Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2545 (2009) (Kennedy, J., dissenting).

202. *Id.*

203. *But see* United States v. Rose, 587 F.3d 695, 701 (5th Cir. 2009) (suggesting, albeit in a noncommittal manner, that anyone who signed the laboratory report may be able to testify in place of an analyst). However, if signatures alone were sufficient, laboratories could simply have a policy that the laboratory supervisor or another employee signs every lab result, allowing the supervisor to be the perpetual witness. Moreover, the Court in *Melendez-Diaz* repeatedly discusses "the analyst" as the person required to testify, not anyone who signed an affidavit. 129 S. Ct. at 2532–34.

report.[204] As the *Pendergrass* dissent suggests, there will rarely be evidence that the supervisor did anything more than "rubber stamp" the results.[205]

Third, as argued below, only cross-examining the supervisor deprives give the defendant of an opportunity to challenge the skill, qualifications, methodology and trustworthiness of the analyst, even though the validity of the underlying data wholly depends on the analyst. Both *Dungo*, in which the nontestifying analyst had been repeatedly disciplined or accused of incompetence, and *Bullcoming*, in which the analyst had been placed on unpaid leave, illustrate the importance of cross-examining the actual analyst. [206] When the credibility of an analyst is at issue, it seems absurd to allow another witness to testify in his or her place, preventing the jury from assessing the analyst's self-presentation. Moreover, since the supervisor will not normally have observed the performance of the specific test, the supervisor would be vouching for the testing analyst's behavior without having any direct knowledge of it.[207]

Fourth, as the *Melendez-Diaz* dissent notes, if both the testing analyst and supervisor are analysts, there is no principled reason why cross-examining only one of them—instead of both of them—would satisfy a defendant's confrontation rights.[208]

Fifth, the facts of *Bullcoming* suggest that there would rarely—if ever—be a case in which a supervisor, and not the person who performed the test, is not the "analyst" whom the defendant has the right to confront. In *Bullcoming*, the Supreme Court found that, rather than being a "mere scrivener" who did nothing more than record the machine-generated results, the analyst who performed the test made several representations, including that the sample was sealed until opened in the lab, that the analyst's statements were correct, and that he had following all procedures, including examining the raw data and sample for any unusual circumstances that would affect the validity of the test.[209] Even in a laboratory in which analysts had fewer responsibilities, they would still need to affirm that they had actually tested the correct sample, as opposed to one from a different defendant. The only circumstance in which a supervisor could serve as a surrogate is when the supervisor had actually observed the entire test and

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204. This is the process described in nearly all the fact situations of cases discussing surrogate testimony. *See supra* Part II. *See also* KELLY M. PYREK, FORENSIC SCIENCE UNDER SIEGE: THE CHALLENGES OF FORENSIC LABORATORIES AND THE MEDICO-LEGAL INVESTIGATION SYSTEM 83 (2007) (describing forensic lab supervisors as being required to evaluate the "appropriateness of the [analyst's] interpretation and conclusions").

205. Pendergrass v. State, 913 N.E.2d 703, 711 (Ind. 2009) (Rucker, J., dissenting).

206. People v. Dungo, 98 Cal. Rptr. 3d 702 (Cal. Ct. App. 2009); *Bullcoming*, 131 S. Ct. 2705, 2715 (2011); *see* notes 155–162 and accompanying text.

207. Persons performing peer review also do not witness the actual performance of the test. For example, in *Turner*'s description of the peer review in that case, the person performing peer review of the analyst's results analyzed the analyst's report, but did not observe the test being conducted, or re-test the physical evidence. United States v. Turner, 591 F.3d 928, 931 (7th Cir. 2010).

208. *See* 129 S. Ct. at 2545 (Kennedy, J., dissenting).

209. 131 S. Ct. 2705, 2714 (2011).

could verify all the analyst's representations.

B. Cross-Examining the Surrogate Does Not Compensate for Lack of Opportunity to Cross-Examine the Analyst

Some courts have argued that cross-examining the surrogate adequately compensates for the inability to cross-examine the analyst. For example, in *Pendergrass*, the Indiana Supreme Court stressed that the defendant "had the opportunity to confront at trial two witnesses who were directly involved in the substantive analysis," and that the "laboratory supervisor who took the stand did have a direct part in the process by personally checking" the analyst's results.[210]

However, this justification for surrogate testimony is inconsistent with *Melendez-Diaz* and is factually untenable. This section begins by reviewing the work of other scholars, who have demonstrated that this approach is unviable. Next, it finds support for the scholars' arguments in *Lonsby*, the dissent in *Pendergrass*, and *Bullcoming*

Scholars have convincingly argued against this justification for surrogate testimony. As Mnookin notes, while cross-examining a surrogate, especially a laboratory director, will not "necessarily lack utility," what *Crawford* demands is not cross-examination of anyone, or someone whose testimony might prove useful to the defense, but cross-examination of the actual persons making testimonial statements.[211] Mnookin concludes that "*Crawford*'s language simply does not permit cross-examination of a surrogate when the evidence in question is testimonial."[212] Imwinkelried observes that the "the opportunity to question [a surrogate witness] will often fall short of satisfying the need to cross-examine the analyst" because "challenging the analyst's specific credentials can be highly useful to the defense."[213] Moreover, "[i]n many forensic disciplines, the expert relies on personal, subjective standards to draw the inference," and surrogate testimony "effectively shields those standards from inquiry or challenge."[214] *Bullcoming* clearly stands for the proposition that cross-examining the declarant, and not just anyone whose testimony may be useful, is what the Constitution requires.[215] Moreover, as a practical matter, cross-examining the surrogate will not give the defendant the same opportunity to identify problems with the methodology employed in the test.

The reasoning of the Michigan Court of Appeals in *Lonsby* and the dissent in *Pendergrass* concur with these arguments. The *Lonsby* court noted that because the surrogate "had no firsthand knowledge about [the

210. Pendergrass v. State, 913 N.E.2d 703, 707–08 (Ind. 2009).
211. Mnookin, *supra* note 5, at 834.
212. *Id.*
213. *Supra note* 168, at 327.
214. *Id.*
215. 131 S. Ct. 2705, 2715–16 (2011).

analyst's] observations or analysis of the physical evidence, defendant was unable, through the crucible of cross-examination, to challenge the objectivity of [the analyst] and the accuracy of her observations and methodology."[216] The surrogate "could only speculate" about the validity of the underlying data, preventing the defendant from questioning its accuracy.[217] Similarly, the dissent in *Pendergrass* argued that the surrogate "could not testify whether [the analyst] diverged from standard laboratory procedures or how carefully or competently she performed the specific analyses."[218] The dissent went on to argue that,

> "[a]lthough a supervisor might be able to testify to her charge's general competence or honesty, this is no substitute for a jury's first-hand observations of the analyst that performs a given procedure; and a supervisor's initials are no substitute for an analyst's opportunity to carefully consider, under oath, the veracity of her results."[219]

The U.S. Supreme Court's opinion in *Bullcoming* also supports the conclusion that cross-examining a surrogate does not satisfy the Confrontation Clause. The Court stated that "the Clause does not tolerate dispensing with confrontation simply because the court believes that questioning one witness about another's testimonial statements provides a fair enough opportunity for cross-examination."[220] The Court also noted that "surrogate testimony . . . could not convey what" the analyst "knew or observed about the events his certification concerned, *i.e.*, the particular test and testing process he employed" or "expose any lapses or lies on the certifying analyst's part."[221] As Justice Sotomayor's concurrence points out, *Bullcoming* did not reach the questions of whether a lab supervisor could serve as a surrogate, whether surrogate testimony is permissible when the surrogate gives an independent opinion about an analyst's report that was not admitted into evidence, or whether a surrogate could constitutionally testify about the lab results when the machine printout alone had been admitted into evidence.[222] Yet the logic of the Court's statements quoted above would seem to rule out surrogate testimony in these cases as well, because cross-examining a surrogate in any of the scenarios Justice Sotomayor mentions would typically be useless in revealing the analyst's mistakes or misrepresentations.

In short, the claim that cross-examining a surrogate is a sufficient

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216. People v. Lonsby, 707 N.W.2d 610, 620 (Mich. Ct. App. 2005).
217. *Id.*
218. Pendergrass v. State, 913 N.E.2d 703, 711 (Ind. 2009) (Rucker, J., dissenting).
219. *Id.*
220. 131 S. Ct. 2705, 2716 (2011).
221. *Id.* at 2716.
222. *Id.* at 2719–23 (Sotomayor, J., concurring).

substitute for cross-examining the testing analyst is incompatible with *Crawford*, *Melendez-Diaz*, and *Bullcoming* and undermines the basic purpose of confrontation: to challenge the validity of testimonial evidence.

C. Courts Have Used Misleading Interpretations of *Melendez-Diaz* to Justify Surrogate Testimony

Courts have attempted to justify admitting surrogate testimony through misleading, often apparently incorrect interpretations of *Melendez-Diaz*. While *Melendez-Diaz* did not rule on surrogate testimony per se, there is nothing in its holding that, understood correctly, actually allows surrogate testimony. This has not stopped courts from suggesting otherwise.

First, some courts have claimed that under *Melendez-Diaz* the prosecutor can choose whom to make available for cross-examination, since under *Melendez-Diaz* not "everyone who laid hands on the evidence" must testify.[223] This implies that the prosecutor chooses whom the analyst is, and thus can choose to call the supervisor as the analyst. This interpretation is plainly inconsistent with the language of the opinion. In context, Justice Scalia's rejection of the idea that "everyone who laid hands on the evidence must be called" to testify was related solely to testimony needed to establish the chain of custody.[224] Scalia also clarified that not everyone involved with confirming the "authenticity of the sample, or accuracy of the testing device" must testify, but this in no way refers to the actual analyst who performs the test.[225] Yet courts quote these statements as if they provide a general license to admit surrogate testimony.[226]

Second, some courts have pointed to Justice Thomas's concurrence as limiting the majority decision so that it could not apply to expert witnesses.[227] Specifically, courts have claimed that *Melendez-Diaz* does not apply to expert testimony because Justice Thomas's concurrence limited the holding to formalized testimonial materials, and expert testimony is not a formalized document.[228] This approach is meritless. Justice Thomas's concurrence relates only to when "extrajudicial statements" implicate the Confrontation Clause.[229] When witnesses testify in court, these are obviously not "extrajudicial statements." Moreover, the underlying forensic

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223. Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2532 n.1 (2009); *see also supra* note 134 and accompanying text.

224. *Melendez-Diaz*, 129 S. Ct. at 2532, n.1.

225. *Id.*

226. *See supra* notes 108, 114 and accompanying text. *See also* United States v. Turner, 591 F.3d 928, 934 (7th Cir. 2010) (citing the same footnote in *Melendez-Diaz* as if it casts doubt on whether the analyst must testify); United States v. Rose, 587 F.3d. 695, 701 (5th Cir. 2009) (same).

227. *See* Larkin v. Yates, No. CV 09-2034-DSF (CT), 2009 WL 2049991, at *2 (C.D. Cal. July 9, 2009); People v. Rutterschmidt, 98 Cal. Rptr. 3d 390, 412 (Cal. Ct. App. 2009); *see also supra* notes 105, 124 and accompanying text.

228. *See supra* note 191.

229. *Melendez-Diaz*, 129 S. Ct. at 2543 (Thomas, J., concurring).

report—the contents of which are indirectly admitted through the surrogate witness—is most likely a testimonial document.[230]

Third, some courts distinguished *Melendez-Diaz* by noting that in their cases, unlike in *Melendez-Diaz*, the actual test results were not admitted into evidence.[231] Alone among the interpretations discussed in this section, this notion has some merit. *Melendez-Diaz* involved the actual introduction of lab results into evidence.[232] However, as argued below in Part III.D, surrogate testimony is still inconsistent with the basic message of *Melendez-Diaz*. Courts should not rest their holdings on the fact that a lab report was not technically admitted, as opposed to being indirectly admitted through a surrogate, without acknowledging the problematic nature of the situation. After all, the result is the same in either case: testimonial evidence is used in court without the analyst who generated the evidence being subject to confrontation.

Finally, in *Gutierrez*, a California appeals court upheld *Geier*'s ruling that the contemporaneous nature of forensic tests rendered them nontestimonial, by arguing that *Melendez-Diaz* only addressed "near-contemporaneous" observations—not actually contemporaneous ones.[233] This hairsplitting argument is highly unconvincing. The probable reason courts have employed the term "near-contemporaneous" instead of "contemporaneous" is that there will always be some gap, however small, between the observation and its recording. Even computer-run analyses operating without human assistance are not exactly contemporaneous, since the computer registers the observation only after electrical currents have travelled through the computer's circuits. In addition, the *Melendez-Diaz* majority's dismissive rejection of the near-contemporaneous argument should make clear that time-based distinctions cannot render statements nontestimonial.[234]

It is certainly true that *Melendez-Diaz* did not rule directly on surrogate testimony, since that issue did not come before the court. Moreover, the Court did mention that not everyone must testify, and Thomas's concurrence may potentially limit the impact of the case. Yet nothing in *Melendez-Diaz*, understood in context, indicates that surrogate testimony is acceptable.

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230. *See infra* note 273 and accompanying text. However, it is possible that for the purposes of *Melendez-Diaz* alone, Justice Thomas's concurrence effectively limited the definition of what is testimonial. For this reason, the analysis below assumes that analyst-produced data must be formalized in some way to be testimonial evidence under *Melendez-Diaz*. *See infra* note 273 and accompanying text.

231. *See Turner*, 591 F.3d at 934; Yermish, *supra* note 6, at 33 ("Several courts [including *Yates* and *Rutterschmidt*] have tried to distinguish *Melendez-Diaz* on the grounds that, unlike the expert parroting the findings of another analyst, *Melendez-Diaz* involved the admission of an affidavit alone without any sponsoring witness who could be cross-examined.").

232. *Melendez-Diaz*, 129 S. Ct. at 2530.

233. People v. Gutierrez, 99 Cal. Rptr. 3d 369, 375–76 (Cal. Ct. App. 2009).

234. *See Melendez-Diaz*, 129 S. Ct. at 2535.

D. The Surrogate's Independent Analysis of Analyst-Produced Data Does Not Preclude Confrontation Violations

This section presents four arguments against surrogate testimony that challenge the commonly-argued idea that surrogates' independent analysis of data precludes a Confrontation Clause violation. As noted previously, many court decisions accept surrogate testimony when the surrogate reaches an independent conclusion based on analyst-generated forensic data, as opposed to relying wholly on the analyst's analysis and conclusions.[235] This approach essentially creates a Confrontation Clause analysis that runs parallel to the Federal Rules of Evidence, which also prohibit expert witnesses from merely serving as a conduit for another's work.[236] While some scholars seem to endorse this view, it is highly problematic.

This section begins by discussing previous scholarship on this topic. While two scholars have seemingly endorsed the independent-analysis rationale, they have not made these arguments with much specificity, and applying one of their perspectives may in fact disqualify most attempts at surrogate testimony. Scholars who have disagreed with this rationale have not made their arguments at any length. Next, this section presents four arguments against the independent-analysis rationale for admitting surrogate testimony, and concludes that unless the underlying data is clearly not testimonial evidence, surrogate testimony violates the Confrontation Clause.

1. Previous Scholarship

Some scholars endorse the independent-analysis rationale for admitting surrogate testimony, without defending it at length or acknowledging the multiple problems it poses. Other commentators seem to reject this justification for surrogate testimony, but only do so implicitly or in brief arguments, which this Article builds upon.

Some scholars accept the view that surrogates' independent analysis of data precludes violations of confrontation rights. Morin, for example, asserts that "[i]f an expert brings independent analysis to bear, and thereby assists the fact-finder, the expert will never be a subterfuge for

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235. *See supra* Part II.

236. As Bradley Morin notes, "Despite *Crawford*'s emphasis on separating the Confrontation Clause from evidentiary hearsay rules, it appears that in the context of expert opinion, the defendant's constitutional attack may actually run parallel to the rules of evidence." Bradley Morin, Note, *Science, Crawford, and Testimonial Hearsay: Applying the Confrontation Clause to Laboratory Reports*, 85 B.U. L. REV. 1243, 1271 (2005). *See also* United States v. Williams, 431 F.2d 1168, 1172 (5th Cir. 1970) ("If the witness has gone to only one hearsay source and seeks merely to summarize the content of that source, then he is acting as a summary witness, not an expert. Since he is introducing the content of the extrajudicial statements or writings to prove truth, his testimony, like its source, is hearsay and is inadmissible unless the source qualifies under an exception to the hearsay rule.").

admitting testimonial hearsay."[237] Imwinkelried argues that "raw data," such as a computer-generated printout, is "not hearsay because the computer is not a person capable of being cross-examined."[238] These views fail to acknowledge the potential problems caused by such a permissive standard, such as the reality that surrogates can, with minimal effort, review the analysts' reasoning and claim it as their own.[239] Morin's blanket statement that independent analysis can "never be a subterfuge for admitting testimonial hearsay" and Imwinkelried's depiction of computer printouts as the statement of computers only both ignore the fact that the underlying data is completely dependent on the analyst's methodology.

Ross Andrew Oliver's view would seem to accept much surrogate testimony, but it suffers from a basic logical flaw, and if actually applied, may exclude most surrogate testimony. In a brief argument, Oliver suggests that when "an expert has relied on a number of sources and types of data and has added significant expertise to interpret and analyze them," a Confrontation Clause violation is unlikely "because the expert's opinion is truly original and a product of his special knowledge or experience."[240] On the other end of the spectrum, as Oliver describes it, is an expert who merely conveys "what others have said," clearly violating the Confrontation Clause.[241]

There are two problems with this argument. First, even if the surrogate draws on several sources of data, if the analyst-generated part of the data is necessary for the surrogate to draw his or her conclusions, then the same Confrontation Clause issue remains. That is, the defense will have no real opportunity to question, through cross-examination, the validity of the analyst-produced data, which as explained below, will typically be testimonial evidence.[242]

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237. Morin, *supra* note 200, at 1272. *See also* United States v. Johnson, 587 F.3d 625, 635 (4th Cir. 2009) ("As long as [the witness] is applying his training and experience to the sources before him and reaching an independent judgment, there will typically be no *Crawford* problem."); G. Michael Fenner, *Today's Confrontation Clause (After* Crawford *and* Melendez-Diaz), 43 CREIGHTON L. REV. 35, 77 (2009) (arguing briefly that expert opinion can be a way around "the demands of the Confrontation Clause," because "[t]he expert to be confronted does not always have to be the exact same expert who did every piece of the leg-work, who prepared every part of the report, and it need not even be the one who prepared the report, as long as the new expert has formed a relevant and independent conclusion.").

238. Imwinkelried, *supra* note 168, at 320 (quoting EDWARD J. IMWINKELRIED ET AL., COURTROOM CRIMINAL EVIDENCE § 1005 (4th ed. 2007)). *But see* Joe Bourne, Note, *Prosecutorial Use of Forensic Science at Trial: When Is a Lab Report Testimonial?*, 93 MINN. L. REV. 1058 (critiquing the holdings of *United States v. Washington*, *United States v. Moon*, and *United States v. Lamons* that machine printouts are not testimonial evidence).

239. *See infra* Part III.D.2.

240. Oliver, *supra* note 16, at 1560. *See also* United States v. Williams, 431 F.2d 1168, 1172 (5th Cir. 1970) ("When, however, the witness has gone to many sources—although some or all be hearsay in nature—and rather than introducing mere summaries of each source he uses them all, along with his own professional experience, to arrive at his opinion, that opinion is regarded as evidence in its own right and not as an attempt to introduce hearsay in disguise.").

241. Oliver, *supra* note 16, at 1560.

242. *See infra* Part III.E.

Second, in most cases, the reality of surrogate testimony will lie between these extremes. Rather than relying on many sources of data, or simply repeating the conclusions of the analyst, the surrogate will rely exclusively, or nearly exclusively, on analyst-produced data, and testify only about his or her own conclusions based on ostensibly independent analysis (which may look nearly identical to the analyst's reasoning).[243] If this is true, Oliver's approach would likely reject most surrogate testimony, since surrogates tend to rely solely on the analyst's data.

Julie Seaman argues briefly against surrogate testimony. She observes that:

> [I]f the [expert's] opinion is only as good as the facts on which it is based, and if those facts consist of testimonial hearsay statements that were not subject to cross-examination, then it is difficult to imagine how the defendant is expected to "demonstrat[e] the underlying information [is] incorrect or unreliable."[244]

This is a crucial point, which the arguments below build upon. Allowing surrogates to derive conclusions from analysts' testimonial statements frustrates a fundamental purpose of confrontation rights: giving the defendant the chance to challenge the truth or reliability of a statement against him or her. As explained below, cross-examination of the surrogate would rarely be capable of uncovering methodological flaws in the underlying data, which the analyst alone would know about.[245]

Mnookin also rejects surrogate testimony, but she does not specifically respond to the independent-analysis rationale. She argues that "when an expert's basis evidence is testimonial, cross-examining the expert cannot be deemed a constitutionally adequate substitute under *Crawford* for being able to confront whoever actually issued the testimonial statements."[246] As she explains, even if cross-examining the expert may be useful, *Crawford* unambiguously requires it.[247] She claims that "[c]ross-examining the expert cannot therefore satisfy *Crawford*'s requirements with respect to the testimonial basis evidence, any more than cross-examining a detective who took an affidavit can substitute for cross-examining the declarant."[248] Mnookin concludes that "*Crawford*'s language simply does not permit cross-examination of a surrogate when the evidence in question

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243. As noted previously, supervisors and those performing peer review, who often serve as surrogates, review analysts' results but neither observe the performance of the test nor perform any actual tests on the physical evidence. *See supra* notes 172, 175, 183 and accompanying text.

244. Seaman, *supra* note 16, at 847 (quoting People v. Valerio, No. H026460, 2005 WL 351788, at *14 (Cal. Ct. App. Feb. 15, 2005) (not designated for publication)).

245. *See infra* Part III.D.2.

246. Mnookin, *supra* note 5, at 834.

247. *Id.*

248. *Id.*

is testimonial."[249] This Article builds on Mnookin's brief argument by applying the same concerns to the independent-analysis justification for surrogate testimony.

2. Four Arguments Against Surrogate Testimony Even When Independent Analysis is Present

This section presents four arguments against surrogate testimony, which are equally applicable when surrogates are applying their independent expertise to "raw data." First, nearly all surrogate testimony is inconsistent with *Melendez-Diaz*, regardless of whether the surrogate applies independent analysis, because of the Court's strong emphasis on the importance of cross-examining the actual analyst and its focus on the role of analysts in creating unreliable or fraudulent test results. Second, depicting surrogates as independently analyzing "raw data" is highly misleading. This is because the "raw data" is heavily dependent on the analyst's methodology and because such independent analyses are likely to be nominal and cursory, allowing the surrogate to serve as a mere conduit for analyst-produced testimonial evidence. Third, surrogate testimony sits uneasily with the expert evidence provisions of the Rules of Evidence, which were never intended to allow a surrogate to rely wholly on data produced by a nontestifying witness in preparation for trial. Finally, strong public policy considerations, including the risk of false convictions, surrogates' multiple incentives to reach the same conclusion as the analyst, and the existence of superior alternatives, indicate that surrogate testimony is an unviable and dangerous form of evidence that should rarely be admitted.

E. Surrogate Testimony is Inconsistent with *Melendez-Diaz*, Independent Analysis or Not

Surrogate testimony contravenes *Melendez-Diaz*'s basic message: the Confrontation Clause requires the government to produce for cross-examination the analyst who produced scientific evidence against the defendant.[250] This section first provides an overview of the *Melendez-Diaz* Court's strong statements about the importance of cross-examining the actual analyst who performs the test. Next, I explain why surrogate

249. *Id.*

250. For a brief argument on the same subject:

> *Melendez-Diaz* confirms the position that an expert cannot testify about lab test reports without confrontation of the person who did the underlying analysis. The Court's rejection of a business records exception to confrontation for lab analyses, coupled with its seemingly unambiguous call for confrontation of forensic science testing, makes a lab supervisor's testimony objectionable testimonial hearsay, and hence inadmissible.

See Yermish, *supra* note 6, at 31.

testimony is inconsistent with the *Melendez-Diaz* holding.

The *Melendez-Diaz* Court placed great emphasis on the importance of the right to cross-examine the actual analyst. The Court replied aggressively to the suggestion that confrontation is not necessary or useful for "neutral, scientific testing."[251] First, the Court restated Crawford's absolute confrontation requirement: while there may be other, perhaps better, ways to "challenge or verify the results of a forensic test . . . . the Constitution guarantees one way: confrontation."[252]

Second, the Court stated that forensic tests are "not uniquely immune from the risk of manipulation."[253] The Court noted that most forensic labs are administered by police departments and quoted a report finding that analysts "face pressure to sacrifice appropriate methodology for the sake of expediency."[254] Analysts thus "may feel pressure—or have an incentive—to alter the evidence in a manner favorable to the prosecution."[255]

Third, the Court stated that confrontation may indeed be useful when analysts have been fraudulent, since they may tell the truth on the witness stand, just as an eye witness may "under oath in open court, reconsider his false testimony."[256] Fourth, the Court acknowledged the consensus that faulty or discredited forensic science has caused a large proportion of false convictions.[257] The Court quoted a National Academy Report finding that the country's forensic science system "has serious problems that can only be addressed by a national commitment to overhaul the current structure that supports the forensic science community."[258] As the Court observed, cross-examination may reveal faulty methodology or the analyst's incompetence.[259]

Fifth, the Court noted that in the case before the Court, and in many other typical cases, there is a wide variety of forensic techniques, which are subject to various errors. Speaking of the tests at issue in the case itself, the Court noted that "[a]t least some of that methodology requires the exercise of judgment and presents a risk of error that might be explored on cross-

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251. 129 S. Ct. at 2536.

252. *Id.*

253. *Id.*

254. *Id* (quoting Nat'l Research Council of the Nat'l Acads., Strengthening Forensic Science in the United States: A Path Forward 23–24 (2009)).

255. *Id.*

256. *Id.* at 2537; *see also* State v. Hudson, No. 79010, 2002 WL 472304, at *10 (Ohio Ct. App. Mar. 28, 2002) (Karpinski, J., dissenting) ("This last year, newspapers have reported instances across the nation of technicians falsifying chemical lab reports. How trustworthy is a report if the person who prepared it has [not] . . . testified under oath at a trial? A major test of reliability is that oath.").

257. *Melendez-Diaz*, 129 S. Ct. at 2537.

258. *Id (*quoting Committee On Identifying The Needs Of The Forensic Science Community, National Research Council Of The National Academies, Strengthening Science in the United States: A Path Forward P–1 (2009)).

259. *Id.*

examination."[260] Because this is true for many other common "types of forensic evidence . . . . there is little reason to believe that confrontation will be useless in testing analysts' honesty, proficiency, and methodology—the features that are commonly the focus in the cross-examination of experts."[261]

All of this relates to the cross-examination of the analyst who performs the test. Yet, as noted above, the dissent attempted to identify ambiguity about the identity of the analyst, suggesting that the lab supervisor or other actors may be "the analyst."[262] As demonstrated in Part III.A, this argument is to no avail. It is clear enough that without any qualification, the Court's reference to the analyst must be read in the most obvious and logical way: to refer to the analyst who performed the test.

Given the emphasis of the *Melendez-Diaz* court on the absolute right and practical importance of cross-examining the analyst, surrogate testimony is inconsistent with *Melendez-Diaz*. The Court's absolute language does not permit any exceptions, even if the surrogate is ostensibly applying his or her own independent expertise to the analyst's testimonial evidence. The reasons the Court cites for confronting the analyst apply equally whether or not the surrogate applies independent expertise and comes to his or her own conclusion. This is because most errors in forensic tests are likely to be introduced by the analyst, and the surrogate will often be unable to detect such problems.

Cross-examination of forensic experts will often center on the facts surrounding the production of the evidence, including whether the correct methodology was applied. Yet surrogate witnesses will be unable to give information about these facts. Having no direct observational knowledge of the actual performance of the test, the surrogate can only point to the analyst's notes or other materials describing what the analyst claims to have done.[263] If the analyst did not apply the methodology as described in his or her notes, or fraudulently altered test results, the surrogate will normally have no way of knowing.[264] The surrogate will have to take the validity of

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260. *Id.* at 2537.

261. *Id.* at 2538.

262. *Id.* at 2545 (Kennedy, J., dissenting).

263. This said, there may be some cases in which an astute surrogate may be able to tell—perhaps by noticing irregularities or inconsistencies in the analyst's report—that the analyst failed to use the proper methodology.

264. In forensic lab scandals, the instances of fraud or mistake are in most cases the fault of individual analysts, and supervisors failed to discover the problems when approving the analysts' work. Analysts have been caught falsifying evidence instead of performing confirmation tests; police and prosecutors have pressured "laboratory workers to produce quick results. . . . leading to shoddy performance and inaccurate results," and prosecutors have succeeded in pressuring analysts to "push the envelope" in particular tests and achieve false positives. Metzger, *supra* note 168, at 492–98. A recent study of false convictions found that 60% of false convictions involved scientifically invalid testimony by forensic analysts, encompassing seventy-two forensic analysts employed by fifty-two laboratories or medical practices in twenty-five states; Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 9 (2009). This included analysts who failed to disclose exculpatory forensic evidence, who gave statistics or estimates unsupported by any empirical

the test results on faith, and so will the jury.

Thus, when cross-examining the analyst, the all-important topic of the validity of the evidence can be meaningfully explored, but when cross-examining the surrogate, this is not possible. There is no logical reason to allow such a disparity: cross-examination regarding the validity of the data is either indispensible in all cases or none. Clearly, surrogate testimony, even when allegedly based on independent analysis of analyst-generated data, fails to fulfill the purpose of the Confrontation Clause: to allow defendants to challenge the content of the testimony against them. For this reason, surrogate testimony violates the Confrontation Clause. The only possible scenario in which surrogate testimony would not violate *Melendez-Diaz* and *Crawford* is when the underlying data is non-testimonial. This question is considered in Part III.E below.

F. "Independent Analysis" of "Raw Data" is Not What is Happening

Depictions of surrogates "independently" analyzing "raw data" to reach their own conclusions are misleading. First, the risk is high that the "independent analysis" will be a sham, going through the motions using minimal time and effort to duplicate the analyst's conclusion. Second, calling the data "raw data" is highly misleading because the analyst produces this data using a precise methodology which, performed incorrectly, invalidates the results. Third, when any person with sufficient expertise would come to the same conclusion after reviewing the analyst-produced data, the expert is essentially serving as a conduit for an implicit statement within the analyst's data. That is, if the data is such that anyone with the right training can "read" it, the raw data itself effectively contains a testimonial statement, the validity of which depends on the analyst's correct methodology in administering the test.

The first problem is that it is simply too easy for a surrogate to reproduce the analyst's exact reasoning and conclusions in his or her own words without devoting the normal amount of care and independent thought to the reasoning process. Such a sham "independent analysis" would be nearly impossible to detect. Cross-examination would normally be useless in determining whether a surrogate truly applied independent analysis.[265] Moreover, as discussed below in Section D, many surrogates will have

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information, and who discounted exculpatory evidence in a scientifically unsupported manner. When scholars recount numerous detailed examples of forensic errors, references to supervisors, as opposed to the analysts who conducted the tests, are few and far between. For example, Garrett and Neufeld refer countless times to analysts as culprits, but only twice to supervisors. *See id.* at 31 n.90, 82.

265. If the surrogate's analysis is identical to the analyst's reasoning, the defense may have difficulty determining whether this was a coincidence or the product of a standardized process of reasoning, as opposed to surrogate's unthinking reproduction of the analyst's report. Cross-examination about the similarity between the surrogate and analyst's reasoning would be unlikely to take place at all. This is because it could easily be harmful to the defense's case, by reinforcing the apparent correctness of the reasoning, and drawing attention away from the possible methodological flaws in the analyst's production of the data.

multiple incentives to engage in an inauthentic independent analysis. In sum, a surrogate's supposedly independent analysis can easily be a sham, which courts and defense counsel are nearly powerless to detect. Since *Daubert v. Merrell Dow Pharmaceuticals* hinges admissibility on the judge's finding that the expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field," surrogate testimony should be highly suspect.[266]

Second, though courts and commentators approving of surrogate testimony are fond of the term "raw data," the term is highly misleading.[267] Very little forensic data is "raw" in the sense of having no human intervention. Rather, analysts are trained in a detailed, multi-step methodology to use machines or computers to obtain valid results.[268] The Fourth Circuit's *Washington* decision illustrates this issue.[269] The majority opinion confidently dismissed the notion that the machine printouts constituted testimonial evidence, stating that the truth of the "raw data that the machines generated . . . is dependent solely on the machine."[270] Since only persons can make statements, and the technicians themselves made no statements, the court concluded that the printouts were not testimonial evidence.[271]

However, the dissent gave a more complete view of the analyst's role in producing the printouts, showing that their validity depended on analysts' adherence to complex procedures. The analysts must go through "extensive training" and follow a precise multi-step procedure, including calibrating the machine, withdrawing the correct amount of blood from the larger sample, inserting the smaller test sample in the machine without contamination, initiating the test, monitoring the machine during the test, and finally annotating and signing the results.[272] Surely the analyst's

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266. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999) (citing Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)).

267. *See supra* notes 79–80 and accompanying text.

268. *See supra* note 250 and accompanying text.

269. United States v. Washington, 498 F.3d 225 (4th Cir. 2007). *See also* United States v. Richardson, 537 F.3d 951, 955 (8th Cir. 2008). In *Richardson*, the Eighth Circuit approved of surrogate testimony by a DNA analyst who had performed a peer review of the original analyst's test, even though the surrogate "'didn't actually receive the evidence in this case,' but instead 'received the case file with [the analyst's] notes and results.'" *Id.* The results were not the actual evidence, but the analyst-produced data somehow derived from the physical evidence. The results were likely entirely dependent upon the analyst's skill in producing them. Yet the Court justified the admission of this testimony because the surrogate claimed that she performed her own "independent analysis" of the analyst's "test results." *Id.* at 956, 960.

270. *Washington*, 498 F.3d at 230.

271. *Id.*

272. *Id.* at 233 (Michael, J., dissenting). Similarly, Thomas Burke observes that "even when a technician produces a report containing only objective facts as conclusions (i.e., the substance was cocaine of ninety percent purity and weighed ten grams), he still must have engaged in some sort of scientific procedure—possibly a complex one—to acquire the reported results." Thomas F. Burke III, *The Test Results Said What? The Post-Crawford Admissibility of Hearsay Forensic Evidence*, 53 S.D. L. REV. 1, 16 (2008). *See generally* Bourne, *supra* note 202 (critiquing the holding of *United States v. Washington*, *United States v. Moon*, and *United States v. Lamons*, that machine printouts are not

annotations and signature renders this an affidavit, and thus a testimonial statement.[273] But even in the absence of this writing, it would seem, as the dissent argued, that due to the analyst's "significant role . . . in conducting the test and generating accurate results, the results . . . must be considered statements of the [analyst] for both evidentiary and Confrontation Clause purposes."[274] The dissent cited several state and federal appellate decisions to demonstrate that only when a printout is produced "without the assistance or input of a person" is the printout not the statement of a person.[275] The dissent's approach is clearly the correct one in light of *Melendez-Diaz*, given the emphasis of the court on the importance of cross-examining the analyst, and the facts that the analysts in *Washington* signed the printouts and performed the test in anticipation of litigation. The *Bullcoming* decision also supports this analysis. In response to the New Mexico Supreme Court's ruling that the "true accuser" was the machine while the analyst was a "mere scrivener," the *Bullcoming* Court noted that the analyst made several representations other than transcribing a computer-generated number.[276]

Third, particularly when any surrogate with the requisite scientific training would come to the same conclusion after reviewing the analyst-generated data, it is disingenuous to claim that the surrogate is applying independent analysis to raw data and coming to his or her own independent conclusion. In many cases, a surrogate's independent analysis may amount to little more than briefly reviewing a computer printout indicating the presence of cocaine. In such situations, what is really occurring is that the surrogate is serving as a vehicle for the testimonial statement within the analyst-produced data. Even if some amount of expertise is needed to interpret or analyze the test results, the test results themselves contain an implicit statement, as explained above. Even though the analyst's data and its implicit statements are not directly admitted into evidence, they are indirectly admitted through the surrogate testimony.[277] Ignoring this reality

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testimonial evidence).

273. *See supra* note 41 and accompanying text.

274. *Washington*, 498 F.3d at 233–34 (Michael, J., dissenting).

275. *Id.* at 233 (quoting United States v. Hamilton, 413 F.3d 1138, 1142 (10th Cir. 2005)). According to these cases, such statements are hearsay and cannot be admitted absent an exception to the hearsay rules. *See id.* The same analysis should apply to forensic printouts now that the testimonial status of evidence is the prime focus of the inquiry. Since analysts generate printouts with the knowledge that their substantive results will be used at trial, these printouts are probably testimonial statements in most cases. The issue of when forensic results are testimonial is discussed in more detail in Part III.E below.

276. 131 S. Ct. 2705, 2714 (2011).

277. As Mnookin argues, there is no need to be concerned that such arguments will lead to an infinite regression, so that the personal source of each witness's data, and the source of her data, and so on, have to be confronted. Mnookin, *supra* note 5, at 833–34. Certainly, raw data relied upon by the analysts but not created by them is not testimonial evidence in most instances. A district court in Kansas recently decided, correctly, that the analyst's reliance on statistical analysis of DNA frequency data did not pose confrontation issues because the data was non-testimonial. State v. Appleby, 221 P.3d 525, 552 (Kan. 2009). Only analyst-produced data will normally be testimonial, because other forms of data will

because the evidence was not directly admitted would amount to a formalistic retreat from the principles and purposes of the Confrontation Clause.

The independent analysis of analyst-generated data is too uncertain and subject to manipulation to be a permissible ground for admitting surrogate testimony. Surrogates can easily reproduce the analyst's reasoning in their own words, and neither the judge nor the defense will be able to detect this sham analysis. What is called "raw data" is in fact completely dependent on the analyst's honest and proficient performance of complex methodologies. When any expert could "read" the analyst's data and come to the analyst's conclusion, the surrogate is clearly serving as a mere conduit for the implicit testimonial statement in the analyst's data.

G. Surrogate Testimony is an Abuse of the Rules of Evidence

Allowing a surrogate witness to testify as an expert witness is an abuse, or at the least a highly questionable use, of the Federal Rules of Evidence, which did not intend expert witness provisions to be used as an end-run around constitutional rights. First, the fact that surrogate testimony may seem technically permissible under the rules of evidence says nothing about its constitutionality, since the Constitution trumps evidence law. Second, the language in Rule 703 allowing experts to rely on inadmissible evidence was not meant to encompass a situation in which a nontestifying declarant is the sole source of data for the expert, who is serving as a substitute for the declarant. Third, the "sufficient data" requirement of Rule 703 suggests that surrogate testimony should not be admitted because the only practical way, and the only way prescribed by the Constitution, for determining the actual quality of the data is cross-examination of the analyst. These examples strongly suggest that surrogate testimony, even when described as independent analysis, is an inappropriate use of the Rules of Evidence.

Even if the Rules of Evidence would seem to support surrogate testimony when the surrogate applies his or her expertise to come to an independent conclusion, this is ultimately irrelevant because the Constitution, not evidence law, defines the contours of the Confrontation Clause.[278] The Supreme Court has held unconstitutional certain uses of evidence law in the past, and there is nothing to stop it from doing so regarding surrogate testimony and Rule 703.[279] If the Court were to adopt

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not have been created in anticipation of trial.

278. As noted above, evidence law would not permit an "expert" to simply summarize the conclusions of someone else. *See supra* note 200 and accompanying text.

279. *See* Chambers v. Mississippi, 410 U.S. 284, 302 (1973) (holding that the Rules of Evidence "may not be applied mechanistically to defeat the ends of justice"). In *Crawford*, the Court stated: "Where testimonial statements are involved, we do not think the Framers meant to leave the Sixth Amendment's protection to the vagaries of the Rules of Evidence, much less to amorphous notions of 'reliability.'" Crawford v. Washington, 541 U.S. 36, 61 (2004).

the rule that this Article advocates—which would ban most surrogate testimony, but allow it in some limited circumstances when the underlying data is not clearly testimonial—it would amount to prohibiting as unconstitutional only one narrowly-defined, anomalous use of Rule 703. Since this use of Rule 703 is not what lawmakers intended, this would hardly be a radical holding. The Fourth Circuit in *Johnson* was rightly concerned that disallowing expert evidence informed by inadmissible evidence would "disqualify broad swaths of expert testimony, depriving juries of valuable assistance in a great many cases."[280] Yet this Article does not recommend "do[ing] away with Federal Rule of Evidence 703," only restricting the practice of allowing surrogates to rely on evidence produced by another analyst in anticipation of trial.[281]

Rule 703, which allows experts to rely on inadmissible material, was not meant, and should not be used, to allow an expert to serve as a substitute for another witness who produced testimonial evidence that is the expert's sole source of data. Rule 703 states in part: "If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence in order for the opinion or inference to be admitted."[282] The amendment to Rule 703 passed in 2000 specified that the underlying data itself may only be disclosed if its probative value "substantially outweighs" its "prejudicial effect."[283] The 2000 amendment to Rule 703 was not meant to expand the ability of experts to rely on inadmissible materials or to reinforce the propriety of such reliance in general.[284] Rather, it was already accepted that experts could rely in part on inadmissible materials.[285] The purpose of the amendment was to prevent courts from automatically admitting basis evidence without a balancing test. The explanatory note for this amendment states that the amendment was "not intended to affect the admissibility of an expert's testimony," but rather to "emphasize that when an expert reasonably relies on inadmissible information to form an opinion or inference, the underlying information is not admissible simply because the opinion or inference is admitted."[286] Yet courts cite the language of Rule 703 as if it grants blanket permission for experts to rely on—and indirectly

280. United States v. Johnson, 587 F.3d 625, 635 (4th Cir. 2009).

281. *See* United States v. Turner, 591 F.3d 928, 934 (7th Cir. 2010). The Seventh Circuit's dismissal in *Turner* of a challenge based on *Melendez-Diaz*, in which the court said "*Melendez-Diaz* did not do away with Federal Rule of Evidence 703," is technically true but off the mark. *Id.* The Court did not have to explicitly abolish Rule 703 for certain uses of the rule to be unconstitutional under its holding. This said, the *Melendez-Diaz* Court of course did not refer specifically to surrogate testimony, and the Court will have to decide a surrogate testimony case to clarify the law on the matter.

282. FED. R. EVID. 703.

283. FED. R. EVID. 703 advisory committee's note.

284. *See infra* note 286 and accompanying text.

285. *See, e.g.*, Singh v. Greiner, No. 02-CV-1324 (JG), 2002 U.S. Dist. LEXIS 22623, at *9 (E.D.N.Y. Nov. 18, 2002) ("[A]n expert may base her opinion on specialized knowledge and facts or data not admissible in evidence so long as they are reasonably relied upon by experts in the field.").

286. FED. R. EVID. 703 advisory committee's note.

admit the substance of—inadmissible evidence.[287]

There is no evidence that the drafters of Rule 703 or its amendments had anticipated the rule's use in the questionable context of surrogate testimony. Consider the fact that the surrogate is often the supervisor of the analyst.[288] Allowing a declarant's boss to testify in the declarant's place, relying solely on materials prepared by the declarant in preparation for trial, is a highly anomalous and constitutionally suspect form of expert testimony. The issue is the same when the surrogate is an outside expert: an expert is relying solely on data produced by a nontestifying analyst in preparation for trial. If Congress or Rule 703's drafters anticipated such an application, they certainly left no evidence of this. The Advisory Committee notes describe a scenario that seems as far removed as possible from surrogate testimony: a physician draws on a variety of sources of evidence, most of them admissible, to make an expert decision.[289] Surrogate testimony is the polar opposite of this example, since surrogates rely solely on inadmissible evidence prepared specifically for litigation.

Rule 702 of the Federal Rules of Evidence requires that the testimony be "based upon sufficient facts or data," and that the opinion of the expert is the result of applying "reliable principles and methods . . . reliably to the facts of the case."[290] One could argue that surrogate testimony should never be admitted because it could never fulfill these requirements. Admitting the surrogate testimony would be assuming what needs to be demonstrated—that the underlying data is of sufficient quality and reliability to warrant admission, because the analyst correctly applied a sound methodology.[291] The only way to determine whether the underlying

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287. *See, e.g.*, United States v. Moon, 512 F. 3d 359, 361 (7th Cir. 2008); United States v. Turner, 591 F.3d 928, 934 (7th Cir. 2010); People v. Rutterschmidt, 98 Cal. Rptr. 3d 390, 414 (Cal. Ct. App. 2009); Pendergrass v. State, 913 N.E.2d 703, 708–09 (Ind. 2009).

288. One source even suggested that surrogate testimony using the supervisor was the most common way to introduce forensic evidence. "Under the present system, the job of testifying about evidence usually falls to a lab supervisor who can speak to the veracity of the test and the methodology . . . ." Dan Wilson, *Supreme Court's Decision May Have Minimal Affect on State's Two Crime Labs*, POST-CRESCENT (Appleton, Wis.), July 27, 2009, at APC.

289. The advisory committee notes to the proposed Rule 703 in 1972 did not directly discuss inadmissible basis evidence at all. Its discussion of the basis for expert opinion is strikingly different from the typical surrogate testimony situation:

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

Proposed FED. R. EVID. 703 (1972) advisory committee note.

290. FED. R. EVID. 702.

291. The Advisory Committee describes the requirement as quantitative rather than qualitative, but of course if the analyst's fraud or mistake invalidates the data, its quantitative value is zero. *See* FED.

data is sufficiently reliable is to cross-examine the analyst or re-do the test, either of which would make the surrogate unnecessary. Also, under *Daubert*, courts must be satisfied with the "principles and methodology" behind the expert's testimony.[292] The methodology employed by the analyst who produced the data is a chief determinant of the validity of the surrogate's conclusions, and a court cannot take this methodology for granted in its *Daubert* analysis.[293] Consequently, the admissibility of any surrogate testimony is, at the very least, problematic.

Surrogate testimony sits uneasily with the Rules of Evidence. Even if it were not such an awkward fit, this would be irrelevant because constitutional rights trump evidentiary rules. While Rule 703 allows experts to rely in part on inadmissible evidence, a recent amendment to the rule was meant to caution against automatically admitting basis evidence – something surrogates in effect do, by serving as a conduit for the analyst's results. Moreover, nothing indicates that lawmakers intended Rule 703 to be used for the unusual situation of surrogate testimony, in which an expert witness substitutes for a nontestifying witness by relying solely on evidence the nontestifying witness produced in anticipation of trial. Finally, the requirements of Rule 702 and *Daubert* seem impossible to meet for surrogate testimony, since only by cross-examining the analyst or performing a second test can the validity of the data and its underlying methodology be assured.

H. Policy Considerations: Superior Alternatives, the Risk of False Convictions, and Multiple Incentives for Bias

Policy considerations, including the existence of superior alternatives to surrogate testimony, the heightened risk of convicting the innocent, and surrogates' multiple incentives for bias, indicate that surrogate testimony is highly problematic and should be generally inadmissible, regardless of whether surrogates apply independent analysis. First, in most cases it should be possible to simply perform a second test and make the analyst who performed the second test available for cross-examination. Second, because the analyst, not the lab supervisor or others, likely introduces most mistakes or acts of fraud leading to invalid forensic results, surrogate testimony encourages false convictions by shielding the analyst from cross-examination. Third, surrogate witnesses who are lab supervisors have a uniquely large and strong set of incentives to be biased towards reaching the same result as the analyst, rendering them an inherently suspect class of witnesses.

R. EVID. 702 advisory committee note.

292. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 594–95 (1993).

293. As the Advisory Committee comment notes, a court cannot take the expert's "word for it." FED. R. EVID. 702 advisory committee note (citing Daubert v. Merrell Dow Pharmaceuticals, Inc., 43 F.3d 1311, 1319 (9th Cir. 1995)).

The existence of a far superior alternative to surrogate testimony—the performance of a second test by an analyst who is available to testify—calls into question the appropriateness of this type of evidence. As the Court notes in *Melendez-Diaz*, certain forensic methods—such as autopsies and breathalyzer tests—cannot be repeated.[294] Most tests, however, can be repeated, provided that the laboratories preserved the evidence, as statutes or regulations typically require.[295] The *Melendez-Diaz* dissent actually suggests that a second test is more effective than cross-examination in "detect[ing] errors in scientific tests." [296] Assuming this is true, repeating tests instead of using surrogates would potentially reduce false convictions. A second benefit of repeating tests instead of admitting surrogate testimony would be that more defendants would have the ability to cross-examine the analyst who actually performed the forensic test. Even if courts remained unconvinced that surrogate testimony violates the Confrontation Clause, they should nonetheless understand its deeply problematic nature, and recognize that repeating the test would eliminate a potential Sixth Amendment violation. Finally, defendants may be more likely to stipulate to test results if a second test confirms their validity. This could potentially reduce the duration of trials.

Surrogate testimony likely contributes to false convictions, because surrogates relying solely on the analyst's results and notes would often be unable to detect problems with the analyst-produced data, such as methodological errors or fraud. Reading reports on laboratories plagued by incompetence or fraud, one rarely sees references to supervisors as the culprits.[297] Rather, it is the analysts who make the mistakes or fraudulent reports, and supervisors apparently either fail to notice these mistakes or approve them anyway.[298] For this reason, cross-examining the supervisor will often be of little use in preventing false convictions.

Of course, surrogates are not always lab supervisors; they are sometimes outside experts. Outside experts would probably be even less likely than supervisors to detect errors in the analyst-produced data, since they are less familiar with the particular procedures and customs of the lab. Given the heightened risk of false convictions, surrogate testimony should be avoided whenever possible.

Finally, surrogates who are lab supervisors (which many of them

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294. Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2536 n.5 (2009).

295. This is not to say there is not a need for legislative action in this regard. *See* Rochelle L. Haller, Comment, *The Innocence Protection Act: Why Federal Measures Requiring Post-Conviction DNA Testing and Preservation of Evidence are Needed in Order to Reduce the Risk of Wrongful Executions*, 18 N.Y.L. SCH. J. HUM. RTS. 101 (2001) (discussing a need for more legislation requiring preservation of evidence).

296. *Melendez-Diaz*, 129 S. Ct. at 2547 (Kennedy, J., dissenting). Since the second analyst may have incentives to come to the same conclusion as the first, it would be even more useful for the defense to have the opportunity to independently test the results.

297. *See supra* note 228 and accompanying text.

298. *Id.*

are) have multiple incentives, apart from their role as the state's witness, to come to the same conclusion as the analyst and support the validity of the underlying data.[299] First, because most crime labs are funded and administered by the police, a supervisor may be reluctant to come to a different conclusion than the analyst.[300] That is, the supervisor may not want to anger his police superiors and risk his job or career advancement by complicating what the police assumed would be a successful prosecution. The Federal Rules of Evidence have apparently responded to such concerns by excluding, in criminal cases, "matters observed by police officers and other law enforcement personnel" from the public records exception to the hearsay rule.[301] Many forensic analysts could plausibly be considered "law enforcement personnel" because police departments administer their labs. Second, in many cases the lab supervisor, having trained the analyst, may not want to admit any errors or weaknesses in the analyst's work, since it would reflect poorly on the supervisor. Third, the lab supervisor may be reluctant to cast any doubt on the validity of the analyst's data out of a desire to maintain collegial relationships with his employees. Fourth, because the supervisor often trains and personally knows the analyst, the supervisor may tend to trust his or her employees' notes and results, and may thus give questionable or inconsistent results the benefit of the doubt, instead of applying a normal standard of care to his or her analysis. This is significant because *Daubert* requires courts to be satisfied that the expert "employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." [302] Fifth, if a supervisor admits that the analyst produced invalid data or analyzed data inappropriately, this could spark a comprehensive investigation of the lab (as has happened in some high-profile cases around the country), resulting in the reversal of numerous convictions and personal humiliation.[303] Faced with threats to his or her reputation, career, relationships, and even to public safety, it may be unrealistic to expect a lab supervisor—or for that matter a colleague of the analyst—to have the fortitude to come to a different conclusion as the analyst even when the facts and methodology require it.[304]

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299. *See supra* note 219 and accompanying text.

300. *See Melendez-Diaz*, 129 S. Ct. at 2536 (citing recent report showing majority of forensic labs are administered by law enforcement agencies). As Metzger notes, "Many courts overlook this institutional loyalty when they evaluate the reliability of state laboratory reports." Metzger, *supra* note 168, at 496 n.87.

301. FED. R. EVID. 803(8)(B).

302. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999).

303. There have been high-profile investigations of certain labs, sometimes involving the indefinite closure of the lab. *See* Metzger, *supra* note 168, at 476–77, 495 (describing scandal involving a Houston crime lab, causing it to close, and a situation in Baltimore in which courts had to reexamine 480 criminal convictions after it was revealed that the analyst did not understand the science behind the tests and had thus created valueless results).

304. This is not necessarily a matter of supervisors saying the substance was cocaine when they knew it was really baking soda. Rather, supervisors acting as surrogates may refuse to acknowledge serious methodological flaws in the analyst's tests, the insufficiency of the data, or the plausibility of alternative conclusions, instead depicting the data and his conclusion as rock-solid. *See* Metzger, *supra*

While these biases may apply, to some degree, to the analyst who performed the test, the supervisor's position of authority compounds the problems. Moreover, while the analyst may share some of these biases, at least he or she has knowledge of the actual performance of the test, which may be relatively rare among supervisors.[305] These multiple incentives for surrogates to come to the same conclusion as the analyst call into question the ability of supervisors who serve as surrogates to reliably apply their expertise to the facts, as Rule 702 requires. [306] To be sure, courts regularly admit the testimony of experts despite the real possibility that their compensation will influence their opinion. But when multiple sources of bias are present, courts should not ignore them and act as if surrogates are typical expert witnesses. Indeed, given the credibility crisis affecting forensic science in the last few years, prompting the National Academy of Sciences to say that "serious problems" reveal that a "national commitment to overhaul" the forensic science system is necessary, it seems prudent to acknowledge the probable biases underlying much surrogate testimony.[307]

Considering public policy concerns alone, courts should avoid admitting surrogate testimony whenever possible. Repeating the test should normally cause minimal inconvenience, and is superior to surrogate testimony for several reasons. Surrogate testimony likely contributes to false convictions, since surrogates may rarely know whether the analyst-produced data they relied upon was invalid. Even if surrogates (specifically those who are lab supervisors) know about the weaknesses or invalidity of the data, they have a uniquely large set of incentives to come to the same conclusion as the analyst and portray the evidence as flawless and overwhelming. This further reinforces the conclusion that surrogate testimony is a highly problematic form of evidence, which courts should generally forbid.

All four of these arguments recommend against surrogate testimony in general, even when surrogates apply independent expertise to analyst-produced data. But the Confrontation Clause violation is clearest when the surrogate relies on analyst-generated data which is itself testimonial evidence. That is, even if a surrogate applies independent analysis to analyst-produced data, if this data itself is testimonial, then any surrogate witness would seem to be, in effect, serving as a mere conduit for the analyst's testimonial statement. Because of the importance of this issue, this Article provides a tentative method for determining whether analyst-produced data is testimonial evidence.

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note 168, at 497–98.

305. *See* Pendergrass v. State, 913 N.E.2d 703, 711 (Ind. 2009) (Rucker, J., dissenting) (arguing that the surrogate "could not testify whether [the analyst] diverged from standard laboratory procedures or how carefully or competently she performed the specific analyses").

306. *See* FED. R. EVID. 702.

307. NATIONAL RESEARCH COUNCIL OF THE NATIONAL ACADEMIES, STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD (Prepublication Copy Feb. 2009).

I. When is Analyst-Generated Data Testimonial Evidence?

The previous section argued that surrogate testimony should be discouraged for a number of reasons, and it is most certain to constitute a Confrontation Clause violation when the surrogate relies on analyst-produced data that is testimonial evidence. But when is analyst-generated data testimonial evidence? Neither *Melendez-Diaz* nor *Bullcoming* directly addressed this question. Justice Sotomayor's concurrence in *Bullcoming* noted that, "we do not decide whether . . . a State could introduce . . . raw data generated by a machine in conjunction with the testimony of an expert witness." [308] This section contends that in most cases the "raw data" produced by an analyst should qualify as a testimonial statement. More specifically, analyst-produced data—assuming that it was produced with the knowledge that it could be used at trial[309]—should be understood as a testimonial statement if the data (a) is sufficiently formalized, (b) makes an explicit or implicit statement (such as saying cocaine was present in the substance), and (c) is dependent on the correct methodology or trustworthiness of the analyst.[310]

First, most data—such as a computer printout—will be formalized: It will be presented in a regularized format according to certain procedures and will often contain the annotations, notes and signature of the testing analyst.[311] Whether other types of data are formalized is less clear. Arguably, all analyst-produced data that is part of the forensic report or file is formalized because the analyst producing it uses precise procedures to fulfill the methodological requirements of the test. Yet perhaps certain

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308. Bullcoming, 131 S. Ct. at 2722. Admittedly, the simplest way for the Supreme Court to eliminate the constitutional problems with surrogate testimony would be to argue that only the type of formal affidavit in *Melendez-Diaz*—containing a statement that the substance contained cocaine, and signed by the analyst—is testimonial evidence, and thus any computer printouts or other such analyst-produced data is not sufficiently formalized to be testimonial. Besides being highly questionable analytically and factually—after all, many such reports are signed—such a ruling would allow a large proportion of surrogate testimony, abdicating an important aspect of courts' roles in enforcing the Confrontation Clause.

309. Both *Crawford* and *Melendez-Diaz* considered a statement "made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial" to be testimonial evidence. *Melendez-Diaz*, 129 S. Ct. at 2532 (quoting Crawford v. Washington, 541 U.S. 36, 52 (2004)).

310. The *Bullcoming* decision recognized that formality is one consideration in deciding whether something is testimonial. The majority opinion said that the "formalities" contained in the analyst's report were "adequate to qualify" the analyst's statement in the report "as testimonial." 131 S. Ct. at. 2717. In a footnote, Justice Sotomayor's concurrence explained that "formality is primarily an indicator of testimonial purpose," because it "suggests that the statement is intended for use at trial." *Id.* at 2721 n.3 (Sotomayor, J., concurring). This suggests that a statement's degree of formality may be irrelevant if it is clear that the statement is meant to be used at trial. Since the only purpose of machine-generated results in a forensic lab is the creation of evidence to be used at trial, such results (even if unaccompanied by the analyst's full report) should be considered testimonial. If this is correct, then introducing only the machine printout and calling an expert witness as a surrogate—one possibility Justice Sotomayor mentioned—would violate the Confrontation Clause. *Id.* at 2723–24.

311. For example, the test in *Washington* had these characteristics. *See supra* note 236 and accompanying text.

isolated pieces of data within the forensic file—such as photographs—would be considered nontestimonial. The latter interpretation could allow surrogates to rely on certain parts of an autopsy report, in line with some court decisions.[312]

Second, if the data makes some kind of implicit or explicit statement, it is properly understood as testimonial. If a machine printout indicates in writing that cocaine was present in a substance, this is obviously a statement. If the printout does not include an explicit written statement, but if any qualified expert would draw a certain conclusion from the printout, the printout is making an implicit statement. When a piece of data is not particularly statement-like—again, like a photograph or video recording—it may not be testimonial. However, this requirement should be interpreted liberally. As the dissent in *Washington* noted, precedent demonstrates that unless the machine produced the results without any intervention by the analyst—something unlikely to occur in the context of forensic analysis—the printout is the analyst's statement.[313]

Third, if the analyst must follow certain procedures for the data to be valid, making the validity of the data dependent on the skill and trustworthiness of the analyst, then the data is most likely testimonial. As the *Washington* dissent argued, "In light of the significant role that the technician plays in conducting the test and generating accurate results," the "test results must be considered statements of the laboratory technicians."[314] Analyst-produced data is only as good as the analyst's methodology.[315] Cross-examining a surrogate, who has no direct observational knowledge of the analyst's methodology, is no substitute for cross-examining the analyst

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312. Some courts have held "factual" portions of autopsies to be nontestimonial, while the opinions in autopsy reports were testimonial. *See, e.g.*, State v. Lackey, 120 P.3d 332, 351–52 (Kan. 2005); Rollins v. State, 897 A.2d 821, 833–34 (Md. 2006) (deciding to adopt the reasoning from *Lackey*). However, such rationales are probably no longer valid after *Melendez-Diaz*. *See* Yermish, *supra* note 6, at 31. Yermish observes that the law professor's amicus brief in *Melendez-Diaz* contained suggestions that could result in more nontestimonial evidence being preserved from medical exams. Specifically:

> They encourage thorough recordkeeping of examinations, including videotaping, preservation of relevant tissue samples and blood or other anatomy, plus photos, including those with relevant measurements. In other words, virtually all of the significant evidence could be preserved by nontestimonial evidence, which would permit a surrogate to utilize the evidence and render a relevant opinion.

Id.; *see also* Mnookin, *supra* note 5, at 854–55. This issue is potentially important because surrogate testimony replacing medical examiners in homicide trials may be relatively common:

> In homicide prosecutions, it is not uncommon for the prosecution to substitute as an expert at trial a medical examiner who was not the pathologist who actually performed the autopsy. In testifying to the manner and cause of death, these 'substitute medical examiners' routinely rely upon the autopsy report, photographs, and other data and information obtained or created in the course of the death investigation.

Steven Yermish, Crawford v. Washington *and Expert Testimony: Limiting the Use of Testimonial Hearsay*, 30 CHAMPION 12, Nov. 2006, at 15.

313. *See supra* note 239 and accompanying text.

314. United States v. Washington, 498 F.3d 225, 233–34 (4th Cir. 2007).

315. *See* Seaman, *supra* note 16, at 847–48.

who actually produced the data. However, if only trivial involvement by the analyst was necessary for the data to be valid, then it is less certain that the data is properly considered the analyst's testimonial statement. Moreover, when one could reliably ascertain the validity of the data without reference to the underlying methodology—perhaps as in the case of a photograph of a dead body—this also weakens the conclusion that the data is testimonial.[316]

If under these criteria the data the surrogate uses to come to his or her conclusion is testimonial evidence, there should be a general rule against surrogate testimony because the surrogate would in effect be serving as a conduit for the analyst's testimonial statement.[317] In many situations, the surrogate's independent analysis will be superficial and cursory, involving little more than reviewing a computer printout.[318] Even if the surrogate must engage in extensive analysis of the data to come to an independent conclusion, the conclusion is nonetheless deduced from, and thus completely dependent on the reliability of, a testimonial statement. Since the validity of the underlying testimonial statement is dependent on the analyst, only by cross-examining the analyst would the defendant have the chance to effectively challenge the reliability of the analyst-produced testimonial evidence.[319]

If the analyst-generated data, though produced in anticipation of litigation, is not formalized, does not amount to a statement in any sense, and does not depend on the skill of the analyst, it may not be testimonial evidence. However, if the data does not seem formalized or statement-like, but its validity is highly dependent on the analyst's skill, it may still be inappropriate to allow surrogate testimony. This is because the defendant would be deprived of an opportunity to challenge the validity of the data that underlies the testimony. That is, even if the data is arguably nontestimonial, it may still implicate the core concern of the Confrontation Clause—allowing defendants to confront the person who is the source of evidence against them. This illustrates why, as argued below, there should still be a general rule (subject to certain exceptions) prohibiting surrogate testimony when it is ambiguous whether the data is testimonial.

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316. In such a case, even if the data is conceivably making some kind of implicit statement, the statement is transparent enough that it does not seem necessary to describe it as the analyst's personal statement. However, if fraud is a realistic possibility, it may not be appropriate to consider such evidence nontestimonial.

317. It should be noted that if the data is clearly testimonial evidence, the reliability of the data is irrelevant to its admissibility. As Mnookin points out, Rule 703 of the Federal Rules of Evidence bases the admissibility of an expert opinion on the reliability of the underlying data, but under *Crawford*, the reliability of testimonial evidence is no longer a consideration. Mnookin, *supra* note 5, at 817–18. In other words, *Crawford* requires a higher level of protection for confrontation rights than evidence law alone would supply. *See id.* at 805.

318. The *Pendergrass* dissent, for example, speaks of supervisors "rubberstamping" test results, noting that there was no evidence that the supervisor did anything more. *See* Pendergrass v. State, 913 N.E.2d 703, 711 (Ind. 2009) (Rucker, J., dissenting).

319. *See supra* part III.B.

IV. A Standard for Admitting Surrogate Testimony in Limited Circumstances

This Part first discusses previously-proposed standards for admitting surrogate testimony, and then presents this Article's original proposal. Previous authors have suggested varying standards for allowing surrogate testimony. This Article rejects some elements of these tests, but accepts and builds on others, in its alternative approach allowing for surrogate testimony in certain limited circumstances. After explaining this approach, this Article briefly responds to two possible counterarguments.

A. Previously Proposed Standards for Permitting Surrogate Testimony

In this section, this Article evaluates three possible standards for determining the admissibility of surrogate testimony. First, a law professors' amicus brief in *Melendez-Diaz* proposes a standard that, while overly permissive, appropriately requires both the analyst to be truly unavailable and a second test to be performed if possible. Second, Oliver's analysis suggests a possible test, which is also too permissive. Third, Mnookin proposes a standard based in part on necessity, trustworthiness, and whether the analyst would have an independent memory of the test. While rejecting the latter consideration, this Article accepts the legitimacy of considering necessity and trustworthiness, albeit in a more restricted way that is consistent with *Crawford* and *Melendez-Diaz*.

A group of law professors supporting the defendant Melendez-Diaz as amici curiae argued that when:

> (1) conducting another test is infeasible; (2) the original test was conducted in accordance with regularized procedures and documented in sufficient detail for another expert to understand, interpret, and evaluate the results, and (3) the original expert is now unavailable[,] a plausible argument exists that surrogate testimony by another qualified expert ought to be constitutionally permissible.[320]

This standard is far too permissive. By all means, the original analyst must be genuinely unavailable for a court to consider surrogate testimony.[321] Yet

320. Brief of Law Professors as Amici Curiae Supporting Petitioner at 23, Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527 (2009) (No. 07-591), 2008 WL 2521264.

321. The genuine unavailability of the analyst is key. If courts were lenient about a finding of unavailability, prosecutors would inevitably try to claim an analyst was unavailable in order to use a surrogate who was regarded as a more skillful or credible witness. Such attempts are especially likely when, as in *People v. Dungo*, the original analyst has been accused of incompetence or otherwise lacks credibility. 98 Cal. Rptr. 3d 702, 714 (Cal. Ct. App. 2009). Since these are precisely the scenarios in which a forensic test was likely to have been performed incorrectly, it is critical that prosecutors are unable to exploit surrogate testimony law by falsely claiming the analyst is unavailable.

the standard is too permissive because nearly all tests are "conducted in accordance with regularized procedures," and most are likely documented with enough detail to allow an expert to evaluate and interpret the results.[322] In applying such a standard, courts would almost always approve of the surrogate testimony, provided another test was "infeasible." Moreover, the professors' brief fails to explain why its criteria justify an exception to *Crawford*'s seemingly absolute requirements.

This Article does endorse, however, the proposal to require a second test whenever possible. As argued above in Part III.D, such a requirement could potentially increase the accuracy of evidence, eliminate the need for surrogate testimony in most cases, and shorten trials by encouraging defendants to stipulate to (now-duplicated) test results. However, such a requirement is potentially problematic for two reasons. First, it could give labs an incentive to destroy samples after the original test, so that they could say a second test was impossible, enabling them to call surrogate witnesses. It is important not to introduce such incentives since the preservation of samples is crucial for exonerating innocent defendants.[323] Second, performing a second test may possibly present logistical or financial problems. This seems unlikely, however, given the small percentage of tests that would likely be done a second time. On balance, as long as laboratories are required to preserve evidence, mandating a second test whenever possible is an appropriate requirement. In fact, if courts reject the overall approach of this Article but begin requiring another test when possible, this alone would be a significant safeguard against the erosion and violation of defendants' confrontation rights.

Oliver argues that when the expert relies on several sources of data and applies his or her own expertise to the data, the testimony is unlikely to violate the Confrontation Clause, and thus should be allowed.[324] While Oliver does not develop a standard for admitting surrogate testimony, his argument suggests that as long as surrogates do not rely solely on analyst-produced data, it is permissible.[325] As discussed previously, this is far too permissive, because even if the surrogate drew on several sources of information, the analyst-produced testimonial evidence may still be an essential piece of evidence, without which the surrogate could not have arrived at his or her conclusion.[326] In such a case, the surrogate would still in effect serve as a conduit for the analyst's data, which in most cases will be testimonial evidence.

In addition to contributing to the law professors' brief, professor

322. *See* Brief of Law Professors, *supra* note 284, at 23.

323. *See generally*, Cynthia E. Jones, *Evidence Destroyed, Innocence Lost: The Preservation of Biological Evidence Under Innocence Protection Statutes*, 42 AM. CRIM. L. REV. 1239 (2005).

324. *See* Oliver, *supra* note 16, at 1560.

325. *See id.*

326. *See supra* Part III.D.1.

Mnookin has suggested her own standard for determining whether to admit surrogate testimony. Mnookin asks:

> When (1) the expert is truly unavailable; (2) even if the expert were available, it is not likely that she would have an independent memory of what she recorded; and (3) the evidence was created in circumstances that suggest its likely (though of course not certain) trustworthiness, does *Crawford* truly mean that we must nonetheless exclude this test? Must the autopsy conducted a decade or two earlier by a now-deceased medical examiner actually be excluded?[327]

The innovation of this proposed standard is to reintroduce trustworthiness into the equation—after it was removed by the *Crawford* analysis—and to consider whether the analyst would have an "independent memory" of the test. As explained below, I accept the need to consider the trustworthiness of the test in ruling on surrogate testimony, and in this sense this Article builds on Mnookin's proposal. I also follow Mnookin's analysis by acknowledging the appropriateness of considering the necessity of the evidence—a consideration she discusses particularly in connection with autopsies.[328] However, this Article's proposal avoids the constitutional problems with considering trustworthiness and necessity by limiting its applicability to cases in which the testimonial status of the data is in doubt.

The independent memory issue is not a useful factor to include in a standard for admitting surrogate testimony. First, given analysts' heavy caseloads, one could always make the argument that the analyst would not remember a particular test.[329] Second, reviewing notes may well jog an analyst's memory. Third, the analyst's memory of the particular test is not necessarily an important indicator of whether cross-examining the analyst would be useful. The qualifications and general credibility of the analyst, and the specifics of the analyst's reasoning as recorded in his or her report, are potentially useful subjects of cross-examination regardless of whether the analyst remembers the particular test. Finally, if, as *Melendez-Diaz* emphasizes, the Confrontation Clause is binding and cannot be ignored for the sake of practicality, then an analyst's forgetfulness would be irrelevant.[330] That is, it is unclear how Mnookin's approach does not amount to "general hand-waving in the direction of 'impracticality,'" which she describes as "strikingly inconsistent with *Crawford*'s bright-line rule approach."[331] While accepting the need for some kind of exception, this Article attempts to develop a more principled approach that avoids running

327. Mnookin, *supra* note 5, at 851.

328. *Id.* at 854.

329. *See* Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527, 2550 (Kennedy, J., dissenting) (mentioning forensic labs' "crushing burden").

330. *Id.* at 2540 (majority opinion).

331. Mnookin, *supra* note 5, at 844.

afoul of current Confrontation Clause jurisprudence.

B. A Proposed Standard for Admitting Surrogate Testimony

This section proposes a standard for determining when admitting surrogate testimony would satisfy the Confrontation Clause. When a source of data the surrogate would use to come to his or her conclusion is testimonial evidence, the surrogate testimony would violate the Confrontation Clause because of the likelihood that the surrogate would in effect serve as the conduit for testimonial evidence, while preventing the defendant from effectively questioning its validity. Conversely, surrogate testimony based on data that is clearly nontestimonial should be admissible. When it is ambiguous whether the data is considered testimonial, there should still be a general preventative rule against the admission of the surrogate testimony. Such a preventative rule is justified because of the risk that a surrogate would be serving as a mouthpiece for the analyst's testimonial evidence. When the testing analyst is genuinely unavailable, it is ambiguous whether the data the surrogate will rely upon is testimonial, and if a second test cannot be performed, courts may consider exceptions to the general rule against surrogate testimony. In deciding whether to make an exception, courts should consider the degree to which the validity of the data depends on the analyst's skill, whether the data bears particularized guarantees of trustworthiness, the nature of the surrogate's analysis, and the likelihood that the failure to admit the testimony would cause the acquittal of a factually guilty defendant, endangering public safety.

1. Recognizing Ambiguity

The root of the difficulty in admitting surrogate testimony is *Crawford*'s all-or-nothing approach to the question of whether a statement is testimonial. Before *Melendez-Diaz* clarified that laboratory reports were testimonial statements, Rieck agonized over this issue, arguing that,

> The problem with *Crawford* is if laboratory reports are testimonial there is no room for judicial discretion in determining under which circumstances there is a need for cross-examination and when there is not. *Crawford* is all or nothing—either laboratory reports are testimonial or they are not . . . . Thus, if laboratory reports are testimonial the state will be greatly and at times unduly burdened, yet if they are nontestimonial criminal defendants may be convicted on the basis of unreliable hearsay. Either way justice suffers.[332]

Part of the solution, this Article argues, is to recognize that it is

332. *See* Rieck, *supra* note 168, at 908–09.

sometimes ambiguous whether a particular portion of the analyst's work—the "raw data" upon which a surrogate witness might base his or her independent conclusion—is testimonial evidence.

As argued above, analyst-produced data prepared with an expectation that it would be used at trial should be considered testimonial evidence if it is sufficiently formalized, contains something akin to a statement, and is dependent on the skill of the analyst.[333] The last factor is most important because it relates to the core concern of the Confrontation Clause—the defendant's ability to challenge the reliability or truth of the evidence against him. When the reliability of the evidence is independent of or only trivially dependent on the analyst's skill or trustworthiness, cross-examination may be unnecessary to fulfill the purpose of confrontation. When the validity of the data is clearly dependent on the analyst's methodology, allowing surrogate testimony would deprive the defendant of the right to challenge this data. The surrogate would be serving as an indirect conduit for the data while shielding the data from effective challenge. This analysis would preclude surrogate testimony in many, perhaps most, cases.

However, in many cases, the truth probably falls somewhere between these two extremes, and it is ambiguous whether the surrogate would serve as a conduit for the analyst's testimonial statements. In particular, it may be ambiguous whether the validity of the data is dependent enough on the skill and trustworthiness of the analyst. This is because it is often possible to argue that the analyst's role is rather minimal, confined to simple and discrete tasks that leave little room for discretion or error.[334] In order to avoid violations of defendants' confrontation rights, there should still be a general rule against admitting surrogate testimony when there is doubt about whether the data could be considered a testimonial statement.[335] This could be understood as a preventative rule that is slightly overprotective of defendants' rights, along the lines of *Miranda v. Arizona*'s prophylactic rule.[336]

2. Additional Prerequisites: Unavailability and Impossibility of a Second Test

Before considering whether to admit surrogate testimony in these ambiguous cases, the court should confirm that the analyst is genuinely unavailable. The court should also confirm that a second test cannot be done. Instead of having surrogates review the analyst-produced data and

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333. *See supra* note 274 and accompanying text.

334. For example, this is how the majority in *Washington* seemed to understand the analyst's role in the tests. *See* United States v. Washington, 498 F.3d 225, 230 (4th Cir. 2007).

335. Of course, when an expert will base her opinion primarily on the analyst's interpretations and conclusions, or will do no more than describe or recite the conclusions of the analyst, the surrogate testimony would be inadmissible. *See supra* notes 147–50 and accompanying text.

336. *See* Miranda v. Arizona, 384 U.S. 436, 463 (1966).

then supposedly apply independent analysis and come to an independent conclusion, the labs should simply have another analyst who is available to testify repeat the test with the original physical sample. As documented in Part III.D, surrogate testimony is deeply problematic for several compelling reasons, and repeating the test has several significant virtues.

3. Proposed Factors for Determining Admissibility of Surrogate Testimony

Once the prerequisites are met, the court should consider four issues in deciding whether to make an exception to the general rule against surrogate testimony. First, the court should consider factors relating to the degree to which the underlying data is dependent upon the skill of the analyst. This is a principled basis for deciding upon the legality of surrogate testimony because it seeks to shed additional light on the source of the original ambiguity, and the issue that implicates the core concerns of the Confrontation Clause. That is, if the validity of the data truly does not depend on the analyst, it is doubtful that it is really a "statement" or "testimony" in any sense, and cross-examination would be unnecessary.

Second, the court should consider the reliability of the process that led to the creation of the data. When this process, and thus the data itself, bears "particularized guarantees of trustworthiness" [337]—to use a phrase from *Roberts*—it is fair to resolve the ambiguity in favor of the expert witness. This is a principled method of informing decisions on surrogate testimony because when particularized guarantees of trustworthiness are present, there is a lower risk that any possible deprivation of confrontation rights would have the practical effect of depriving the defendant of a realistic opportunity to shed doubt on a forensic test. If it were certain that the surrogate relied on testimonial data, trustworthiness considerations would not justify admitting the surrogate testimony under current Confrontation Clause jurisprudence. But when there is ambiguity about the testimonial status of the underlying data, and the rule against surrogate testimony is best understood as a preventative rule, trustworthiness is a legitimate consideration because it lowers the risk that a possible violation would have any effect.

The fundamental problem with considering trustworthiness is that it is nearly always possible to depict forensic analysis as having strong indicia of reliability.[338] The way to address this issue is to make clear that the reliability indicators must not be commonplace, of the type that are typically structured into forensic tests, but instead must be factors that genuinely indicate a qualitatively higher than average level of reliability. Of course, regardless of how the standard is phrased, there are basic problems with such a test that make it vulnerable to abuse or manipulation, producing

337. Ohio v. Roberts, 448 U.S. 56, 66 (1980).

338. *See* Crawford v. Washington, 541 U.S. 36, 63 (2004).

varying results with the same facts.[339] Yet given the ambiguity of whether the evidence is testimonial and the immense practical problems with allowing no exceptions, re-introducing a reliability analysis as one factor in a well-circumscribed, marginal area of Confrontation Clause jurisprudence may well be justified.

Third, the court should consider the nature of the surrogate's analysis. Because it addresses the core concern that the surrogate could serve as a mere conduit for inadmissible evidence, this is a principled way to decide on the admission of surrogate testimony. If the surrogate's independent analysis is relatively superficial—such as reviewing a printout and notes for any errors—this increases the danger that the surrogate is serving as a mere conduit for the analyst's data. However, such considerations might not preclude surrogate testimony if the process is highly reliable and minimally dependent on the analyst's skill and trustworthiness.

Courts might also consider a fourth factor, though serious reservations prevent the author from recommending the factor without hesitation. When a grave threat to public safety would be likely to result from the inability of the state to introduce the surrogate testimony, one could argue that this should be a consideration in some cases. Importantly, this factor should only be applicable when the court has virtually no doubt that the defendant is factually guilty—perhaps because of access to evidence that was excluded at trial. Considering public safety is a principled way to inform decisions on surrogate testimony because when courts overprotect constitutional rights through prophylactic rules, it is legitimate to apply these doctrines in light of the perennial trade-off between honoring defendants' rights and safeguarding the government's ability to protect the public and enforce the law.[340] Just as particularly trustworthy data lessens the risk that a possible Confrontation Clause violation would have real effects on the defendant's rights, a threat to public safety increases the risk that the preventative rule would result in negative social consequences.

The problem with including this factor, which resembles pre-*Roberts* "necessity" justifications for introducing hearsay, is that evidence of the defendant's guilt may often appear overwhelming to the judge, resulting in the use of this factor in inappropriate cases.[341] For this reason, it may be unwise to allow courts to consider the factor. The advantage of this factor, of course, is that it addresses the key concern of courts—and Justice Kennedy's *Melendez-Diaz* dissent—that an overly strict Confrontation

339. *See id.*

340. The *Roberts* Court recalled that the Court had said in the past that "general rules of law of this kind, however beneficent in their operation and valuable to the accused, must occasionally give way to considerations of public policy and the necessities of the case." *Roberts*, 448 U.S. at 64 (quoting Mattox v. United States, 156 U.S. 237, 259–60 (1895)). *See also* Dutton v. Evans, 400 U.S. 74, 99 (1970) (speaking of the "necessity of hearsay evidence"). While the Court should not return to necessity-based doctrines, reference to necessity may be appropriate when the constitutional violation is uncertain.

341. *See Roberts*, 448 U.S. at 64; *Dutton*, 400 U.S. at 99.

Clause jurisprudence would free guilty defendants on "the most technical grounds."[342]

4. Summary

In fashioning a doctrine for admitting surrogate testimony, there is a real danger that the doctrine would amount to a grossly pragmatic, ad hoc approach. Mnookin aptly warns against "a too-thoughtless pragmatism" that could "trump[] principled application of the underlying principle at stake in *Crawford*."[343] As noted earlier, a general rule allowing surrogate testimony when the surrogate comes to his or her own conclusion based on analyst-generated data—which many courts have articulated and some commentators endorse—ignores the fact that the validity of this data can only be effectively challenged by cross-examining the analyst. Such an approach undermines the fundamental concerns underpinning *Crawford* and the Confrontation Clause.

This Article's approach, by contrast, is consonant with the basic principles underlying *Crawford*. First, as noted above, there is a principled basis for including each of these factors in the analysis, connected to the central concerns of Confrontation Clause jurisprudence. Second, by forbidding surrogate testimony when the analyst-produced data is clearly testimonial evidence, this Article's proposed standard avoids running afoul of *Crawford*. As Justice Scalia wrote for the *Crawford* majority, "[t]he unpardonable vice of the *Roberts* test, however, is not its unpredictability, but its demonstrated capacity to admit core testimonial statements that the Confrontation Clause plainly meant to exclude."[344] Although this Article's proposed test resembles *Roberts* in that it reintroduces trustworthiness as a consideration and allows a court to consider several factors, it does not threaten to admit "core testimonial statements."[345] Indeed, it is explicitly limited to marginal cases: situations in which it is ambiguous whether the data the surrogate witness uses to form his or her opinion is testimonial evidence. Third, *Melendez-Diaz* contains a hint that the kinds of considerations used in this test may be relevant to a Confrontation Clause analysis. The majority opinion notes that the petitioner, "[a]t the time of trial . . . did not know . . . whether those tests were routine, and whether interpreting their results required the exercise of judgment or the use of skills that the analysts may not have possessed."[346] While it is unclear why the majority made this observation, it suggests that the degree to which test results depend on the analyst's skill is an important issue in some contexts.

342. *See Melendez-Diaz*, 129 S. Ct. at 2550 (Kennedy, J., dissenting).

343. Mnookin, *supra* note 5, at 842.

344. *Crawford*, 541 U.S. at 63.

345. *Id.*

346. *Melendez-Diaz*, 129 S. Ct. at 2537.

C. Responding to Potential Counterarguments

An argument against this approach might be that it is too conceptually unusual to emphasize the ambiguity of whether analyst-produced data is testimonial, and to make exceptions only to a preventive ban on most surrogate testimony. A simpler, alternative approach that is substantively similar is also possible.

Under such an approach, courts would rule on surrogate testimony by evaluating whether the analyst-produced data prepared with the expectation of use at trial is formalized, statement-like, and significantly dependent on the skill of the analyst, and is thus a testimonial statement. As part of analyzing the degree to which the data is dependent on the analyst, courts would consider the reliability of the process because a particularly reliable process would suggest that the contribution of the skill of the analyst is relatively minor. If the data is not testimonial evidence, surrogate testimony would then be allowed. If the data is testimonial, then the surrogate testimony would be inadmissible. This approach is similar to the Article's preferred approach, but avoids the concept of ambiguity and an overprotective standard.

While only practice could determine which standard is superior, this Article's first approach has three advantages. First, reliability is better understood as an independent consideration, since a process may be highly reliable even though it is dependent on the skill of the analyst. Second, this Article's simpler, alternative approach could be underprotective if courts err on the side of declaring data nontestimonial. Under the Article's first approach, all of the factors would be considered at once, and ambiguous cases would still need to be analyzed using all the factors. Third, under the alternative test there would be no principled way to consider public safety or the nature of the surrogate's analysis. Instead, the underlying practical realities of the case—e.g., the likelihood a factually guilty and dangerous defendant would go free absent surrogate testimony—could encourage courts to make questionable findings that data is not testimonial. When used in precedential decisions, such arguments could effectively lower the bar for the standard, endangering the confrontation rights of all defendants.

Another potential counterargument is that cross-examination of the surrogate witness and limiting instructions to the jury would be an acceptable way to address the possibility that a surrogate could serve as a conduit for testimonial statements despite applying independent analysis. Specifically, the defense could ask the surrogate during cross-examination whether he or she can personally attest to the validity of the underlying data and whether it takes skill and discretion to produce such data accurately. Moreover, the defense could present a witness demonstrating how the analyst's errors could have produced erroneous data, invalidating the surrogate's conclusions based upon that data. The limiting instruction could remind the jurors that the data was produced by an analyst who did not testify and that they could not draw conclusions about the truth of the

underlying data based on the surrogate's testimony.

However, these measures would not serve as an adequate substitute for cross-examining the analyst when the surrogate relied on data that is testimonial evidence. Only by cross-examining the analyst could the defendant effectively question the analyst's methodology or trustworthiness. Limiting instructions may have little effect, since jurors would have difficulty understanding why an expert would be allowed to testify unless the court determined that the expert is basing his or her opinion on reliable evidence.

V. Conclusion

Crawford and its progeny have revived and strengthened defendants' confrontation rights.[347] *Melendez-Diaz* struck down the practice of admitting lab reports without making the analyst available for confrontation, and *Bullcoming* ruled that surrogate testimony violated the Confrontation Clause when the lab report was admitted into evidence and the surrogate neither observed the test nor offered an expert opinion on it.[348] However, there is a danger that the new Confrontation Clause jurisprudence will be eroded, as judges interpret it in ways that minimize the practical difficulties its all-or-nothing requirements might cause. To some extent this has already occurred: most court decisions since *Crawford* and *Melendez-Diaz* have approved surrogate testimony, allowing prosecutors to indirectly admit testimonial evidence on the questionable ground that the surrogate is simply doing what experts normally do by relying on the work of others. Since cross-examining surrogate witnesses is unlikely to reveal the weaknesses or invalidity of the underlying forensic data, these rulings defeat the purpose of the defendant's Sixth Amendment confrontation rights. At the same time, although the logic of *Crawford*, *Melendez-Diaz* and *Bullcoming* seems to demand a ban on nearly all surrogate testimony, most recognize the need for exceptions to the general rule, given the strong possibility that factually guilty defendants will go free simply because an analyst is unavailable and the test cannot be repeated

This Article has demonstrated that all of the available arguments for admitting surrogate testimony have either been foreclosed by *Melendez-Diaz* or *Bullcoming* and are fundamentally flawed. Courts and commentators approving of surrogate testimony have relied upon misleading interpretations of *Melendez-Diaz*, and implausible claims that the supervisor is an "analyst" and that cross-examining the surrogate is an adequate substitute for cross-examining the analyst. Courts most often rely

347. It is also possible that *Crawford* has somewhat weakened confrontation rights by declaring some kinds of evidence to be nontestimonial, and thus beyond the reach of the Sixth Amendment. *See* Josephine Ross, *What's Reliability Got to Do with the Confrontation Clause After Crawford?*, 14 WIDENER L. REV. 383, 384–85 (2009).

348. *Melendez-Diaz*. 129 S. Ct. at 2532; *Bullcoming*, 131 S. Ct. at 2710.

on the deeply problematic notion that surrogates' independent analysis of analyst-produced data precludes Confrontation Clause violations. Yet even when it involves independent analysis, surrogate testimony is inconsistent with the basic message of *Melendez-Diaz*, at odds with the Federal Rules of Evidence, and is likely to involve sham independent analysis that is virtually undetectable by defendants or courts, allowing the surrogate to serve as a mere conduit for testimonial evidence. Moreover, public policy concerns—such as a heightened risk of false convictions, surrogates' multiple incentives for biased testimony, and the availability of superior alternatives—demonstrate the undesirability of most surrogate testimony.

However, surrogate testimony should be admitted under certain limited circumstances. When surrogates rely on analyst-produced data that is itself testimonial, surrogate testimony should never be admissible, because it would indirectly admit testimonial evidence from a non-testifying witness. Conversely, when the underlying data is clearly non-testimonial—because it is not formalized, not statement-like, or does not depend on the skill of the analyst for its validity—surrogate testimony should be admitted. When it is ambiguous whether the data is testimonial, there should still be a general, preventative rule against surrogate testimony to ensure defendants' confrontation rights are protected. In these ambiguous cases, courts should make an exception and admit the surrogate testimony after considering the degree to which the validity of the data depends on the analyst, the trustworthiness of the data, the nature of the surrogate's analysis, and the likelihood that failure to admit the testimony would endanger public safety by allowing a factually guilty defendant to go free. While this approach is complex and departs from *Crawford*'s black-and-white approach, it is a principled method for ruling on surrogate testimony. Since these considerations would only apply when it is uncertain whether the underlying data is testimonial, they do not violate *Crawford*'s absolute requirements.

Note

The Failures of *Melendez-Diaz v. Massachusetts* and the Unstable Confrontation Clause

Andrew W. Eichner*

I. Introduction

In the 2009 decision *Melendez-Diaz v. Massachusetts*,[1] the United States Supreme Court continued to develop its Sixth Amendment Confrontation Clause jurisprudence following the standards established in the 2004 landmark case of *Crawford v. Washington*.[2] The *Melendez-Diaz* majority further defined the term "testimonial," as established in the

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1. Melendez-Diaz v. Massachusetts, 129 S. Ct. 2527 (2009).

2. Crawford v. Washington, 541 U.S. 36 (2004).

Crawford decision,[3] holding that "analysts' affidavits [are] testimonial statements, and the analysts [are] 'witnesses' for purposes of the Sixth Amendment,"[4] which ensures defendants the right to confrontation in the form of cross-examination as provided by the Confrontation Clause.[5] Although *Melendez-Diaz* offered some degree of much-needed clarification to the holding of *Crawford*, the opinion ultimately left the most critically important ambiguities of *Crawford* unresolved and also added further indefinite standards which will likely result in "hundreds of pending cases, and an unknown, but much smaller number of future cases becoming unprosecutable. . . ."[6] This Note considers the effects of *Melendez-Diaz* on the jurisprudence of the Sixth Amendment's Confrontation Clause and on the overall functioning of the legal system.

II. The Confrontation Clause: *Roberts* to *Davis*

The Confrontation Clause of the Sixth Amendment guarantees criminal defendants that "[i]n all criminal prosecutions, the accused shall enjoy the right. . . to be confronted with the witnesses against him,"[7] subject to certain exceptions as provided in the rules governing hearsay.[8] Prior to the Court's decision in *Crawford v. Washington* in 2004, the standard for determining the admissibility of hearsay evidence under the requirements of the Sixth Amendment was a two-prong test established in the 1980 case of *Ohio v. Roberts*.[9] The first prong of the *Roberts* test mandated that in instances where a hearsay declarant was considered "unavailable"[10] for cross-examination at trial, the Confrontation Clause requires a showing of the declarant's unavailability at the burden of the prosecution.[11] Once the first prong of the *Roberts* test was satisfied, the second prong came into operation;[12] if the declarant is shown to be unavailable, "his statement is admissible only if it bears adequate 'indicia of reliability.'"[13] According to *Roberts*, "[r]eliability can be inferred without more in a case where the evidence falls within a firmly rooted hearsay exception," or where it

3. *See id.* at 51–52 (where the *Crawford* majority discusses the "[v]arious formulations of [the] core class of 'testimonial' statements . . . .").

4. *Melendez-Diaz*, 129 S. Ct. at 2532.

5. *See Crawford*, 541 U.S. at 68–69 ("Where testimonial statements are at issue, the only indicium of reliability sufficient to satisfy constitutional demands is the one the Constitution actually prescribes: confrontation.").

6. Craig M. Bradley, Melendez-Diaz *and the Right to Confrontation*, 85 CHI.-KENT L. REV. 315, 315 (2010).

7. U.S. CONST. amend. VI.

8. *See, e.g.*, FED. R. EVID. 803; FED. R. EVID. 804.

9. Ohio v. Roberts, 448 U.S. 56, 65–66 (1980).

10. *See, e.g.*, FED. R. EVID. 804(a) (defining "unavailability").

11. *Roberts*, 448 U.S. at 65. ("[T]he prosecution must either produce, or demonstrate the unavailability of, the declarant whose statement it wishes to use against the defendant.").

12. *Id.* ("The second aspect operates once a witness is shown to be unavailable.").

13. *Id.* at 66.

contains "a showing of particularized guarantees of trustworthiness."[14] In the situation where the declarant is unavailable and his evidentiary statement does not meet the conditions required of the "indicia of reliability" standard, that evidence was excluded and rendered inadmissible at trial.[15]

Nearly twenty-five years later, the majority's holding in *Crawford v. Washington* abrogated the authority of the *Roberts* two-prong test, significantly retracting its scope and applicability.[16] Justice Scalia, writing the majority opinion in *Crawford*, attacked the ambiguity of the reliability standard from the second prong of the *Roberts* test, writing that "[r]eliability is an amorphous, if not entirely subjective, concept" with "countless factors bearing on whether a statement is reliable. . . ."[17] Adhering to originalist principles in its analysis of the Sixth Amendment's Confrontation Clause,[18] the *Crawford* majority wrote that the reliability standard undermined the Framers' design "[b]y replacing categorical constitutional guarantees with open-ended balancing tests. . . ."[19] According to the majority, these same subjective, open-ended tests provide an opening for judicial activism, allowing the ultimate determination of "[w]hether a statement is deemed reliable" to rest on "which factors the judge considers and how much weight he accords each of them."[20] The inevitable consequence of such patchwork interpretation was that the *Roberts* test discouraged uniformity of application, resulting in a framework that was "so unpredictable that it fail[ed] to provide meaningful protection from even core confrontation violations."[21]

In stepping away from one vague standard, *Crawford* created a new test for determining the admissibility of hearsay evidence under the Sixth Amendment that has proved equally ambiguous and unpredictable. According to the new two-prong test of *Crawford*, "[w]here testimonial evidence is at issue. . . the Sixth Amendment demands what the common law required: unavailability and a prior opportunity for cross-examination."[22] For purposes of determining admissibility under the Confrontation Clause, *Crawford* shifted the courts' focus away from the "open-ended balancing tests" of the *Roberts* indicia of reliability standard

14. *Id.*

15. *Id.*

16. *See Crawford*, 541 U.S. at 68. While the influence of *Roberts* was significantly diminished in *Crawford v. Washington*, its applicability was not entirely nullified ("Where nontestimonial hearsay is at issue, it is wholly consistent with the Framers' design to afford the States flexibility in their development of hearsay law—as does *Roberts*, and as would an approach that exempted such statements from Confrontation Clause scrutiny altogether.").

17. *Id.* at 63.

18. *Id.* at 61 ("[W]e do not think the Framers meant to leave the Sixth Amendment's protection to the vagaries of the rules of evidence, much less to amorphous notions of 'reliability.'").

19. *Id.* at 67–68.

20. *Id.* at 63.

21. *Id.*

22. *Id.* at 68.

and towards the question of whether or not a statement was considered "testimonial."[23] However, despite reliance on the term "testimonial" as the foundation for its new admissibility test, "the Court left little guidance as to the definition of a 'testimonial statement,'"[24] deciding to "leave for another day any effort to spell out a comprehensive definition of 'testimonial.'"[25] Rather than providing an explicitly stated or detailed explanation of what constitutes "testimonial" hearsay for purposes of the Sixth Amendment, the *Crawford* majority instead opted to provide vaguely defined categories of what are considered the "core class of 'testimonial' statements," which include:

> "*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," . . . [and] "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."[26]

In the final lines of the opinion, the majority offered only a slight degree of clarification, writing that "[w]hatever else the term covers, it applies at a minimum to prior testimony at a preliminary hearing, before a grand jury, or at a former trial; and to police interrogations," citing such examples as being "the modern practices with closest kinship to the abuses at which the Confrontation Clause was directed."[27]

By providing such an unclear definition of "testimonial," the *Crawford* majority defeated its own intentions—creating a new standard that is essentially substituting the "open-ended balancing tests"[28] engendered by *Roberts* with a new wave of equally open-ended balancing tests. Chief Justice Rehnquist, concurring with the result of the opinion but dissenting from the decision to step away from *Ohio v. Roberts*,[29] expressed concern over the result of leaving "testimonial" without a clear definition, writing that:

> [T]housands of federal prosecutors and . . . tens of thousands of

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23. *Id.*

24. Stephanie McMahon, Note, *The Turbulent Aftermath of* Crawford v. Washington*: Where Do Child Abuse Victims' Statements Stand?*, 33 HASTINGS CONST. L.Q. 361, 365 (2006).

25. *Crawford*, 541 U.S. at 68.

26. *Id.* at 51–52 (internal citations omitted).

27. *Id.* at 68.

28. *Id.*

29. *See id.* at 69 (Rehnquist, C.J., concurring).

> state prosecutors need answers as to what beyond the specific kinds of "testimony" the Court lists . . . is covered by the new rule. They need them now, not months or years from now. Rules of criminal evidence are applied every day in courts throughout the country, and parties should not be left in the dark in this manner.[30]

Addressing Chief Justice Rehnquist's "objection . . . that [the] refusal to articulate a comprehensive definition . . . will cause interim uncertainty," the majority dismissively responded by writing that the new test could "hardly be any worse than the status quo," stating that "[t]he difference is that the *Roberts* test is *inherently*, and therefore *permanently*, unpredictable."[31]

In the years that have passed since *Crawford*, Chief Justice Rehnquist's predictions appear to have come to fruition. In 2006, the Supreme Court decided *Davis v. Washington* and *Hammon v. Indiana* in a single, joint decision,[32] attempting to offer some degree of clarification as to what constitutes a "testimonial statement" under the Confrontation Clause. In *Davis*, the Court considered the issue of "whether, objectively considered, [an] interrogation that took place in the course of [a] 911 call produced testimonial statements."[33] Citing *Crawford*,[34] the majority held that "[s]tatements are nontestimonial 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," and that statements are testimonial when "there is no such ongoing emergency, and . . . the primary purpose of the interrogation is to establish or prove past events potentially relevant to later criminal prosecution."[35]

While aiming to clarify the proper means of categorizing which hearsay evidence constitutes a "testimonial statement" within the scope of *Crawford*'s test, the *Davis* majority diminished the power of its holding by writing that "a conversation which begins as an interrogation to determine the need for emergency assistance . . . [may] 'evolve into testimonial statements,' once that purpose has been achieved," without actually providing any indication as to when such a transition might occur.[36] Instead of creating a bright-line rule that states in clear terms when a statement crosses the line from being nontestimonial into being testimonial, *Davis* only managed to create another hazy standard as to what constitutes a

30. *Id.* at 75–76 (internal citations omitted).

31. *Id.* at 68 n.10 (majority opinion) (internal citations omitted).

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

33. *Id.* at 826.

34. *Id.* ("'[I]nterrogations by law enforcement officers fall squarely within [the] class' of testimonial hearsay." (quoting *Crawford*, 541 U.S. at 53)).

35. *Id.* at 822.

36. *Davis*, 547 U.S. at 828 (internal citations omitted).

"testimonial statement." This left room for extensive legal debate, heightened judicial activism and discretion, and the continuation of the problems which *Crawford* proposed—but ultimately failed—to resolve. The legal foundation paved by *Crawford* and *Davis* formed the core of Confrontation Clause jurisprudence in 2009, placing the principles of those cases at the center of the reasoning under which *Melendez-Diaz v. Massachusetts* was decided.

III. *Melendez-Diaz v. Massachusetts*: A Problematic Opinion

Melendez-Diaz v. Massachusetts[37] was the next case after *Davis* to address the topic of clarifying "testimonials" as relating to the Sixth Amendment's Confrontation Clause. In *Melendez-Diaz*, the Court considered the issue of whether "affidavits reporting the results of forensic analysis . . . are 'testimonial,' rendering the affiants 'witnesses' subject to the defendant's right of confrontation under the Sixth Amendment."[38]

Luis Melendez-Diaz was arrested by police under suspicion of distributing and trafficking cocaine.[39] While transporting Melendez-Diaz to the police station, "the officers observed [Melendez-Diaz and the two other individuals they had picked up with him] fidgeting and making furtive movements in the back of the car."[40] After taking the men to the police station, the officers "searched the police cruiser and found a plastic bag containing 19 smaller plastic bags hidden in the partition between the front and back seats . . . [which] [t]hey submitted . . . to a state laboratory required by law to conduct chemical analysis upon police request."[41] Charging Melendez-Diaz with "distributing cocaine and with trafficking in cocaine in an amount between 14 and 28 grams . . . the prosecution placed into evidence the bags seized from [one of the two other men] and from the police cruiser."[42] In addition to the bags themselves, the prosecution "also submitted three 'certificates of analysis' showing the results of the forensic analysis performed on the seized substances."[43] These certificates "reported the weight of the seized bags and stated that the bags '[h]a[ve] been examined with the following results: The substance was found to contain: Cocaine'"[44] and had been "sworn to before a notary public by analysts at

37. 129 S. Ct. 2527 (2009).

38. *Id.* at 2530 (2009).

39. *Id.* In 2001, Boston police officers received a tip that Thomas Wright, a Kmart employee, was engaging in suspicious activity, wherein he would be picked up in front of the store by a blue sedan and would return a short while later. *Id.* The police set up surveillance, and when Wright got out of the car, he was detained by police. *Id.* They found on his person "four clear white plastic bags containing a substance resembling cocaine." *Id.* The police then arrested the two men in the car, one of whom was Melendez-Diaz. *Id.*

40. *Id.*

41. *Id.*

42. *Id.* at 2530–31.

43. *Id.* at 2531.

44. *Id.* (alterations in original).

the State Laboratory Institute of the Massachusetts Department of Public Health, as required under Massachusetts law."[45]

Melendez-Diaz "objected to the admission of the certificates, asserting that [the Court's] decision in *Crawford* . . . required the analysts to testify in person."[46] His objection was overruled and the certificates were admitted into evidence pursuant to state law.[47] Upon being found guilty by the jury, Melendez-Diaz appealed, "contending, among other things, that admission of the certificates violated his Sixth Amendment right to be confronted with the witnesses against him."[48] The Appeals Court of Massachusetts rejected Melendez-Diaz's claim by relying on the Massachusetts Supreme Judicial Court's decision in *Commonwealth v. Verde*,[49] "which held that the authors of certificates of forensic analysis are not subject to confrontation under the Sixth Amendment."[50] After Massachusetts' Supreme Judicial Court denied review,[51] the United States Supreme Court granted certiorari.

The *Melendez-Diaz* majority, written by Justice Scalia, began its analysis by highlighting and reinforcing the testimonial-centric reasoning of *Crawford* by writing that, "[i]n *Crawford*, after reviewing the [Confrontation] Clause's historical underpinnings, we held that it guarantees a defendant's right to confront those 'who "bear testimony"' against him."[52] Justice Scalia went on to restate the two-prong test, which asserts that "[a] witness's testimony against a defendant is . . . inadmissible unless the witness appears at trial or, if the witness is unavailable, the defendant had a prior opportunity for cross-examination."[53] After reviewing the "[v]arious formulations of [the] core class of testimonial statements"[54] discussed in *Crawford*, the *Melendez-Diaz* majority reasoned that "[t]here is little doubt that the documents at issue . . . fall within the 'core class of testimonial statements' . . . described," noting that *Crawford*'s "description of that category mentions affidavits twice."[55] In addition to highlighting the affidavits' function as being "solemn declaration[s] or

45. *Id.* (citing MASS. GEN. LAWS, ch. 111, § 13).

46. *Id.* (citing *Crawford*, 541 U.S. 36).

47. *Id.*

48. *Id.*

49. Commonwealth v. Verde, 444 Mass. 279 (2005).

50. *Melendez-Diaz*, 129 S. Ct. at 2531 (quoting *Verde*, 444 Mass. at 283–285 (2005)).

51. *See* Commonwealth v. Melendez-Diaz, 449 Mass. 1113 (2007).

52. *Melendez-Diaz*, 129 S. Ct. at 2531 (quoting *Crawford*, 541 U.S. at 51).

53. *Id.* (citing *Crawford*, 541 U.S. at 54).

54. *Id.* (quoting *Crawford*, 541 U.S. at 51–52). These formulations include "*ex parte* in-court testimony or its functional equivalent[,] . . . extrajudicial statements[,] . . . [and] 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." Affidavits are cited as being an example of the equivalent of *ex parte* in-court testimony as well as being an example of an extrajudicial statement. For the full quotation from *Crawford* explicitly listing the formulations of the core class of testimonial statements, *see supra* Section II of this Note.

55. *Id.* at 2532.

affirmation[s] made for the purpose of establishing or proving some fact,"[56] the majority reasoned that,

> not only were the affidavits "made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial," . . . but under Massachusetts law the *sole purpose* of the affidavits was to provide "prima facie evidence of the composition, quality, and the net weight" of the analyzed substance . . . .[57]

Considering the purpose of the affidavits, the majority reasoned that it "can [be] safely assume[d] that the analysts were aware of the affidavits' evidentiary purpose,"[58] solidifying the assertion that the affidavits were made under circumstances that would lead an objective witness to reasonably believe that the statement would be available for use at a later trial. In light of these considerations, the *Melendez-Diaz* majority held that, "under [the] decision in *Crawford*[,] the analysts' affidavits were testimonial statements, and the analysts were 'witnesses' for purposes of the Sixth Amendment."[59] As a result, "[a]bsent a showing that the analysts were unavailable to testify at trial *and* that [the defendant] had a prior opportunity to cross-examine them, [the defendant] was entitled to 'be confronted with' the analysts at trial."[60]

Although the holding of *Melendez-Diaz* is problematic in that it created some novel and difficult questions that go unanswered, the complications of *Melendez-Diaz* are not limited solely to the new standards it instituted. It is worthwhile to consider each of the issues presented by *Melendez-Diaz* in turn, discussing their respective faults and implications.

A. Failure to Offer a Comprehensive Definition of "Testimonial"

Although the hazy new standards established in *Melendez-Diaz*, discussed below, are troublesome in their own regard, one of the most bothersome aspects of *Melendez-Diaz* is not what the majority included in its opinion but rather what it left out. By writing that its decision "involves little more than the application of [the] holding in *Crawford v. Washington*,"[61] the *Melendez-Diaz* majority suggested that its opinion is merely applying the *Crawford* standards to the facts of the case instead of actually attempting to add clarity or further definition to the term "testimonial" as used in *Crawford*. In other words, instead of seeking to

56. *Id.* (quoting *Crawford*, 541 U.S. at 51).
57. *Id.* (quoting *Crawford*, 541 U.S. at 52 and MASS. GEN LAWS, ch. 111, § 13).
58. *Id.*
59. *Id.*
60. *Id.* (quoting *Crawford*, 541 U.S. at 54).
61. *Id.* at 2542.

propose a much-needed "comprehensive definition"[62] for what is considered "testimonial" under the Confrontation Clause, *Melendez-Diaz* opted for a mere "application"[63] of the painfully vague *Crawford* test. Just as in *Crawford*, the majority of *Melendez-Diaz* "leave[s] for another day any effort to spell out a comprehensive definition of 'testimonial[,]'"[64] resulting in a legal system that remains in a state of suspense and uncertainty.

By repeatedly refusing to offer a comprehensive definition of "testimonial," the Supreme Court has "left the world of . . . prosecutorial officers in a state of disarray."[65] Despite the *Crawford* majority's attack on the *Roberts* test for providing a "framework [that] is so unpredictable that it fails to provide meaningful protection from even core confrontation violations[,]"[66] *Crawford*'s test will remain equally unpredictable so long as the Court fails to comprehensively define which statements are "testimonial" for purposes of the Sixth Amendment. The negative effects of this unresolved ambiguity can be seen in many aspects of the criminal justice system but perhaps most visibly in cases involving child victims.[67] According to the vague formulations in *Crawford* of what is considered part of the core class of testimonial statements,[68] "fidelity to the text and policies of the Confrontation Clause suggests that some degree of understanding of the consequences of the statement is necessary before a declarant may be considered a 'witness.'"[69] Accordingly, in a scenario where a very young child who has "no sense of the consequences that her communication may have[]"[70] is telling a police officer that she has been sexually abused, it seems a perfectly logical argument that the child's statement is nontestimonial because the child cannot "'reasonably . . . believe that the statement would be available for use at a later trial . . . .'"[71] In other words, it may be impossible for a child of a certain age to understand how the legal system works, much less that what they say to a police officer may later be used against their abuser within the processes of that system. As a

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62. *Crawford*, 541 U.S. at 68.

63. *Melendez-Diaz*, 129 S. Ct. at 2542.

64. *Crawford*, 541 U.S. at 68.

65. McMahon, *supra* note 24, at 394.

66. *Crawford*, 541 U.S. at 63.

67. *See* Richard D. Friedman, *The Confrontation Clause Re-Rooted and Transformed*, 2004 CATO SUP. CT. REV. 439, 461 (2004) ("Another type of case that frequently will test the limits of the term "testimonial" involves statements by children, typically alleging some kind of abuse.").

68. *See Crawford*, 541 U.S. at 51–52.

69. Friedman, *supra* note 67, at 461; *see Crawford*, 541 U.S. at 52 (quoting Brief for National Ass'n. of Criminal Defense Lawyers et al. as Amici Curiae 3, Crawford v. Washington, 541 U.S. 36 (2004) (No. 02-9410)) (where part of the core class of testimonial statements is defined as "'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 . . . .'").

70. Friedman, *supra* note 69, at 461.

71. *Crawford*, 541 U.S. at 52 (quoting Brief for National Ass'n of Criminal Defense Lawyers et al. as Amici Curiae 3, Crawford v. Washington, 541 U.S. 36 (2004) (No. 02-9410)).

nontestimonial statement, the child victim's statement, despite being hearsay, is considered an acceptable exception to the confrontational demands of the Sixth Amendment and the child declarant would not be forced to take the stand for purposes of cross-examination.[72]

Yet, regardless of how reasonable these considerations are, "several courts have labeled child forensic interviews as testimonial, thus requiring the child to testify at trial in order to later admit hearsay statements or statements made during the forensic interview."[73] The fact that polar-opposite conclusions about one type of evidence can be reached through applying a single set of standards is a troubling indication of the confusion resulting from *Crawford*'s poorly-defined standards regarding what is considered "testimonial." Because *Melendez-Diaz*, like its predecessors, failed to provide a comprehensive definition of what constitutes a "testimonial statement," the judiciary will almost certainly proceed in a manner that allows a diversity of opinion and that allows room for continued judicial activism in interpretation and application of the *Crawford* standards. This diversity of opinion will inevitably result in a broad range of possible constructions for the applicability of the Confrontation Clause that will vary among jurisdictions. The existence of such diversity of application defeats one of the fundamental purposes for supplanting *Roberts* with *Crawford*. *Crawford*, like *Roberts*, suffers from "unpredictable and inconsistent application"[74] and will continue to do so until a more comprehensive definition of "testimonial" is finally produced.

B. Failure to Define the Term "Analyst"

The *Melendez-Diaz* majority held that "analysts' affidavits were testimonial statements[] and [that] the analysts were 'witnesses' for purposes of the Sixth Amendment."[75] However, as Justice Kennedy's dissent pointed out, "[t]here is no accepted definition of analyst, and there is no established precedent to define that term."[76] The intrinsic difficulty of failing to define the term "analyst" is illustrated in an example provided by the dissent:

> Consider how many people play a role in a routine test for the

72. *Id.* at 68 ("Where nontestimonial hearsay is at issue, it is wholly consistent with the Framers' design to afford the States flexibility in their development of hearsay law [and would allow for] an approach that exempted such statements from Confrontation Clause scrutiny altogether.").

73. Allie Phillips, *Weathering the Storm After* Crawford v. Washington *(Part 1 of 2)*, NCPCA Update Vol. 17, No. 5 (2004), *available at* http://www.ndaa.org/ncpca_update_v17_no5.html; *see, e.g.*, State v. Snowden, 867 A.2d 314, 329 (Md. 2005) ("Even though there are sound public policy reasons for limiting a child victim's exposure to a potentially traumatizing courtroom experience, we nonetheless must be faithful to the Constitution's deep concern for the fundamental rights of the accused.").

74. *Crawford*, 541 U.S. at 66.

75. *Melendez-Diaz*, 129 S. Ct. at 2532.

76. *Id.* at 2544 (Kennedy, J., dissenting).

> presence of illegal drugs. One person prepares a sample of the drug, places it in a testing machine, and retrieves the machine's printout—often a graph . . . . A second person interprets the graph the machine prints out . . . . Meanwhile, a third person—perhaps an independent contractor—has calibrated the machine and, having done so, has certified that the machine is in good working order. Finally, a fourth person—perhaps the laboratory's director—certifies that his subordinates followed established procedures.[77]

The problem in this example is that "[i]t is not at all evident which of [the] four persons is the analyst to be confronted"[78] under the majority's holding.[79] Since all four individuals have "contributed to the test's result and ha[ve], at least in some respects, made a representation about the test[,]"[80] it is possible to say under the majority's holding that "all four must testify"[81] in order to satisfy the demands of the Confrontation Clause.[82] Although arguing that the question of who falls within the broad scope of the term "analyst" remains unanswered, the dissent persuasively argued that because "[t]he Court made clear in *Davis* that it will not permit the testimonial statement of one witness to enter into evidence through the in-court testimony of a second[,]" the title of "analyst" at the very least "cannot be cabined [solely] to the person who signs the certificates."[83] Rather, "[i]f the signatory is restating the testimonial statements of the true analysts—whoever they might be—then those analysts, too, must testify in person."[84]

The *Melendez-Diaz* dissent worried that if, in the example provided, "all are witnesses who must appear for in-court confrontation, then the Court has, for all practical purposes, forbidden the use of scientific tests in criminal trials."[85] Beyond the argument that the new standard for analysts developed in *Melendez-Diaz* "threatens to disrupt[,] if not end[,] many prosecutions where guilt is clear but a newly found formalism now holds sway,"[86] the majority's holding appears to establish an untenable system wherein every person involved with a scientific report must testify in court if the document is to be considered admissible. That in turn places an extremely high burden on prosecutors to not only locate each technician involved in the creation of the report but also to persuade them to take the

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77. *Id.*
78. *Id.*
79. *Id.*
80. *Id.* at 2545.
81. *Id.*
82. *Id.*
83. *Id.* at 2546.
84. *Id.*
85. *Id.* at 2544.
86. *Id.* at 2544–45.

stand. As the dissent predicted, the likely result is a high "risk of dismissal based on erratic, all-too-frequent instances when a particular laboratory technician . . . simply does not or cannot appear."[87]

Furthermore, the dissent argued that analysts, who "already spent considerable time appearing as witnesses"[88] prior to *Melendez-Diaz*, will bear a "crushing burden"[89] that will force them away from their typical occupational duties to "find [their] way to an unfamiliar courthouse [and to] sit there waiting to read aloud notes made months ago."[90] The majority rebutted the dissent's concerns in a footnote, writing that it "do[es] not hold, and it is not the case, that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case."[91] Although agreeing with the dissent that "'[i]t is the obligation of the prosecution to establish the chain of custody,'"[92] the majority asserted that "this does not mean that everyone who laid hands on the evidence must be called."[93] Stating that "'gaps in the chain [of custody] normally go to the weight of the evidence rather than its admissibility'"[94] the majority suggested that "[i]t is up to the prosecution to decide what steps in the chain of custody are so crucial as to require evidence; but what testimony *is* introduced must (if the defendant objects) be introduced live."[95]

The problem with the majority's response to the dissent's concerns is the same problem that pervades virtually every other aspect of the majority's reasoning: the explanation is glaringly ambiguous. Instead of offering a reliable, consistent standard for the qualifying characteristics of analysts who "must appear in person as part of the prosecution's case," the majority instead offered only the unhelpful advice that "[i]t is up to the prosecution"[96] to determine which pieces of the chain of custody require evidence.[97] Adding insult to injury, the majority then used the still-undefined (and equally ambiguous) concept of "testimonial" in its effort to

87. *Id.* at 2549.

88. *Id.*

89. *Id.* at 2550. The dissent considers this burden in the light of state drug prosecutions, stating that "[i]n 2004, . . . drug possession and trafficking resulted in 362,850 felony convictions . . . across the country. Roughly 95% of those convictions were products of plea bargains, . . . which means that state courts saw more than 18,000 drug trials in a single year." *Id.* at 2549–50 (internal citations omitted) Using these statistics, the dissent argues that Philadelphia, which saw 25,000 drug crimes in 2007, would require each of the city's eighteen drug analysts to testify in more than sixty-nine trials each per year. *Id.* at 2550. Cleveland, which saw 14,000 drug crimes in 2007, would require each of the city's six drug analysts to testify in 117 drug cases per year. *Id.*

90. *Id.* at 2250.

91. *Id.* at 2532 n.1 (majority opinion).

92. *Id.* (quoting *id.* at 2546 (Kennedy, J., dissenting)).

93. *Id.*

94. *Id.* (quoting United States v. Lott, 854 F.2d 244, 250 (7th Cir. 1988)).

95. *Id.*

96. *Id.*

97. *Id.*

clarify the holding of *Melendez-Diaz*, stating that "what testimony *is* introduced must . . . be introduced live."[98] Ultimately, because *Melendez-Diaz* "involve[d] little more than the application of [the] holding in *Crawford*,"[99] the majority's response to the dissent's genuine concerns did little more than answer a centrally important question with yet another question—the very one that has been left unresolved since *Crawford* due to the Court's continued failure to clearly define "testimonial."

Because of the confusing ambiguities both perpetuated and newly created by the majority's opinion, it is almost inevitable that the various lower courts are going to apply the standards of *Melendez-Diaz* inconsistently, resulting in the same type of unpredictable framework that *Crawford* was purportedly designed to protect against.[100] By leaving "analyst" undefined and by again failing to comprehensively define what constitutes a "testimonial statement," the holding of *Melendez-Diaz* has strong potential to leave the criminal system in a state of disarray and to invite strong judicial activism[101] as the lower courts struggle to delineate and interpret the newly announced standards.

IV. Post-*Melendez-Diaz* Developments and the Uncertain Future of the Confrontation Clause

In the short time that has passed since *Melendez-Diaz* was decided, there has already been much debate over the implications of the case and, more generally, about the future direction of Confrontation Clause jurisprudence.

A. The Implications of *Melendez-Diaz*

The holding of *Melendez-Diaz* states that each defendant has the constitutional right to confront those witnesses "'who bear testimony against him,'"[102] including those analysts who submit scientific affidavits that can be used against the defendant at trial.[103] Although this holding encumbers prosecutors by demanding that they ensure the availability of the analysts responsible for producing any of the scientific reports they

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98. *Id.*

99. *Id.* at 2542.

100. *See* Crawford v. Washington, 541 U.S. 36, 63 (2004) (criticizing *Roberts* for creating a "framework [that was] so unpredictable that it fail[ed] to provide meaningful protection from even core confrontation violations.").

101. Such judicial activism could very well lead to the same types of open-ended balancing tests found in many courts under the *Roberts* standard. This will almost certainly lead to a system where constitutional guarantees are replaced with jurisdictionally unique, judicially-determined tests, which *Crawford*'s majority stated was contrary to the design and intention of the Framers of the Sixth Amendment. *See Crawford*, 541 U.S. at 67–68.

102. *Melendez-Diaz*, 129 S. Ct. at 2531 (quoting *Crawford*, 541 U.S. at 51) (internal quotation marks omitted).

103. *Id.* at 2532.

anticipate using at trial, there also appears to be an alternate avenue available which can be used to diminish, or perhaps entirely circumvent, this burden: the use of so-called "notice-and-demand" statutes. Notice-and-demand statutes

> [i]n their simplest form, . . . require the prosecution to provide notice to the defendant of its intent to use an analyst's report as evidence at trial, after which the defendant is given a period of time in which he may object to the admission of the evidence absent the analyst's appearance live at trial.[104]

Because "[t]he defendant *always* has the burden of raising his Confrontation Clause objection" and these statutes "simply govern the *time* within which he must do so,"[105] the majority noted that these statutes "shift no burden whatever"[106] and are not threatened by the Court's reasoning.[107] Writing that "[t]here is no conceivable reason why [the defendant] cannot . . . be compelled to exercise his Confrontation Clause rights before trial"[108] as these notice-and-demand statutes require, the Court infers from the existence and use of these statutes that its decision "will not disrupt criminal prosecutions in the many large States whose practice is already in accord with the Confrontation Clause."[109]

The Court's holding that it is constitutionally permissible to use notice-and-demand statutes increases the likelihood "that states will most likely turn to these types of statutes in the future specifically to avoid Confrontation Clause violations."[110] Yet despite the ability of states to use these statutes to avoid some of the possible hardships of *Melendez-Diaz*, the majority continued its discussion of notice-and-demand statutes in a footnote, writing that the Court has "no occasion today to pass on the constitutionality of every variety of statute commonly given the notice-and-demand label."[111] Although the Court has decided that the "'simplest form [of] notice-and-demand statutes,' is constitutional,"[112] there remains the

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104. *Id.* at 2541.

105. *Id.*

106. *Id.*

107. *Id.* The majority wrote: "[T]he dissent believes that those state statutes 'requiring the defendant to give early notice of his intent to confront the analyst,' are 'burden-shifting statutes [that] may be invalidated by the Court's reasoning.' That is not so." (second alteration in original) (internal citations omitted).

108. *Id.*

109. *Id.*

110. Jody L. Sellers, *No Witness? No Admission: The Tale of Testimonial Statements and* Melendez-Diaz v. Massachusetts, 61 MERCER L. REV. 683, 696 (2010). More recently, the Court made a similar argument in *Bullcoming v. New Mexico*, where the majority wrote that "notice-and-demand procedures, long in effect in many jurisdictions, can reduce burdens on forensic laboratories." Bullcoming v. New Mexico, 131 S. Ct. 2705, 2718 (2011).

111. *Melendez-Diaz*, 129 S. Ct. at 2541 n.12.

112. *Id.* (internal citation omitted).

possibility that certain variations of the statute could be deemed unconstitutional in future decisions.[113] Because "the Supreme Court has not determined what constitutes an invalid notice-and-demand statute, states now face the challenge of trying to determine what the proper form of a notice-and-demand statute will be."[114] This will likely result in a considerable amount of wasted time and resources as the lower courts struggle to define the constitutional boundaries of these statutes in relation to the Confrontation Clause and to establish procedures that fall properly within them.

B. A Dream Deferred:[115] The Disappointments of *Briscoe v. Virginia* and *Bullcoming v. New Mexico* and the Uncertain Future Direction of Confrontation Clause Jurisprudence

The majority's opinion in *Melendez-Diaz* "explicitly denounc[ed] so-called 'burden-shifting' statutes that pass the responsibility of calling an analyst to testify from the prosecution to the defense"[116] by writing that the power of the defendant to subpoena analysts, "whether pursuant to state law or the Compulsory Process Clause[,] is no substitute for the right of confrontation."[117] Yet, unexpectedly, four days after deciding *Melendez-Diaz*, the Supreme Court granted certiorari in *Briscoe v. Virginia*,[118] a case "asking the Supreme Court to decide whether a Virginia statute violated the Confrontation Clause by not requiring the prosecution to subpoena laboratory analysts in cases where it wishes to introduce certificates of analysis into evidence."[119] Because "*Melendez-Diaz* concluded that the power to subpoena witnesses is 'no substitute for the right of confrontation,' it seem[ed] clear that this Virginia scheme is flatly unacceptable under *Melendez-Diaz*."[120] The controversial grant of certiorari for *Briscoe* sparked a wave of scholarly debate discussing the possible implication of granting certiorari for a case that seemed to directly contradict one of the central holdings of *Melendez-Diaz* so shortly after it

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113. *See id.*, giving the example that "*some* state statutes[] 'requir[e] defense counsel to subpoena the analyst, to show good cause for demanding the analyst's presence, or even to affirm under oath an intent to cross-examine the analyst.'" (alteration in original) (internal citations omitted). The constitutionality of such a statute is not decided by the Court in *Melendez-Diaz* and will likely require further consideration by the Supreme Court. However, considering the Court's clear disapproval of burden-shifting statutes in *Melendez-Diaz*, *see id.* at 2540, it seems a reasonable assumption that a statute similar to the one just described will eventually be found unconstitutional.

114. Sellers, *supra* note 110, at 696.

115. LANGSTON HUGHES, *Harlem*, *in* MONTAGE OF A DREAM DEFERRED (1951).

116. Caroline Mix, Briscoe v. Virginia*: Reexamining the Scope of* Melendez-Diaz, 5 DUKE J. CONST. L. & PUB. POL'Y SIDEBAR 105, 106 (2010).

117. *Melendez-Diaz*, 129 S. Ct. at 2540.

118. Briscoe v. Virginia, 129 S. Ct. 2858 (U.S. June 29, 2009) (granting petition for certiorari).

119. Mix, *supra* note 116, at 105–06.

120. Bradley, *supra* note 6, at 328 (internal citation omitted).

had been decided.[121]

A commonly discussed hypothesis as to why the Court granted certiorari in *Briscoe* was premised on the appointment of Justice Sonia Sotomayor.[122] As a former prosecutor,[123] it was predicted that "Sotomayor . . . could prove amenable to prosecution-friendly arguments"[124] that could be used to counter the Court's holding in *Melendez-Diaz*. Furthermore, because Justice Sotomayor "replaced Justice David Souter, who voted with the five-member majority in *Melendez-Diaz*," it seemed conceivable that if "the dissenters could convince newly-appointed Justice Sonia Sotomayor to join them[,]" they could use *Briscoe* to "limit [*Melendez-Diaz*'s] impact" or possibly even "overturn the majority's holding in *Melendez-Diaz* altogether."[125] In addition to the possible implications of the inclusion of a new justice, *Briscoe v. Virginia* provided the Court with the opportunity to establish constitutionality requirements for notice-and-demand statutes as preliminarily discussed in *Melendez-Diaz*, helping guide states in any efforts to design constitutionally permissible statutes that mitigate the burden *Melendez-Diaz* placed on their prosecutors.

Ultimately, however, these possibilities did not have the opportunity to come to fruition. In a brief per curiam opinion, the Supreme Court "vacate[d] the judgment of the Supreme Court of Virginia and remand[ed] the case for further proceedings not inconsistent with the opinion in *Melendez-Diaz* . . . ."[126] By remanding the case, the Court left the potential impact of Justice Sotomayor's influence on the future development of the Confrontation Clause's jurisprudence for another day. Furthermore, "[i]n remanding *Briscoe*, the Supreme Court passed on an opportunity to establish criteria for what a notice-and-demand statute can and cannot require."[127] As a result, the Supreme Court left *Melendez-Diaz* as the standing authority on Confrontation Clause jurisprudence and procedure.

Even more recently, the Court decided *Bullcoming v. New Mexico*,[128] a case where the majority ultimately affirmed *Melendez-Diaz*,[129]

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121. *See, e.g.*, *id.* at 328–29; *see generally* Mix, *supra* note 116; Stephen Wills Murphy and Darryl K. Brown, *The Confrontation Clause and the High Stakes of the Court's Consideration of* Briscoe v. Virginia, 95 VA. L. REV. IN BRIEF 97 (2010).

122. *See, e.g.*, Bradley, *supra* note 6, at 328 ("Maybe the *Melendez-Diaz* dissenters voted for certiorari in hopes [of] attracting a fifth vote in Justice Sotomayor next year.").

123. *See* Biographies of Current Justices of the Supreme Court, *available at* http://www.supremecourt.gov/about/biographies.aspx (last visited Aug. 6, 2010).

124. Mix, *Reexamining the Scope*, *supra* note 116, at 118.

125. *Id.*

126. Briscoe v. Virginia, 130 S. Ct. 1316 (2010) (mem.) (per curiam).

127. Sellers, *supra* note 110, at 697.

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

129. The New Mexico Supreme Court "acknowledged that the blood-alcohol report introduced at Bullcoming's trial qualified as testimonial evidence . . . [l]ike the affidavits in *Melendez-Diaz*," yet concluded that "admission of the report did not violate the Confrontation Clause." *Id.* at 2712. Justice Ginsburg, writing the majority opinion, reversed the New Mexico Supreme Court judgment. *Id.* at 2713.

though the opinion leaves reason to believe that change may be imminent. In the case, the State presented "a forensic laboratory report certifying that Bullcoming's blood-alcohol concentration was well above the threshold for aggravated DWI,"[130] but "did not call as a witness the analyst who signed the certification."[131] Instead, "the State called another analyst who was familiar with the laboratory's testing procedures, but had neither participated in nor observed the test on Bullcoming's blood sample."[132] In many ways, the facts were almost identical to those found in *Melendez-Diaz*.[133]

The particularly interesting aspect of *Bullcoming* is that the decision indicates that the *Crawford* line of Confratation Clause opinions may be starting to fray. Like *Melendez-Diaz*, the *Bullcoming* majority only had a single vote majority,[134] and the majority opinion was somewhat fractured.[135] Though Justice Sotomayor signed on to the majority opinion, her decision to write a concurrence shows that she is not entirely aligned with the direction of the *Crawford* line that Justices Scalia and Ginsburg have promoted. It is possible that, had the factual circumstances of the case been distinguishable from *Melendez-Diaz*, Justice Sotomayor may not have agreed with the majority at all.[136] Additionally, the dissent's tenor regarding the extension of Sixth Amendment rights has become increasingly vociferous in *Bullcoming*. Justice Kennedy attacked the *Crawford* line by writing that, while "[t]he protections in the Confrontation Clause . . . are designed to ensure a fair trial with reliable evidence[,] . . . the *Crawford v. Washington* . . . line of cases has treated the reliability of evidence as a reason to exclude it."[137] He further wrote that "the Court in the wake of *Crawford* has had such trouble fashioning a clear vision of that case's meaning,"[138] which he finds "unsettling [because] *Crawford* binds every judge in every criminal trial in every local, state, and federal court in the Nation."[139] Such assertions indicate that the dissent feels that the entire *Crawford* line, not simply the most recent cases relating to the Confrontation Clause, is ripe for reform.

Despite the reinforcement of the principles of *Melendez-Diaz* as

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130. *Id.* at 2709.

131. *Id.*

132. *Id.*

133. *See Bullcoming*, 131 S. Ct. at 2721 (J. Sotomayor, concurring) ("[T]his case is materially indistinguishable from the facts we considered in *Melendez-Diaz*.").

134. This fact distinguishes *Melendez-Diaz* and *Bullcoming* from *Crawford* and *Davis*.

135. For instance, Justices Sotomayor, Kagan, and Thomas did not join in with Part IV of the majority opinion; in fact, only Justice Scalia joined the opinion in full. *Id.* at 2709.

136. In her concurring opinion, Justice Sotomayor writes about a number of "factual circumstances that [*Bullcoming*] does *not* present," suggesting that such circumstances may lead to a different result. *Id.* at 2721–22. This may be indicative of an unwillingness to continue extending confrontation rights beyond their current scope.

137. *Id.* at 2725 (Kennedy, J., dissenting).

138. *Id.* at 2726 (Kennedy, J., dissenting).

139. *Id.* (Kennedy, J., dissenting).

made express in *Bullcoming* and implied in the Court's decision to remand in *Briscoe*, the future of Confrontation Clause jurisprudence remains in a state of uncertainty and potential fluctuation. The true influence of Justice Sotomayor on the development of the Sixth Amendment and the Confrontation Clause remains to be seen. Even if "Sotomayor does not vote to overrule *Melendez-Diaz* [in the future], . . . it is likely that, as a former prosecutor, she will support limiting the further expansion of confrontation rights," at least "in the realm of laboratory certificates."[140] Additionally, with the replacement of long-serving Justice John Paul Stevens by Justice Elena Kagan,[141] the Court lost yet another member of the *Melendez-Diaz* majority. If the four *Melendez-Diaz* dissenters can rally both Justice Sotomayor and Justice Kagan to their side, the ability to either limit or overrule *Melendez-Diaz*—and even more dramatically, to potentially alter the landscape of the Confrontation Clause as established by *Crawford* itself—becomes far more realistic. Though Justice Kagan voted with the majority in *Bullcoming*, she inexplicably separated herself from part of the opinion and did not write any concurrences; as such, her reasoning relating to the confrontation right remains yet to be seen. The Sixth Amendment could very well be in a state of flux. At present, it is difficult to predict the exact direction that the Court will take in the Confrontation Clause's future development.

V. Conclusion

Melendez-Diaz, like all of the other post-*Crawford* Confrontation Clause cases, suffers from ambiguities that plague the majority's opinion and ultimately leave the criminal system in an unsettled state. Not only does the opinion fail to answer the critical question of how to comprehensively define "testimonial," as left open by *Crawford*, but the holding also declares that "analysts" who submit scientific affidavits for the purposes of a trial are witnesses giving testimonial statements under the Sixth Amendment without actually defining the characterizing traits that dictate exactly who falls within that category.[142] As a result, the Supreme Court has forced the burden of interpreting these muddled standards onto the lower courts, creating a system that will inevitably result in interjurisdictional variation in the standards of application and that encourages judicial activism due to a lack of explicit guidance. Although the Court had the opportunity to clarify its previous holdings after granting certiorari in *Briscoe v. Virginia*, its unfortunate decision to remand that case has left the legal system in a state of suspense as the lower courts continue

140. Mix, *supra* note 116, at 119; *see also* the opening paragraph of Justice Sotomayor's concurrence in *Bullcoming v. New Mexico*, where she notes that she "write[s] separately . . . [in part] to emphasize the limited reach of the Court's opinion." *Bullcoming*, 131 S. Ct. at 2719.

141. *See* Carl Hulse, *Senate Confirms Kagan as Justice in Partisan Vote*, N.Y. TIMES (Aug. 5, 2010), *available at* http://www.nytimes.com/2010/08/06/us/politics/06kagan.html?_r=1&hp.

142. *See Melendez-Diaz*, 129 S. Ct. at 2532.

to struggle with these painfully indefinite standards.

However, despite the disappointment of the Court's remanding of *Briscoe*, there is still hope that the Supreme Court will resolve these ambiguities and offer a sustainable structure for the Confrontation Clause in the near future. The recent appointments of Justices Sotomayor and Kagan hold the promise of at least clarifying, and perhaps even overturning, the holding of *Melendez-Diaz*. Starting with a reworking of *Melendez-Diaz*, this changing dynamic of the Court could usher in a new era of Confrontation Clause jurisprudence, potentially resulting in the clarity that has been so desperately needed since *Crawford* was decided in 2004.