

Car-ving Out Notions of Privacy: The Impact of GPS Tracking and Why *Maynard* is a Move in the Right Direction

Justin P. Webb
justin.webb@marquette.edu

Follow this and additional works at: <http://scholarship.law.marquette.edu/mulr>



Part of the [Law Commons](#)

Repository Citation

Justin P. Webb, *Car-ving Out Notions of Privacy: The Impact of GPS Tracking and Why Maynard is a Move in the Right Direction*, 95 Marq. L. Rev. 751 (2011).

Available at: <http://scholarship.law.marquette.edu/mulr/vol95/iss2/9>

This Article is brought to you for free and open access by the Journals at Marquette Law Scholarly Commons. It has been accepted for inclusion in Marquette Law Review by an authorized administrator of Marquette Law Scholarly Commons. For more information, please contact megan.obrien@marquette.edu.

CAR-VING OUT NOTIONS OF PRIVACY: THE IMPACT OF GPS TRACKING AND WHY MAYNARD IS A MOVE IN THE RIGHT DIRECTION

In a controversial decision in 2010, the D.C. Circuit held that warrantless GPS tracking of an automobile for an extended period of time violates the Fourth Amendment. The D.C. Circuit approached the issue in a novel way, using “mosaic theory” to assert that the aggregation of information about an individual’s movements, over an extended period of time, violated an individual’s reasonable expectation of privacy. This Note discusses how state and federal courts have dealt with warrantless GPS tracking, and ultimately asserts that the Maynard court’s decision was correct, insofar as it takes account of the interaction of changing technology and shifting societal notions of privacy. This Note urges the Supreme Court to incorporate an approach similar to Maynard within its Fourth Amendment jurisprudence. This Note concludes that failure to do so will contract already-cramped notions of privacy in the digital age, and facilitate a normative shift in conceptions of privacy that may be detrimental and irreversible.

I. INTRODUCTION	752
II. FOURTH AMENDMENT JURISPRUDENCE—REASONABLE EXPECTATION OF PRIVACY WITH RESPECT TO “SENSE- ENHANCING” TECHNOLOGY	759
A. <i>The Reasonable Expectation of Privacy Test</i>	759
B. <i>More Recent Application of the Reasonable Expectation of Privacy to Technology</i>	763
III. STATE AND FEDERAL APPELLATE LAW ON THE USE OF GPS TRACKING TECHNOLOGY, PRE-MAYNARD.....	769
A. <i>Survey of State Law Influence on GPS Tracking</i>	769
B. <i>The First Federal Appellate Interpretations—Garcia and Marquez</i>	774
C. <i>GPS Tracking in the Forefront—The Ninth Circuit’s Interpretation in Pineda-Moreno</i>	777
IV. A FUNDAMENTALLY DIFFERENT FEDERAL INTERPRETATION— <i>UNITED STATES V. MAYNARD</i>	781
V. WHY THE MAYNARD COURT IS MOVING IN THE RIGHT	

DIRECTION.....	788
A. <i>The Need for Change</i>	788
B. <i>A Framework to “Futur-ize” the Reasonable Expectation of Privacy and How Maynard Fits</i>	792
VI. CONCLUSION	796

*The needs of the day have swept away much that was sacred in the American heritage; the barriers of privacy have crumbled on many fronts. It will be the task of the Supreme Court to attempt to preserve those which are left.*¹

I. INTRODUCTION

Society’s notion of privacy² has evolved as civilization and technology have motored on.³ As technology’s progress encapsulates more in a smaller space (think microchips),⁴ so too has privacy become encased in ever smaller domains. And, just as forward thinkers such as Justices Warren and Brandeis were compelled to assert and carve out privacy notions to combat what they saw as invasive technology,⁵ a new generation should push against the continuing erosion of privacy by technology, lest society may never get its privacy back. Nothing more

1. JACOB W. LANDYNSKI, *SEARCH AND SEIZURE AND THE SUPREME COURT: A STUDY IN CONSTITUTIONAL INTERPRETATION* 270 (1966).

2. Privacy is one of the more amorphous terms in the law, and “there is no universally accepted philosophical definition of ‘privacy.’” Anita L. Allen, *Privacy-as-Data Control: Conceptual, Practical, and Moral Limits of the Paradigm*, 32 *CONN. L. REV.* 861, 864 (2000). However, Alan Westin’s definition is instructive: “Privacy is the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others.” ALAN F. WESTIN, *PRIVACY AND FREEDOM* 7 (1967). For a well-developed synopsis of competing notions of privacy, see DANIEL J. SOLOVE & PAUL M. SCHWARTZ, *INFORMATION PRIVACY LAW* 39–76 (3d ed. 2009).

3. MARTIN KUHN, *FEDERAL DATAVEILLANCE: IMPLICATIONS FOR CONSTITUTIONAL PRIVACY PROTECTIONS* 11 (2007) (“During the twentieth century, conceptualizations of privacy have gradually evolved from privacy as the right to a private, physical space to privacy as the right to control access to and the use of personal information.”).

4. See Russell D. Covey, *Pervasive Surveillance and the Future of the Fourth Amendment*, 80 *MISS. L.J.* 1289, 1289–94 (2011) (noting that rapid advances in technology have occurred and will continue to; one such advance is computer chips becoming more powerful and shrinking in size).

5. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 *HARV. L. REV.* 193, 193 (1890) (“[T]he right to life has come to mean the right to enjoy life,—the right to be left alone . . .”). The article was a response to “snapshot cameras,” whose use along with gossip-type media was seen as invasive to guarded notions of privacy at the time. *Id.* at 195–96.

succinctly displays the invasiveness of technology than the use of GPS tracking by law enforcement (often without a warrant) to monitor every movement of a person in an automobile for extended periods of time.⁶

An example illustrates this point in more detail. In 2010, Yasir Afifi, a twenty-year-old American citizen who is half-Egyptian, discovered a GPS tracking device hidden in the undercarriage of his automobile during a routine maintenance visit to a local garage.⁷ The discovery was surprising for several reasons: (1) there had been no evidence that the device was placed with a warrant; (2) there had been no specific justification given by the FBI (who allegedly placed the device) about why Afifi was being tracked;⁸ and, most striking of all, (3) the FBI arrived shortly after Afifi's friend posted images of the device on the Internet and allegedly told him that they had been tracking him for *three to six months*.⁹ Afifi subsequently filed a federal lawsuit,¹⁰ alleging that the locational information the FBI had gathered about him detailed "the persons with whom Mr. Afifi associated, the hospitals he attended, the organizations of which he was a member, the religious services he frequents, [and] the restaurants he went to with friends and families."¹¹ Even without delving further into the intricacies of the Afifi case, this discovery should raise eyebrows solely because it is a harbinger of what is to come (and is already happening)—the warrantless tracking by law enforcement of an individual's every movement in an automobile for a significant duration of time.

6. See, e.g., *People v. Weaver*, 909 N.E.2d 1195, 1195–96 (N.Y. 2009) ("[A GPS] device remained in place for 65 days This nonstop surveillance was conducted without a warrant.").

7. Kim Zetter, *Caught Spying on Student, FBI Demands GPS Tracker Back*, WIRED (Oct. 7, 2010), <http://www.wired.com/threatlevel/2010/10/fbi-tracking-device/>.

8. *Id.* And this is not an isolated case. Afifi's attorney stated that "after learning about Afifi's experience, other lawyers in her organization told her they knew of two people in Ohio who also recently discovered tracking devices on their vehicles." *Id.* The government has not denied this practice. See Appellee's Petition for Rehearing En Banc at 2 n.1, *United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010) ("Investigative agents of the United States Department of Justice employ this method of surveillance with great frequency.").

9. See Zetter, *supra* note 7.

10. Bob Egelko, *San Jose Arab American Sues FBI over GPS*, SFGATE.COM, Mar. 3, 2011, http://articles.sfgate.com/2011-03-03/bay-area/28648677_1_gps-device-fbi-agent-fbi-director-robert-mueller.

11. Complaint at 13, *Afifi v. Holder*, No. 11-00460 (D.D.C. Mar. 2, 2011). Afifi's case has been stayed, pending the outcome of *United States v. Jones*. Order Granting Plaintiff's Motion to Stay at 1, *Afifi v. Holder*, No. 11-00460 (D.D.C. Sept. 12, 2011).

To say that this type of GPS tracking has enflamed the already-contentious argument about how far the government can go to prevent and respond to crime would be an understatement.¹² One need only look to Judge Kozinski's dissent after a denial of a rehearing en banc in *United States v. Pineda-Moreno* to observe the alarm: "The needs of law enforcement, to which my colleagues seem inclined to refuse nothing, are quickly making personal privacy a distant memory. 1984 may have come a bit later than predicted, but it's here at last."¹³ One could argue that, while the warrantless electronic monitoring of automobiles might indeed be an alarming encroachment on privacy, the Orwellian rhetoric¹⁴ is overblown because automobile travel invariably occurs in public, and the Supreme Court has previously held that "[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another."¹⁵ However, automobiles are a mainstay in the life of the American public and are vital to its commerce and interconnectedness.¹⁶ Use of

12. See Adam Cohen, *Big Brother Is Watching*, TIME, Sep. 13, 2010, at 53; John W. Whitehead, *GPS and the Police State We Inhabit: Living in Oceania*, HUFFINGTON POST (Sept. 28, 2010), http://www.huffingtonpost.com/john-w-whitehead/gps-and-the-police-state-_b_740348.html.

13. *United States vs. Pineda-Moreno*, 617 F.3d 1120, 1121 (9th Cir. 2010) (Kozinski, C.J., dissenting), *petition for cert. filed*, No. 10-7515 (U.S. Nov. 10, 2010).

14. DANIEL J. SOLOVE, *THE DIGITAL PERSON: TECHNOLOGY AND PRIVACY IN THE INFORMATION AGE* 7 (2004) ("The dominant metaphor for modern invasions of privacy is Big Brother, the ruthless totalitarian government in George Orwell's novel *1984*."). Big Brother's totalitarian government attempts to wipe out privacy notions by using various forms of surveillance, "constantly monitoring and spying" on its citizens, who have no way to know if they are being watched. *Id.* at 29. Orwell and dystopia have been invoked by many courts and commentators in reference to GPS tracking. See *United States v. Cuevas-Perez*, 640 F.3d 272, 275-76 (7th Cir. 2011) (stating that GPS is "a technology surely capable of abuses fit for a dystopian novel"); Phillip R. Sumpter, Note, *Is Big Brother Watching You? United States v. Pineda-Moreno and the Ninth Circuit's Dismantling of the Fourth Amendment's Protections*, 2011 BYU L. REV. 209, 209-10 (2011) (arguing that the court in *Pineda-Moreno* was "enabling the creation of a modern-day Oceania"); David Kravets, *Judge Calls Location-Tracking Orwellian, While Congress Moves to Legalize It*, WIRED (Aug. 24, 2011), <http://www.wired.com/threatlevel/2011/08/gps-privacy-crossroads/>.

15. *United States v. Knotts*, 460 U.S. 276, 281 (1983). While "location information is not actually held by another," this statement is generally an extension of the "third party doctrine," which states that "a person retains no expectation of privacy in information conveyed to another." Stephen E. Henderson, *The Timely Demise of the Fourth Amendment Third Party Doctrine*, 96 IOWA L. REV. BULL. 39, 39-40, 43 (2011); see also FRED H. CATE, *PRIVACY IN THE INFORMATION AGE* 58 (1997); Covey, *supra* note 4, at 1295.

16. In 1960, there were over 60 million passenger cars on the road. As of 2008, this number had more than doubled, to over 137 million. BUREAU OF TRANSP. STAT., U.S.

automobiles is inexorably intertwined with the path that an individual's life takes each day.¹⁷ It is not hard to argue, then, that by watching where an individual goes in an automobile, one can paint a precise picture of that individual's life. As the court noted in *United States v. Maynard*,

[this] type[] of information can . . . reveal more about a person than . . . any individual trip viewed in isolation. Repeated visits to a church, a gym, a bar, or a bookie tell a story not told by any single visit, as does one's not visiting any of these places The sequence of a person's movements can reveal still more; a single trip to a gynecologist's office tells little about a woman, but that trip followed a few weeks later by a visit to a baby supply store tells a different story. A person who knows all of another's travels can deduce whether he is a weekly church goer, a heavy drinker, a regular at the gym, an unfaithful husband, an outpatient receiving medical treatment, an associate of particular individuals or political groups—and not just one such fact about a person, but *all such facts*.¹⁸

Surveillance of this sort necessarily raises a critical question: Does a person have a reasonable expectation of privacy in *all* of his movements over a delineated course of time?¹⁹ And who determines what amount of time is presumptively reasonable or unreasonable—i.e., when is the government overreaching?²⁰ Finally, what determinative test or rule

DEP'T TRANSP., NATIONAL TRANSPORTATION STATISTICS 2011, at tbl.1-11 (2011), available at http://www.bts.gov/publications/national_transportation_statistics/pdf/entire.pdf.

17. This has been due to the shift from agricultural jobs to factories and offices, which have shifted work farther away from home. This has necessarily had an effect on society's notion of privacy. See Daniel J. Solove, *Conceptualizing Privacy*, 90 CALIF. L. REV. 1087, 1129–43 (2002).

18. *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *reh'g denied en banc sub nom. United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. denied*, 131 S. Ct. 671 (2010), *cert. granted sub nom. United States v. Jones*, 131 S. Ct. 3064 (2011), and *aff'd on other grounds*, 132 S. Ct. 945 (2012) (emphasis added).

19. The concept of a “reasonable expectation of privacy” with regard to Fourth Amendment searches was first raised by Justice Harlan's concurring opinion in *Katz v. United States*, 389 U.S. 347, 360–61 (1967) (Harlan, J., concurring).

20. One time-based suggestion has been twenty-four hours. See CONST. PROJECT LIBERTY & SEC. COMM., LIBERTY AND SECURITY COMMITTEE STATEMENT ON LOCATION TRACKING 5 (2001), available at <http://www.constitutionproject.org/pdf/LocationTrackingReport.pdf>. However, due to the particular nuances of criminal investigations, a time-based

exists to assert that “dragnet-type” surveillance is actually occurring and is violating the Fourth Amendment’s proscription against unreasonable searches?²¹ Although the focus in answering these questions may be on GPS tracking at the moment, more advanced technology that may not need to be attached to an automobile to facilitate prolonged surveillance is surely on the horizon. Thus, any solution to this problem must be significantly forward thinking to combat the slow creep toward becoming an increasingly panoptic society.²²

Courts at both the state and federal level have wrestled with the questions raised above, with disparate results failing to provide clarity.²³ Because this issue is constitutional and has given rise to a circuit split,²⁴ the Supreme Court granted the petition for certiorari in *Maynard* to rectify the split.²⁵ During the publication of this Note, the Court decided *United States v. Jones*; however, the focus here will not be on the *Jones*

approach should be viewed with caution because it could seriously impede legitimate and necessary investigatory processes that may not be able to culminate within that time.

21. The holding in *Knotts* reserved judgment on the Fourth Amendment implications of “twenty-four hour surveillance of any citizen of this country,” noting that “if such dragnet-type law enforcement practices . . . should eventually occur, there will be time enough then to determine whether different constitutional principles may be applicable.” *Knotts*, 460 U.S. at 283–84.

22. The Panopticon was “the antithesis of public anonymity[,] . . . a model prison first imagined by Jeremy Bentham.” CHRISTOPHER SLOBOGIN, *PRIVACY AT RISK: THE NEW GOVERNMENT SURVEILLANCE AND THE FOURTH AMENDMENT* 92–93 (2007) (citing JEREMY BENTHAM, *PANOPTICON; OR, THE INSPECTION-HOUSE* (1787), reprinted in 4 *THE WORKS OF JEREMY BENTHAM* 37–172 (John Bowring ed., Russell & Russell, Inc. 1962) (1843). While it was imagined as a prison, the total surveillance state it creates and the disciplinary mechanism that it enforces have together been interpreted as a way to control society, as well. MICHEL FOUCAULT, *DISCIPLINE AND PUNISH: THE BIRTH OF THE PRISON* 208–09 (Alan Sheridan trans., Vintage Books ed. 1979); see also SOLOVE, *supra* note 14, at 30–31 (“[T]he Panopticon is not merely limited to the prison or to a specific architectural structure—it is a technology of power that can be used in many contexts and in a multitude of ways.”).

23. See Petition for a Writ of Certiorari at 7–13, *Pineda-Moreno v. United States*, No. 10-7515 (U.S. Nov. 10, 2010) (discussing both the Federal Circuit Court split as well as the conflicting decisions in various state courts).

24. *Id.* at 8 (“Four circuit court opinions demonstrate conflict and growing inconsistency in the federal courts on the issue of Fourth Amendment protection in cases of GPS monitoring.”).

25. *United States v. Jones*, 131 S. Ct. 3064 (2011); see also Orin Kerr, *Supreme Court Agrees to Review Case on GPS and the Fourth Amendment*, VOLOKH CONSPIRACY (Jun. 27, 2011), <http://volokh.com/2011/06/27/supreme-court-agrees-to-review-case-on-gps-and-the-fourth-amendment/> [hereinafter Kerr, *Supreme Court*].

holding.²⁶ Rather, this Note's primary focus will be on *Maynard* and other recent federal court cases that deal with Fourth Amendment issues under the the reasonable expectation of privacy test. State court examples will be used to illustrate the general issue, as they have helped to guide the federal courts. Additionally, it is presumed that the reader is familiar with GPS technology, insofar as it applies to tracking the movements of an automobile, and its admission as evidence.²⁷ While it has also been argued that tracking via GPS can be halted by asserting that placement of the GPS tracker on someone's automobile is a seizure under the Fourth Amendment,²⁸ this Note will focus solely on the issue

26. See *United States v. Jones*, 132 S. Ct. 945 (2012). Unfortunately, the holding fails to clearly delimit the strictures of the Fourth Amendment when dealing with technology, opting instead to take an undeniably originalist approach to the question (through notions of trespass). *Id.* Consequently, the door has still been left wide open for mosaic theory to become part of Fourth Amendment jurisprudence, and at least one commentator has argued that the concurrences in *Jones* give the impression that some Justices (possibly even five) may be ready to embrace it. See Orin Kerr, *What's the Status of the Mosaic Theory After Jones?*, VOLOKH CONSPIRACY (Jan. 23, 2012), <http://volokh.com/2012/01/23/whats-the-status-of-the-mosaic-theory-after-jones/>. Both Justices Alito and Sotomayor, in their concurrences, used *Maynard*-esque language, without actually adopting (or rejecting) *Maynard*, and they both reserved the issue of when (temporally) GPS tracking becomes an unreasonable search. *Jones*, 132 S. Ct. at 955–56 (Sotomayor, J., concurring); *id.* at 962–64 (Alito, J., concurring in the judgment). Justice Alito stated, “We need not identify with precision the point at which the tracking of this vehicle became a search, for the line was surely crossed before the 4-week mark.” *Id.* at 964 (Alito, J., concurring in the judgment). In her concurrence, Justice Sotomayor agreed with Justice Alito's conclusion that “longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy.” *Id.* at 955 (Sotomayor, J. concurring) (quoting *id.* at 964 (Alito, J., concurring in the judgment)).

The *Maynard* court offered a novel answer to the reserved question. I will focus on *Maynard*'s novel resolution of this issue and where I think Fourth Amendment jurisprudence should go. Thus, despite *Jones* being resolved, the analysis in this Note is not moot; alternatively, the *Jones* decision leaves Fourth Amendment jurisprudence muddled and still ripe for reform to properly address changing technology.

27. See generally Nathan J. Buchok, *Plotting a Course for GPS Evidence*, Note, 28 QUINNIPIAC L. REV. 1019, 1020 (2010) (examining the use of GPS technology as applied under the Federal Rules of Evidence, ultimately concluding that “GPS technology . . . is reliable enough for use at trial”); Sarah Rahter, *Privacy Implications of GPS Tracking Technology*, Note, 4 I/S: J.L. & POL'Y FOR INFO. SOC'Y 755 (2008).

28. Many cases on both the state and federal level have also addressed Fourth Amendment seizure relating to the installation of GPS monitors on automobiles. See *United States v. Jones*, 625 F.3d 766, 770 (D.C. Cir. 2010) (Kavanaugh, J., dissenting) (noting that Fourth Amendment seizure issue raised by defendant “poses an important question and deserves careful consideration by the en banc court”); *United States v. McIver*, 186 F.3d 1119, 1127 (9th Cir. 1999) (holding that placement of magnetized tracking devices did not deprive owner of dominion and control and thus “no seizure occurred because the officers did not meaningfully interfere with [the defendant's] possessory interest in the [vehicle]”);

of whether doing so constitutes a Fourth Amendment search. This narrow scope is necessary because GPS tracking and prolonged surveillance must be addressed under the reasonable expectation of privacy standard governing searches, lest we wish to revisit this argument once new technology emerges and tracking no longer requires a device to be physically attached to a vehicle—a necessary corollary if resolution is based on seizure. Lastly, there may also be federal legislative methods to address the issue of GPS tracking; indeed, at least two bills have been proposed,²⁹ and commentators have suggested this approach.³⁰ This Note, however, will focus narrowly on a judicial solution.

Commonwealth v. Connolly, 913 N.E.2d 356, 369 (Mass. 2009) (“[A]part from the installation of the GPS device, the police use of the defendant’s minivan to conduct GPS monitoring for their own purposes constituted a seizure.”). Justice Stevens has also stated more generally that “[i]n my opinion the surreptitious use of a radio transmitter—whether it contains a microphone or merely a signalling device—on an individual’s personal property is both a seizure and a search within the meaning of the Fourth Amendment.” *United States v. Karo*, 468 U.S. 705, 728 (1984) (Stevens, J., dissenting). The question of seizure was before the Supreme Court, at its behest, in *United States v. Jones*, 131 S. Ct. 3064 (2011) (“[I]n addition to the question presented by the petition, the parties are directed to brief and argue the following question: ‘Whether the government violated respondent’s Fourth Amendment rights by installing the GPS tracking device on his vehicle without a valid warrant and without his consent.’” (emphasis added)). This question could rein in the practice of warrantless GPS tracking by invoking the Fifth Amendment instead of the Fourth. See Kerr, *Supreme Court*, *supra* note 25.

29. Senator Ron Wyden and U.S. Representative Jason Chaffetz authored the GPS Act, which requires, *inter alia*, that law enforcement obtain a warrant before GPS tracking could be used. H.R. 2168, 112th Cong. (2011); S. 1212, 112th Cong. (2011). Senator Patrick Leahy has also introduced legislation that requires a warrant for GPS tracking, however, his proposal would amend the Electronics Communications Privacy Act (ECPA). S. 1011, 112th Cong. (2011).

30. See Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 802–07 (2004) [hereinafter Kerr, *New Technologies*] (“[C]ourts should place a thumb on the scale in favor of judicial caution when technology is in flux, and should consider allowing legislatures to provide the primary rules governing law enforcement investigations involving new technologies.”); Kimberly C. Smith, Comment, *Hiding in Plain Sight: Protection from GPS Technology Requires Congressional Action, Not a Stretch of the Fourth Amendment*, 62 MERCER L. REV. 1243, 1276–78 (2011). However, legislative action is not without its detractors. See Daniel J. Solove, *Fourth Amendment Codification and Professor Kerr’s Misguided Call for Judicial Deference*, 74 FORDHAM L. REV. 747 (2005). Solove argues that “[w]here the courts have left open areas for legislative rules to fill in, Congress has created an uneven fabric of protections that is riddled with holes and that has weak protections in numerous places. Therefore, Kerr’s claim that legislatures create more comprehensive and balanced rules than courts is simply not borne out by the evidence.” *Id.* at 766.

This Note asserts that the *Maynard* court’s interpretation of the reasonable expectation of privacy through the “mosaic theory” is the type of interpretation that the Supreme Court should incorporate into Fourth Amendment jurisprudence, and that prolonged GPS tracking without a warrant is a violation of the Fourth Amendment.³¹ This interpretation will be justified by using the Supreme Court’s Fourth Amendment jurisprudence, applicable federal decisions, and relevant legal commentary. This Note concludes that “mosaic theory” is a move in the right direction by illustrating that other interpretations and current judicial precedent are not sufficiently forward thinking to survive the onward march of technology.

Part II of the Note surveys the Fourth Amendment legal landscape as it currently stands, articulating Supreme Court jurisprudence regarding the reasonable expectation of privacy. Part III delves into the recent state and federal appellate court decisions and their conflicting interpretations of how GPS tracking comports with Fourth Amendment jurisprudence and state constitutions. Part IV focuses on the *Maynard* decision and its use of “mosaic theory” to define the reasonable expectation of privacy. Part V argues that the *Maynard* approach to the reasonable expectation of privacy is a move in the right direction and may assist in curtailing the inevitable shrinking of privacy that continues to occur as technology advances. Part VI concludes by positing that the Supreme Court should build upon the *Maynard* court’s interpretation of privacy and include that interpretation, or a forward-thinking analogue, within its Fourth Amendment jurisprudence.

II. FOURTH AMENDMENT JURISPRUDENCE—REASONABLE EXPECTATION OF PRIVACY WITH RESPECT TO “SENSE-ENHANCING” TECHNOLOGY

A. *The Reasonable Expectation of Privacy Test*

The Fourth Amendment to the United States Constitution states in pertinent part as follows: “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated.”³² The Fourth Amendment would seem to not even address the issue of surreptitious tracking because it does

31. *Maynard*, 615 F.3d at 562–63. For an explanation of *Maynard*, see *infra* Part IV.

32. U.S. CONST. amend. IV.

not affect the security of people in their “houses, papers, and effects,” language that on its face seems to contemplate the invasion of something physical;³³ however, the Supreme Court has construed this language in the Fourth Amendment quite expansively to include non-physical intrusion.³⁴ Typically, a non-physical intrusion occurs by “sense-augmenting” or “extrasensory” tools that allow us to ascertain information beyond which one’s normal human senses would permit.³⁵ The Court has addressed the use of these tools by law enforcement almost thirty times since 1927.³⁶ Indeed, its interpretation has evolved as the Court has been confronted with novel challenges and technologies.³⁷ The genesis of non-physical invasion violating the Fourth Amendment began in *Katz v. United States*.³⁸ There, the defendant was a gambler who placed wagers with a bookie, who was across state lines, via telephone from a particular telephone booth.³⁹ The FBI placed a listening device on the outside of the phone booth to record his conversations.⁴⁰ The government argued that the method of obtaining the evidence did not violate the Fourth Amendment because “the surveillance technique they employed involved no physical penetration of the telephone booth from which the petitioner placed his calls.”⁴¹ The

33. Prior to 1967, the Fourth Amendment was grounded only in property rights, and it protected only tangible objects from physical invasion. THOMAS K. CLANCY, *THE FOURTH AMENDMENT: ITS HISTORY AND INTERPRETATION* 53–55 (2008).

34. Richard G. Wilkins, *Defining the ‘Reasonable Expectation of Privacy’: An Emerging Tripartite Analysis*, 40 VAND. L. REV. 1077, 1114–28 (1987) (“[T]he presence or absence of a physical intrusion ostensibly ceased to be the focal point of [F]ourth [A]mendment analysis.”).

35. Renée McDonald Hutchins, *Tied Up in Knotts? GPS Technology and the Fourth Amendment*, 55 UCLA L. REV. 409, 432–33 (2007). According to Hutchins, “[s]ense-augmenting surveillance refers to surveillance that reveals information that could theoretically be attained through one of the five human senses.” *Id.* She goes on to state that “[e]xtrasensory surveillance . . . is that which reveals information otherwise indiscernible to the unaided human senses.” *Id.* at 433.

36. *Id.* at 423.

37. See, e.g., *Kyllo v. United States*, 533 U.S. 27, 33–34 (2001) (acknowledging that the Fourth Amendment has not been “entirely unaffected by the advance of technology” when faced with a novel thermal imaging case).

38. *Katz v. United States*, 389 U.S. 347 (1967). *Katz* was a direct refutation of *Olmstead v. United States*, where the court held that the Fourth Amendment applied only to material things. 277 U.S. 438, 466 (1928).

39. *Katz*, 389 U.S. at 348.

40. *Id.*

41. *Id.* at 352.

Court rejected this argument, and the narrow application of previous case law,⁴² holding that the Fourth Amendment could be violated by actions that did not involve any physical intrusion—“Wherever a man may be, he is entitled to know that he will remain free from unreasonable searches and seizures.”⁴³ The Court explained that

the Fourth Amendment protects people, not places. What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.⁴⁴

While the holding in *Katz* was revolutionary for its expansive reading of the Fourth Amendment, it is more important today because Justice Harlan’s concurrence annunciated the test a court should use to determine if a non-physical invasion has violated the Fourth Amendment.⁴⁵ At the outset of his opinion, Justice Harlan set the constitutional floor, explaining that “a person has a constitutionally protected reasonable expectation of privacy.”⁴⁶ He further stated that a solely physical test was misplaced and was “bad physics as well as bad law, for reasonable expectations of privacy may be defeated by electronic as well as physical invasion.”⁴⁷ Thus, he stated that to determine if the Fourth Amendment is implicated, there is “a twofold requirement, first that a person have exhibited an actual (subjective)

42. *See supra* text accompanying note 38.

43. *Katz*, 389 U.S. at 359.

44. *Id.* at 351–52 (citation omitted). Removing the physical intrusion element pushed Fourth Amendment jurisprudence away from trespass doctrine, widening its scope and arguably expanding its open texture. *See* Amy L. Peikoff, *Pragmatism and Privacy*, 5 N.Y.U. J.L. & LIBERTY 638, 657 (2010) (“[Justice] Stewart, like Brandeis and Douglas before him, want[ed] to disengage the notion of a Fourth Amendment ‘search’ from any remnant of the trespass doctrine. He, too, want[ed] to keep as many options open as possible, with respect to what does or does not constitute a search.”). While *Katz* was a push away from a property-based notion, its approach has been criticized as well. *See* Lewis R. Katz, *In Search of a Fourth Amendment for the Twenty-First Century*, 65 IND. L.J. 549, 564 (1990) (arguing that *Katz* is now merely an assumption of the risk doctrine, based on the language “‘knowingly expose[d] to the public,’” and that *Katz* actually takes away Fourth Amendment protections in a “high-tech society”).

45. *Katz*, 389 U.S. at 360–62 (Harlan, J., concurring).

46. *Id.* at 360.

47. *Id.* at 362.

expectation of privacy and, second, that the expectation be one that society is prepared to recognize as ‘reasonable.’”⁴⁸

The *Katz* test thus has two parts: (1) that the individual exhibits a subjective expectation of privacy; and (2) that society is prepared to recognize the individual’s expectation as objectively reasonable.⁴⁹ The first part of the test can be satisfied by the individual’s showing affirmative steps to protect his or her own privacy,⁵⁰ like concealing items in a locked glove box, putting up high walls on their property, or not publicly listing their telephone number. These affirmative steps have an outward element, allowing clear resolution of the first part of the *Katz* test. The second part of the test—society’s acceptance of the expectation as reasonable—has been weighed much more heavily by courts and is more often contested.⁵¹ It has been argued that the uncertainty in this regard has resulted from the nature and extent of “the methods used by government to intrude into private places; . . . [the] privacy interests [that may exist in] a broad range of places and activities; and . . . the role that modern technology plays in enabling the government to intrude into places and activities that previously were inaccessible.”⁵²

Thus, while *Katz* “revolutionized Fourth Amendment search analysis”⁵³ and “laid to rest most of the criticism that the law had become stilted and anachronistic in its attempts to accommodate modern investigative technology,” it was still often problematic in application,⁵⁴ and at times even criticized by the Court itself.⁵⁵ Accordingly, although the Supreme Court has ruled numerous times on

48. *Id.* at 361.

49. *Id.*

50. Hutchins, *supra* note 35, at 428 (“[T]he Court has found that affirmative steps like erecting fences and packaging contraband in closed luggage are sufficient to satisfy the first prong of *Katz*.”).

51. See Bennett L. Gershman, *Privacy Revisited: GPS Tracking as Search and Seizure*, 30 PACE L. REV. 927, 928–29 (2010).

52. *Id.* at 929.

53. Wilkins, *supra* note 34, at 1087. This is a decidedly non-originalist interpretation of the Fourth Amendment. See Justin F. Marceau, *The Fourth Amendment at a Three-Way Stop*, 62 ALA. L. REV. 687, 687–712 (2011). Marceau noted that “[i]nsofar as the *Katz* model of Fourth Amendment review reflects a rejection of stagnation and history, the Fourth Amendment represents an ongoing indignity to strict originalism.” *Id.* at 710.

54. Wilkins, *supra* note 34, at 1087–88.

55. See *Smith v. Maryland*, 442 U.S. 735, 740–41 n.5 (1979).

this issue,⁵⁶ its interpretations have often been muddled, and the resulting precedent more resembles a case-by-case, ad hoc approach than a hard and fast legal standard that is consistently adhered to.⁵⁷ As one commentator has noted, “the highly elastic boundaries of the ‘reasonable expectation of privacy’ test ma[d]e judicial construction of the [Fourth Amendment] quite haphazard.”⁵⁸ This erratic nature is evidenced in the cases that follow, and the varied interpretations to which commentators have ascribed.

B. More Recent Application of the Reasonable Expectation of Privacy to Technology

The *Katz* decision established the reasonable expectation of privacy test as the measure that later courts would use to evaluate searches under the Fourth Amendment. But technology moved further still. In 1983, the Court had its first opportunity to address devices that facilitate tracking of subjects through surreptitious means.⁵⁹

In *United States v. Knotts*, the defendant was charged with “conspiracy to manufacture a controlled substance”⁶⁰ after one of the co-defendants was reported by his employer for stealing chemicals that “could be used in manufacturing illicit drugs,” including chloroform.⁶¹ Law enforcement officers placed a beeper (radio transmitter) in a chloroform container that was sold to the defendant.⁶² Officers then followed the subject, using both visual surveillance and monitoring of the beeper signal, to discover where the defendant was delivering the chemicals.⁶³ While the police were following the defendant, he began making evasive maneuvers, and the police stopped their pursuit and lost

56. See Hutchins, *supra* note 35, at 423.

57. See Orin S. Kerr, *Four Models of Fourth Amendment Protection*, 60 STAN. L. REV. 503, 504–05 (2007) [hereinafter Kerr, *Four Models*] (noting that “the meaning of the phrase ‘reasonable expectation of privacy’ remains remarkably opaque” and stating, amusingly, that some Fourth Amendment scholars “suggest that the only way to identify when an expectation of privacy is reasonable is when five Justices say so”). However, Kerr does go on to state that the Supreme Court’s precedent fits within four distinct approaches—an attempt to provide some clarity. *Id.* at 506.

58. Wilkins, *supra* note 34, at 1088.

59. See generally *United States v. Knotts*, 460 U.S. 276 (1983).

60. *Id.* at 277.

61. *Id.* at 278.

62. *Id.*

63. *Id.*

visual contact.⁶⁴ Despite the fact that the police were no longer able to follow the defendant on the ground, they were able to use a helicopter equipped with a monitoring device to locate the signal of the beeper and thus able to determine where the defendant had travelled.⁶⁵ The defendant argued that tracking him using a beeper violated his reasonable expectation of privacy, and all evidence derived from it should be suppressed.⁶⁶ The Supreme Court disagreed with the defendant, and held that the use of the beeper did not violate the Fourth Amendment.⁶⁷

At the outset, the Court noted that “[t]he governmental surveillance conducted by means of the beeper in this case amounted principally to the following of an automobile on public streets and highways.”⁶⁸ The Court was in essence analogizing the use of the beeper to another way to follow an automobile and perform visual surveillance.⁶⁹ More germane to the Fourth Amendment argument, the Court stated that “[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another.”⁷⁰ Further, the Court said that “[n]othing in the Fourth Amendment prohibited the police from augmenting the sensory faculties bestowed upon them at birth with such enhancement as science and technology afforded them in this case.”⁷¹ However, despite appearing to be highly deferential to the use of technology by law enforcement, the Court’s reasoning was not without qualification. Responding to the defendant’s argument that a verdict for the government would allow “twenty-four hour surveillance of any citizen of this country,”⁷² the Court proceeded cautiously, noting that “if such dragnet-type law enforcement practices as respondent envisions should eventually occur, there will be time enough then to determine whether

64. *Id.*

65. *Id.*

66. *Id.* at 279.

67. *Id.* at 285.

68. *Id.* at 281.

69. See Tarik N. Jallad, *Old Answers to New Questions: GPS Surveillance and the Unwarranted Need for Warrants*, 11 N.C. J.L. & TECH. 351, 362 (2010) (“[T]he Court stated that the beeper tracking was akin to the physical following of the automobile on public roads.”).

70. *Knotts*, 460 U.S. at 281.

71. *Id.* at 282.

72. *Id.* at 283 (internal quotations omitted).

different constitutional principles may be applicable.”⁷³ This reservation of judgment on “dragnet-type law enforcement practices” has become the focal point of later cases grappling with technology that can arguably do such dragnet-type observation.

Justice Steven’s concurrence in *Knotts* was much narrower and carefully limited to the facts before the Court.⁷⁴ He noted that in *Katz*, the Court held that the Fourth Amendment *does inhibit* police from augmenting their sensory abilities with technological advancements.⁷⁵ He argued, however, that just because “the augmentation in this case was unobjectionable, it by no means follows that the use of electronic detection techniques does not implicate especially sensitive concerns,”⁷⁶ a recognition that not all searches accomplished through technological advances may be constitutional in the future.

Indeed, the Supreme Court eventually determined, years later, in *Kyllo v. United States*, that the reasonable expectation of privacy was violated when police used a device to search a defendant’s home, reasoning that the device used was not available to the public, provided extrasensory abilities, and invaded the protected space of the home.⁷⁷ In *Kyllo*, the government used a thermal imager to see the heat generated in areas of the defendant’s home; the government used the imager to determine if the defendant was growing marijuana through the use of heat lamps.⁷⁸ Writing for the majority, Justice Scalia noted at the outset that “[i]t would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology.”⁷⁹ The Court found that use of the device provided the police extrasensory abilities, and despite being used from a public space out in front of the house, its revelations about what occurred inside the house, including lawful activities, were an invasion

73. *Id.* at 284.

74. *Id.* at 288 (Stevens, J., concurring).

75. *Id.*

76. *Id.* The Supreme Court appeared ready to accept Justice Stevens’ words, at least somewhat so, in *Karo*, where the Court held that use of a beeper to track a person while they are in their home is a search under the Fourth Amendment. *United States v. Karo*, 486 U.S. 705, 714 (1984). However, the Court’s decision is more a gesture of deference to the privacy in the home, like *Kyllo*, than a condemnation of technological surveillance. See Kerr, *New Technologies*, *supra* note 30, at 831–36; see *infra* note 82.

77. *Kyllo v. United States*, 533 U.S. 27, 40 (2001).

78. *Id.* at 29–30.

79. *Id.* at 33–34.

of the reasonable expectation of privacy that one has within his or her home.⁸⁰

While *Kyllo* would appear quite favorable to defendants in cases involving any device that bestowed extrasensory gifts on the would-be discoverer (i.e., the police), it has been read more as a decision fortifying privacy protection within the home and less a decision limiting the use of extrasensory technology.⁸¹ But this decision has provided a basis for the argument that the location of the search alone should not demarcate the beginning or end of privacy.⁸² Notably, Justice Scalia's decision appears to be forward thinking on its surface, stating that "[w]hile the technology used in the present case was relatively crude, the rule we adopt must take account of more sophisticated systems that are already in use or are in development."⁸³

At the heart of *Kyllo*, though, is a formulaic inquiry that "can cause constitutional protections to rise or fall on the talismanic incantation of the sense-augmenting or extrasensory categories."⁸⁴ This classification

80. *Id.* at 40. Justice Stevens disagreed about the scope of the rule, stating "[c]learly, a rule that is designed to protect individuals from the overly intrusive use of sense-enhancing equipment should not be limited to a home." *Id.* at 48 (Stevens, J., dissenting).

81. See Tracey Maclin, Katz, *Kyllo*, and *Technology: Virtual Fourth Amendment Protection in the Twenty-First Century*, 72 MISS. L.J. 51, 116–23 (2002); April A. Otterberg, Note, *GPS Tracking Technology: The Case for Revisiting Knotts and Shifting the Supreme Court's Theory of the Public Space Under the Fourth Amendment*, 46 B.C. L. REV. 661, 692–93 (2005). This deference to home protection was also the deciding factor in *Karo*. See *supra* text accompanying note 76. Some of the criticism of *Kyllo* arises because of this focus on the home, and the narrowness of the holding—the general result being that we are still left with the *Katz* test. See Peikoff, *supra* note 44, at 662–71; *supra* text accompanying note 80.

82. See Otterberg, *supra* note 81, at 694 ("[L]anguage in *Kyllo* . . . suggests the Court is beginning to recognize that technology often antiquates a Fourth Amendment analysis based purely on physical boundaries."); see also Kerr, *New Technologies*, *supra* note 30, at 838–39. Professor Kerr argues that

A "reasonable expectation of privacy" has not been equated with the expectation of privacy of a reasonable person; rather, it has been used as a term of art based heavily on property law principles. As a result, existing Fourth Amendment rules are not necessarily the rules that sensible legislators might enact and reasonable citizens might desire. Especially in the area of high technology, the property-based Fourth Amendment does not guarantee that the rules governing law enforcement are optimal rules that effectively balance the competing concerns of privacy and effective law enforcement.

Id. at 838.

83. *Kyllo*, 533 U.S. at 36.

84. Hutchins, *supra* note 35, at 437.

has been heavily relied on in later cases, and if the Court has found that certain technology is merely sense-augmenting, that finding has typically (but not always) led the Court to uphold use of the technology.⁸⁵ However, this bright line determination should not be functionally dispositive of a violation of the reasonable expectation of privacy, as “the quantity of information that the technology can potentially disclose is also a critical component in assessing its proper constitutional treatment.”⁸⁶

While *Kyllo* makes a somewhat convincing push toward the sense-augmenting or extrasensory dichotomy, this distinction is not fully explicative of the current law.⁸⁷ Thus, Fourth Amendment jurisprudence has also been viewed more simply as relying on an “inside/outside” distinction.⁸⁸ Essentially, anything that is “outside” is subject to surveillance by the government, and is not a search, but anything “inside” is more heavily scrutinized, and often ends up a

85. *Id.* at 432–38.

86. *Id.* at 438. For an argument that *Kyllo*’s bright line rules will indeed be fleeting, see Maclin, *supra* note 81, at 107–16.

87. For example, in *United States v. Place*, the court found that a canine sniff was not a search, even though this extends human senses beyond their capabilities. 462 U.S. 696, 707 (1983). However, the court labeled dog sniffs as “*sui generis*,” and the “search” was extremely narrow because only illegal contraband was revealed, so the holding in this case is somewhat cabined. *Id.* (“We are aware of no other investigative procedure that is so limited both in the manner in which the information is obtained and in the content of the information revealed by the procedure.”); see also CLANCY, *supra* note 33, at 308. Despite the *sui generis* label, Justice Brennan, joined by Justice Marshall, was still not comfortable with the implication of the holding in *Place*, stating that

the use of electronic detection techniques that enhance human perception implicates “especially sensitive concerns.” Obviously, a narcotics detection dog is not an electronic detection device. Unlike the electronic “beeper” in *Knotts*, however, a dog does more than merely allow the police to do more efficiently what they could do using only their own senses. A dog adds a new and previously unobtainable dimension to human perception. The use of dogs, therefore, represents a greater intrusion into an individual’s privacy. Such use implicates concerns that are at least as sensitive as those implicated by the use of certain electronic detection devices.

Place, 462 U.S. at 719–20 (Brennan, J., concurring) (internal citation omitted). This decision was upheld, post-*Kyllo*. See *Illinois v. Caballes*, 543 U.S. 405 (2005). The Court distinguished the *Caballes* case from *Kyllo* by noting that the thermal-imaging device in *Kyllo* also exposed lawful activity, which is fundamentally different than hoping or expecting that illegal contraband will not be discovered. *Id.* at 409–10.

88. Orin S. Kerr, *Applying the Fourth Amendment to the Internet: A General Approach*, 62 STAN. L. REV. 1005, 1009–12 (2010) [hereinafter Kerr, *Applying the Fourth Amendment*].

search. Stated a slightly different way, anything observable with the naked eye (or in plain view) does not garner Fourth Amendment protection.⁸⁹ This approach somewhat adeptly explains the Supreme Court's holdings in other Fourth Amendment cases: in *Kyllo*, the technology revealed something in a house, so it was a search; in *Karo*, the beeper went into a house, so it was a search; in *Knotts*, the beeper never invaded a private space, so it was not a search. The Court has ruled along the same lines in other Fourth Amendment cases as well. For example, the Court has held that aerial observation is not a search because the public flying over the same spot could have seen the same;⁹⁰ analyzing garbage left on the street is not a search because it is in plain view;⁹¹ but manipulation of a bag, above and beyond simple observation, is a search.⁹²

The cases and approaches above provide the framework within which the GPS tracking question must be addressed, but the holes are obvious. The GPS issue prods the unresolved Fourth Amendment issue about how new technology interacts within the existing framework, and has pushed the somewhat amorphous precedent to the point of near inflexibility. At one extreme is *Knotts*, providing that anything a person does in public in an automobile is subject to no protection; at the other is *Kyllo*, suggesting that advanced technology may trigger Fourth Amendment protection because of its extrasensory characteristics. However, it is unclear if *Kyllo*'s holding can be extended outside the home.⁹³

89. See Christopher Slobogin, *Peeping Techno-Toms and the Fourth Amendment: Seeing Through Kyllo's Rules Governing Technological Surveillance*, 86 MINN. L. REV. 1393, 1410 (2002); see also *Minnesota v. Dickerson*, 508 U.S. 366, 375 (1993) (“[I]f contraband is left in open view and is observed by a police officer from a lawful vantage point, there has been no invasion of a legitimate expectation of privacy and thus no ‘search’ within the meaning of the Fourth Amendment.”). The Respondent’s brief in *United States v. Jones* attempts to chip away at this notion, with respect to GPS. Brief for Respondent at 11, 29, *United States v. Jones*, 131 S. Ct. 3064 (2011) (No. 10-1259). The Respondent noted that “the government’s GPS device generated and stored a unique form and quality of data that was not exposed to the naked eye,” *id.* at 11, and that the “location and velocity calculations [that GPS provides] are materially different from what the human eye observes.” *id.* at 29.

90. See *Florida v. Riley*, 488 U.S. 445, 450–52 (1989); *Dow Chem. Co. v. United States*, 476 U.S. 227, 238–39 (1986); *California v. Ciraolo*, 476 U.S. 207, 215 (1986).

91. *California v. Greenwood*, 486 U.S. 35, 40 (1988).

92. *Bond v. United States*, 529 U.S. 334, 338–39 (2000).

93. *United States v. Knotts*, 460 U.S. 276, 281 (1983); *Kyllo*, 533 U.S. at 35–36.

III. STATE AND FEDERAL APPELLATE LAW ON THE USE OF GPS TRACKING TECHNOLOGY, PRE-MAYNARD

A. Survey of State Law Influence on GPS Tracking

Preliminarily, it should be noted that nine states have enacted statutes to address warrantless GPS tracking.⁹⁴ At least ten other states have faced the issue judicially, and they are almost evenly split over whether a warrant is required to use GPS tracking as an investigative tool.⁹⁵ Because of the lack of guidance at the federal level with respect to this issue,⁹⁶ these cases have often turned on factual nuances and state constitutional interpretation, instead of judicial precedent. Additionally, because state courts are free to interpret their own constitutions more broadly than the baseline protections that the United States Constitution provides, state court decisions are only informative to the extent that they provide judicial perspective on potential federal

94. See CAL. PENAL CODE § 637.7 (West 2010); DEL. CODE ANN. tit. 11, § 1335 (2010); FLA. STAT. ANN. §§ 934.06, 934.42 (West 2010); HAW. REV. STAT. §§ 803-42, 803-44.7 (West 2010); MINN. STAT. §§ 626A.37, 626A.35 (2010); OKLA. STAT. tit. 13, §§ 176.6, 177.6 (2010); 18 PA. CONS. STAT. § 5761 (2010); S.C. CODE ANN. § 17-30-140 (2010); UTAH CODE ANN. §§ 77-23a-4, 77-23a-7, 77-23a-15.5 (West 2010). The Delaware statute does contain an exception for “lawful use of an electronic tracking device by a law enforcement officer.” DEL. CODE ANN. tit. 11, § 1335(a)(8). “Lawful use” is extremely ambiguous; however, one court in Delaware has interpreted that statement to require a warrant. See *State v. Holden*, No. 1002012520, 2010 WL 5140744, at *8 (Del. Super. Ct. Dec. 14, 2010).

95. Four states courts have found warrantless GPS tracking impermissible: *Commonwealth v. Connolly*, 913 N.E.2d 356, 370 (Mass. 2009); *People v. Weaver*, 909 N.E.2d 1195, 1203 (N.Y. 2009); *State v. Campbell*, 759 P.2d 1040, 1049 (Or. 1988); *State v. Jackson*, 76 P.3d 217, 224 (Wash. 2003). Five found it permissible: *Stone v. State*, 941 A.2d 1238, 1250–51 (Md. Ct. Spec. App. 2008); *Osburn v. State*, 44 P.3d 523, 526 (Nev. 2002); *State v. Johnson*, 944 N.E.2d 270, 279 (Ohio Ct. App. 2010), *appeal docketed*, 943 N.E.2d 572 (Ohio 2011); *Foltz v. Commonwealth*, 698 S.E.2d 281, 292–93 (Va. Ct. App. 2010); *State v. Sveum*, 769 N.W.2d 53 (Wis. Ct. App. 2009). The issue of GPS tracking as a search is currently before the Ohio Supreme Court, which must grapple with the split among the Ohio appellate courts. Compare *State v. Johnson*, 944 N.E.2d at 279 (“[P]lacing a GPS device on a vehicle to track the vehicles whereabouts does not constitute a search or seizure according to the Fourth Amendment and Ohio’s Constitution”), with *State v. Jefferson*, 8th Dist. No. 95950, 2011-Ohio-4637 at ¶ 21 (Ohio App. Ct. Sep. 15, 2011) (holding that if defendant’s counsel had filed a motion to suppress GPS evidence, “there is a strong likelihood such motion would have been granted,” based on *Maynard*), and *State v. White*, 5th Dist. No. 2010-CA-60, 2011-Ohio-4526 at ¶ 29 (Ohio App. Ct. Sep. 1, 2011) (“We respectfully disagree with our brethren in the Twelfth Appellate District. We find . . . a warrant was required before placing the GPS tracking unit on the suspect vehicle and to continuously monitor the tracking signal.”).

96. See *People v. Weaver*, 909 N.E.2d 1195, 1202 (N.Y. 2009) (noting “the unsettled state of federal law” on the issue of GPS monitoring).

law.⁹⁷ This Note will focus on the three state court decisions that are most germane and potentially influential to the larger federal question.⁹⁸

In *State v. Jackson*, the most prominent of the state cases and, arguably, the genesis of the argument against GPS tracking, the state court held that tracking via GPS is a search and seizure under the Washington Constitution and thus requires a warrant.⁹⁹ The defendant in the case was convicted of first-degree murder after authorities used GPS tracking to locate the remote site where he had dumped his daughter's body.¹⁰⁰ Pursuant to a warrant, the GPS tracking devices had been attached to the defendant's two automobiles (without his knowledge) while the automobiles were lawfully impounded; the GPS devices were used to track the defendant's location for ten days.¹⁰¹ The court decided the case based only on an interpretation of Washington state law, and made almost no mention of Fourth Amendment jurisprudence; however, the court's interpretation was generally in line with Fourth Amendment case law.¹⁰²

The court stated that something observed from a "lawful vantage point" merely through use of the senses is not a search.¹⁰³ But, the court went on to say that "a substantial and unreasonable departure from a lawful vantage point, or a particularly intrusive method of viewing, may constitute a search."¹⁰⁴ This precedent is consistent with the *Kyllo* quasi-formulaic approach to extrasensory devices.¹⁰⁵ With respect to GPS tracking, the court questioned the state appellate court's determination

97. See Jallad, *supra* note 69, at 364–65 (explaining that state court decisions have "analyses [that] travel outside of the Fourth Amendment, [and thus] their authoritative guidance is limited since state courts are free to afford broader protections under their own constitutions").

98. For a discussion of other state cases addressing GPS monitoring, see Adam Koppel, Note, *Warranting a Warrant: Fourth Amendment Concerns Raised by Law Enforcement's Warrantless Use of GPS and Cellular Phone Tracking*, 64 U. MIAMI L. REV. 1061 (2010).

99. *Jackson*, 76 P.3d at 224.

100. *Id.* at 221.

101. *Id.* at 220–21.

102. See Koppel, *supra* note 98, at 1074 ("Though the *Jackson* court did not rely upon the Supreme Court's Fourth Amendment case law, its focus on the potential intrusiveness of the technology was entirely consistent with the directive of the *Katz* line of cases.").

103. *Jackson*, 76 P.3d at 222; see also *Minnesota v. Dickerson*, 508 U.S. 366, 375 (1993).

104. *Jackson*, 76 P.3d at 222 (quoting *State v. Young*, 867 P.2d 593, 598 (Wash. 1994)) (emphasis added).

105. See Hutchins, *supra* note 35, at 437 (describing the quasi-formulaic approach in *Kyllo*).

that GPS devices were merely sense augmenting; the court noted, instead, that use of GPS does not equate to following someone on public roads, but rather “provides a technological substitute for traditional visual tracking.”¹⁰⁶ Thus, the court determined that GPS was essentially extrasensory because the surveillance it afforded could not have been accomplished without interruption by law enforcement.¹⁰⁷

The court also focused on the potential intrusiveness that GPS tracking would inevitably lead to.¹⁰⁸ Similar to the later interpretation by *Maynard*, the court noted that GPS could provide a detailed record of a person’s life, just based on where he or she went.¹⁰⁹ The court further stated that “[i]n this age, vehicles are used to take people to a vast number of places that can reveal preferences, alignments, associations, personal ails and foibles,” all of which can paint a highly detailed portrait of an individual.¹¹⁰ Additionally, the court noted the common fear that this technology would be used to track individuals regardless of suspected criminal activity.¹¹¹ Thus, the court held that people “have a right to be free from the type of governmental intrusion that occurs when a GPS device is attached to a citizen’s vehicle, regardless of reduced privacy expectations due to advances in technology.”¹¹²

The New York Court of Appeals in *People v. Weaver* found, similar to *Jackson*, that use of GPS tracking was a violation of an individual’s reasonable expectation of privacy.¹¹³ In *Weaver*, the tracking was done

106. *Jackson*, 76 P.3d at 223.

107. *Id.*; see also Hutchins, *supra* note 35, at 449 (noting that the *Jackson* court “[i]mplicitly referenc[ed] the two categories of technology identified to date by the Supreme Court—extrasensory and sense augmenting—. . . [and] concluded that GPS surveillance should most fairly be treated as the former, and not the latter”); Otterberg, *supra* note 81, at 681 (stating that the *Jackson* court found that GPS serves as “a total substitute for visual tracking and therefore was distinguishable from other sense-augmenting devices like binoculars” (citing *Jackson*, 76 P.3d at 223–24)).

108. *Jackson*, 76 P.3d at 223 (“[T]he intrusion into private affairs made possible with a GPS device is quite extensive . . .”).

109. *Id.*; *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *reh’g denied en banc sub nom. United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. denied*, 131 S. Ct. 671 (2010), *cert. granted sub nom. United States v. Jones*, 131 S. Ct. 3064 (2011), and *aff’d on other grounds*, 132 S. Ct. 945 (2012).

110. *Jackson*, 76 P.3d at 223.

111. *Id.* at 224.

112. *Id.*

113. *People v. Weaver*, 909 N.E.2d 1195, 1203 (N.Y. 2009).

for sixty-five days, a far more substantial time than the twenty-plus days in *Jackson*.¹¹⁴ Unlike the *Jackson* court, however, the *Weaver* court did rely on federal Fourth Amendment jurisprudence, in addition to state law protections.¹¹⁵ The court outlined the precedent in *Katz* and, more specifically, *Knotts*, but was quick to explain that *Knotts* was not completely analogous to the case before it because one could not deny “more than a quarter of a century later,” that a beeper is “a very primitive tracking device” compared to GPS.¹¹⁶ The court also noted that *Knotts* involved the single trip of a container of chloroform, as opposed to the GPS monitoring in the case at hand, which monitored *all* trips within a 65-day period.¹¹⁷ Moreover, the court related that the “dagnet-style” monitoring that the *Knotts* court had reserved judgment on had finally arrived, and that “GPS technology, even in its present state of evolution, quite simply and matter-of-factly forces the issue.”¹¹⁸ Additionally, the court addressed the *Kyllo* extrasensory versus sense-augmenting dichotomy,¹¹⁹ stating that “GPS is not a mere enhancement of human sensory capacity, it facilitates a new technological perception of the world in which the situation of any object may be followed and exhaustively recorded over, in most cases, a practically unlimited period.”¹²⁰

Addressing the reasonable expectation of privacy that people have in their day-to-day movements in their automobiles, the court was unwilling to cede that there had been “any dramatic diminution in the socially reasonable expectation that our communications and transactions will remain to a large extent private.”¹²¹ The court acknowledged that there were in fact diminished expectations, but not to the point that “we effectively consent to the unsupervised disclosure to law enforcement authorities of all that GPS technology can and will reveal.”¹²² Thus, the court was unwilling to find that a person’s

114. *Id.* at 1195; *Jackson*, 76 P.3d at 220–21.

115. *Weaver*, 909 N.E.2d at 1197 (citing *Olmstead v. United States*, 277 U.S. 438, 478–79 (1928)).

116. *Id.* at 1198–99.

117. *Id.* at 1199.

118. *Id.* at 1200.

119. *See supra* notes 35–37 and accompanying text.

120. *Weaver*, 909 N.E.2d at 1199.

121. *Id.* at 1200.

122. *Id.*

reasonable expectation of privacy has been so diminished by technology that surreptitious use of GPS tracking devices raised no constitutional issue at all.¹²³ Similar to the *Jackson* court, the court in *Weaver* stressed that the amount of information that GPS could provide about an individual (especially over the course of sixty-five days) would be of “brehtaking quality and quantity” and, inferentially, would be a large invasion of privacy.¹²⁴ In conclusion, the court held that use of GPS to track an individual was a search under the Fourth Amendment.¹²⁵ The court did offer one caveat, noting that technological advances can serve to help law enforcement, but it indicated that “[w]ithout judicial oversight, the use of these powerful devices presents a significant and, to our minds, unacceptable risk of abuse.”¹²⁶

Not all state courts, however, have found GPS tracking impermissible.¹²⁷ In *Foltz v. Commonwealth*, for example, the court held that GPS tracking of a sexual offender in his company van for ten days was not a violation of the Fourth Amendment.¹²⁸ As in *Weaver*, the court addressed the *Kyllo* dichotomy, articulating that use of GPS was merely sense-augmenting, and enabled the police to “technologically supplement . . . information which the police could have obtained by their own sensory perception.”¹²⁹ Thus, the court saw the facts as merely a *Knotts* analogue, albeit using more advanced technology, and therefore asserted that GPS monitoring fell within the existing Fourth Amendment framework.¹³⁰ The court also noted in a footnote that the case could be distinguished from *Maynard* because *Maynard* involved more than a month of monitoring, whereas in *Foltz* it was merely ten

123. *Id.*

124. *Id.* at 1199–200.

125. *Id.* at 1202.

126. *Id.* at 1203.

127. *Foltz v. Commonwealth*, 698 S.E.2d 281 (Va. Ct. App. 2010); *see also Osburn v. State*, 44 P.3d 523, 526 (Nev. 2002) (“[T]he attachment of the electronic tracking device to the bumper of [the defendant’s] vehicle did not constitute an unreasonable search or seizure under the Nevada Constitution.”); *State v. Sveum*, 769 N.W.2d 53, 60 (Wis. Ct. App. 2009) (“[N]o Fourth Amendment search or seizure occurs when police attach a GPS device to the outside of a vehicle while it is in a place accessible to the public and then use that device to track the vehicle while it is in public view.”).

128. *Foltz*, 698 S.E.2d at 292.

129. *Id.* at 291.

130. *Id.* (“We find that this advancement in tracking technology provides an insufficient basis for distinguishing *Knotts*.”).

days.¹³¹ The court more convincingly distinguished this case from *Maynard* by explaining that the cases differed fundamentally in the amount and type of monitoring done: In *Maynard*, authorities monitored the defendant's personal vehicle over the course of a month, which would show all of the places he had been; in *Foltz*, the defendant was only being monitored while on the job, since the GPS device was affixed to his work van.¹³² This more limited use of monitoring (in terms of time and of scope) appears to have convinced the court that the defendant's reasonable expectation of privacy had not been violated.¹³³ This distinction from *Maynard* is arguably significant because one's actions at work are fundamentally more "public" (depending on the job); consequently, if one is subject to employer supervision, invasion by law enforcement could be construed as less offensive.

It remains clear that without federal guidance, state court decisions will continue to be disparate and unsettled; without a constitutional floor, an individual's movements in an automobile will be protected only to the extent that states are willing to find that people have a reasonable expectation of privacy in those movements by using Fourth Amendment analogues within state constitutions.

B. The First Federal Appellate Interpretations—Garcia and Marquez

The first elaborate analysis of GPS tracking relating to Fourth Amendment searches occurred in *United States v. Garcia*, an opinion authored by Judge Posner of the Seventh Circuit.¹³⁴ In *Garcia*, the defendant challenged the use of a GPS tracker that was placed on his automobile without a warrant and eventually revealed his travels to a large tract of land used to manufacture methamphetamines.¹³⁵ Judge Posner began by stating that using GPS was functionally equivalent to using cameras or satellite imaging, and that if those methods of

131. *Id.* at 291 n.12. For a discussion of the *Maynard* court's holding and rationale, see *infra* Part IV.

132. *Foltz*, 698 S.E.2d at 291 n.12; see also *infra* Part IV.

133. *Foltz*, 698 S.E.2d at 291 n.12; see also *infra* Part IV.

134. *United States v. Garcia*, 474 F.3d 994 (7th Cir. 2007), *cert. denied*, 552 U.S. 883 (2007). However, *Garcia* was not the first federal court of appeals case to address GPS monitoring. See *United States v. McIver*, 186 F.3d 1119 (9th Cir. 1999).

135. *Garcia*, 474 F.3d at 995; see also Ryan J. Foley, *Police Use GPS to Track Suspects Despite Murky Law*, ASSOCIATED PRESS, May 25, 2009, available at http://www.pantagraph.com/news/article_74ee4137-bf8c-56ea-925f-89e26eb4e4a8.html.

surveillance are not a search under the Fourth Amendment, neither is the use of GPS.¹³⁶ But, he conceded that this could not be the end of the argument because “the meaning of a Fourth Amendment search must change to keep pace with the march of science.”¹³⁷ Judge Posner then postulated that GPS tracking devices could be used in a more widespread “wholesale surveillance” application by the government, and that it would be “premature to rule that such a program of mass surveillance could not possibly raise a question under the Fourth Amendment.”¹³⁸ He noted the need for the police to continue to be efficient in the twenty-first century by using more advanced devices and that doing so involves the traditional “tradeoff between security and privacy.”¹³⁹ In conclusion, he stated, pragmatically, Chief Justice Warren’s warning in *Lopez v. United States* that “the fantastic advances in the field of electronic communication constitute a great danger to the privacy of the individual” and that the court has a responsibility to supervise the “indiscriminate use of such devices.”¹⁴⁰ The court ultimately held that use of GPS tracking was no more offensive to Fourth Amendment rights than the use of cameras or satellite imagery.¹⁴¹ Notably, Judge Posner’s continual forward thinking

136. *Garcia*, 474 F.3d at 997.

137. *Id.*

138. *Id.* at 998.

139. *Id.*

140. *Id.* (quoting *Lopez v. United States*, 373 U.S. 427, 441 (1963)).

141. *Id.* at 997. This holding was upheld in *United States v. Cuevas-Perez*, 640 F.3d 272 (7th Cir. 2011). However, reminiscent of Judge Kozinski’s dissent in *Pineda-Moreno*, Justice Diane Wood also wrote a forceful dissent, stating, *inter alia*, that

To conclude that open-ended, real-time GPS surveillance is not a ‘search’ invites an unprecedented level of government intrusion into every person’s private life. The government could, without any metric of suspicion, monitor the whereabouts of any person without constitutional constraint. Under the majority’s view, such surveillance is tolerable. And because the Fourth Amendment protects individual rights, it is not clear why the use of GPS technology for mass surveillance would trigger the warrant requirement if the suspicionless surveillance of an individual does not. Thus, not only is the indefinite GPS surveillance of a single person permissible; the government could also keep tabs on entire communities, perhaps with the hope of identifying hints of criminal conduct. Under the majority’s framework, GPS tracking of all cars in a high-crime area is as unremarkable as an officer on the beat posing a polite question to a local resident. All of this can occur solely at the whim of a governmental actor, and there would be no requirement to demonstrate any suspicion of wrongdoing to a neutral magistrate.

provided a warning that “[s]hould government someday decide to institute programs of mass surveillance of vehicular movements, it will be time enough to decide whether the Fourth Amendment should be interpreted to treat such surveillance as a search.”¹⁴² While Judge Posner’s belief that that time has not arrived is debatable, his decision is unequivocally qualified by “draw[ing] a line between technological ‘capability’ and ‘reality.’”¹⁴³

At least one commentator has attempted to distinguish *Garcia* from other state and federal cases because law enforcement in *Garcia* used a memory-tracking unit that did not provide real-time information about the defendant’s whereabouts but had to be downloaded at a later time.¹⁴⁴ While it is unclear whether this distinction in what type of GPS technology was used colored Judge Posner’s opinion, it is irrelevant if it did so¹⁴⁵ because the intrusiveness of GPS tracking is not related, per se, to when the information is reviewed, but instead is related to the *amount* and *type* of information that the GPS tracking reveals.¹⁴⁶

The Eighth Circuit addressed a similar case in *United States v. Marquez*, holding that the defendant lacked standing to challenge GPS tracking on an automobile he was in, but that even if he had standing,

Cuevas-Perez, 640 F.3d at 294 (Wood, J., dissenting) (internal citation omitted).

142. *Garcia*, 474 F.3d at 998.

143. See Jallad, *supra* note 69, at 372–73.

144. See Koppel, *supra* note 98, at 1078–79. The Seventh Circuit recently rejected this argument in *United States v. Cuevas-Perez*, holding that the court was not persuaded “that real-time revelation of location (although additional to the information provided in *Garcia*) necessarily serves the impermissible ends of the extensive GPS surveillance at issue in *Maynard*.” 640 F.3d 272, 275 (7th Cir. 2011). At least one state court has also found this distinction unpersuasive. See *State v. Brereton*, 2011 WI App 127, ¶ 15, 337 Wis. 2d 145, 804 N.W.2d 243 (“[W]e see no reason to find that the police overstepped their bounds simply because they were able to monitor the movements in real time rather than needing to continually return to the car, remove the device, and download its information to a computer.”).

145. To make Fourth Amendment jurisprudence turn on this distinction would be a move in the wrong direction. Judge Bell in *United States v. Walker* forecloses this GPS technology distinction in a notable way: “That the officers here chose to use a specifically engineered GPS tracking device rather than merely duct-taping an iPhone to Defendant’s bumper is of little moment. The technology in this case is in general use” 771 F. Supp. 2d 803, 811 (W.D. Mich. 2011).

146. See Hutchins, *supra* note 35, at 457 (“[A]pplication of the general rules governing qualitative categories of technology are moderated by consideration of the quantity or specificity of information revealed. In other words, as with other forms of enhanced surveillance, after GPS-enabled technology is qualitatively classified, the question of constitutional protection turns on the quantity of information revealed by the surveillance.”).

the GPS tracking was nevertheless permissible.¹⁴⁷ In *Marquez*, the facts insinuate that a GPS tracker was used over the course of many months to track the defendant's whereabouts to gather evidence about a drug ring.¹⁴⁸ The defendant was a passenger in the automobile that was tracked, but he neither owned nor drove the automobile.¹⁴⁹ The court addressed the GPS tracking in dicta; it noted the precedent provided by *Knotts* and elucidated that “when police have reasonable suspicion . . . [that a particular vehicle is or will be used in the commission of a crime] . . . a warrant is not required when, while the vehicle is parked in a public place, they install a non-invasive GPS tracking device on it for a reasonable period of time.”¹⁵⁰ The court did not provide, however, any reasoning as to what constitutes a reasonable amount of time.¹⁵¹

Like the court in *Garcia*, the court in *Marquez* indicated that the “wholesale surveillance” scenario from *Garcia* would similarly change the way the court interpreted a case with facts of that nature and the court might not find such surveillance permissible; however, the court concluded that the surveillance before it was not of that type, and thus such postulating had no bearing on the holding.¹⁵² The court did suggest that GPS tracking was merely sense-augmenting, stating that “[t]he device merely allowed the police to reduce the cost of lawful surveillance.”¹⁵³ In some respects, *Marquez* widened the scope of *Garcia* because, in *Marquez*, the surveillance occurred over a long period of time, and the court was willing to adopt the *Knotts* holding that anything that occurs in public in an automobile is without a subjective expectation of privacy.¹⁵⁴ However, because the court in *Marquez* found the defendant had no standing, and the relevant portions are in dicta, it is only minimally informative.¹⁵⁵

C. GPS Tracking in the Forefront—The Ninth Circuit’s Interpretation in

147. *United States v. Marquez*, 605 F.3d 604, 609 (8th Cir. 2010).

148. *Id.* at 607. It is unclear exactly how long the GPS tracker was in place based on the decision; however, it was placed in May and removed in October, *id.*, so the assumption is more than a few months.

149. *Id.* at 609.

150. *Id.* at 610.

151. *Id.*

152. *Id.*

153. *Id.*

154. *Id.* at 609–10.

155. *Id.* at 609.

Pineda-Moreno

The most publicized case involving GPS tracking is *United States v. Pineda-Moreno*.¹⁵⁶ In *Pineda-Moreno*, the defendant moved to suppress evidence obtained from GPS tracking, arguing that the evidence obtained violated his Fourth Amendment rights.¹⁵⁷ The defendant was suspected of being part of a drug ring and was monitored with “various types of mobile tracking devices” over the course of a four-month period.¹⁵⁸ The defendant asserted, *inter alia*, that use of the tracking devices to continuously monitor him subverted *Kyllo*’s holding that usage of sense-enhancing devices is a search unless the device is in public use.¹⁵⁹ There is no indication that the defendant asserted a more general reasonable expectation of privacy claim against the four-month tracking of his movements.¹⁶⁰ Instead, the defendant’s main contention was that *Knotts* should therefore not control because the Supreme Court had “heavily modified the Fourth Amendment analysis applicable to such technological devices in *Kyllo*.”¹⁶¹ However, the court found this contention misguided, relating that a “search” does not occur every time officers use “sense-enhancing technology not available to the general public.”¹⁶² Moreover, the court stated that the use of GPS in this case was equivalent to following an automobile on a public street, something that is “unequivocally not a search within the meaning of the [Fourth A]mendment.”¹⁶³ After dismissing the defendant’s claim under *Kyllo*, the court then neatly fit the situation within *Knotts*, stating that

156. *United States v. Pineda-Moreno*, 591 F.3d 1212 (9th Cir. 2010), *reh’g en banc denied*, 617 F.3d 1120 (9th Cir. 2010), *petition for cert. filed*, No. 10-7515 (U.S. Nov. 10, 2010).

157. *Id.* at 1214.

158. *Id.* at 1213.

159. *Id.* at 1216. His contention, as noted by the court, misstates *Kyllo*’s precedent. *Id.* *Pineda-Moreno* also asserted that his reasonable expectation of privacy was violated by installation of the device in public areas *and* in his curtilage (in this case, his driveway). *Id.* at 1214–15. The court’s holding that an officer may enter the curtilage to install such a device caused a large amount of contention nationally, as well. *Id.* at 1215; *see also* Matt Buchanan, *Our Worst Nightmares About the Government Tracking Us Just Came True*, GIZMODO (Aug. 26, 2010), <http://gizmodo.com/5622800/our-worst-nightmares-about-the-government-tracking-us-just-came-true> (discussing the court of appeals’ decision upholding the lower court; the appellate decision was more highly publicized).

160. *Pineda-Moreno*, 591 F.3d at 1212.

161. *Id.* at 1216.

162. *Id.* The court refers to GPS as sense-enhancing; however, it is arguably extra-sensory.

163. *Id.* (quoting *United States v. Garcia*, 474 F.3d 994, 997 (7th Cir. 2007)).

“[i]nsofar as [Pineda-Moreno’s] complaint appears to be simply that scientific devices such as [tracking devices] enabled the police to be more effective in detecting crime, it simply has no constitutional foundation. We have never equated police efficiency with unconstitutionality, and we decline to do so now.”¹⁶⁴

Thus, the *Pineda-Moreno* court was able to dismiss any argument of an invasion of privacy by leveraging *Knotts*’ assertion of no privacy in public automotive movements, and impliedly using *Kyllo*’s quasi-formulaic distinction between sense-augmenting and extrasensory devices.¹⁶⁵ The court’s explanation, in essence, stated that “[t]echnology did not . . . alter what was already in the public domain,” a holding not unlike the holding in *Knotts*.¹⁶⁶

After the decision was handed down, the defendant appealed for a rehearing en banc, which was denied.¹⁶⁷ Chief Judge Kozinski (joined by others) wrote a stirring dissent to this denial, which touched on many of the issues that the original decision ignored.¹⁶⁸ Judge Kozinski discussed, *inter alia*, the overlooked issue regarding the constant monitoring of a person’s movements over an elongated course of time.¹⁶⁹ Judge Kozinski ascribed to the notion also mentioned in *Weaver* that “[t]he electronic tracking devices used by the police in this case have little in common with the primitive devices in *Knotts*.”¹⁷⁰ Like the court in *Weaver*, Judge Kozinski also asserted that *Knotts* could be distinguished from the present case because tracking one container of chloroform with a beeper is not equivalent to using “GPS satellites to pinpoint the car’s location on a continuing basis,” without the need for an officer’s intervention

164. *Pineda-Moreno*, 591 F.3d at 1216 (alteration in original) (quoting *United States v. Knotts*, 460 U.S. 276, 284 (1983)). Other courts have discounted or found irrelevant the difference in technology between a beeper and GPS. *See, e.g.*, *United States v. Narri*, 789 F. Supp. 2d 645, 652 (D.S.C. 2011) (“*Knotts* was not limited to any particular technology . . .”).

165. *United States v. Knotts*, 460 U.S. 276, 281 (1983); *see supra* text accompanying note 36.

166. *See Jallad, supra* note 69, at 370.

167. *United States v. Pineda-Moreno*, 617 F.3d 1120, 1121 (9th Cir. 2010), *petition for cert. filed*, No. 10-7515 (U.S. Nov. 10, 2010).

168. *Id.* at 1121–26 (Kozinski, C.J., dissenting).

169. *Id.* at 1123–24.

170. *Id.* at 1124; *see also* *People v. Weaver*, 909 N.E.2d 1195, 1199 (N.Y. 2009) (“*Knotts* involved the use of what we must now, more than a quarter of a century later, recognize to have been a very primitive tracking device.”).

(except to download or monitor the information).¹⁷¹ Judge Kozinski further argued that GPS tracking, along with other new technologies, is not sense-augmenting, but extrasensory because of the sophisticated information that it can provide.¹⁷² Insinuating an Orwellian society, Judge Kozinski asserted that “[b]y holding that this kind of surveillance doesn’t impair an individual’s reasonable expectation of privacy, the panel hands the government the power to track the movements of every one of us, every day of our lives.”¹⁷³ While that statement is arguably melodramatic, it in essence states what *Weaver* and *Jackson* attempted to imply.¹⁷⁴

Finally, after reviewing other technologies that are “advance ripples to a tidal wave of technological assaults on our privacy,” Judge Kozinski returned to the inferential leap one must make from *Knotts* to *Pineda-Moreno*;¹⁷⁵ namely, that what *Knotts* held—that one has no reasonable expectation of privacy in her public travels, because visual surveillance (or enhanced versions of it) could see you—is a far cry from the inability to “hid[e] from the all-seeing network of GPS satellites that hover overhead, which never sleep, never blink, never get confused and never lose attention.”¹⁷⁶ He also forwarded the less convincing argument that a guilty person would not know to disguise his or her movements because “they’ll have no reason to suspect that Big Brother is watching them.”¹⁷⁷ In closing, Judge Kozinski asserted that society has reached the time that *Knotts* foretold—where dragnet-style surveillance is possible—and that “[t]his is precisely the wrong time for a court covering one-fifth of the country’s population to say that the Fourth Amendment has no role to play in mediating the voracious appetites of

171. *Pineda-Moreno*, 617 F.3d at 1124; *Weaver*, 909 N.E.2d at 1199.

172. *Pineda-Moreno*, 617 F.3d at 1124 (“The modern devices used in [the defendant’s] case can record the car’s movements without human intervention.”).

173. *Id.*

174. Both *Weaver* and *Jackson* lamented the large amount of potentially intimate information that could be obtained about an individual, for an extended duration—there is not a large inferential step from there to constant government monitoring. *Weaver*, 909 N.E.2d at 1199; *State v. Jackson*, 76 P.3d 217, 223 (Wash. 2003); *see also* Hutchins, *supra* note 35, at 459 (noting that if GPS tracking isn’t a search, “the government will be entitled to check whether we spend our lunch hour at the gym, at the temple, or at the strip club”).

175. *Pineda-Moreno*, 617 F.3d at 1125.

176. *Id.* at 1125–26.

177. *Id.* at 1126.

law enforcement.”¹⁷⁸ In the wake of Judge Kozinski’s stirring dissent was a growing awareness of the implications of GPS tracking within the public.¹⁷⁹ If the reasonable expectation of privacy is a function of societal expectations, then arguments here and in *Maynard* will certainly affect the public opinion when the Supreme Court decides this issue.¹⁸⁰

IV. A FUNDAMENTALLY DIFFERENT FEDERAL INTERPRETATION— *UNITED STATES V. MAYNARD*

Handed down six days prior to the Ninth Circuit’s denial of rehearing en banc in *Pineda-Moreno*, the *Maynard* decision furthered a novel approach to Fourth Amendment jurisprudence by injecting “mosaic theory,” a theory typically reserved for Freedom of Information Act (FOIA) and national security cases, to counter what some argue is constantly eroding privacy due to technological innovation.¹⁸¹ The opinion by Judge Ginsburg flew in the face of *Pineda-Moreno*, and reignited the ongoing privacy debate with regard to GPS.¹⁸²

In *Maynard*, the defendant Jones’s Jeep was outfitted with a GPS device that was installed without a warrant and his movements were

178. *Id.*

179. See Cohen, *supra* note 12; Editorial, *Supreme Court, Congress Need New Rules for GPS Searches*, BOS. GLOBE, Sept. 2, 2010, http://www.boston.com/bostonglobe/editorial_opinion/editorials/articles/2010/09/02/supreme_court_congress_need_new_rules_for_gps_searches; Whitehead, *supra* note 12.

180. See generally *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *reh’g denied en banc sub nom. United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. denied*, 131 S. Ct. 671 (2010), *cert. granted sub nom. United States v. Jones*, 131 S. Ct. 3064 (2011), *and aff’d on other grounds*, 132 S. Ct. 945 (2012); Shaun B. Spencer, *Reasonable Expectations and the Erosion of Privacy*, 39 SAN DIEGO L. REV. 843 (2002).

181. *Maynard*, 615 F.3d at 562. See generally Recent Case, *United States v. Maynard*, 615 F.3d 544 (D.C. Cir.), *reh’g en banc denied*, No. 08-0304, 2010 WL 4703743 (D.C. Cir. Nov. 19, 2010), *cert. denied*, No. 10-7102, 2010 WL 4156203 (U.S. Nov. 29, 2010), 124 HARV. L. REV. 827 (2011); Editorial, *An Illegal Search, by GPS*, NY TIMES, Oct. 5, 2010, at A30; Orin Kerr, *D.C. Circuit Introduces “Mosaic Theory” of Fourth Amendment, Holds GPS Monitoring a Fourth Amendment Search*, THE VOLOKH CONSPIRACY (Aug. 6, 2010), <http://volokh.com/2010/08/06/d-c-circuit-introduces-mosaic-theory-of-fourth-amendment-holds-gps-monitoring-a-fourth-amendment-search/> [hereinafter Kerr, *D.C. Circuit*] (noting that *Maynard* is unpersuasive because “it ignores and misrepresents a wide range of Fourth Amendment cases and principles”); Julian Sanchez, *GPS Tracking and a Mosaic Theory of Government Searches*, CATO @ LIBERTY (Aug. 11, 2010), <http://www.cato-at-liberty.org/gps-tracking-and-a-mosaic-theory-of-government-searches/>.

182. See Kerr, *D.C. Circuit*, *supra* note 181.

tracked twenty-four hours a day for four weeks.¹⁸³ Jones argued that evidence gained from the GPS tracking was improperly admitted because the tracking constituted an unreasonable search under the Fourth Amendment.¹⁸⁴ The government, consistent with its position in previous cases, contended that this case fell squarely within the *Knotts* holding, and thus the defendant's Fourth Amendment argument could be dismissed because Jones's movements were on public thoroughfares where no reasonable expectation of privacy exists.¹⁸⁵ The court rejected the government's contention, pointing to the Supreme Court's decision to reserve judgment on the "dragnet" question in *Knotts*, and relaying that in *Knotts*, the Court *did not* hold that a person "has no reasonable expectation of privacy in his movements whatsoever, world without end, as the Government would have it."¹⁸⁶ The court then used this distinction—that some reasonable expectation of privacy is carved out even when traveling in public in an automobile—to distinguish this case from *Garcia* and *Pineda-Moreno*.¹⁸⁷ The distinguishing element here, the court explained, was that Jones actually argued that prolonged monitoring was a search falling outside of *Knotts*; this granular distinction is fundamentally important because the defendants in *Garcia* and *Pineda-Moreno* conceded that *Knotts* was controlling, essentially foreclosing the "dragnet" argument, allowing the *Garcia* and *Pineda-Moreno* courts to continue to leave for another day "whether 'wholesale' or 'mass' electronic surveillance . . . requires a warrant."¹⁸⁸ Moreover, the court reinforced that *Knotts* did not apply to the facts before it, because law enforcement tracked Jones's "movements 24 hours a day for 28 days as he moved among scores of places, thereby discovering the totality and pattern of his movements from place to

183. *Maynard*, 615 F.3d at 555.

184. *Id.*

185. *Id.* at 556; *see also* *United States v. Marquez*, 605 F.3d 604 (8th Cir. 2010); *United States v. Garcia*, 474 F.3d 994 (7th Cir. 2007). Subsequent to *Maynard*, many courts have found that GPS monitoring still falls under *Knotts*. *See, e.g.*, *United States v. Sparks*, 750 F. Supp. 2d 384, 392 (D. Mass. 2010) (holding that use of GPS to catch bank robbers within the same day fell within *Knotts* and the *Maynard* "synergism" was unconvincing). However, *Sparks* is likely distinguishable from *Maynard* in that the monitoring in *Sparks* occurred over one single day, whereas the defendant in *Maynard* was tracked for a month. *Id.*; *Maynard*, 615 F.3d at 555.

186. *Maynard*, 615 F.3d at 557.

187. *Id.* at 557–58.

188. *Id.*

place to place.”¹⁸⁹

However, resolution of whether *Knotts* applied was not the end of the case—the defendant still needed to prove that he had a reasonable expectation of privacy, and that “depends in large part upon whether that expectation relates to information that has been ‘expose[d] to the public.’”¹⁹⁰ This inquiry focuses on both actual exposure and constructive exposure.¹⁹¹

Addressing actual exposure, the court stated that when considering whether something is actually exposed to the public, one must ask “not what another person can physically and may lawfully do but rather what a reasonable person expects another might *actually* do.”¹⁹² The court then rejected the argument that all of Jones’s travels were actually exposed to the public because it would be highly unlikely that a stranger would observe all of another’s movements over the course of a month.¹⁹³ The court explained that

[i]t is one thing for a passerby to observe or even to follow someone during a single journey as he goes to the market or returns home from work. It is another thing entirely for that stranger to pick up the scent again the next day and the day after that, week in and week out, dogging his prey until he has

189. *Id.* at 558. However, post-*Maynard*, at least one court has found that tracking for an even longer time than twenty-eight days still does not constitute dragnet-type surveillance, and that *Knotts* still applies. See *United States v. Walker*, 771 F. Supp. 2d 803, 811, 817 n.2 (W.D. Mich. 2011).

190. *Maynard*, 615 F.3d at 558 (quoting *Katz v. United States*, 389 U.S. 347, 351 (1967)).

191. *Id.* at 558.

192. *Id.* at 559 (emphasis added).

193. *Id.* at 560 (“[W]e hold the whole of a person’s movements over the course of a month is not actually exposed to the public because the likelihood a stranger would observe all of those movements is not just remote, it is essentially nil.”). The *Maynard* court’s probabilistic approach to the Fourth Amendment, here, derives from one of the many ways that the Supreme Court has approached Fourth Amendment jurisprudence. See Kerr, *Four Models*, *supra* note 57, at 508–12 (“Under the probabilistic approach, a person has a reasonable expectation of privacy when the odds are very high that others will not successfully pry into his affairs.”). This probabilistic argument is taken even further in Jones’s brief to the Supreme Court, even reinvoking property rights along with it. See Brief for Respondent at 11, 28–29, *supra* note 89. The respondents argued that Jones did have a reasonable expectation of privacy because, while GPS tracking devices are available to the public, it would be unlawful for another person to attach it to Jones’s car, and thus Jones would not reasonably expect it to happen—i.e., not probable. *Id.* at 20. The *Jones* Court adopted this property rights approach. *United States v. Jones*, 132 S. Ct. 945 (2012).

identified all the places, people, amusements, and chores that make up that person's hitherto private routine.¹⁹⁴

Moving on to constructive exposure, the court addressed the veiled and more technical issue of whether all of Jones's movements were "constructively exposed because each of his individual movements during that time was itself in public view."¹⁹⁵ Therefore, even though no one might have actually seen all that he did, the mere fact that everything was public would have been sufficient to defeat his reasonable expectation of privacy. The government did not raise this issue, but the court explained that it was important to address it. To do so, the court borrowed from national security and FOIA cases and analyzed the use from a data aggregation standpoint or "mosaic theory."¹⁹⁶ One commentator has described mosaic theory as the notion that

[d]isparate items of information, though individually of limited or no utility to their possessor, can take on added significance when combined with other items of information. Combining the items illuminates their interrelationships and breeds analytic synergies, so that the resulting mosaic of information is worth more than the sum of its parts.¹⁹⁷

Mosaic theory or "compilation" has also been defined more succinctly in national security applications as "the concept that apparently harmless pieces of information when assembled together could reveal a damaging picture."¹⁹⁸ Applying this concept to a Fourth Amendment reasonable expectation of privacy case was wholly novel.¹⁹⁹

194. *Maynard*, 615 F.3d at 560.

195. *Id.* at 560–61.

196. *Id.* at 561–62.

197. David E. Pozen, Note, *The Mosaic Theory, National Security, and the Freedom of Information Act*, 115 YALE L.J. 628, 630 (2005).

198. *Id.* (quoting 32 C.F.R. § 701.31 (2005)). For a larger discussion of mosaic theory as it relates to FOIA and national security, see Pozen, *supra* note 197.

199. See Kerr, *D.C. Circuit*, *supra* note 181 ("Maynard introduces a novel theory of the Fourth Amendment: That whether government conduct is a search is measured not by whether a particular individual act is a search, but rather whether an entire course of conduct, viewed collectively, amounts to a search."). This approach has not been without its criticisms. See generally *id.*; *United States v. Jones*, 625 F.3d 766, 767 (D.C. Cir. 2010) (Sentelle, C.J.,

In its analysis, the *Maynard* court first looked to *United States Department of Justice v. National Reporters Committee*, a FOIA case in which a CBS correspondent and others had requested the FBI rap sheet of a member of the Medico crime family; the reporter had requested under FOIA those parts of the rap sheet that were of public record.²⁰⁰ Justice Stevens, writing for the majority, said that although the information in the rap sheet had previously been disclosed to the public, a person's privacy interest in that information *did not* "approach zero," and thus, the Supreme Court rejected the "respondents' cramped notion of personal privacy."²⁰¹ The Supreme Court went further and noted the distinction between "scattered disclosure of the bits of information contained in a rap sheet and revelation of the rap sheet as a whole."²⁰² The Supreme Court went on to hold that disclosure would implicate Fourth Amendment concerns and "could reasonably be expected to constitute an unwarranted invasion of personal privacy."²⁰³

Building upon the distinction between the whole and the sum of its parts, the *Maynard* court then drew precedent from *Smith v. Maryland*, a Fourth Amendment case having to do with pen registers.²⁰⁴ The *Maynard* court found it telling that if

the privacy interest in a whole could be no greater (or no different) than the privacy interest in its constituent parts, then the Supreme Court would have had no reason to consider at length whether . . . a reasonable expectation of privacy [exists] in the list of numbers [one calls].²⁰⁵

dissenting) (stating that the panel's decision was "inconsistent not only with every other federal circuit which has considered the case, but more importantly, with controlling Supreme Court precedent set forth in *United States v. Knotts*" (internal citation omitted)), *denying cert. to United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *cert. denied sub nom. United States v. Maynard*, 131 S. Ct. 671 (2010), and *cert. granted*, *United States v. Jones*, 131 S. Ct. 3064 (2011), *aff'd on other grounds*, 132 S. Ct. 945 (2012).

200. *United States Dep't of Justice v. Reporters Comm. for Freedom of the Press*, 489 U.S. 749, 757 (1989).

201. *Id.* at 762–63.

202. *Id.* at 764.

203. *Id.* at 770–71.

204. *Maynard*, 615 F.3d at 561; *Smith v. Maryland*, 442 U.S. 735 (1979). A pen register is a device used to record the numbers a person dials from their phone. *Smith*, 442 U.S. at 737.

205. *Maynard*, 615 F.3d at 561.

The court more specifically pointed to Justice Stewart's dissent in *Smith*, where he stated that a reasonable expectation of privacy should exist in the list of calls one makes because "such a list . . . could reveal the identities of the persons and places called, and thus reveal the most intimate details of a person's life."²⁰⁶ Explicit within this reference to the intimate details of one's life is Jones's argument to the court that GPS data essentially reveals the same thing when aggregated. Justice Marshall, dissenting in *Smith* as well, went further in his criticism of the call list, referring to it as an "extensive [intrusion]," that can "significantly jeopardize [individuals'] sense of security" and stating that such methods thus require "more than self-restraint by law enforcement officials."²⁰⁷ While not mentioned by the *Maynard* court, Justice Marshall's call for restraint when dealing with extensive privacy intrusions resonates similarly today with GPS use.

Upon this foundation that the Fourth Amendment implicates a distinction between the whole and the sum of its parts, the court described the whole of Jones's movements over the course of a month as not constructively exposed because, "like a rap sheet, that whole reveals far more than the individual movements it comprises."²⁰⁸ And appealing to a true "mosaic theory" case from a national security perspective, the court stated that "[w]hat may seem trivial to the uninformed, may appear of great moment to one who has a broad view of the scene."²⁰⁹ This statement encapsulates the notion that "even though an individual knows some attention from others is likely [in public], the level of scrutiny the person expects and risks merely by being in public is not the kind of highly individualized, targeted scrutiny imparted by law enforcement."²¹⁰ Moreover, as the *Jackson* and *Weaver* courts did, the

206. *Smith*, 442 U.S. at 748 (Stewart, J., dissenting).

207. *Id.* at 751 (Marshall, J., dissenting) (quoting *United States v. White*, 401 U.S. 745, 786 (1970) (Harlan, J., dissenting)).

208. *Maynard*, 615 F.3d at 562.

209. *Id.* (quoting *CIA v. Sims*, 471 U.S. 159, 178 (1985)). *Sims* was a case concerning intelligence sources and focused on the assemblage of data from disparate sources giving rise to national security concerns. *Sims*, 471 U.S. at 178 ("[T]he very nature of the intelligence apparatus of any country is to try and find out the concerns of others; bits and pieces of data may aid in piecing together bits of other information even when the individual piece is not of obvious importance in itself." (internal citation omitted)).

210. Otterberg, *supra* note 81, at 686; *see also* *Bond v. United States*, 529 U.S. 334, 338–39 (2000) (holding that manipulation of a bus passenger's carry-on bag, above simple observation, is a search).

court then elaborated on just how much information could be revealed by tracking an individual's movements over the course of a month.²¹¹ Finally, to bolster its constructive exposure analysis, the court pointed to common law privacy tort violations where prolonged surveillance had been found actionable and to state court GPS tracking cases where such practices have been found to reveal an intimate portrait of one's life, violating a person's reasonable expectation of privacy.²¹²

Closing out the *Maynard* court's decision was an analysis of the second part of the *Katz* test—whether Jones's expectation of privacy was an expectation society is prepared to recognize as reasonable—and one that has “‘a source outside the Fourth Amendment,’ such as ‘understandings that are recognized or permitted by society.’”²¹³ To begin, the court restated that not everything that one does in public has no constitutional protection, but that one continues to have a “zone” of privacy outside of the home.²¹⁴ The court then noted that there can be no question that prolonged GPS tracking is something society is prepared to recognize as a violation of an individual's reasonable expectation of privacy because this type of intrusion “stands in stark contrast to the relatively brief intrusion at issue in *Knotts*; indeed it exceeds the intrusions occasioned by every police practice the Supreme Court has deemed a search under *Katz*.”²¹⁵ The court then pointed to “nationwide ‘societal understandings’” of GPS monitoring's privacy implications by looking at state law restrictions on the use of GPS tracking and state court holdings that GPS tracking is a violation of the Fourth Amendment (or state constitutions).²¹⁶ Finally, and in lieu of creating precedent even more in conflict with other federal circuits, the court distinguished prolonged visual surveillance from its holding, stating that “just as the Supreme Court in *Knotts* reserved the lawfulness of prolonged beeper surveillance, we reserve the lawfulness of

211. See *supra* note 174 and accompanying text.

212. *Maynard*, 615 F.3d at 562–63.

213. *Id.* at 563 (quoting *United States v. Jacobsen*, 466 U.S. 109, 123 n.22 (1984)); see also *Hutchins*, *supra* note 35, at 428 (“A personal desire for privacy, no matter how earnestly held, does not trigger Fourth Amendment protection unless the desire is one that society is prepared to embrace as reasonable.”).

214. *Maynard*, 615 F.3d at 563.

215. *Id.*

216. *Id.* at 564.

prolonged visual surveillance.”²¹⁷

V. WHY THE *MAYNARD* COURT IS MOVING IN THE RIGHT DIRECTION

A. *The Need for Change*

The Supreme Court has stated that “[t]he judiciary risks error by elaborating too fully on the Fourth Amendment implications of emerging technology before its role in society has become clear.”²¹⁸ However, it is hard to argue that GPS’s role within society is muddled at this point considering its use within the military, the citizenry, and by law enforcement.²¹⁹ GPS is now installed in nearly all new cellphones and is a feature available in automobiles with OnStar.²²⁰ There has also been a substantial upward trend in its use as a stand-alone device for travel assistance.²²¹ Its widespread use cannot be understated, and this prevalence has been noted by many of the courts that have been faced with GPS tracking Fourth Amendment questions.²²² More alarmingly,

217. *Id.* at 566. The reservation of the visual surveillance issue was one focal point when the case went up for rehearing. *United States v. Jones*, 625 F.3d 766, 769 (D.C. Cir. 2010) (Sentelle, C.J., dissenting) (noting that the court’s aggregation approach provides no distinction “between the supposed invasion by aggregation of data [by] GPS-augmented surveillance and . . . purely visual surveillance of substantial length”), *cert. granted*, *United States v. Jones*, 131 S. Ct. 3064 (2011), *aff’d on other grounds*, 132 S. Ct. 945 (2012).

218. *City of Ontario, Cal. v. Quon*, 130 S. Ct. 2619, 2629 (2010).

219. *See* Buchok, *supra* note 27, at 1019–26. GPS is also the legislated method of choice for tracking sex offenders, for life, in a multitude of states, including California. *See, e.g.*, Sarah Shekhter, Note, *Every Step You Take, They’ll Be Watching You: The Legal and Practical Implications of Lifetime GPS Monitoring of Sex Offenders*, 38 HASTINGS CONST. L.Q. 1085, 1085–92 (2011).

220. OnStar itself has become embroiled in a privacy-related GPS tracking issue. *See* Kashmir Hill, *GM’s Boneheaded Privacy Mistake with OnStar*, FORBES (Sept. 26, 2011), <http://www.forbes.com/sites/kashmirhill/2011/09/26/gms-boneheaded-privacy-mistake-with-onstar/> (reporting that OnStar indicated in a new privacy agreement that they would continue to track cars with the system installed, even after the owners had cancelled OnStar). Senator Chuck Shumer called for an FTC investigation to the practice, saying “[b]y tracking drivers even after they’ve cancelled their service, OnStar is attempting one of the most brazen invasions of privacy in recent memory.” Sen. Charles Schumer, *Schumer Calls on OnStar to Immediately Stop Tracking Former Customers and Refrain From Selling Drivers’ Data; Calls on FTC to Investigate*, SENATE.GOV (Sept. 26, 2011), <http://schumer.senate.gov/Newsroom/record.cfm?id=334193>.

221. *See* Buchok, *supra* note 27, at 1026. For a dystopian perspective on the pervasiveness of GPS technology (and how the government could potentially use it), see *United States v. Pineda-Moreno*, 617 F.3d 1120, 1125 (2010) (Kozinski, C.J., dissenting), *petition for cert. filed*, No. 10-7515 (U.S. Nov. 10, 2010).

222. *Pineda-Moreno*, 617 F.3d at 1126; *United States v. Marquez*, 605 F.3d 604, 610 (8th

GPS's use within law enforcement appears to be growing.²²³ The risk we continually run by letting *Knotts* stand as nearly the only defining precedent governing GPS is that we are equating an antiquated technology (the beeper) with something massively more sophisticated and capable of gathering a larger amount of data.²²⁴ Thus, to reserve an opinion on GPS much longer is to “transform[] from mere assertion to self-fulfilling prophecy the government’s contention that people categorically lack any reasonable expectation of privacy” when it comes to not only GPS, but also other emerging and maybe not yet as prevalent technologies.²²⁵ While the *Maynard* decision has been criticized for using *Knotts* “as an escape hatch” to craft an entire new way to approach the GPS tracking problem,²²⁶ that escape was necessary to reinterpret Fourth Amendment jurisprudence in a manner that adequately addresses emerging technology.

Maynard succeeds in addressing technology by viewing privacy not wholly within the constrained notions of the Fourth Amendment but

Cir. 2010) (noting, as observed in *Garcia*, that with respect to GPS, “the cost of the technology is decreasing while the ability of police to monitor and install such devices is increasing”); *United States v. Sparks*, 750 F. Supp. 2d 384, 392 (D. Mass. 2010) (“[W]ith the proliferation of private GPS use . . . it is unconvincing to argue that society is completely unaware of the power of these devices.”); *People v. Weaver*, 909 N.E.2d 1195, 1200 (N.Y. 2009) (“GPS [is] becoming an increasingly routine feature in cars and cell phones.”).

223. See Appellee’s Petition for Rehearing En Banc, *supra* note 8, at 2 n.1 (“GPS tracking is an important law-enforcement tool. Investigative agents of the United States Department of Justice employ this method of surveillance with great frequency.”). The government has also made clear that they believe they are not abusing GPS technology. Brief for the United States at 14–15, *United States v. Jones*, 131 S. Ct. 3064 (2011) (No 10-1259).

224. See *State v. White*, 5th Dist. No. 2010-CA-60, 2011-Ohio-4526, at ¶ 49 (Ohio Ct. App. Sept. 1, 2011) (“The argument that [GPS devices] only augment[] that which can admittedly be done by visual surveillance is feckless.”); see also *Hutchins*, *supra* note 35, at 453–54; *Otterberg*, *supra* note 81, at 694–95. Ironically, the Fifth Circuit distinguished *Maynard* in a recent case involving GPS tracking in part by arguing that despite the tracking occurring over a cross-country trip, the GPS tracker that was used was apparently less sophisticated, and thus equated the GPS device with the beeper in *Knotts*. *United States v. Hernandez*, 647 F.3d 216, 220–21 (5th Cir. 2011).

225. *In re App. of U.S. for Order Authorizing the Release of Historical Cell-Site Info.*, 736 F. Supp. 2d 578, 595 (E.D.N.Y. 2010); see also *Spencer*, *supra* note 180, at 912–13 (“The privacy battle is to be won or lost not by theoretical argument about the nature of privacy, but by concrete action . . .”).

226. Kerr, *D.C. Circuit*, *supra* note 181 (“The [*Maynard*] opinion seems to use that ‘dragnet’ section from *Knotts* as an escape hatch: And once it’s free, nothing from *Knotts* is relevant anymore.”). See generally *United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. granted*, *United States v. Jones*, 131 S. Ct. 3064 (2011), *aff’d on other grounds*, 132 S. Ct. 945 (2012).

also allowing conceptions of privacy within other bodies of law to be instructive.²²⁷ The invocation of “mosaic theory” is no more novel than the concept that law enforcement cannot merely go on a fishing expedition, looking for evidence while impinging on privacy rights.²²⁸ And the hard question left unanswered by the Ninth and Seventh Circuit interpretations is how long is too long before GPS tracking becomes offensive even to those courts? *Maynard* has also been criticized as leaving too amorphous a precedent, leaving the reasonableness determination of GPS tracking (and of other technologies) and how it all fits into the “mosaic” up to the judiciary.²²⁹ But this argument is untenable because it requires that we should forsake progress in lieu of judicial certainty, which is almost never attainable.²³⁰ Additionally, the issue with “solving” the GPS tracking problem by merely adopting the precedent established in *Garcia* and

227. See Lior Jacob Strahilevitz, *Reunifying Privacy Law*, 98 CALIF. L. REV. 2007, 2038 (2010) (“The *Maynard* opinion’s embrace of a coherent body of information privacy law was more complete than anything written since Warren and Brandeis’s time.”). Strahilevitz goes on to say that

Maynard . . . does not take the position that reasonable expectations of privacy in tort law, FOIA, and other non-Fourth Amendment contexts are the same as those arising under the Fourth Amendment. It only takes the position that such precedents are instructive, and can be used to get a handle on the Fourth Amendment issues presented by relatively novel technologies.

Id. at 2041.

228. See Wilkins, *supra* note 34, at 1129 (“Thus, [F]ourth [A]mendment protection does not depend solely upon a finding of a particular intrusion into a defined place to obtain specified information. Rather, as *Katz* itself held, a ‘search’ occurs when government probing for information intrudes upon fundamental concepts of personal intimacy and privacy.”).

229. See Kerr, *D.C. Circuit*, *supra* note 181. The workability of *Maynard* was one of the key issues recently before the Court in *United States v. Jones*. Compare Brief for the United States, *supra* note 223 (using the word “unworkable” four times in its brief), with Brief for Respondent at 45, *supra* note 89 (arguing that *Maynard* is workable, but even if it is not, “the answer is not to unleash unchecked government GPS monitoring and recording. The answer is to hold that any GPS monitoring is a search.”). However, in its decision the Court did not analyze the workability of the *Maynard* rule. 132 S. Ct. 945 (2012). Justice Sotomayor concurred and Justice Alito concurred in the judgment with three Justices joining. *Id.* at 954 (Sotomayor, J., concurring); *id.* at 957 (Alito, J., concurring in the judgment). Justice Alito, while adopting the principles underpinning *Maynard*, only obliquely confronted the workability of the *Maynard* rule. *Id.* at 962–64 (Alito, J., concurring in the judgment). Justice Sotomayor did not confront *Maynard*’s workability. *Id.* at 955 (Sotomayor, J., concurring).

230. See generally Kerr, *Four Models*, *supra* note 57 (positing why the Supreme Court cannot—or should not—develop a definition of or test for “reasonable expectation of privacy”).

Pineda-Moreno is that we still have not moved forward.²³¹ Both decisions continue to adhere blindly to *Knotts*, holding fast to the blanket assertion that anything that is done in public is not subject to a reasonable expectation of privacy.²³² And, both *Karo* and *Kyllo* provide limited insight into this problem because they too continue to facilitate this “inside/out distinction,” where what one does inside is entitled to constitutional protection, but all else gives rise to no reasonable expectation of privacy.²³³

As we continue to grapple with this distinction in constitutional coverage arising out of physical space, we will undoubtedly revisit the issue anew as a functionally equivalent problem erupts in cyberspace.²³⁴ Moreover, as technology moves forward, we will trade pen registers,²³⁵ flashlights,²³⁶ and phone taps²³⁷ for online surveillance, Radio Frequency Identification tags, and technologies that will abolish the physical inside/out distinction altogether.²³⁸ And finally, data aggregation and prolonged surveillance issues will rise in prevalence as sophisticated technology for doing such aggregation and analysis continues to advance. It is inescapable that the framers could not have contemplated the type of technology that the Fourth Amendment must now grapple

231. *United States v. Pineda-Moreno*, 591 F.3d 1212 (9th Cir. 2010), *reh'g en banc denied*, 617 F.3d 1120 (9th Cir. 2010), *petition for cert. filed*, No. 10-7515 (U.S. Nov. 10, 2010); *United States v. Garcia*, 474 F.3d 994 (7th Cir. 2007).

232. *United States v. Knotts*, 460 U.S. 276, 281 (1983). Judge Flaum of the Seventh Circuit has held to this position as well, but noted that “[i]f the doctrine needs clarifying, tweaking, or an overhaul in light of technologies employed by law enforcement,” that should be done by the Supreme Court and is “above our pay grade.” *United States v. Cuevas-Perez*, 640 F.3d 272, 276 (7th Cir. 2011) (Flaum, J., concurring).

233. *Kyllo v. United States*, 533 U.S. 27 (2001); *United States v. Karo*, 486 U.S. 705 (1984). Kerr asserts that “[t]he distinction between government surveillance outside and government surveillance inside is probably the foundational distinction in Fourth Amendment law.” Kerr, *Applying the Fourth Amendment*, *supra* note 88, at 1010; *see also* Kerr, *D.C. Circuit*, *supra* note 181.

234. *See generally* Kerr, *Applying the Fourth Amendment*, *supra* note 88.

235. *See Smith v. Maryland*, 442 U.S. 735 (1979).

236. *See Texas v. Brown*, 460 U.S. 730, 739–40 (1983) (holding that use of a flashlight to look at a darkened area was not a search under the Fourth Amendment).

237. *See Katz v. United States*, 389 U.S. 347 (1967).

238. One concern regarding technology’s movement and privacy is that the Supreme Court’s pace is not progressing equally. *See* Kerr, *New Technologies*, *supra* note 30, at 868–69. *But see* Solove, *supra* note 30, at 768–73 (noting that the judiciary, not the legislature, is better suited to keep up with technological advances).

with,²³⁹ nor could one argue that the *Knotts* Court possessed the foresight to portend where we (and technology) would be in 2012.²⁴⁰

B. A Framework to “Futur-ize” the Reasonable Expectation of Privacy and How Maynard Fits

So where do we go from here? First, and concededly, the judiciary cannot and should not react to every changing aspect in the landscape of technology. When confronted with these problems after they have properly matured, as is the case with GPS surveillance, courts must in some way fashion their decision normatively.²⁴¹ Societal expectations of privacy are driven by not only the social atmosphere and practices with regard to a technology but also how the judiciary speaks on that issue.²⁴² Commentators and the general populace continue to lament the erosion of privacy as technology marches forward.²⁴³ These notions cannot merely be informative, but must drive the way in which the judiciary crafts remedies to this erosion.

The *Maynard* court squarely addressed the normative issue by attempting to divine “nationwide ‘societal understandings’” through analysis of statutory regulation of GPS in the states as well as “the considered judgments of every court to which the issue has been

239. See Hutchins, *supra* note 35, at 430 (noting new technology is not something the Framers could have envisioned); see also SLOBOGIN, *supra* note 22, at 205 (arguing that “Supreme Court case law construing the Fourth Amendment, broadly read, allows government agents to . . . continuously track our public movements with cameras and beepers . . . at their discretion. It is inconceivable that the drafters of the Constitution meant government to have such uncabined power. If that is the import of its decisions, the Supreme Court has done this country a vast disservice.”).

240. For example, *Knotts* was decided in 1983. *United States v. Knotts*, 460 U.S. 276 (1983). GPS technology was not made available to the public at large until 1996, by order of President Bill Clinton. Presidential Decision Directive NSTC-6 (March 28, 1996); see also *United States v. Cuevas-Perez*, 640 F.3d 272, 290 (7th Cir. 2011) (Wood, J., dissenting) (noting that the GPS device used in that case is “a device whose capabilities are so far beyond anything the Court saw in *Knotts* that we have difference in kind, not just a difference in degree”).

241. See Solove, *supra* note 17, at 1142 (“Without a normative component, a conception of privacy can only provide a status report on existing privacy norms rather than guide us toward shaping privacy law and policy in the future.”). See generally Spencer, *supra* note 180 (examining how the predominate framework of privacy law promotes the disintegration of privacy).

242. Spencer, *supra* note 180, at 850–51.

243. *Id.* at 873–78.

squarely presented.”²⁴⁴ While these two sources are not fully representative of societal norms, they do at least embody *some* inclination of how representative government has legislated on the issue, and how state courts have wrestled with the problem.²⁴⁵ Additionally, it is hard to argue that privacy norms are not shifting, based on the recent proposal of federal legislation to protect against unwarranted GPS tracking,²⁴⁶ the unrelated-but-germane public outcry that occurred when people realized that their cell phone operating system was keeping a record of everywhere they went via GPS (a concept more innocuous than “Big Brother” doing so),²⁴⁷ and the bipartisan efforts to offer guidance and solutions to the problem.²⁴⁸

244. *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *reh’g denied en banc sub nom. United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. denied*, 131 S. Ct. 671 (2010), *cert. granted sub nom. United States v. Jones*, 131 S. Ct. 3064 (2011), and *aff’d on other grounds*, 132 S. Ct. 945 (2012).

245. However, some have argued that state court conception and societal views have been foreclosed as influences on the Supreme Court’s Fourth Amendment jurisprudence. *See* Kerr, *D.C. Circuit, supra* note 181 (noting that the *Maynard* court’s “reliance on state laws for its view that the expectation of privacy is reasonable seems plainly foreclosed by *Virginia v. Moore* and *California v. Greenwood*”).

246. *See supra* notes 29–30 and accompanying text.

247. Apple and Google were discovered to be tracking user locations and transmitting that information back to the companies, igniting public concern over personal privacy. *See* Byron Acohido, *Lawmakers Request Probe of Tracking by Apple and Google*, USA TODAY, Apr. 24, 2011, http://www.usatoday.com/money/usaedition/2011-04-25-iPhone-Tracking_ST_U.htm. Officials from both companies were brought in front of Congress to testify about the tracking. Jim Puzzanghera, *Apple, Google Officials Testify*, L.A. TIMES, May 11, 2011, at B1. Senator Leahy’s statements from that panel are indicative of the growing public concern:

Like many Americans, I am deeply concerned about the recent reports that the Apple iPhone, Google Android Phone and other mobile applications may be collecting, storing, and tracking user location data without the user’s consent. . . .

They have good reason to be concerned. The collection, use and storage of location and other sensitive personal information has serious implications regarding the privacy rights and personal safety of American consumers.

Protecting Mobile Privacy: Your Smartphones, Tablets, Cell Phones and Your Privacy Before the S. Sub. Comm. on Privacy, Technology and the Law, 112th Cong. (2011) (statement of Sen. Patrick Leahy).

248. A bi-partisan group of legal experts and former law enforcement officers has agreed with *Maynard’s* interpretation in principle, and called for limits on how police can use GPS. *See* CONST. PROJECT LIBERTY & SEC. COMM., *supra* note 20, at 3–7. The report states that “[a] warrant based on probable cause should be required before law enforcement may seek GPS or other electronic location tracking information for a period extending beyond 24 hours.” *Id.* at 5–6; Emily Babay, *Report Urges Limits on Police Use of GPS Tracking*, WASH. EXAMINER (Sept. 22, 2011), <http://washingtonexaminer.com/local/crime-punishment/2011/09>

Second, a judicial conception of the reasonable expectation of privacy must adequately address the amount of information that can potentially be gathered about a person through various forms of technology—with some limiting function that articulates a reasonable duration of time over which data collection can occur.²⁴⁹ It is generally conceded that GPS can function to gather an inordinate amount of intimate information and for a significant duration.²⁵⁰ Thus, as commentator Renee Hutchins has noted, “the extensive database of information collectable through the use of GPS-enabled surveillance justifies affording some constitutional limitation on police use of the technology.”²⁵¹ And addressing time duration, Hutchins has argued that “it is entirely consistent with existing precedent to understand the level of proof required from one who challenges covert tracking as bearing an inverse relationship to the length of time such surveillance is conducted.”²⁵²

The *Maynard* court’s “mosaic theory” was successful in addressing the amount of information that GPS could potentially reap and, to some extent, the duration issue.²⁵³ The court recognized that prolonged surveillance could paint an “intimate picture of the subject’s life that he expects no one to have—short perhaps of his spouse.”²⁵⁴ By invoking a conception of the whole being distinct from the sum of its parts, the

/report-urges-limits-police-use-gps-tracking.

249. See Kerr, *D.C. Circuit*, *supra* note 181. Kerr offered his skeptical take of implementing *Maynard*’s precedent:

Much of the problem is knowing when the line is crossed when a bunch of non-searches become a search. The Supreme Court has stressed the need for clear rules that tell the police what they can and cannot do. But how do the police know when a mosaic has been created such that the sum of law enforcement techniques, when aggregated, amount to a search? Are they supposed to carry around a D.H. Ginsburg Aggregatormeter that tells them when it’s time to get a warrant? Take the case of *Maynard*. One-month of surveillance is too long, the court says. But how about 2 weeks? 1 week? 1 day? 1 hour? I have no idea.

Id.

250. See *supra* text accompanying note 174; *United States v. Maynard*, 615 F.3d 544, 562 (D.C. Cir. 2010), *reh’g denied en banc sub nom. United States v. Jones*, 625 F.3d 766 (D.C. Cir. 2010), *cert. denied*, 131 S. Ct. 671 (2010), *cert. granted sub nom. United States v. Jones*, 131 S. Ct. 3064 (2011), and *aff’d on other grounds*, 132 S. Ct. 945 (2012).

251. Hutchins, *supra* note 35, at 458.

252. *Id.* at 455; see also Otterberg, *supra* note 81, at 697–98.

253. *Maynard*, 615 F.3d at 562.

254. *Id.* at 563.

court was able to address both data aggregation as well as correlation.²⁵⁵ This “mosaic” formula divorces the qualitative component of evidence from its quantitative component, so that its impact can be measured in its component parts and method of acquisition.²⁵⁶ It facilitates the reasonable notion that one “do[es] not expect that for weeks or months at a time the various bits and pieces of [his or her] daily routine will be woven together in an unbroken stream” to divine likely relevant, but unquestionably intrusive, things about his or her life.²⁵⁷ What the “mosaic” does not do, admittedly, is denote a time-frame over which use of GPS transforms an acceptable law enforcement practice into a Fourth Amendment search. While this is a weakness of adopting “mosaic theory” to Fourth Amendment jurisprudence, it is no more amorphous than the *Katz* reasonable expectation of privacy test itself.²⁵⁸ And, arguably, what the *Maynard* court’s holding lacks in specificity, it makes up for two-fold in flexibility.

Third, the reasonable expectation of privacy standard must be pushed past the “inside/out” problem and become a forward-thinking approach to encapsulate all new technologies that might possibly emerge.²⁵⁹ As commentator Orin Kerr concedes, “the inside/outside distinction operates sensibly in a physical investigation governed by human eyesight.”²⁶⁰ Society has moved outside of these limited bounds with GPS because GPS can do what law enforcement practically cannot do—real-time, round-the-clock surveillance.²⁶¹ While *Katz* did provide a shift away from bright line boundaries between public and private, this shift has not been sufficient. GPS tracking, more than any technology widely used, “highlight[s] the need for the Fourth Amendment to offer

255. *Id.* at 561–62.

256. The government contends, however, that aggregation of a lot of information is often the goal in an investigation. Brief for Petitioner, *supra* note 223, at 32. The government also argues that “mosaic” theory “has the potential to destabilize Fourth Amendment law and to raise questions about a variety of common law-enforcement practices.” *Id.*

257. Hutchins, *supra* note 35, at 455.

258. *Katz*, along with the entire body of Fourth Amendment law, has been criticized for its lack of clarity. See *supra* text accompanying note 57.

259. See *supra* text accompanying note 233.

260. See Kerr, *Applying the Fourth Amendment*, *supra* note 88, at 1011.

261. See Otterberg, *supra* note 81, at 667–68 (“[GPS] can last for weeks at a time . . . [and] police could acquire constant, real-time, precise location information about that vehicle for much longer than they practically might be able to maintain round-the-clock visual surveillance.”).

protection even within the public space.”²⁶² One functional method of addressing the “inside/out” problem is to view the data collectively, not based on location, but on the information it reveals. Undoubtedly, the concern an individual has in privacy is equated less with where the data was gathered and more with what that data divulges. The *Maynard* court’s holding is most successful in addressing the “inside/out” problem that has dogged Fourth Amendment jurisprudence *ad nauseum*. The court’s holding does what *Kyllo* could not: it provides “essential guidance” to address situations in the future that have been foretold in a line of Supreme Court cases that have dealt with technology and the Fourth Amendment.²⁶³ The *Maynard* court’s holding does not falter when presented with a novel place from which to gain evidence, or a novel method for doing so. Its focal point is on the amount of information that is revealed about the subject through the component parts of evidence. It gives judicial authority to contemplate whether the evidence presented reveals information to a degree no one could have contemplated as a reasonable matter because of the scope, amount, and method used to gather it—if so, then the process by which it was obtained was a search under the Fourth Amendment.²⁶⁴ Moreover, it facilitates “a Fourth Amendment analysis better equipped to handle changes brought about by technology [that] focus[es] less on physical boundaries and more on whether allowing the law enforcement practice at issue would alter the degree of privacy experienced by society before the technology existed.”²⁶⁵

VI. CONCLUSION

While there may be other judicial solutions to GPS tracking,²⁶⁶ the

262. *Id.* at 694.

263. *See, e.g.,* *Kyllo v. United States*, 533 U.S. 27, 36 (2001) (“[T]he rule we adopt must take account of more sophisticated systems that are already in use or in development.”). Justice Stevens’ dissent in *Kyllo* called into question the holding’s “essential guidance.” *Id.* at 46 (Stevens, J., dissenting).

264. *See* Gershman, *supra* note 51, at 958 (asserting that with GPS monitoring “there can be a legally significant difference in terms of the degree, scope, and duration of an intrusion into privacy”).

265. *See* Otterberg, *supra* note 81, at 699.

266. The government does offer an alternative solution in its Brief for *United States v. Jones*, arguing that even if the use of GPS was a search or seizure, it could still be justified under the Supreme Court’s “general Fourth Amendment approach.” Brief for the United States, *supra* note 223, at 47–52 (quoting *Samson v. California*, 547 U.S. 843, 848 (2006)).

Maynard court's focus on the method and type of information to determine a violation of a reasonable expectation of privacy is a move in the right direction. A novel approach to Fourth Amendment jurisprudence is direly needed to confront the challenges that technology will continue to bring. Additionally, if the judiciary continues to bury its head in the metaphorical sand of *Knotts* while the complexity of systems that can be used to track an individual increases, society will be self-propagating the waves of advancement against an individual's zone of privacy. Soon, the bubble of autonomy that individuals cling to as a fundamental right will be washed away, the Fourth Amendment's historical meaning will be significantly diluted,²⁶⁷ and this inaction will unwittingly facilitate a normative shift in the conception of privacy that may not be undone.

JUSTIN P. WEBB*

This balancing approach entails weighing the degree of the intrusion (search or seizure) on an individual's privacy against the need for promoting a legitimate governmental interest. *United States v. Knights*, 534 U.S. 112, 118–19 (2001); *see also* CLANCY, *supra* note 33, at 489–507. However, the government's argument is flatly untenable because the majority of cases it is based on involve specialized situations not requiring a warrant because of their unique nature. *See Samson*, 547 U.S. at 850 (parolees have a diminished expectation of privacy); *United States v. Flores-Mantano*, 541 U.S. 149, 152–53 (2004) (noting that the expectation of privacy at the border is diminished, and “[t]he Government's interest in preventing the entry of unwanted persons and effects is at its zenith at the international border”); *Knights*, 534 U.S. at 119–20 (probationers have a diminished expectation of privacy); *New Jersey v. T.L.O.*, 469 U.S. 325, 348 (1985) (students have lesser expectation of privacy in school and warrant requirement would be unworkable). It is unclear if this argument will even be considered, since it was not used in the lower courts. Brief for Respondent, *supra* note 89, at 54–55.

267. The meaning of the Fourth Amendment has been described in various ways; however, Professor Taslitz's description of one of the Fourth Amendment's expressive functions is particularly applicable:

[T]he Fourth Amendment can be seen as serving yet a final expressive function: educating the People in the necessity for individualized justice based on . . . the need to restrain all three branches of government, as well as the People themselves, from exercising arbitrary power over others' lives, privacy, property, and locomotion. For the state to treat any person as less than a unique individual entitled to be free from governmental intrusions absent significant evidence of his wrongdoing violates the terms of the American social contract.

ANDREW E. TASLITZ, *RECONSTRUCTING THE FOURTH AMENDMENT: A HISTORY OF SEARCH AND SEIZURE, 1789–1869*, at 44 (2006).

* J.D. expected, 2013, Marquette University Law School; B.S., 2003, UCLA. I would like to thank my beautiful wife Sara, who has loved me (and the ghost of me while I wrote

this), unconditionally. I am forever blessed by the love and support of my parents and brother, as well, and I could not have crafted this without Professor Alison Julien's guidance. I dedicate this piece to friends lost, but not forgotten.