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THE EVOLVING FOURTH AMENDMENT: *UNITED STATES v. JONES*, THE INFORMATION CLOUD, AND THE RIGHT TO EXCLUDE

BER-AN PAN*

In George Orwell's *Nineteen Eighty-Four*, the citizens of the dystopian, totalitarian country of Oceania are subjected to a grim reality of constant government surveillance.[1] There, "Big Brother" and his thought police maintain power through a system of relentless monitoring and subjugation using tools such as the omnipresent two-way telescreen.[2] As an expression of fear and a weighty warning of pervasive government scrutiny, society in *Nineteen Eighty-Four* exists as a literary satire to which few modern cultures can compare.[3] In contrast, the technology necessary to fulfill Orwell's nightmare is far closer to fact than fiction.

Consider the modern smartphone: While its GPS function is an indispensable addition to countless road trips, this ubiquitous device harbors many of the same capabilities as *Nineteen Eighty-Four*'s dreaded telescreen. Although an everyday user might think he is being simply directed from one location to another, his buying habits, Internet searches, and text messages are just a few examples of what a service

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1. GEORGE ORWELL, NINETEEN EIGHTY-FOUR (1988).

2. *Id.*; *see also* James Hayes, *The Technology of 'Nineteen Eighty-Four'*, GEORGE ORWELL FESTIVAL, http://georgeorwellfestival.org/?page_id=282 (last visited Jan. 13, 2013) (exploring the history and theory behind the telescreens described in Orwell's novel).

3. The exception to this, if any, is North Korea. *See* Doug Bandow, *Systematic Tyranny: How the Kim Dynasty Holds the North Korean People in Bondage*, FORBES (Aug. 29, 2012, 8:58 AM), http://www.forbes.com/sites/dougbandow/2012/08/29/systematic-tyranny-how-the-kim-dynasty-holds-the-north-korean-people-in-bondage/ (using a report published by the Committee for Human Rights in North Korea to examine the way in which the regime maintains its totalitarian society).

provider receives in return for that phone's Internet connection.[4] Similarly, GPS-enabled devices pre-installed in some cars need not even be in use to relay detailed travel records that exist as intangible entries inside a vast electronic cloud of information.[5] Consequently, a body of privacy law dependent on physical boundaries is very much in danger of becoming as quaint a notion as the public telephone booth.

In *United States v. Jones*,[6] the Supreme Court of the United States concluded that police violated the Fourth Amendment[7] of the United States Constitution when they attached a GPS-enabled tracking device to the defendant's vehicle and used it to monitor the cars movements for twenty-eight days.[8] In finding that police violated Jones's right to privacy, Justice Scalia declared that the government's physical intrusion onto Jones's vehicle was a violation of the Fourth Amendment's intrinsic tie to property rights.[9]

Jones highlights two uniquely prescient concerns: (1) the impact of modern information-sharing technology on individual privacy,[10] and (2) what limits ought to be placed on law enforcement from using such technology unrestricted by physical boundaries.[11] This Comment will argue that the Court conveniently avoided addressing either of these concerns in *Jones* by applying the property-based approach developed in outdated cases.[12] In doing so, the Court not only exploited the loopholes in Fourth Amendment protection created by modern technology, but also perpetuated the legal uncertainties that

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4. *See Privacy in the Age of the Smartphone*, PRIVACYRIGHTS.ORG (Dec. 2012), https://www.privacyrights.org/fs/fs2b-cellprivacy.htm (providing a brief introduction to multiple types of information that are traded back and forth between users and service providers to educate consumers about privacy concerns when using smartphones and similar devices).

5. See Chris Woodyard & Jayne O'Donnell, *Your Car May be Invading Your Privacy*, USA TODAY (Mar. 25, 2013, 11:45 AM), http://www.usatoday.com/story/money/cars/2013/03/24/car-spying-edr-data-privacy/1991751/ (describing the dangers of personal information being collected from cars, often without the driver's knowledge).

6. 132 S. Ct. 945 (2011).

7. U.S. CONST. amend. IV.

8. *Jones*, 132 S. Ct. at 945.

9. *Id.* at 949.

10. *See infra* Part II.A.1.a.

11. *See infra* Part II.C.

12. *See infra* Part I.C.

frustrate individual citizens and law enforcement agents.[13] Instead, the Court should have recognized that the capabilities of modern technology go beyond physical limitations and adapted the Fourth Amendment to address this new intangible reality.[14]

Part I will conduct a particularized analysis of the Court's Fourth Amendment jurisprudence, focusing specifically on the evolution of a strictly property-based approach into the more nebulous "reasonable expectation of privacy" that has split state and federal courts. Part II will advance three arguments: first, it will argue that the nature of modern technology has fundamentally changed the way society operates; second, it will suggest that legislative bodies may be more suited to address this concern on a broader level; finally, it will contend that framing the Fourth Amendment as a "right to exclude" better addresses the concerns raised by modern technology. Part III will conclude that while *Jones* was not decided wrongly, courts must advance an updated perspective of this constitutional guarantee before the guarantee declines into irrelevancy.

I. LEGAL BACKGROUND

This Part begins with a brief introduction to the Supreme Court's interpretation of the Fourth Amendment, with particular attention paid to the relationship between individual privacy and property rights.[15] Next, it surveys how state and federal courts have applied the Court's decisions in factually similar cases and reached inconsistent results.[16] Finally, it discusses the reasoning behind the Court's decision in *Jones*.[17] Due consideration is given to the majority opinion written by Justice Scalia as well as the concurring opinions of Justices Alito and Sotomayor.

A. *Supreme Court Jurisprudence Reflects a Keen Sensitivity to Privacy Concerns Not Limited to Physical Intrusions*

The full text of the Fourth Amendment states that:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue,

13. *See infra* Part II.A.
14. *See infra* Part II.C.
15. *See infra* Part I.A.
16. *See infra* Part I.B.
17. *See infra* Part I.C.

> but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.[18]

At the time the Fourth Amendment was adopted, neither the government nor its agents had access to the type of GPS-enabled devices that are the focus of *Jones*.[19] Instead, the Fourth Amendment was written when visual surveillance and physical invasions were the primary method of gathering private information from individuals.[20] Early Supreme Court jurisprudence reflects this reality as it restricted the application of the Fourth Amendment to cases of physical trespass.[21] The later development of a "reasonable expectation of privacy" not explicitly tied to property rights represents the judiciary's attempt to update the Fourth Amendment to meet modern concerns.[22]

1. *The Supreme Court Initially Limited the Protection of the Fourth Amendment to Physical Trespass Despite Strong Dissent*

In *Olmstead v. United States*,[23] the Court held that inserting wires into ordinary telephone wires without a trespass of the defendants' real property did not constitute a search or seizure.[24] Even if the Fourth Amendment ought to be "liberally construed,"[25] the Court declared, no literal search or seizure occurred in this case because the evidence was "secured by the use of the sense of hearing and that only."[26] As a result, the majority effectively tied the application of the Fourth Amendment to cases of physical trespass, suggesting that in

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18. U.S. CONST. amend. IV.

19. United States v. Jones, 132 S. Ct. 945, 945 (2011).

20. *See id.* at 950 ("[F]or most of our history the Fourth Amendment was understood to embody a particular concern for government trespass upon the areas ('persons, houses, papers, and effects') it enumerates.").

21. *See infra* Part I.A.1.

22. *See infra* Part I.A.2.

23. 277 U.S. 438 (1928), *overruled by* Katz v. United States, 389 U.S. 347 (1967).

24. *Id.* at 465. The Court also compared telephone wires to public highways to justify its conclusion that the Fourth Amendment " cannot be extended and expanded to include telephone wires reaching to the whole world . . . . The intervening wires are not part of his house or office any more than are the highways along which they are stretched." *Id.*

25. *Id.*

26. *Id.* at 464.

the absence of trespass, no privacy rights are implicated.[27] Yet even at this early stage, Justice Brandeis argued the Fourth Amendment was adopted in a simpler time and that "[t]ime works changes, [and] brings into existence new conditions and purposes."[28] Moreover, he emphasized that "[t]he progress of science in furnishing the Government with means of espionage is not likely to stop with wiretapping."[29] Justice Butler dissented on the grounds that the Court should not limit itself to the "literal or ordinary meanings of the words [of the Fourth Amendment]," but rather "in the light of the principles upon which it was founded."[30]

In spite of these objections, the Court adopted a similar stance in *Goldman v. United States*[31] more than a decade later, finding that no search or seizure occurred when law enforcement used a detectaphone[32] to listen in on conversations through the wall of an adjoining office.[33] Insofar as the petitioners had to reckon with *Olmstead*, the Court was not only unwilling to overrule its previous decision but also rejected the suggested distinction between (a) one who assumes the risk his communication over telephone wires might be intercepted and (b) one who does not intend his conversation to pass through walls.[34] While Justices Stone and Frankfurter dissented on the same grounds as they did in *Olmstead*,[35] Justice Murphy wrote separately and argued: "[I]t has not been the rule or practice of this Court to permit the scope and operation of broad principles ordained by the Constitution to be restricted, by a literal reading of its provisions, to those

27. *Id.* ("The Amendment itself shows that the search is to be of material things . . . it must specify the place to be searched and the person or *things* to be seized.").

28. *Id.* at 472–73 (1928) (Brandeis, J., dissenting).

29. *Id.* at 474.

30. *Id.* at 487.

31. 316 U.S. 129 (1942), *overruled by* Katz v. United States, 316 U.S. 129 (1967).

32. A detectaphone was described by the Court as a "device . . . having a receiver so delicate as, when placed against the partition wall, to pick up sound waves originating in [the] office, and means for amplifying and hearing them." *Id.* at 131.

33. *Id.* at 135.

34. *Id.* The Court deemed this distinction "too nice for practical application of the Constitutional guarantee." *Id.* The Court additionally reasoned that the term "intercept" did not "ordinarily connote the obtaining of what is to be sent before, or at the moment, it leaves the possession of the proposed sender." *Id.* at 134.

35. *Id.* at 136 (Stone, J., dissenting).

evils and phenomena that were contemporary with its framing."[36] Instead, Justice Murphy recognized "[t]he conditions of modern life have greatly expanded the range and character of those activities which require protection from intrusive action by Government officials"[37] such that "[p]hysical entry may be wholly immaterial."[38] Emphasizing the need for a warrant to adequately safeguard Fourth Amendment rights, Justice Murphy concluded that *Olmstead*'s holding was "wrong."[39]

Nonetheless, the Court maintained its reluctance to separate the Fourth Amendment from physical property rights two decades later, rejecting an offer to reconsider *Olmstead* and *Goldman* in *Silverman v. United States*.[40] There, the petitioners argued that police officers' attachment of a spike mike[41] to the heating duct of their house effectively transformed it into a gigantic microphone that ran through the entire building.[42] Despite the petitioners supplementing their case with additional examples "in the light of recent and projected developments in the science of electronics" and the Court's open admission that "the vaunted marvels of an electronic age" may yet contemplate Fourth Amendment implications, the majority concentrated on the fact that "the eavesdropping was accomplished by means of an unauthorized physical penetration into the premises."[43] In doing so, the majority distinguished the eavesdropping in *Goldman* as not involving any "unauthorized physical encroachment within a constitu-

36. *Id.* at 138 (Murphy, J., dissenting).

37. *Id.*

38. *Id.* at 139.

39. *Id.* at 141.

40. 365 U.S. 505 (1961), *superseded by statute*, Title III of the Omnibus Crime Control and Street Safety Act ("Wiretap Act"), 18 U.S.C. §§ 2510–2520 (2006).

41. At the onset of his opinion, Justice Stewart described the design and the operation of a spike mike thusly:

> The instrument in question was a microphone with a spike about a foot long attached to it, together with an amplifier, a power pack, and earphones. The officers inserted the spike under a baseboard in a second-floor room of the vacant house and into a crevice extending several inches into the party wall, until the spike hit something solid "that acted as a very good sounding board."

Id. at 506.

42. *Id.* at 506–07.

43. *Id.* at 508–09.

tionally protected area."[44] Despite open concern over the capabilities of new technology, the Court thus repeatedly required physical trespass before triggering Fourth Amendment protection.

2. *The Supreme Court Specifically Rejected Olmstead and Goldman in Favor of a Reasonable Standard of Privacy Unrestricted by a Requisite Physical Intrusion*

The Court changed course in *Katz v. United States*,[45] and Justice Stewart's majority opinion and Justice Harlan's concurrence altered significantly the application of the Fourth Amendment.[46] Katz was convicted of violating a statute prohibiting the interstate transmission by wire communication of bets or wagers.[47] As a part of their investigation, police officers installed an electronic device into the public telephone booth used by Katz to listen and to record the words spoken into the receiver.[48] Reversing the judgment of the appellate court, the Supreme Court held that the government's activities violated "the privacy upon which [Katz] justifiably relied while using the telephone booth and thus constituted a 'search and seizure.'"[49] Though it characterized the government's contention that a telephone booth was not a "constitutionally protected area" as "misleading," the majority refused to translate the Fourth Amendment into a "general constitutional 'right to privacy.'"[50] Rather, the Court recognized the Fourth Amendment's protection extended beyond specific types of governmental intrusion and may "often have nothing to do with privacy at all."[51]

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44. *Id.* at 510. The Court also stated that "[i]nherent Fourth Amendment rights are not inevitably measurable in terms of ancient niceties of tort or real property law." *Id.* at 511. Rather, it defined the Fourth Amendment as one that secures "personal rights" at which "the very core stands the right of a man retreat into his own home and there be free from unreasonable governmental intrusion." *Id.*

45. 389 U.S. 347 (1967).

46. *Id.* at 360 (Harlan, J., concurring).

47. *Id.* at 348 (majority opinion).

48. *Id.*

49. *Id.* at 353. The appellate court had determined that no Fourth Amendment violation occurred because there was no "'physical entrance into the area occupied.'" *Id.* at 348–49.

50. *Id.* at 350–51.

51. *Id.* at 350. Notably, the majority recognized that the agents involved in *Katz* acted with restraint in installing the listening device but held that "the inescapable fact is that this restraint was imposed by the agents themselves, not by a judicial officer." *Id.* at 356.

Justice Stewart specifically emphasized that protecting places or what a person might knowingly expose to the public was not the purpose of the Fourth Amendment.[52] He argued that the Fourth Amendment assures "what [a person] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."[53] Indicating that the Court had expanded the application of the Fourth Amendment well beyond the narrow ambit of trespass to govern "not only the seizure of tangible items, but . . . [also] the recording of oral statements, overheard without any 'technical trespass under . . . local property law,'"[54] Justice Stewart also concluded that "the underpinnings of *Olmstead* and *Goldman* have been so eroded by our subsequent decisions that the 'trespass' doctrine there enunciated can no longer be regarded as controlling."[55] Famously, Justice Stewart declared that "[t]he fact that the electronic device employed to achieve that end did not happen to penetrate the wall of the booth can have no constitutional significance" for "the Fourth Amendment protects people, not places."[56]

Therefore, in the absence of a warrant, "searches conducted outside the judicial process, without prior approval by judge or magistrate, are *per se* unreasonable under the Fourth Amendment—subject only to a few specifically established and well-delineated exceptions." *Id.* at 357.

52. *Id.* at 351.

53. *Id.* at 351–52. The government alternatively argued that because the telephone was transparent, Katz could not reasonably rely upon the protection of the Fourth Amendment. *Id.* at 352. In response, the Court not only pointed out that what Katz sought to exclude was the "uninvited ear" rather than the "intruding eye," but also advocated for a broader interpretation of the Constitution concerning "vital" tools like the telephone booth. *Id.* Specifically, "[t]o read the Constitution more narrowly is to ignore the vital role that the public telephone has come to come play in private communication." *Id.*

54. *Id.* at 353 (quoting Silverman v. United States, 365 U.S. 505, 511 (1961)).

55. *Id.* at 353.

56. *Id.* Using *Alderman v. United States*, 394 U.S. 165, 176 (1969), to define a person as one "aggrieved by the invasion," the Court also held that "there is a substantial difference for constitutional purposes between preventing the incrimination of a defendant and through the very evidence illegally seized from him and suppressing evidence on the motion of a party who cannot claim this predicate for exclusion." *Id.* at 174. An owner of the premises, however, "would be entitled to the suppression of government evidence originating in electronic surveillance violative of his own Fourth Amendment right to be free of unreasonable searches and seizures . . . whether or not he was present or participated in those conversations." *Id.* at 176. Likewise in *Rakas v. Illinois*, 439 U.S. 128 (1978), the Court declined to extend standing in Fourth Amendment cases to criminal defendants

Despite Justice Stewart's well-reasoned opinion, Justice Harlan's concurrence is cited most often for its summary of principles defining a "[c]onstitutionally protected reasonable expectation of privacy."[57] To Justice Harlan, Fourth Amendment protection carried two prerequisites: "first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as 'reasonable.'"[58] Thus, according to Justice Harlan, the government violated Katz's Fourth Amendment rights because: (1) he subjectively expected his conversations inside the telephone would remain private, and (2) society accepts such expectations as objectively reasonable because telephone booths are "temporarily private place[s] whose momentary occupants' expectations of freedom from intrusion are recognized as reasonable."[59] Justice Harlan continued to describe *Goldman*'s limitations on Fourth Amendment protections as "bad physics as well as bad law, for reasonable expectations of privacy may be defeated by electronic as well as physical invasion."[60]

Justice Black dissented, objecting to the majority's Fourth Amendment interpretation and to the suggestion that the Court ought to assume the role of updating the Amendment to current sen-

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who could neither assert a possessory nor a property interest in the place searched by police officers. *Id.* at 133. The Court also considered the proposition that "a person can have a legally sufficient interest in a place other than his own home so that the Fourth Amendment protects him from unreasonable governmental intrusion into that place" to be "unremarkable." *Id.* at 142.

57. *Katz*, 389 U.S. at 360 (Harlan, J., concurring).

58. *Id.* at 361.

59. *Id.*

60. *Id.* at 362. Justice Harlan also declared that "[a]s elsewhere under the Fourth Amendment, warrants are the general rule, to which the legitimate needs of law enforcement may demand specific exceptions." *Id.* Interestingly, Justice White's concurrence pointed out that "today's decision does not reach national security cases." *Id.* at 363 (White, J., concurring). Even further, he argued that a broad exception to the warrant process should be granted to "the President of the United States or his chief legal officer, the Attorney General," provided that a magistrate or a judge "has considered the requirements of national security and authorized electronic surveillance as reasonable." *Id.* at 364. This open issue would return in *United States v. United States District Court*, 407 U.S. 297 (1972), in which the majority held that prior judicial approval was required for the types of domestic security surveillance contemplated under the Wiretap Act. *Id.* at 323–24. In that case, Justice White concurred on the statutory ground alone and did not reach the constitutional issue discussed by the majority. *Id.* at 336 (White, J., concurring).

sibilities.[61] Regarding the former objection, Justice Black took a strict approach in construing the language of the Fourth Amendment and concluded that the text did not apply to what he characterized as "eavesdropping" because "the language of the second clause indicates that the Amendment refers not only to something tangible so it can be seized but to something already in existence so it can be described."[62] Despite accepting the premise that "[t]apping telephone wires, of course, was an unknown possibility at the time the Fourth Amendment was adopted," Justice Black argued that the Framers were aware of eavesdropping as an "ancient practice which at common law was condemned as a nuisance"[63] and would have restricted law enforcement's use of eavesdropping had they desired to do so.[64] In explaining his second objection, Justice Black advocated against "distort[ing] the words of the Amendment to 'keep the Constitution up to date' or 'to bring it into harmony with the times.'"[65] Such power, he suggested, would inappropriately transform the Court into a "continuously functioning constitutional convention."[66]

B. *The Decisions Following* Katz *Demonstrate a Struggle to Consistently Apply the Fourth Amendment to Modern Situations*

Without overturning the analysis applied in *Katz*, *Smith v. Maryland*[67] sparked a series of challenges to its modern applicability, which culminated in *Jones*. These challenges highlighted the divide between the now quaint "spike mike" and "detectaphone" operations[68] and their modern replacements: inexpensive GPS-enabled tracking devices as small as an iPod, many of which already pre-installed in everyday

61. *Katz*, 389 U.S. at 373 (Black, J., dissenting).

62. *Id.* at 365.

63. *Id.* at 366 (citation omitted) (internal quotation marks omitted).

64. *Id.* Justice Black went as far as to express a professional disappointment in his peers, declaring: "[I]t strikes me as a charge against their scholarship, their common sense and their candor to give to the Fourth Amendment's language the eavesdropping meaning the Courts imputes to it today." *Id.*

65. *Id.* at 373.

66. *Id.*

67. 442 U.S. 735 (1979).

68. *See supra* Part I.A.1.

phones and vehicles.[69] While the Court has been relatively conservative in applying Justice Harlan's "reasonable expectation of privacy" test in context-specific circumstances, state and federal courts have been divided.[70]

1. *The Court Has Struggled to Balance Reasonable Expectations of Privacy with Modern Information-Gathering Technology*

In *Smith*, the Court held that obtaining information derived from a pen register was not a Fourth Amendment search.[71] Using the two-step test described by Justice Harlan in *Katz*, the majority rejected the defendant's claims that he had a legitimate, subjective expectation of privacy regarding the telephone numbers dialed from his home because telephone companies routinely made permanent records of all numbers dialed and Smith voluntarily conveyed this information to his particular provider.[72] Moreover, the Court declared that "the site of the call is immaterial"[73] because Smith's expectation that his conduct would remain private was not one "'that society is prepared to recognize as reasonable.'"[74]

Justice Stewart dissented on the grounds that, although a list of numbers dialed may not be incriminating in itself, "it easily could reveal the identities of the persons and the places called, and thus reveal the most intimate details of a person's life."[75] Justice Marshall's dissent added that "the constitutional prohibition of unreasonable searches and seizures assigns to the judiciary some prescriptive responsibility."[76] According to Justice Marshall, law enforcement offi-

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69. *See* Paul Ohm, *The Fourth Amendment in a World Without Privacy*, 81 MISS. L.J. 1309, 1310 (2012) ("Millions now own sophisticated tracking devices (smartphones) studded with sensors and always connected to the Internet.").

70. *See infra* Part I.B.2.

71. *Smith*, 442 U.S. at 745–46. The pen register recorded numbers dialed from the defendant's home. *Id.* at 737. The police were investigating the defendant for a robbery after which the victim reported receiving "threatening and obscene" phone calls from a man who claimed to be the robber. *Id.*

72. *Id.* at 742.

73. *Id.* at 743.

74. *Id.* (quoting Katz v. United States, 389 U.S. 347, 360–61 (1967) (Harlan, J., concurring)).

75. *Id.* at 748 (Stewart, J., dissenting).

76. *Id.* at 750 (Marshall, J., dissenting).

cials should almost always be required to obtain a warrant before requesting information from telephone companies.[77]

Only a few years later in *United States v. Knotts*,[78] the Court held that the government's warrantless monitoring of a GPS-enabled beeper surreptitiously placed in a can of chemicals sold to the defendant did not violate the Fourth Amendment.[79] The government argued that the beeper was merely a supplement to officers' visual surveillance of the defendant, which included following his truck from the initial purchase of the can to his cabin.[80] Recognizing that officers combined both methods of surveillance, the Court added that "[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another."[81] Famously, the reasoning given was 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."[82]

In contrast, the Court in *United States v. Karo*[83] found that the monitoring of a beeper installed into a can of ether sold to the defendant implicated the protection of the Fourth Amendment because it "reveal[ed] a critical fact about the interior of the premises that the Government is extremely interested in knowing and that it could not have otherwise obtained without a warrant."[84] In spite of the govern-

77. *Id.* at 752. Justice Brennan joined both dissents. *Id.* at 746, 748.

78. 460 U.S. 276 (1983).

79. *Id.* at 285.

80. *Id.* at 282.

81. *Id.* at 281. The Court also noted that "[w]e have commented more than once on the diminished expectation of privacy in an automobile." *Id.* Thus, because the defendant traveled on public and private roads, the Court declared that "no such expectation of privacy extended to the visual observation of [the defendant]'s automobile arriving on his premises after leaving a public highway." *Id.* at 282. Further, the defendant had no reasonable expectation of privacy, including "whatever stops he made." *Id.* Surprisingly, Justices Brennan and Marshall concurred, noting that, had the defendant challenged "not merely certain aspects of the monitoring of the beeper installed in the chloroform container . . . but also its original installation," their opinions might have been the opposite. *Id.* at 286 (Brennan, J., concurring).

82. *Id.* at 282 (majority opinion).

83. 468 U.S. 705 (1984).

84. *Id.* at 715. Justice Stevens, joined by Justices Brennan and Marshall, concurred only insofar as the "agents thereafter learned who had the container and where it was only through use of the beeper." *Id.* at 733 (Stevens, J., concurring).

ment's objections that a broad warrant requirement would raise the difficulty of conducting any search, the Court offered no sympathy in concluding that it was entirely possible to describe the circumstances and length of time in which a beeper might be installed into a particular object.[85] Furthermore, the Court stated that the primary reason behind the warrant procedure was to "interpose a 'neutral and detached magistrate' between the citizen and 'the officer engaged in the often competitive enterprise of ferreting out crime.'"[86]

2. *The Rapid Integration of New Information-Sharing Technology into Everyday Activity Has Enabled Contrasting Interpretations of Context-Sensitive Precedent*

The Supreme Court's inconsistent application of the Fourth Amendment is reflected in a split among the lower courts. On the one hand, some federal courts have declared that no reasonable expectation of privacy exists when an individual travels on public streets and thus no warrant is required to monitor those movements.[87] On the other hand, some state courts have stressed that the superior capabilities of modern surveillance technology implicates the Fourth

85. *Id.* at 718 (majority opinion). *Karo* also offered the Court an opportunity to address the concerns voiced by Justices Brennan and Marshall in *Knotts*, namely, whether the installation of a beeper in a container of chemicals with the original owner's consent constituted a search or seizure when the container is delivered to the buyer without knowledge of said beeper. *Id.* at 711. To resolve the legality of the warrantless installation, the Court quickly declared that "[i]t is clear that the actual placement of the beeper into the can violated no one's Fourth Amendment rights. . . . [B]y no stretch of the imagination could it be said that respondents then had any legitimate expectation of privacy in it." *Id.* The majority went on to note that the transfer of the can containing the beeper "infringed no privacy interest," for it "conveyed no information at all." *Id.* at 712. Justice O'Connor's concurrence opinion went even further and would have construed the privacy interests implicated by the activation of the beeper as "unusually narrow," because "one who lacks ownership of the container itself or the power to move the container at will, can have no reasonable expectation that the movements of the container will not be tracked." *Id.* at 722 (O'Connor, J., concurring). Instead, Justice O'Connor would "use as the touchstone the defendant's interest in which the beeper is placed." *Id.* at 724. Yet even in spite of traditional Fourth Amendment protection of the home, "[a] privacy interest in a home itself need not be coextensive with a privacy interest in the contents or movements of everything situated inside the home." *Id.* at 725.

86. *Id.* at 717 (majority opinion) (quoting Johnson v. United States, 333 U.S. 10, 14 (1948)).

87. *See infra* Part I.B.2.a.

Amendment.[88] The result of this inconsistency is an incomplete and, at times, contradictory Fourth Amendment doctrine.[89]

a. Prior to Jones, Circuits Recognized That No Legitimate Expectation of Privacy Exists Along Public Streets and No Warrant Is Required to Monitor Movements Thereupon

In *United States v. Garcia*,[90] the defendant was convicted of crimes relating to the manufacture of methamphetamines.[91] The district court denied a motion to suppress evidence obtained from a GPS-enabled tracking device the police had attached to the defendant's car without a warrant.[92] Writing for the United States Court of Appeals for the Seventh Circuit, Judge Posner held that no search or seizure under the Fourth Amendment occurred and thus no warrant was required.[93] Judge Posner emphasized the similarities between older surveillance technology with the device officers used, concluding that: "GPS tracking is on the same side of the divide with the surveillance cameras and the satellite imaging, and if what they do is not searching in Fourth Amendment terms, neither is GPS tracking."[94] Despite acknowledging *Katz*'s insistence that the Fourth Amendment ought to "keep pace with the march of science"[95] and that "[t]echnological progress poses a threat to privacy by enabling an extent of surveillance that in earlier times would have been prohibitively expensive,"[96] Judge Posner nonetheless concluded "the amendment cannot sensibly be read to mean that police shall be no more efficient in the twenty-first century than they were in the eighteenth."[97] If anything, Judge

88. *See infra* Part I.B.2.b.

89. *See infra* Part II.A.

90. 474 F.3d 994 (7th Cir. 2007).

91. *Id.* at 995.

92. *Id.*

93. *Id.* at 996–97 ("But of course the presumption in favor of requiring a warrant, or for that matter the overarching requirement of reasonableness, does not come into play unless there is a search or seizure within the meaning of the Fourth Amendment."). Judge Posner did recognize, however, that *United States v. Knotts*, 460 U.S. 276 (1983), left open "the question whether installing [the beeper] in the vehicle converted the subsequent tracking into a search." *Garcia*, 474 F.3d at 996–97.

94. *Id.* at 997.

95. *Id.*

96. *Id.* at 998.

97. *Id.*

Posner acknowledged that the balance between individual security and effective security often falls in favor of the former.[98]

In *United States v. Marquez*,[99] the United States Court of Appeals for the Third Circuit took a similar approach in holding that the installation and use of a GPS-enabled tracking device to monitor the defendant's vehicle did not constitute a Fourth Amendment violation.[100] Agreeing with *Knotts*, the Third Circuit explained that there is no reasonable expectation of privacy when a person travels in an automobile via public streets.[101] Moreover, the court concluded that so long as police have reasonable suspicion that a particular vehicle is being used in pursuit of a crime such as the transport of drugs, "a warrant is not required when . . . they install a non-invasive GPS tracking device on it for a reasonable period of time."[102] Thus, because here there was "nothing random or arbitrary about the installation and use of the device," and the installation itself was "non-invasive and occurred when the vehicle was parked in public," Judge Wollman held that no search occurred within the meaning of the Fourth Amendment.[103]

98. *Id.*

99. 605 F.3d 604 (8th Cir. 2010).

100. *Id.* at 607. The court also found that the defendant lacked standing to contest the search of a place to which he had "an insufficiently close connection" because he neither "owned nor drove the Ford and was only an occasional passenger therein." *Id.* at 609.

101. *Id.* The court did acknowledge, however, that "[w]hen . . . police use electronic monitoring in a private residence, not open to visual surveillance, it violates reasonable expectations of privacy and is impermissible under the Fourth Amendment." *Id.* at 609–10.

102. *Id.*

103. *Id.* The court specifically acknowledged Judge Posner's opinion in *Garcia*, warning that although the ability to monitor and to install GPS devices was increasing, the device here "merely allowed the police to reduce the cost of lawful surveillance." *Id.*; *see Garcia*, 474 F.3d at 998 ("Technological progress poses a threat to privacy by enabling an extent of surveillance that in earlier times would have been prohibitively expensive."); *see also* United States v. Pineda-Moreno, 591 F.3d 1212, 1215 (9th Cir. 2010) (finding that the defendant did not have a reasonable expectation of privacy to the undercarriage of his vehicle when parked on a street or parking lot, and thus the government's installation and use of a mobile tracking device did not constitute a Fourth Amendment search), *vacated*, Pineda-Moreno v. United States, 132 S. Ct. 1533 (2012).

b. State Courts Have Emphasized the Capacity of Modern Technology to Go Beyond the Physical Senses and Collect an Unreasonable Amount of Information

Compare the stance taken by federal appellate courts with the opposite approach adopted by the Supreme Court of the State of Washington and the Supreme Court of the State of New York. The Washington supreme court, in *State v. Jackson*,[104] concluded that the installation of GPS-enabled devices onto the defendant's vehicles constituted a search or a seizure requiring a warrant.[105] Although the court found that probable cause existed and that law enforcement agents properly obtained a warrant for the GPS tracking,[106] it explicitly refrained from concluding in all cases that the "use of the GPS devices to monitor [the defendant]'s travels merely equates to following him on public roads where he has voluntarily exposed himself to public view."[107]

Likewise, in *People v. Weaver*,[108] the New York supreme court held that the placement of a GPS-enabled device onto the defendant's vehicle and the subsequent monitoring of his movement constituted a search requiring a warrant under the Fourth Amendment.[109] Accepting that individuals have a significantly reduced expectation of privacy along public roads,[110] the court declared that the GPS-enabled device used was not a mere enhancement of an officer's senses, but rather "a surrogate technological deployment" capable of "[c]onstant, relentless tracking."[111] Reasoning that these devices "facilitate[] a new technological perception of the world,"[112] the court concluded that without judicial oversight, prolonged use of GPS-enabled tracking devices

104. 76 P.3d 217 (Wash. 2003).

105. *Id.* at 224.

106. *Id.* at 231.

107. *Id.* at 223.

108. 909 N.E.2d 1195 (N.Y. 2009).

109. *Id.* at 1203.

110. *Id.* at 1198. The court did concede that "[i]t is, of course, true that the expectation of privacy has been deemed diminished in a car upon a public thoroughfare." *Id.* at 1200.

111. *Id.* at 1199; *see also* Renee Hutchins, *The Anatomy of a Search*, 38 SEARCH & SEIZURE L. REP. 21, 26 (2011) (suggesting a new test that differentiates between "sense-augmenting" or "extrasensory" devices).

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

constituted a massive invasion of privacy "inconsistent with even the slightest reasonable expectation of privacy."[113]

C. *In* Jones, *the Supreme Court Relied on Property Rights to Apply Fourth Amendment Protection and Left Unresolved Its Relevance to Modern Technology*

In 2004, the FBI and the District of Columbia's Metropolitan Police Department launched a joint operation to investigate Antoine Jones and his associates for allegedly supplying significant amounts of cocaine and cocaine base to residents of the District, the State of Maryland, and elsewhere.[114] In addition to direct visual surveillance and the use of cellphone wiretaps, agents obtained a warrant in 2005 authorizing the installation of a GPS-enabled tracking device onto the Jeep Grand Cherokee Jones used subject to two requirements: (1) that the device be installed within ten days and (2) inside the boundaries of the District of Columbia.[115] Agents installed the device onto the undercarriage of Jones's Jeep in Maryland on the eleventh day and then proceeded to use the device to track the whole of Jones's movements over the next twenty-eight days.[116] The task force ceased covert operations in October when agents seized drugs, firearms, and cash from a stash house and the homes of a number of Jones's co-conspirators.[117] Jones and eight other defendants were charged with multiple narcotics-related violations the following day.[118]

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113. *Id.* at 1201–03. The dissenting opinion written by Judge Smith argued that "[t]he proposition that some devices are too modern and sophisticated to be used freely in police investigation is not a defensible rule of constitutional law." *Id.* at 1204 (Smith, J., dissenting). The other dissenting opinion authored by Judge Read opined that "[t]he GPS monitoring technology used in this case was less intrusive or informative than physical surveillance of the defendant would have been." *Id.* at 1210 (Read, J., dissenting).

114. United States v. Jones, 451 F. Supp. 2d 71, 73–74 (D.D.C. 2006), *aff'd in part, rev'd in part sub nom.* United States v. Maynard, 615 F.3d 544 (D.C. Cir. 2010), *aff'd in part sub nom.* United States v. Jones, 132 S. Ct. 945 (2011).

115. *Jones*, 132 S. Ct. at 948.

116. *Id.* Law enforcement agents stepped in once during this period to replace the device's battery while the vehicle was parked at a public parking lot in Maryland. *Id.*

117. *Jones*, 451 F. Supp. 2d at 74.

118. *Id.* at 73. Specifically, Jones and his associates were charged under 21 U.S.C. § 846 with conspiracy to distribute and possession with intent to distribute five kilograms or more of cocaine and fifty grams or more of cocaine base. *Id.* They were also charged with individual violations, including use of a communication facility to facilitate a drug traffick-

Prior to trial, Jones filed a motion contending that the agents originally lacked probable cause to attach the GPS-enabled device to his vehicle and that the installation occurred outside the bounds of the original warrant.[119] Although the government conceded that it committed technical violations of the warrant,[120] the United States District Court for the District of Columbia agreed that the placement of the GPS device remained proper because Jones lacked a reasonable expectation of privacy when traveling in public and admitted the information gathered from the device while the Jeep was on public roads.[121] The jury ultimately failed to reach a verdict on the conspiracy count and acquitted Jones and his co-defendants on all others.[122] But, the government filed another indictment in March 2007 in which the jury found Jones and a co-conspirator guilty, and both were sentenced to life imprisonment in a joint trial that concluded in January 2008.[123]

On appeal, the United States Court of Appeals for the District of Columbia Circuit distinguished the facts from *Knotts* on the basis of the level of detail with which the GPS-enabled device recorded Jones's extended habits.[124] Concluding that the transmission of information gathered over such a prolonged period was neither harmless nor reasonable,[125] the court reversed Jones's conviction because the evidence admitted against him "reveal[ed] types of information not revealed by short-term surveillance"[126] and thus violated his Fourth Amendment

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ing offense. *Id.* Jones was additionally charged with two counts of unlawful possession with intent to distribute cocaine or cocaine base in violation of 21 U.S.C. §§ 841(a)(1) and (b)(1)(A)(iii) (Count Two), and 21 U.S.C. §§ 841(a)(1) and (b)(1)(C) (Count Three), respectively. *Id.*

119. *Id.* at 87–88.

120. *Id.* at 88. The court suppressed all evidence gathered from the GPS-enabled tracking device while the vehicle was parked in Jones's personal garage. *Id.* at 89.

121. *Id.*

122. United States v. Maynard, 615 F.3d 544, 549 (D.C. Cir. 2010), *aff'd in part sub nom.* United States v. Jones, 132 S. Ct. 945 (2011).

123. *Id.*

124. *Id.* at 558.

125. *Id.* at 567–68.

126. *Id.* at 562. On the same grounds, the court also rejected the government's assertion that Jones *actually* exposed his movements to the public and thus *constructively* revealed the whole of his movements, analogizing the facts to cases where the Government has sought to use exactly the same theory in reverse. *See id.* at 562 ("As with the 'mosaic theory' often invoked by the Government in cases involving national security information,

rights.[127] The D.C. Circuit denied the government's petition for rehearing en banc.[128]

The Supreme Court affirmed, holding that the government's installation and tracking of a GPS-enabled device on Jones's vehicle outside the bounds of a judicially-authorized warrant constituted an unreasonable search under the Fourth Amendment.[129] Writing for the majority, Justice Scalia reasoned that the phrase "in their persons, house, papers, and effects,"[130] reflected the Amendment's historically "close connection to property."[131] Despite conceding that the Court had deviated from this approach with the introduction of a "reasonable expectation of privacy,"[132] Justice Scalia emphasized that the *Katz* test constituted an addition, not a substitution, to the common-law trespassory rule.[133] Contending that the Fourth Amendment at a minimum must protect those rights afforded to individuals, Justice Scalia concluded that "'when the Government does engage in physical intrusion of a constitutionally protected area in order to obtain information, that intrusion may constitute a violation of the Fourth Amendment'"[134] because "such a physical intrusion would have been considered a 'search' within the meaning of the Fourth Amendment when it was adopted."[135]

'What may seem trivial to the uninformed, may appear of great moment to one who has a broad view of the scene.'"); *see also infra* Part II.A.1.b.

127. *Id.* at 568.

128. United States v. Jones, 625 F.3d 766, 767 (D.D.C. 2006). Four judges dissented to the Government's petition. *Id.*

129. United States v. Jones, 132 S. Ct. 945, 945 (2011).

130. U.S. CONST. amend. IV.

131. *Jones*, 132 S. Ct. at 949.

132. *Id.* at 950.

133. *Id.* at 952.

134. *Id.* at 951 (emphasis omitted) (quoting United States v. Knotts, 460 U.S. 276, 286 (1986)).

135. *Id.* at 949. The Court also stressed that its post-*Katz* rejection of Fourth Amendment challenges to electronic monitoring using beeper devices such as those featured in *United States v. Knotts*, 460 U.S. 276 (1983), and *United States v. Karo*, 148 U.S. 705 (1984), did not foreclose its conclusion here. *Jones*, 132 S. Ct. at 951–52. Justice Scalia pointed out that the GPS-enabled device used to track Jones was trespassorily installed while the Jeep was in his possession, unlike the circumstances in *Knotts* and *Karo* where agents attached similar devices to items not yet in the defendants' possession. *Id.* Furthermore, in response to the government's argument that the mere visual examination of a car in the public eye could not constitute a search under the Fourth Amendment, the Court high-

Justice Alito concurred with the majority's judgment not because he agreed that the physical attachment of the GPS-enabled device constituted a search or seizure, but instead because "the lengthy monitoring" violated the reasonable expectation to privacy afforded to Jones under *Katz*.[136] Criticizing the Court's focus as "unwise" and "highly artificial," Justice Alito reasoned that the degree of privacy that existed when the Fourth Amendment was first adopted was an inappropriate analogy reminiscent of the trespass rule previously abandoned in *Katz*.[137] Instead, Justice Alito argued that prolonged surveillance conducted purely through indirect, electronic means would lead to "particularly vexing problems."[138] Applying *Katz*'s "ex-

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lighted the admission of the Government agents involved that "'the officers in this case did more than conduct a visual inspection of respondent's vehicle.'" *Id.* at 952 (emphasis omitted). Similarly, the government's contention that an electronic information-gathering intrusion in a literal open field did not constitute a Fourth Amendment search failed to persuade the Court because open fields are not afforded the same level of protection afforded to a private home. *Id.* at 953. Justice Scalia also added that the Court had no occasion to consider whether the officers had reasonable suspicion and probable cause to attach the GPS device in the absence of a valid warrant because the government did not raise the issue in the lower courts. *Id.* at 954.

136. *Id.* at 964 (Alito, J., concurring). Justice Alito argued that "'an actual trespass is neither necessary nor sufficient to establish a constitutional violation.'" *Id.* at 960 (emphasis omitted) (quoting United States v. Karo, 468 U.S. 705, 713 (1984)). Justice Alito also described the GPS-enabled device used in *Jones* to be "trivial," and that restricting Fourth Amendment protection to instances in which such an item is physically attached to another's property created the danger of "incongruous results." *Id.* at 961; *see also* United States v. Marquez, 605 F.3d 604, 609 (2010) (finding that the defendant lacked standing to make a Fourth Amendment challenge to the installation and use of a GPS-enabled device to the bumper of a vehicle in which he was merely an occasional passenger). Justice Alito expressed additional concern that the majority's trespass-based rule would completely ignore prolonged monitoring using closed-circuit television video monitoring, automatic toll collection systems, cellphones, and other "social" phone-location-tracking services. *Jones*, 132 S. Ct. at 963.

137. *Id.* at 958.

138. *Id.* at 962. Specifically, Justice Alito criticized Justice Scalia's emphasis on the protection of property originally afforded by the Fourth Amendment to be a misguided application of "18th-century tort law." *Id.* at 957. Justice Alito noted, for example: "[S]uppose that the officers in the present case had followed respondent by surreptitiously activating a stolen vehicle detection system that came with the car when it was purchased. Would the sending of a radio signal to activate this system constitute a trespass to chattels?" *Id.* at 962.

pectation-of-privacy test" would not only avoid these problems,[139] he explained, but would more appropriately reflect the practical reality of modern surveillance technology that regularly utilizes small, easy-to-use, and relatively cheap devices to monitor persons.[140] Consequently, Justice Alito concluded that the appropriate approach to a Fourth Amendment inquiry was to ask "whether the use of GPS tracking in a particular case involved a degree of intrusion that a reasonable person would not have anticipated."[141]

In her concurring opinion, Justice Sotomayor agreed with Justice Scalia insofar as "*Katz*'s reasonable-expectation-of-privacy test augmented, but did not displace or diminish, the common-law trespassory test that preceded it."[142] Consequently, "the trespassory test applied in the majority's opinion reflects an irreducible constitutional minimum . . . . The reaffirmation of that principle suffices to decide this case."[143] Nonetheless, Justice Sotomayor also echoed Justice Alito's warning that technological advances may render physical trespass irrelevant because "GPS monitoring . . . may 'alter the relationship between citizen and government in a way that is inimical to democratic society.'"[144] Specifically, an individual's reasonable expectation of privacy may not be appropriate for a society where "people reveal a great deal of information about themselves to third parties in the course of carrying out mundane tasks."[145] Moreover, Justice Sotomayor raised doubts regarding the fundamental trigger of the Fourth Amendment, adding that such people "can attain constitutionally protected status

139. *Id.* at 962. Justice Alito conceded that his recommendation would present its own issues. *Id.* On the one hand, "judges are apt to confuse their own expectations of privacy with those of the hypothetical reasonable person to which the *Katz* test looks." *Id.* On the other hand, "the *Katz* test rests on the assumption that this hypothetical reasonable person has a well-developed and stable set of privacy expectations." *Id.*

140. *Id.* at 964. Justice Alito did acknowledge, however, that the privacy consequences of "dramatic technological change" might be better resolved through legislatures more suited to "balanc[ing] privacy and public safety in a comprehensive way." *Id.*

141. *Id.*

142. *Id.* at 955 (Sotomayor, J., concurring).

143. *Id.*

144. *Id.* at 956 (quoting United States v. Cuevas-Perez, 640 F.3d 272, 285 (7th Cir. 2011) (Flaum, J., concurring) (holding that the placement of a GPS tracking unit on the defendant's vehicle did not violate the Fourth Amendment), *vacated*, Cuevas-Perez v. United States, 132 S. Ct. 1534 (2012)).

145. *Id.* at 957 (Sotomayor, J., concurring).

only if our Fourth Amendment jurisprudence ceases to treat secrecy as a prerequisite for privacy."[146]

II. ANALYSIS

Although the majority in *Jones* ultimately found that the government's installation and use of a GPS-enabled tracking device constituted a search under the Fourth Amendment, it did so on the basis of its "close connection to property."[147] In contrast, Justice Alito's concurrence reckoned with the numerous uncertainties in Fourth Amendment jurisprudence raised by modern technology unburdened by physical limitations by advancing a standard based upon a "reasonable expectation of privacy."[148] Yet neither Justice Scalia's nor Justice Alito's opinions properly recognize how the capabilities of modern technology have fundamentally changed how people share information.[149] In fact, legislative bodies acting in concert with the academic and business worlds may be better equipped to solve this quagmire than a piecemeal solution gradually created by the judiciary. Title III of the Omnibus Crime Control and Safe Streets Act of 1968 ("Wiretap Act")[150] and the Electronic Communications Privacy Act ("ECPA")[151] provide two examples in which a similar collaboration has implemented useful, if imperfect, protections of individual privacy rights.[152]

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146. *Id.*

147. *Id.* at 949 (majority opinion).

148. *Id.* at 953 ("[W]e do not make trespass the exclusive test. Situations involving merely the transmission of electronic signals without trespass would remain subject to *Katz* analysis" (emphasis omitted)). It also seems as if Justices Scalia, Alito, and Sotomayor believe that the Fourth Amendment is due a re-evaluation. While Justice Alito supported the already established test set by *Katz,* Justices Scalia and Sotomayor seemed to regard *Jones* as simply the inappropriate arena in which to re-examine what privacy rights the Constitution guarantees. Justice Sotomayor even suggested as much, agreeing with Justice Alito's concern that "physical intrusion is now unnecessary to many forms of surveillance," but also siding with Justice Scalia insofar as "the trespassory test applied in the majority's opinion . . . suffices to decide this case." *Id.* at 955 (Sotomayor, J., concurring).

149. *See supra* Part I.C.

150. Pub. L. No. 90-351, 82 Stat. 197 (codified as amended at 42 U.S.C. §§ 2510–2522 (2006)).

151. Pub. L. No. 99-508, 100 Stat. 1848 (codified as amended at 18 U.S.C. §§ 2510–2522 (2006)).

152. *See infra* Part II.B.

Until such a broad collaborative solution can be reached, courts must first act on their own to uniformly recognize that electronic tracking and other electronic information-gathering processes constitute searches under the Fourth Amendment.[153] Moreover, courts ought to take the additional step of recognizing the Fourth Amendment as guaranteeing a person's "right to exclude" the government to better address uniquely modern concerns.[154] In an era where tangible property is becoming increasingly irrelevant,[155] understanding this constitutional right as a positive one restores it to its original guarantee: "the right to be secure in their persons, houses, papers, and effects."[156] *Jones* should thus be read as an example of outdated Fourth Amendment jurisprudence that, in the absence of legislative revision, ought to spur courts to adopt an appropriately modern picture of its constitutional guarantee.[157]

A. *Current Supreme Court Jurisprudence Is Inappropriate and Ill-Suited to Electronic Tracking*

Despite offering several different interpretations of the Fourth Amendment,[158] the Supreme Court has yet to address how it might be violated through intrinsically intangible, electronic means. Additionally, just as the individual citizen deserves some measure of privacy in the face of technology that has significantly altered the way in which they communicate with one another,[159] so too must law enforcement agencies have access to superior technological tools and bright-line

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153. *See infra* Part.II.C.1.

154. *See infra* Part II.C.2.

155. *See infra* Part II.A.1.a. Also consider the increasingly common use of laptops and tablets in the public classroom. *See, e.g.*, James M. Crotty, *The Tech-Driven Classroom Is Here, but Grades Are Mixed*, FORBES (Aug. 21, 2012), http://www.forbes.com/sites/jamesmarshallcrotty/2012/08/21/the-tech-driven-classroom-is-here-but-grades-are-mixed/ (describing how education technology already ubiquitous in many classrooms will soon be able to personalize learning to each individual student); Bryan Goodwin, *One-to-One Laptop Programs Are No Silver Bullet*, 68 TEACHING SCREENAGERS 78, 78–79 (2011), *available at* http://www.ascd.org/publications/educational_leadership/feb11/vol68/num05/One-to-One_Laptop_Programs_Are_No_Silver_Bullet.aspx (assessing the objective success of the widespread initiative to adopt one-to-one laptop programs in public classrooms).

156. U.S. CONST. amend. IV.

157. *See infra* Part III.

158. *See supra* Part I.A.

159. *See infra* Part II.A.1.

rules that appropriately limit their reach.[160] The current inability of Fourth Amendment jurisprudence to satisfactorily address either concern demonstrates the need for a different approach.[161]

1. *Neither the Factually Limited Property Approach nor the Reliance on a Reasonable Expectation of Privacy Can Keep Pace with Modern Technology*

First, it is important to recognize that the property-based approach offered by Justice Scalia in *Jones* does not represent a complete disregard of the changing nature of electronic information.[162] While the majority rested its holding on a traditional interpretation of Fourth Amendment protections, it specifically emphasized that "we do not make trespass the exclusive test."[163] The concurring opinions by Justice Sotomayor and Justice Alito strongly suggest that the Court is aware that physical invasions are not prerequisites to violations of the Fourth Amendment.[164] The Supreme Court has previously recognized as much.[165] Secondly, a number of Justices also appear to support a re-interpretation of the Fourth Amendment to satisfy modern needs.[166] Nonetheless, any proposed solution must first recognize that the modern age has revolutionized the trappings of individual privacy and then assess what degree of access police should have to the wealth of private information made available by current technology.[167]

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160. *See infra* Part II.A.2.

161. *See infra* Part II.C.2.

162. United States v. Jones, 132 S. Ct. 945, 953 (2011) (majority opinion) ("Situations involving merely the transmission of electronic signals without trespass would remain subject to Katz analysis" (emphasis omitted)).

163. *Id.*

164. *See supra* Part I.C.

165. *See* Kyllo v. United States, 533 U.S. 27, 34 (2001) ("We think that obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical 'intrusion into a constitutionally protected area,' constitutes a search" (citations omitted)).

166. *See supra* note 148 and accompanying text.

167. *See infra* Part II.A.2.

a. The Reach and Intersection of Modern Technology Has Fundamentally Transformed the Frame Through Which Society Considers Individual Privacy

As *Jones* and its contemporaries indicate,[168] tracking people's movements using electronic methods has become an increasingly attractive option[169] in part due to the low cost and ease with which the process is completed.[170] Where law enforcement agents previously had to expend substantial time, effort, and resources to monitor a person's movements over an extended period of time,[171] the success of the StarChase Pursuit Management system means that external launchers mounted onto patrol cars capable of affixing GPS-equipped darts to any vehicle may very well become the new norm rather than a science fiction experiment.[172]

The reality of modern society reflects a near constant connection to some form of information-sharing technology whether the purpose is accessing the Internet, replacing a bag of books with a single tablet, or simply plugging in to any number of social websites.[173] Thus it is even easier to initiate the information-gathering process because many of the devices that enable these options carry built-in electronic

168. *See supra* Part I.B.2.

169. United States v. Jones, 132 S. Ct. 945, 955 (2012) (Sotomayor, J., concurring) ("With increasing regularity, the Government will be capable of duplicating the monitoring undertaken in this case by enlisting factory—or owner—installed vehicle tracking devices or GPS-enabled smartphones.").

170. *See* United States v. Garcia, 474 F.3d 994, 998 (7th Cir. 2007) ("These 'fantastic advances' continue, and are giving the police access to surveillance techniques that are ever cheaper and ever more effective. . . . Technological progress poses a threat to privacy by enabling an extent of surveillance that in earlier times would have been prohibitively expensive."); People v. Weaver, 909 N.E.2d 1195, 1199 (N.Y. 2009) ("GPS is a vastly different and exponentially more sophisticated and powerful technology that is easily and cheaply deployed and has virtually unlimited and remarkably precise tracking capability. . . . Constant, relentless tracking of anything is now not merely possible but entirely practicable, indeed much more practicable than the surveillance conducted in *Knotts*.").

171. Paul D. Schultz, *The Future Is Here: Technology in Police Departments*, 75 POLICE CHIEF MAG. (June 2008), *available at* http://www.policechiefmagazine.org/magazine/index.cfm?article_id=1527&fuseaction=display&issue_id=62008 (describing a list of ways in which technology has made police investigative work less time-consuming and more effective).

172. *See* Elaine Pittman, *Real-Life Police Technology Catches up with Science Fiction*, STARCHASE (Apr. 29, 2010), http://www.starchase.com/real-life-police-technology-catches-up-with-science-fiction.html.

173. *See supra* note 69 and accompanying text.

GPS trackers that can be activated at a moment's notice or, more often, are left on by default.[174] The sheer number of smartphones, tablets, and computers owned by the modern citizen further inflates the vulnerabilities of a system that continuously transmits potentially private information.[175] Given this vast and intangible information-sharing model, a doctrine purporting to protect individual privacy rights cannot rest on outdated notions of physical property lest it lack relevance and practicality.[176]

Despite Justice Alito's criticism that the majority adopted this exact approach in resting its decision on the physical trespass committed by the law enforcement agents in *Jones*, his own reliance on Justice Harlan's "reasonable expectation of privacy" raises many of the same concerns.[177] Particularly in light of ubiquitous gadgets capable of far more than just location services, an individual's "expectation of privacy"[178] regarding phone calls and text messages may be even more important than the privacy of his physical location.[179] Moreover, an individual assertion of privacy leaves unsettled the second prong of the

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174. *Id.*

175. *See supra* note 4.

176. *See* Christopher Slobogin, *Is the Fourth Amendment Relevant in a Technological Age* 2 (Vanderbilt Pub. Law & Legal Theory, Working Paper No. 10-64, 2011) ("[T]oday, with the introduction of devices that can see through walls and clothes, monitor public thoroughfares twenty-four hours a day, and access millions of records in seconds, police are relying much more heavily on what might be called 'virtual searches,' investigative techniques that do not require physical access to premises, people, papers or effects . . . . To date, the Supreme Court's interpretation of the Fourth Amendment has both failed to anticipate this revolution and continued to ignore it.").

177. *See* Katz v. United States, 389 U.S. 347, 353 (1967) (holding that law enforcement's use of devices enabling them to listen in on conversations made through a public telephone booth to violate the Fourth Amendment), *superseded by statute*, Wiretap Act, 18 U.S.C. §§ 2510–2520 (2006).

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

179. *See* Renee M. Hutchins, *Tied Up in* Knotts*? GPS Technology and the Fourth Amendment*, 55 UCLA L. REV. 409, 411 (2007) ("Though the necessities of modern life may at times require the disclosure of discrete portions of our daily routine to the handful of private parties that provide us with services, it is unlikely most Americans would sanction pervasive monitoring by our government."); Michael Isikoff, *The Snitch in Your Pocket*, DAILY BEAST (Feb. 18, 2010, 7:00 PM), http://www.thedailybeast.com/newsweek/2010/02/18/the-snitch-in-your-pocket.html ("[C]ell-phone tracking is among the more unsettling forms of government surveillance, conjuring up Orwellian images of Big Brother secretly following your movements through the small device in your pocket.").

Katz test, namely, whether "society is prepared to recognize this expectation of privacy as 'reasonable.'"[180]

Of course, what society expects is not always consistent with the expectations of the government.[181] Neither is the view of any particular judge an accurate substitute for the attitude of society.[182] In fact, society's expectations of privacy may be unreasonable because of a lack of knowledge, a misunderstanding of the underlying technology, or pure naivety.[183] Justice Harlan's reasonable suggestion, and by extension Justice Alito's, fails to properly fill these holes and leaves as many loopholes open in the Fourth Amendment as does Justice Scalia's trespass theory.

Importantly, electronic tracking information does not flow directly to the police in every instance. Police are increasingly turning to Internet service providers and to data storage companies that control, monitor, and enable the electronic capabilities of any particular device.[184] While the release of such information is certainly not as

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180. *Katz*, 389 U.S. at 361 (Harlan, J., concurring).

181. *See* Olmstead v. United States, 277 U.S. 438, 452 (1927) ("[A] balance should be sought between that which will preserve the fundamental safeguard which the Amendment was designed to secure, and at the same time not unduly fetter the arm of the Government in the enforcement of law."), *overruled in part by* Katz v. United States, 277 U.S. 438 (1967); *see also* United States v. Marquez, 605 F.3d 604, 609 (8th Cir. 2010) (holding that the defendant was merely an "occasional passenger" of a vehicle upon which police installed a GPS tracking device and thus "lacked standing to contest the installation and use of the GPS device").

182. *See* United States v. Jones, 132 S. Ct. 945, 962 (2011) (Alito, J., concurring) ("[J]udges are apt to confuse their own expectations of privacy with those of the hypothetical reasonable person to which the *Katz* test looks."); *see also* Somini Sengupta, *Courts Divided Over Searches of Cellphones*, N.Y. TIMES (Nov. 25, 2012), http://www.nytimes.com/2012/11/26/technology/legality-of-warrantless-cellphone-searches-goes-to-courts-and-legislatures.html?pagewanted=all&_r=0 (discussing the various, inconsistent ways that judges from different circuits have addressed the same privacy concerns raised by modern technology).

183. *See Jones*, 132 S. Ct. at 962 (noting that while "the *Katz* test rests on the assumption that this hypothetical reasonable person has a well-developed and stable set of privacy expectations," it remains true that "[d]ramatic technological change may lead to periods in which popular expectations are in flux and may ultimately produce significant changes in popular attitudes").

184. *See* Eric Lichtblau, *Wireless Firms Are Flooded by Requests to Aid Surveillance*, N.Y. TIMES (July 8, 2012), http://www.nytimes.com/2012/07/09/us/cell-carriers-see-uptick-in-requests-to-aid-surveillance.html?pagewanted=all&_r=0 (reporting that cellphone carriers

simple as asking with a smile, the "third-party doctrine" ensures that policing agencies will have access without much more effort.[185] This doctrine holds that when an individual knowingly entrusts the security of private information to a third party, that individual has relinquished any expectation of privacy in that information.[186] Alternatively, the individual has assumed the risk that his information may be revealed.[187] This doctrine has been upheld not only in cases where criminals have described their crimes to third parties that have then gone to the police,[188] but also to situations in which banks have released the financial records of their clients.[189] Applied to cases of electronic surveillance, an individual might be said to have relinquished any expectation of privacy in his internet activity and even the content of calls, text messages, and, of course, location. As long as an individual has knowingly revealed that information through a

responded to "1.3 million demands for subscriber information" in 2011 from "law enforcement agencies seeking text messages, caller locations and other information in the course of investigations").

185. *See* United States v. Miller, 425 U.S. 435, 443 (1976) ("[T]he Fourth Amendment does not prohibit the obtaining of information revealed to a third party and conveyed by him to Government authorities, even if the information is revealed on the assumption that it will be used only for a limited purpose and the confidence placed in the third party will not be betrayed."), *superseded by statute*, Right to Financial Privacy Act, 12 U.S.C. §§ 3401–3421 (2006).

186. *See* Orin S. Kerr, *The Case for the Third-Party Doctrine*, 107 MICH. L. REV. 561, 563 (2009) ("By disclosing to a third party, the subject gives up all of his Fourth Amendment rights in the information revealed. . . . In other words, a person cannot have a reasonable expectation of privacy in information disclosed to a third party. The Fourth Amendment simply does not apply.").

187. *See* Smith v. Maryland, 442 U.S. 735, 744 (1979) (holding that the defendant did not have a reasonable expectation of privacy in the number dialed from his telephone because he "assumed the risk that the company would reveal to police the numbers he dialed").

188. *See* United States v. White, 401 U.S. 745, 752 (1971) ("Given the possibility or probability that one of his colleagues is cooperating with the police, it is only speculation to assert that the defendant's utterances would be substantially different or his sense of security any less if he also thought it possible that the suspected colleague is wired for sound.").

189. *See Miller*, 425 U.S. at, 443 (holding that the defendant did not have a legitimate expectation of privacy in the contents of checks and deposit slips filed to two banks because they were not confidential communications but negotiable instruments voluntarily conveyed to banks in the ordinary course of business).

run-of-the-mill service contract, for example, the "third-party doctrine" ensures that even a single subsequent request will allow police access.[190]

The resulting hiccup is one unique to our modern context: Access to the modern information market necessarily requires one to accept the very practical possibility that third-parties will have access to this transmitted data. As Justice Sotomayor suggested, future technology may very well force the Court to reconsider the very nature of privacy and its relationship to the Fourth Amendment.[191] As Paul Ohm points out, however, that time is now.[192] To be socially active members of society, modern consumers are left with few alternatives but to make public extensive records regarding their whereabouts, interests, and possessions, lest they choose to opt out from integration altogether.[193] Upholding the third-party doctrine as it currently exists would ignore the needs of the deeply connected state in which we

190. For an opposing perspective, see Kerr, *supra* note 186, at 565 (arguing that understanding the third-party doctrine as a "subset of consent law rather than an application of the reasonable expectation of privacy test" allows it to "fit[] naturally within the rest of Fourth Amendment law").

191. United States v. Jones, 132 S. Ct. 945, 957 (2011) (Sotomayor, J., concurring) ("More fundamentally, it may be necessary to reconsider the premise that an individual has no reasonable expectation of privacy in information voluntarily disclosed to third parties. This approach is ill suited to the digital age, in which people reveal a great deal of information about themselves to third parties in the course of carrying out mundane tasks." (citations omitted)).

192. *See* Ohm, *supra* note 69, at 1310 ("If we woke up tomorrow in a world without privacy, we might also find ourselves in a world without constitutional protection from new, invasive police powers. This bleak scenario is not science fiction, for tomorrow we will likely wake up in that world.").

193. *See* Hutchins, *supra* note 179, at 411 ("Though the necessities of modern life may at times require the disclosure of discrete portions of our daily routine to the handful of private parties that provide us with services, it is unlikely most Americans would sanction pervasive monitoring by our government."); *see also* Ohm, *supra* note 69, at 1314–16 (describing how the concurrence of the "one device," a high-powered machine like an iPhone that continually sends a person's information to an online provider; the "cloud," distant servers that store millions of private messages and work product; "the social," social networks that encourage people to reveal their thoughts and behaviors; and "Big Data," companies that analyze all this information to infer private details about a person's life have created a new "surveillance society" in which privacy has effectively disintegrated).

now reside.[194] In a "world without privacy," the Fourth Amendment must adopt a similarly fresh perspective or else it will leave vulnerable those it seeks to protect.[195]

b. The Array of Information Gathered by Third-Party Technology Rewards in Medias Res[196] Investigation and Enables Armchair Policing

Given the vulnerabilities already afforded by the current state of Fourth Amendment jurisprudence, it is particularly disconcerting that it also rewards police who take advantage of its loopholes. In many cases, information gathered through electronic sources already exists in one form or another and often in the hands of more than one entity.[197] Thus even when a law enforcement agency must first obtain a warrant or request certain information from an internet service provider, subsequent access to the wealth of available information regarding any particular target is nearly immediate.[198] This not only allows law enforcement agents to reap the fruits of third-party efforts, but also rewards their behavior in the expenses, resources, and time saved by doing so.[199]

The extent of information that can be gleaned from this process supports a new approach to policing that this Comment will refer to as "armchair policing." This concept is best described in the context of the "mosaic theory," the approach emphasized by the lower court

194. *See* Ohm, *supra* note 69, at 1331 (arguing that "getting rid of the third-party doctrine is necessary but not nearly sufficient to ensure the appropriate protection of the Fourth Amendment").

195. *Id.* at 1311 ("If we continue to interpret the Fourth Amendment as we always have, we will find ourselves not only in a surveillance society, but also in a surveillance state.").

196. *See in medias res*, MERRIAM-WEBSTER, http://www.merriam-webster.com/dictionary/in%20medias%20res (last visited Apr. 18, 2013) (defining the phrase "in media res" as "in or into the middle of a narrative or plot").

197. *See supra* Part II.A.1.a.

198. People v. Weaver, 909 N.E.2d 1195, 1199–1200 (N.Y. 2009) ("One need only consider what the police may learn, practically effortlessly, from planting a single [GPS] device. The whole of a person's progress through the world, into both public and private spatial spheres, can be charted and recorded over lengthy periods possibly limited only by the need to change the transmitting unit's batteries.").

199. *See* Lichtblau, *supra* note 184 (describing reports that "law enforcement officials are shifting away from wiretaps in favor of other forms of cell tracking that are generally less legally burdensome, less time consuming and less costly").

in *Maynard*.[200] The "mosaic theory" emphasized that "[p]rolonged surveillance reveals types of information not revealed by short-term surveillance, such as what a person does repeatedly, what he does not, and what he does ensemble." Moreover, "[t]hese types of information can each reveal more about a person than does any individual trip viewed in isolation."[201] Most importantly, however, "'[w]hat may seem trivial to the uninformed, may appear of great moment to one who has a broad view of the scene.'"[202] Alternatively put, the "prolonged surveillance of a person's movements may reveal an intimate picture of his life . . . occasion[s] a heretofore unknown type of intrusion into an ordinarily and hitherto private enclave."[203]

As the "third-party doctrine" grants police the ability to begin an investigation *in medias res*, law enforcement officers are thus afforded the capacity to sit back, relax, and sift through large quantities of information from the comfort and the safety of their own offices, simultaneously avoiding many substantive legal barriers. In terms of the expenses saved by substituting actual fieldwork for a leisurely data-mining process alone, it is no stretch to suggest that "armchair policing" is a highly attractive option and a more effective one as well.

This new ability greatly upsets the balance of effort and reward. Traditionally, the expense of gathering information against a particular target was an important factor in whether a law enforcement agency might proceed against a particular target.[204] The nature of an ongoing investigation also provides some degree of extended supervision supplied either internally or by a judge, another protection rescinded in this abbreviated process.[205] By removing the balancing of

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200. United States v. Maynard, 615 F.3d 544 (D.C. Cir. 2010), *aff'd in part sub nom.* United States v. Jones, 132 S. Ct. 945 (2011).

201. *Id.* at 562.

202. *Id.*

203. *Id.* at 562–65. The court also noted that "when it comes to the Fourth Amendment, means do matter." *Id.* at 566.

204. *See Jones*, 132 S. Ct. at 963–64 ("Traditional surveillance for any extended period of time was difficult and costly and therefore rarely undertaken. The surveillance at issue in this case—constant monitoring of the location of a vehicle for four weeks—would have required a large team . . . . Only an investigation of unusual importance could have justified such an expenditure of law enforcement resources. Devices like the one used in the present case, however, make long-term monitoring relatively easy and cheap.").

205. *See* United States v. Karo, 468 U.S. 705, 717 (1984) (declaring that the primary reason behind the warrant procedure is to "interpose a neutral and detached magistrate be-

risk and reward introduced by the warrant process, "armchair policing" thus inappropriately inflates the information-gathering ability of law enforcement relative to the vulnerable individual.

2. *The Legitimate Interest in Effective Policing Mechanisms Benefits from Unclear Boundaries and Suffers from Arbitrary Judicial Whims*

Interest in individual privacy aside, it would be a substantive omission not to acknowledge a factor just as weighty: the interest in an effective and unburdened police force.[206] While it has been posited previously that the inherent nature of the Fourth Amendment introduces inefficiency into the policing system, it has also been emphasized that extending its protection too far will unnecessarily impede policing efforts.[207] This fundamental struggle between enabling police with the best possible tools to facilitate law enforcement versus the concern for individual privacy is a significant factor in driving the judiciary's inconsistent applications of the Fourth Amendment.[208]

The interest in making accessible to officers and to federal agents the most effective, useful, and up-to-date technology is a cornerstone of an effective law enforcement system. Better tools not only facilitate discovery and prosecution of crime but also help law enforcement stay competitive relative to criminals all too willing to exploit the best technology available. Thus, to unnecessarily restrict police access to outdated means and mechanisms already abandoned by their opposition places them at a severe disadvantage.[209] Professor Orin Kerr described this balancing act by the courts as an "equilibrium-based" approach in which the Fourth Amendment is inconsistently interpreted

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tween the citizen and the officer engaged in the often competitive enterprise of ferreting out crime" (internal quotation marks omitted)).

206. *See supra* note 181 and accompanying text.

207. *See* United States v. Garcia, 474 F.3d 994, 998 (7th Cir. 2007) ("Of course the [Fourth] [A]mendment cannot sensibly be read to mean that police shall be no more efficient in the twenty-first century than they were in the eighteenth. There is a tradeoff between security and privacy, and often it favors security." (citations omitted)).

208. *See supra* Part I.B.

209. *See* Ulf Wolf, *Cyber-Crime: Law Enforcement Must Keep Pace with Tech-Savvy Criminals*, DIGITALCOMMUNITIES (Jan. 27, 2009), http://www.digitalcommunities.com/articles/Cyber-Crime-Law-Enforcement-Must-Keep-Pace.html ("The important point is that cyber-criminals aren't sitting still; they're probably increasing the distance between themselves and the law—beyond the yonder mountain range already. Law enforcement has no option but to catch up.").

to maintain a somewhat equal playing field between law enforcement and would-be criminals.[210] Yet this theory suffers from an underlying problem: Law enforcement officers often discover the limits to their power only after violating those boundaries. The equilibrium-based approach is a rigged game: One side has no clue what the rules are while the other has no rules at all.

Compare the way in which state and federal courts have interpreted the Fourth Amendment differently despite factually similar circumstances.[211] In *Garcia*, Judge Posner of the Seventh Circuit held that no warrant was required before police attached a GPS-enabled tracking device to someone's vehicle because "GPS tracking is on the same side of the divide with the surveillance cameras and satellite imaging."[212] Likewise in *Marquez*, attaching a GPS-enabled tracking device to someone's bumper violates no "legitimate expectation of privacy."[213] Yet the Washington Supreme Court said any installation of GPS devices onto a person's vehicle necessitated a warrant because of the dangers of prolonged electronic surveillance,[214] and the Supreme Court of New York did the same while also emphasizing that GPS technology is "vastly different and exponentially more sophisticated" than a "mere enhancement of human sensory capability."[215] In all

210. Orin S. Kerr, *An Equilibrium-Adjustment Theory of the Fourth Amendment*, 125 HARV. L. REV. 476 (2011). Paul Ohm took Professor Kerr's analysis one step further and suggested that statistical metrics be used to assess the proper balance between police powers and individual privacy. *See* Ohm, *supra* note 69, at 1313 ("The problems with Kerr's theory are its informality and indeterminacy. . . . To lend rigor to this approach, I recommend that judges look for hard, objective measures of how much the playing field has tilted-statistical quantities like length of investigation and number of indictments. When criminals use new private services and technologies in ways that, for example, increase the average length of police investigations, judges should relax Fourth Amendment burdens on the police. Conversely, when the police use tools to decrease the average length of investigations, judges should tighten these burdens.").

211. *See supra* Part I.B.2.

212. United States v. Garcia, 474 F.3d 994, 997 (7th Cir. 2007).

213. United States v. Marquez, 605 F.3d 604, 607 (3d Cir. 2010).

214. State v. Jackson, 76 P.3d 217, 222 (Wash. 2003) (en banc).

215. People v. Weaver, 909 N.E.2d 1195, 1199 (N.Y. 2009); *see also* United States v. Maynard, 615 F.3d 544, 558–67 (D.C. Cir. 2010), *aff'd in part,* United States v. Jones, 132 S. Ct. 945 (2011) (finding that a person has a reasonable expectation of privacy in the totality of his movements over the course of a month even though law enforcement could constitutionally conduct warrantless observations of his individual movements from one place to another while in public).

four occasions, police acted in public places with similar intents and results, but the opinions split down two opposite paths.

This inconsistent and, at times, discretionary application of the Fourth Amendment creates a significant and unintended effect: the lack of a bright-line rule delineating what police may or may not do fundamentally frustrates their efforts. Specifically, if law enforcement agencies have no clear guidelines, it should come as no surprise when they overstep the bounds of their authority. Consequently, police may be baffled at the very outset of their investigations.[216] Even awaiting a final dictation by the Court leaves citizens and police engaged inside a temporary minefield with no clear exits. Therefore, the current state of the Fourth Amendment frustrates the efforts of law enforcement just as much as it leaves the individual vulnerable to the vast, accessible nature of modern technology.

B. Legislatures Are Better Qualified to Weigh the Concerns of All Parties Impacted by the Uncertain Scheme of Privacy Rights

The solution to this pitched disparity between the privacy rights afforded to the individual versus the capacity of the police to conduct thorough investigations has so far been relegated to the judiciary. The inconsistent application of the Fourth Amendment to an admittedly complicated series of situations, however, has left citizens and law enforcement agencies confused and frustrated.[217] Rather than a lack of effort or consideration, the judiciary may simply lack the institutional competence to weigh the issue properly.[218]

Whereas the judiciary offers a limited arena in which only a few voices can be entertained at a time, and even then only within a specific context, the legislative process offers a far larger and more accessible stage upon which to reconcile the interests of multiple parties. Not only would the voices of the government be articulated in an open setting, but private advocates would also be afforded a more impactful opportunity to contribute to the conversation. Additionally,

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216. *See* Cameron Steele, *New Digital Equipment Can Help Police, but Agencies Need to be Wary*, CHARLOTTE OBSERVER (Dec. 13, 2012), http://www.charlotteobserver.com/2012/12/13/3722752/as-police-expand-surveillance.html (highlighting city officials' concerns that "police have to be meticulous and transparent in developing guidelines for using these surveillance systems if they want residents to see them as protectors, rather than invaders of privacy").

217. *See supra* Part II.A.1.

218. *See* Slobogin, *supra* note 176 at 19 ("Comparing the effectiveness, not to mention the expense, of these competing approaches is far from the typical judicial job.").

the participation of officials that represent the will of certain constituencies offers the average citizen an avenue to affect legislative proceedings.[219]

Even more significantly, a discussion at this larger stage grants one more benefit not available to the judiciary: the chance for the technology industry as a whole to offer its input on the nature, design, and future evolution of electronic monitoring technology. Major technology companies and Internet service providers, such as Google and Verizon, have often found themselves in the middle between users and government agencies seeking to access their data.[220] While many have resisted revealing their customer information, the judiciary has been exposed to their concerns one expert witness at a time. In contrast, a legislative setting would furnish these gatekeepers of electronic privacy with the opportunity to affect directly the laws governing their industry.[221]

The submission of this issue to a collaborative, legislative body would not be a case of first impression. In Title III of the Wiretap

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219. *See* Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 806 (2004) (arguing that "the legislative branch rather than the judiciary should create the primary investigative rules when technology is changing" because "[t]echnological change may reveal the institutional limits of the modern enterprise of constitutional criminal procedure, exposing the need for statutory guidance"). Kerr also suggests that the "deferential stance" of the Court is a message that "we should not expect the Fourth Amendment alone to provide adequate protections against invasions of privacy made possible by law enforcement use of new technologies." *Id.* at 838. Rather, "Congress will likely remain the primary source of privacy protections in new technologies thanks to institutional advantages of legislatures." *Id.*

220. *See* David Teather, *Google Defies White House over Disclosing Users' Searches*, GUARDIAN (Jan. 20, 2006), http://www.guardian.co.uk/technology/2006/jan/21/security.usnews (reporting that Google defied a request by the U.S. government to turn over roughly one million randomly selected web addresses to scour the users' search data); Ellen Nakashima, *Verizon Says It Turned over Data Without Court Orders*, WASH. POST, Oct. 16, 2007, at A1 (relaying Verizon Communications' admission that it provided customers' telephone records to federal authorities in emergency cases without court orders several hundred times since 2006).

221. *See* Nick Feamster, *The Internet's Gatekeepers*, ALLTHINGSD (Feb. 11, 2011), http://allthingsd.com/20110211/the-internets-gatekeepers/ (comparing the censorship prominent in countries like Egypt and China to the United States to weigh two competing concerns: "Should free and open communication . . . be considered an unalienable right? How much control should a government or Internet service provider wield over its citizens' communications?").

Act,[222] Congress sought to regulate the collection of the content of wire and electronic communications.[223] With an exception for wire and electronic communication services providing the wiretap, the Act effectively barred the government from intercepting all communications except those that are publicly accessible.[224] Similarly, in the ECPA[225] the legislature sought to extend restrictions placed on the government's ability to intercept traditional telephone calls onto attempts made to monitor electronic transmissions of data by computer.[226] The legislature later extended the ECPA's scope to prohibit unfettered access to stored electronic data through the Stored Communications Act.[227]

In both instances, Congress recognized the difficulties faced by the judiciary in enacting two broad, uniform solutions to concerns shared on a large scale.[228] The broad definitions of wiretaps and electronic communications demonstrate that Congress was well aware of the substantial risk that inaction would facilitate the use of private communications in violation of the Fourth Amendment.[229] It also reflects a fluency with the underlying technology that individual judges limited by time and scope are unlikely to share. A similar undertaking to resolve the quagmire currently frustrating the Fourth Amendment's application to modern technological capabilities would likely benefit far more from the experience of a proven collaborator than the opinion of any individual judge.[230]

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222. Pub. L. No. 90-351, 82 Stat. 197 (codified as amended at 42 U.S.C. § 3711 (2006)).

223. 42 U.S.C. § 3711 (2006).

224. *Id.* The definition of an "electronic communication" specifically excluded "any communication from a tracking device." *Id.*

225. Pub. L. No. 99-508, 100 Stat. 1848 (codified as amended at 18 U.S.C. §§ 2510–2522 (2006)).

226. 18 U.S.C. § 2510 (2006). The ECPA also excluded from its protection communications gathered via tracking devices. *Id.*

227. 18 U.S.C. §§ 2701–2712 (2006).

228. *See* Kerr, *supra* note 219, at 849–50 (tracing the history leading up the enactment of Title III, specifically, that Congress was already prepared to enact new wiretap laws to resolve a deep split in the courts and refrained from doing so because the Court was to hear arguments in *Berger v. New York*, 388 U.S. 41 (1967), and *Katz v. United States*, 389 U.S. 954 (1967), which it "decided both . . . very much with Congress in mind").

229. 42 U.S.C. § 3711 (2006).

230. *See supra* note 218 and accompanying text.

Just as the judiciary is constantly burdened with a limited timeframe to deal with a seemingly endless stream of cases, so too are legislatures inundated by their own weighty dockets. The recent gridlock in Congress demonstrates that even if the legislative level is infinitely better equipped to assess the Fourth Amendment as it applies to emerging technology, the judiciary does not have the luxury of waiting for an external solution.

C. In the Absence of Reasoned Legislative Action, Courts Must Recognize GPS-Enabled Tracking Falls Within the Fourth Amendment's Protection Against Unreasonable Government Interference

Absent legislative action, the judiciary must undertake a substantial shift in its perspective to appropriately address the privacy concerns that *Jones* raises. The first step is to recognize uniformly the use of GPS-enabled tracking devices and other electronic monitoring gadgets as searches under the Fourth Amendment in their initial installation and subsequent use by police agencies. Any warrantless use of these devices must be considered in violation of that constitutional protection.[231] Secondly, judges would be better served by framing this protection as a "right to exclude" the government rather than a "reasonable expectation of privacy."[232]

1. Courts Ought to Recognize the Weaknesses of the Fourth Amendment by Requiring Warrants Before Conducting Electronic Surveillance

First, it is immediately necessary to classify the use of GPS-enabled devices and other electronic monitoring methods as searches under the Fourth Amendment. Whether this view is justified on the grounds that in such circumstances the government is seeking information[233] or simply that people have a right "to be secure in their persons, houses, papers, and effects,"[234] a person ought to be afforded some degree of privacy in how he chooses to use a smartphone, computer, or vehicle. Without a proper judicially authorized warrant, attaching a device to any of these items to monitor the activities of their

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231. *See infra* Part II.C.1.

232. *See infra* Part II.C.2.

233. United States v. Jones, 132 S. Ct. 945, 949 (2011) (majority opinion) ("It is important to be clear about what occurred in this case: The Government physically occupied private property for the purpose of obtaining information.").

234. U.S. CONST. amend. IV.

owner ought to be understood as intruding on a right to use them without undue interference. Similarly, the use of such devices to monitor, track, and transfer private information to police agencies, with or without a physical installation, must also be construed as an inappropriate exercise of power.

Warrants necessarily inject the judiciary into the investigative process.[235] The requirement is designed, not as a burden or speed-bump to police efforts, but rather to introduce the judgment of a "neutral, detached magistrate" into what is typically a subjective process initiated by officers invested in a particular outcome.[236] Generally, this helps to legitimize and to direct the scope of most investigations. Yet, in regards to satisfying the protection afforded by the Fourth Amendment, it is also to the overall benefit of society that the decision of a reasoned individual removed from the immediate conflict is placed between powerful electronic devices and the law enforcement agents seeking to obtain that information.[237] Requiring warrants in the investigative process thus injects a necessary dose of honesty—not just to prevent potential police abuse, but to add an extra layer of protection and oversight in favor of the individual.

For example, in *Garcia*, Judge Posner seemed convinced that GPS technology was so similar to surveillance cameras and satellite imaging such that if the latter two did not raise Fourth Amendment concerns, neither should the former.[238] The *Marquez* court emphasized that public streets were not suitable for any reasonable expectation of privacy.[239] Regardless of whether citizens have a legitimate expectation of privacy in their travels in public, warrants provide the necessary level of legitimacy to justify police access to these exact applications of modern technology. Seizing tapes of surveillance cameras routinely requires a warrant, and while the use of public roads is certainly within the public eye, the Supreme Court has agreed that pro-

235. *See* United States v. United States District Court, 407 U.S. 297, 316 (1972) ("Inherent in the concept of a warrant is its issuance by a 'neutral and detached magistrate.'").

236. *Id.* (holding that "where practical, a governmental search and seizure should represent both the efforts of the officer to gather evidence of wrongful acts and the judgment of the magistrate that the collected evidence is sufficient to justify invasion of a citizen's private premises or conversation"); *see also supra* text accompanying note 86.

237. *Id.* at 317 ("This judicial role accords with our basic constitutional doctrine that individual freedoms will be best preserved through a separation of powers and division of functions among the different branches and levels of Government.").

238. United States v. Garcia, 474 F.3d 994, 997 (7th Cir. 2007).

239. United States v. Marquez, 605 F.3d 604, 609 (3d Cir. 2010).

longed surveillance implicates Fourth Amendment protection.[240] Notwithstanding the lack of a bright-line rule or reasonable expectation of privacy,[241] police can avoid these issues by obtaining the seal of approval a warrant provides. Accordingly, warrantless police surveillance such as that in *Jones* must be treated as a violation of the Constitution.

2. *Framing Fourth Amendment Protection as an Active Right to Exclude Versus a Passive Right to Privacy Offers a Stronger, More Uniform Source of Law*

Even in cases where a warrant is obtained prior to the use of electronic surveillance, courts still entertain challenges to the use of evidence gathered using modern devices. Although warrants, by definition, introduce more checks into the legal process, the existing doctrine is unclear about when a warrant is needed and under what terms. To address this uncertainty and to better frame the tension created in the Fourth Amendment by new technologies, the judiciary should respond to *Jones* by re-framing the Fourth Amendment's "right to be secure"[242] into a "right to exclude" the government.

Since *Katz*, the Fourth Amendment has been construed as protecting a right of privacy, specifically, the "reasonable expectation of privacy" that "society is prepared to recognize as 'reasonable.'"[243] Considering privacy as the underlying motivation of the Fourth Amendment, however, narrows the larger issue of individual privacy into a struggle between the individual and the government. This approach has since fallen short of providing reliable protection.[244] Furthermore, stretching Fourth Amendment jurisprudence into an era exposed to rapid developments in information-sharing technology is a lost cause.[245]

That said, Justice Scalia's approach in *Jones* is valid because physical trespass was traditionally a staple of many government investiga-

240. *See supra* text accompanying notes 132–135.

241. *See supra* Part II.A.2.

242. U.S. CONST. amend. IV; *see also* Thomas K. Clancy, *What Does the Fourth Amendment Protect: Property, Privacy, or Security*, 33 WAKE FOREST L. REV. 307, 356 (2009) ("This ability to exclude is so essential to the exercise of the right to be secure that it is proper to say that it is equivalent to the right–the right to be secure *is* the right to exclude.").

243. Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) *superseded by statute*, Wiretap Act, 18 U.S.C. §§ 2510–2520 (2006).

244. *See supra* note 176 and accompanying text.

245. *See supra* note 195 and accompanying text.

tions.[246] Justice Scalia also agreed with Justices Sotomayor and Alito insofar as he upheld the *Katz* test absent physical trespass.[247] What their opinions collectively demonstrate, however, is that stretching the Fourth Amendment doctrine, rooted in an age without the Internet or the smartphone, to one in which information is constantly passed through a vast, intangible stream of data is a stopgap measure at best, and a wasted effort at worst.[248] Moreover, the current interpretation of the Fourth Amendment is a primarily reactive one, offering protection only after it already has been violated. Given a system where police regularly can reap the benefits of third parties already inundated with a person's private information merely by requesting preassembled records,[249] a reactive right fails to afford any real protection in a world where sensitive information is already available. The focus, instead, must be on preventing any access.

As the *Katz* court famously held, "the Fourth Amendment protects people, not places."[250] Simultaneously, the Fourth Amendment text secures "their persons, houses, papers, and effects."[251] Nowhere in the amendment is a "reasonable expectation of privacy" mentioned, and only where there is a "warrant issued upon probable cause"[252] may this protection be violated. That the warrant process is described as an initial protection implies that the Fourth Amendment guarantee is not a reactive right, but a positive one to be held at the forefront of any intrusion contemplated by the government. An individual's right to "secure" his items[253] is an additional sign that courts ought to employ a process in which the Fourth Amendment acts as the first line of defense to unreasonable searches before they may be carried out. Viewing this protection as a "right to exclude" properly encapsulates a positive guarantee flexible enough to adapt to a society increasingly exposed by pervasive information-sharing technology.[254]

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246. *See supra* Part I.A.

247. *See supra* text accompanying notes 133–135.

248. *See supra* note 170 and accompanying text.

249. *See supra* note 184 and accompanying text.

250. Katz v. United States, 389 U.S. 347, 351 (1967) (Harlan, J., concurring) *superseded by statute*, Wiretap Act, 18 U.S.C. §§ 2510–2520 (2006).

251. U.S. CONST. amend. IV.

252. *Id.*

253. *Id.*

254. *See* Clancy, *supra* note 242, at 357 ("The essential attribute of the right to be secure is the *ability* of the individual to exclude the government from intruding. . . . Without the ability to exclude, a person has no security.").

Alternatively, the right to secure one's effects against unreasonable intrusion can be analogized to a right to exclude the government from unreasonably intruding on those same objects.[255] In the course of consistently respecting the right of an individual to be secure in one's home, for example, courts have guaranteed the freedom to do what one wishes inside that home.[256] As with a right to security, this freedom cannot be fully respected without simultaneously affording the ability to control access and, at times, to deny it.[257] This scope of protection ought to be no different simply because a person's papers and effects exist within an electronic network rather than a physical folder cabinet.

While this approach is by no means a complete solution, it offers a more consistent and more flexible guideline for individual courts to make informed decisions in limited timeframes. Given the annual software and hardware updates available for most smartphones on the market, there is little doubt that new methods of gathering and storing information will eventually replace GPS-enabled devices and further blur the line at issue in *Jones*. A "right to exclude" is designed to avoid becoming as outdated as a "reasonable expectation of privacy"[258] because it is not as subjective nor is it tethered to any physical limits. Thus, while imperfect, the "right to exclude" presents a doctrine more stable and more flexible than the outdated reasoning applied in *Jones*.

III. CONCLUSION

United States v. Jones reaches far beyond the sum of its parts and implicates a much larger concern—the degree of individual privacy protected by the Fourth Amendment. While no Justice disputed the outcome of *Jones*, Justices Sotomayor and Alito disapproved of Justice

255. *See id.* at 358 ("The core concept, the right to exclude, remains—the ability of the individual to refuse to accede to the government intrusion.").

256. *See id.* at 345 (noting how a person's home has been described by courts as a sanctuary in need of special protection).

257. *See* STANLEY I. BENN, A THEORY OF FREEDOM 266 (1988) ("[T]o control access by others to a private object (to a private place, to information, or to an activity). [It] is the ability to maintain the state of being private or to relax it as, and to the degree that, and to whom one chooses.").

258. Katz v. United States, 389 U.S. 347, 360 (1967) (Harlan, J., concurring) *superseded by statute*, Wiretap Act, 18 U.S.C. §§ 2510–2520 (2006).

Scalia's emphasis on property rights[259] for good reason: substantial quantities of information no longer exist as physical documents, but rather as intangible electronic data.[260] Moreover, the increasing ubiquity of smart devices designed to share information efficiently has expanded exponentially the vast cloud of potentially private information available to "armchair police" courtesy of the "third-party doctrine."[261] *Jones* avoided confronting either of these issues despite vague warnings of a new technological age,[262] electing instead to condone the inconsistencies of the lower courts[263] and to further weaken a Fourth Amendment already at risk of irrelevancy.[264] Although legislatures may ultimately be better suited to reconcile these concerns,[265] courts must step forward as the first line of defense to a constitutional guarantee by accepting two core principles: (1) utilizing GPS-enabled devices without a warrant violates the Fourth Amendment,[266] and (2) a positive "right to exclude" presents a more flexible and more consistent source of protection than a reactive expectation of privacy.[267]

259. *See supra* note 138 and accompanying text.

260. *See supra* note 193 and accompanying text.

261. *See supra* Part II.A.1.b.

262. *See supra* text accompanying note 134.

263. *See supra* Part I.B.

264. *See supra* note 176 and accompanying text.

265. *See supra* Part II.B.

266. *See supra* Part II.C.1.

267. *See supra* Part II.C.2.