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It's Raining *Katz* and *Jones*: The Implications of *United States v. Jones*–A Case of Sound and Fury

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I. Introduction

Reading the highly anticipated decision of *United States v. Jones*,[1] concerning the constitutionality of the installation and use by police of a GPS tracking device without a warrant, was much like waking up Christmas morning only to find out that you did not get everything on your Christmas list. Santa not only did not bring you everything on your list, but also forgot all the good stuff. So, all of the excitement and anticipation of the moment yields way to "Bah! Humbug!"[2] feelings, and the long awaited moment becomes merely a footnote in annals of Christmases past. Such may be the case with *Jones* and its lasting impact and significance. Like the decision itself, the long-term impact of *Jones* on Fourth Amendment[3] jurisprudence and privacy concerns in the wake of GPS surveillance and similar tracking technologies is likely to be much like the tale of the idiot—"full of sound and fury, [s]ignifying nothing."[4]

The *Jones* case garnered widespread coverage across the nation,[5] and became a polarizing topic of discussion especially among lawyers, judges, legal commentators, and law students. Even the average person on the street seemed to have an opinion regarding the authority of the

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1. 132 S. Ct. 945 (2012).

2. "Bah! Humbug!" is the catchphrase used by Ebenezer Scrooge, the principal character in Charles Dickens's novel *A Christmas Carol.* CHARLES DICKENS, A CHRISTMAS CAROL 3 (Cricket House Books 2009) (1843).

3. U.S. CONST. amend. IV.

4. WILLIAM SHAKESPEARE, MACBETH act 5, sc. 5.

5. Benjamin J. Priester, Five Answers and Three Questions after *United States v. Jones* (2012), the Fourth Amendment "GPS Case" 1 (March 28, 2012) (unpublished manuscript), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2030390.

government to secretly track the public movements of a person in everyday life.[6] Many hoped that the opinion would finally put to rest the long debated issue regarding whether the warrantless installation and use of GPS tracking devices by law enforcement to track the movements of suspects along public roads constitutes a search or seizure under the Fourth Amendment.[7] But even more, many others hoped that the Court would ultimately provide some guidance on the degree of permissible intrusion that would be acceptable in the wake of electronic surveillance and other tracking technologies utilized by law enforcement in this digitally interconnected age.[8] While the opinion specifically answered the question, "whether under the facts in *Jones*, the government's actions violated the Fourth Amendment,"[9] the opinion fell far short of providing guidance about the Fourth Amendment implications of the use of GPS tracking devices and other technologically advanced tracking methods. The opinion also failed to address any Fourth Amendment privacy concerns in the wake of such technologically advanced devices and their general use by law enforcement as investigatory tools.[10]

In this digital age, spyware, smartphones, security cameras, license-plate scanners, home security systems, body scanners, and other such technologically advanced devices are becoming common-place and are functionally capable of the same degree of intrusion as GPS devices. The Court's reliance on common law trespass to resolve the ultimate issue in *Jones* leaves uncertain the constitutionality of many investigatory techniques that make the need for any trespassory intrusion superfluous. Additionally, when you consider third-party services, such as Facebook, Twitter, OnStar and other similar services, where large amounts of data

6. *See* Kevin Emas & Tamara Pallas, United States v. Jones*: Does* Katz *Still Have Nine Lives?*, 24 ST. THOMAS L. REV. 116, 117 (2012).

7. *See, e.g.*, *id.* ("Many thought that, with the United States Supreme Court's anticipated decision in *United States v. Jones*, we would no longer harbor any uncertainty as to when Big Brother was born.").

8. *See, e.g.*, Caren Myers Morrison, *The Drug Dealer, The Narc, and the Very Tiny Constable: Reflections on* United States v. Jones, 3 CAL. L. REV. CIRCUIT 113, 114 (2012) ("My . . . critique is leveled at the Court's refusal to answer the . . . question . . . whether the police actions in *Jones* constituted a search, given contemporary realities regarding technology and social norms, regardless of whether a common law trespass was committed.").

9. *See* United States v. Jones, 132 S. Ct. 945, 954 (2012).

10. *See* Barry Friedman, *Privacy, Technology and Law*, N.Y. TIMES, Jan. 29, 2012, at SR5, *available at* http://www.nytimes.com/2012/01/29/opinion/sunday/in-the-gps-case-issues-of-privacy-and-technology.html.

about an individual can be collected and stored,[11] and the possibility that police may have access to this information without any trespassory intrusion, the decision in *Jones* appears largely illusionary. For these reasons, and because the Court avoided most of the complex Fourth Amendment issues implicated by use of technologically advanced tracking devices, the narrow focus of *Jones*[12] may likely render its usefulness going forward mostly insignificant; merely a footnote in the annals of Fourth Amendment jurisprudence.

This Article discusses the implications of *Jones* in light of emerging technology capable of duplicating the monitoring undertaken in *Jones* with the same degree of intrusiveness attributable to GPS tracking devices, but without depending on any physical invasion of property. This Article also discusses how the pervasive use of this emerging technology may reshape reasonable expectations of privacy concerning an individual's public movements, making it all the more difficult to apply the Fourth Amendment constitutional tests outlined in *Jones*. In this regard, this Article explores recent trends in electronic tracking, surveillance, and other investigative methods that have raised privacy concerns, including automatic license-plate recognition systems, smartphone tracking, and third-party subpoenas to access private information from third-party service providers. All of these methods may fall outside the purview of the current constitutional constructs identified in *Jones*, even though the accumulated effect of the information collected can provide a comprehensive record of an individual's comings and goings. This Article makes the argument that neither *Jones* nor the reasonable expectation of privacy test set forth in *Katz v. United States*[13] provides adequate Fourth Amendment protection against warrantless unwanted electronic intrusions by law enforcement or other nontrespassory invasions, even though such intrusion may result in the collection of vast amounts of information about an individual's daily

11. *See* Joseph Menn, *Online Privacy Fears Stoked by Google, Twitter, Facebook Data Collection Arms Race*, HUFFINGTON POST (Feb. 19, 2012, 9:06 AM), http://www.huffingtonpost.com/2012/02/19/online-privacy-google-twitter-facebook-data-collection_n_1287419.html.

12. *See* Adam Liptak, *Justices Reject GPS Tracking in a Drug Case*, N.Y. TIMES, Jan. 24, 2012, at A1, *available at* http://www.nytimes.com/2012/01/24/us/police-use-of-gps-is-ruled-unconstitutional.html?pagewanted=all&_r=0 ("Justice Sotomayor joined the majority opinion, agreeing that many questions could be left for another day 'because the government's physical intrusion on Jones's Jeep supplies a narrower basis for decision.'").

13. 389 U.S. 347 (1967).

movements, either because there is no physical trespass involved, because of the nature of the intrusion, or because of the pervasiveness of the technology involved.

II. Implications of *Jones*

To begin, *Jones* did not appear too terribly complex, and with its unanimous decision, one would think that this was, in fact, the case. However, while the Justices were unanimous in their decision, the underlying reasoning beneath the Court's holding was split five-four, with three Justices penning separate opinions, all espousing separate reasoning and, at times, criticizing the others' rationale. To better appreciate all of the "sound and fury"[14] of the Justices in their seemingly warring opinions, it is necessary to go back to the beginning.

A. *Brief Background of* Jones

In 2004, Antoine Jones, the owner of a nightclub in the District of Columbia, was under investigation for suspicion of drug trafficking.[15] During the course of the investigation, officers utilized various investigative methods, including visual surveillance, a pen register, and wiretaps.[16] In 2005, based on the information gathered from their investigation, the government applied for a warrant to install a GPS tracking device on a vehicle driven by Jones, which was registered in his wife's name.[17] The warrant authorized the agents to install the GPS tracking device in the District of Columbia within ten days.[18]

Agents installed the GPS tracking device on the undercarriage of Jones's vehicle on the eleventh day while the vehicle was parked in a public parking lot located in Maryland, not while the vehicle was in the District of Columbia.[19] Over a twenty-eight day period, the government used the GPS tracking device to record the vehicle's movements, changing the battery at least once while the vehicle was parked in another public lot in Maryland.[20] The GPS tracking device recorded more

14. SHAKESPEARE, *supra* note 4.
15. United States v. Jones, 132 S. Ct. 945, 948 (2012).
16. *Id.* at 946.
17. *Id.*
18. *Id.*
19. *Id.*
20. *Id.* at 947.

than two thousand pages of location data over the twenty-eight day period.[21]

Based in part on the information gathered from the use of the GPS tracking device, the government was able to obtain a multiple-count indictment charging Jones and other coconspirators with conspiracy to distribute, and possession with intent to distribute, cocaine and cocaine base.[22] Jones filed a motion in the district court to suppress the evidence obtained through use of the GPS device without a warrant.[23] The district court granted the motion in part as it related to data obtained while the vehicle was parked in a garage at Jones's residence, but denied the motion as it related to data obtained while the vehicle was traveling on public roads. [24] The lower court based its ruling on the Supreme Court's holding in *United States v. Knotts*,[25] that "[a] person traveling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another."[26] Jones's first trial ended in a hung jury on the conspiracy count.[27]

In March 2007, Jones and others were again indicted on the conspiracy count.[28] At the new trail, the government introduced the same GPS location data presented in the first trial and on this evidence Jones was convicted of conspiracy and received a life sentence.[29] The United States Court of Appeals for the District of Columbia reversed Jones's conviction, holding that the admission of the evidence obtained by the warrantless use of the GPS tracking device violated the Fourth Amendment.[30] The District of Columbia Circuit Court denied the government's petition for rehearing en banc, with four judges dissenting.[31] Following this denial, the Supreme Court granted certiorari on July 27, 2011,[32] and oral arguments were heard on November 8, 2011.[33]

21. *Id.*
22. *Id.*
23. *Id.*
24. *Id.*
25. 460 U.S. 276 (1983).
26. *Id.* at 281.
27. *Jones*, 132 S. Ct. at 948.
28. *Id.*
29. *Id.*
30. *Id.* at 949.
31. *Id.*
32. United States v. Jones, 131 S. Ct. 3064 (2011).
33. *See* Transcript of Oral Argument at 1, United States v. Jones, 132 S. Ct. 945

B. *Constitutional Precedent Leading up to* Jones

At the time of *Jones*, there were several existing Supreme Court decisions the Court could have used to help resolve the issue of "whether the attachment of a Global-Positioning-System (GPS) tracking device to an individual's vehicle, and subsequent use of that device to monitor the vehicle's movements on public streets, constitutes a search or seizure within the meaning of the Fourth Amendment."[34] Principal among the existing precedent was the Supreme Court's decision in *Katz v. United States*,[35] which established the reasonable expectation of privacy test—a search under the Fourth Amendment occurs only when an expectation of privacy that society considers reasonable is invaded.[36]

In *Katz*, the FBI attached an electronic listening device to the exterior of a telephone booth used by defendant for illegal gambling and recorded the defendant's conversations, which were later used as evidence to convict the defendant of wire fraud.[37] The Supreme Court held that the defendant sought to exclude others when he entered the enclosed telephone booth, which allowed him to assume that his conversations were private and would not be "broadcast to the world."[38] The Supreme Court concluded that "[t]he government's activities in electronically listening to and recording the petitioner's words violated the privacy upon which he justifiably relied while using the telephone booth and thus constituted a 'search and seizure' within the meaning of the Fourth Amendment."[39]

The *Katz* reasonable expectation of privacy test informed the Supreme Court's decision in numerous situations, including thermal imaging,[40] aerial observations,[41] curbside trash,[42] dog sniff tests,[43] and

(2012) (No. 10-1259), *available at* http://www.supremecourt.gov/oral_arguments/argument_transcripts/10-1259.pdf.

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

35. 389 U.S. 347 (1967).

36. *See id.* at 361 (Harlan, J., concurring). Augmented by Justice Harlan's concurring opinion, the Court adopted a two-part test for determining when a "search" had occurred under the Fourth Amendment: "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.'" *Id.*

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

38. *Id.* at 353.

39. *Id.* at 353.

40. *See* Kyllo v. United States, 533 U.S. 27 (2001) (holding thermal imaging technology used to detect heat emanating for the home of the defendant constituted a search under the Fourth Amendment).

traffic stops.[44] But perhaps the most relevant precedent the *Jones* Court could have relied on involved the installation and use of beepers, arguably the closest predecessor to GPS technology.

United States v. Knotts[45] was the Supreme Court's first opportunity to address whether the use of beepers to track a defendant's location constitutes a "search" under the Fourth Amendment. In *Knotts*, the Supreme Court held that monitoring beeper signals was "neither a 'search' nor a 'seizure' within the contemplation of the Fourth Amendment"[46] because monitoring beeper signals did not infringe upon the defendant's reasonable expectations of privacy.[47] In *Knotts*, law enforcement, suspecting the defendant of illegal activity, arranged to have a beeper placed inside a container of chloroform that was purchased by the defendant for use in the manufacture of illegal drugs.[48] After the defendant purchased the container with the beeper, the officers followed the defendant's vehicle using a monitor that picked up the beeper's signal, as well as visual surveillance of the defendant.[49] Using the beeper signal, officers eventually traced the container of chloroform to the defendant's cabin.[50] Police obtained a search warrant, relying primarily on the information obtained by use of the beeper, and discovered an illegal drug operation.[51] The Court concluded that while the defendant may have had a subjective expectation of privacy in his movements, "[a] person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to

41. *See* Florida v. Riley, 488 U.S. 445, 450-51 (1989) (holding aerial observation of the defendant's home during helicopter flyover was not a search under Fourth Amendment); Dow Chem. Co. v. United States, 476 U.S. 227, 237-39 (1986) (holding aerial observation of an industrial plant was not a search under Fourth Amendment); California v. Ciraolo, 476 U.S. 207, 213 (1986) (holding aerial observation of curtilage of defendant's home was not a search).

42. *See* California v. Greenwood, 486 U.S. 35, 41-42 (1988) (holding no reasonable expectation of privacy in trash left at curbside outside defendant's home).

43. *See* United States v. Place, 462 U.S. 696, 707 (1983) (holding no Fourth Amendment violation when officers subjected defendant's luggage to a "dog sniff" test).

44. *See* Rakas v. Illinois, 439 U.S. 128 (1978) (holding defendants did not have a reasonable expectation of privacy in vehicle which they did not claim an ownership interest).

45. 460 U.S. 276 (1983).

46. *Id.* at 285.

47. *See id.* at 284-85.

48. *Id.* at 277-78.

49. *Id.*

50. *Id.*

51. *Id.* at 279.

another."[52] The Court reasoned that following the beeper signal was analogous to visual surveillance of the vehicle while traveling on the public roads and highways.[53]

Just over a year later, on almost identical facts, the Supreme Court addressed the issue again in *United States v. Karo*.[54] In *Karo*, after obtaining a court order to install and monitor a tracking beeper in a can of ether, which agents suspected would be used by the defendant "to extract cocaine from clothing that had been imported into the United States,"[55] the agents used the tracking device and visual surveillance to monitor the can's whereabouts.[56] The agents relied primarily on the beeper signal, which led them to a residence rented by one of the defendants.[57] The agents obtained a warrant to search one of the defendant's homes "based in part on information derived through use of the beeper."[58] Upon execution of the warrant, the agents found drug manufacturing equipment.[59] Relying on the *Katz* analysis, the Court affirmed the rationale of *Knotts* regarding the constitutionality of monitoring the beeper while on public roads,[60] but concluded that monitoring the beeper while it was located in a private residence violated the Fourth Amendment and the rights of "those who ha[d] a justifiable interest in the privacy of the residence."[61]

Whereas *Katz*, *Knotts*, and *Karo* represented what most legal scholars and jurists believed to be the constitutional framework by which the Court would decide *Jones*, many were left utterly shocked by the Court's almost total rejection of these previous constitutional precedents in favor of a doctrine that most believed was dead—the "trespass doctrine."[62] Legal scholars and jurists alike, for decades, had interpreted

52. *Id.* at 281.

53. *Id.* at 281-82.

54. 468 U.S. 705 (1984).

55. *Id.* at 708.

56. *Id.*

57. *Id.* at 708-10.

58. *Id.* at 710.

59. *Id.*

60. *Id.* at 713-15; s*ee also* April A. Otterberg, Note, *GPS Tracking Technology: The Case for Revisiting* Knotts *and Shifting the Supreme Court's Theory of the Public Space Under the Fourth Amendment*, 46 B.C. L. REV. 661, 678 (2005) ("[T]he Court . . . implicitly accepted *Knotts*'s rationale regarding the constitutionality of DEA officers' monitoring of the beeper as it moved on public thoroughfares.").

61. *Karo*, 468 U.S. at 714.

62. The "trespass doctrine" in Fourth Amendment jurisprudence was first articulated in *Olmstead v. United States*, 277 U.S. 438 (1928), and is based on the

Katz as replacing, if not overruling, the trespass doctrine,[63] since the Court so explicitly and emphatically declined to resolve the issue in *Katz* upon a property-based theory.[64] *Katz*'s complete denouncement[65] of a property-based resolution left many to wonder about the fate of the trespass doctrine and the future of property-based Fourth Amendment arguments—that is, until *Jones*.

C. *The* Jones *Decision*

On January 23, 2012, a unanimous Supreme Court held that the warrantless installation and use of a GPS tracking device to track the movements of a suspect's vehicle constitutes a "search" under the Fourth Amendment.[66] Justice Scalia, joined by Chief Justice Roberts and Justices Kennedy, Thomas, and Sotomayor, wrote for the majority: "We hold that the [g]overnment's installation of a GPS device on a target's vehicle, and its use of that device to monitor the vehicle's movements, constitutes a 'search.'"[67] Though the decision was unanimous, the Court was split on which constitutional precedent to use to resolve the issue—the older "trespass doctrine" first announced in *Olmstead v. United*

concept that "the [F]ourth [A]mendment protected 'persons, houses, papers, and effects' when these entities were located within a 'constitutionally protected area.'" David P. Miraldi, Comment, *The Relationship Between Trespass and Fourth Amendment Protection After* Katz v. United States, 38 OHIO ST. L.J. 709, 710 (1977); *see also* Goldman v. United States, 316 U.S. 129, 134-35 (1942) (relying on the opinion in *Olmstead*, the Supreme Court held that the use of an electronic recording device did not infringe upon the Fourth Amendment rights of the defendant because no physical trespass occurred into the home or curtilage of the defendant).

63. *See* Miraldi, *supra* note 62, at 712.

> Some lower federal courts have read *Katz* as expanding [F]ourth [A]mendment protection by merely supplementing the trespass doctrine. On the other hand, some lower federal courts have focused upon Justice Harlan's concurring opinion and have read *Katz* as completely replacing the trespass doctrine with the reasonable expectation of privacy test.

Id. (footnotes omitted). *But see id.* at 732-33 (supporting the continued use of the trespass doctrine together with the *Katz* reasonable expectation test).

64. *See* Katz v. United States, 389 U.S. 347, 353 (1967) ("[T]he 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.").

65. *Id.*

66. United States v. Jones, 132 S. Ct. 945, 948-54 (2012).

67. *Id.* at 949 (footnote omitted).

States,[68] or the reasonable expectation of privacy test announced in *Katz*.[69]

The five-Justice majority opted to return to the property-driven concept, the trespass doctrine, first articulated in *Olmstead*.[70] In relying on the trespass doctrine, the majority reasoned that applying common-law trespass principles best preserved the degree of privacy against government intrusion that existed at the time of the Fourth Amendment's adoption, stating that "[w]e have no doubt that such a physical intrusion would have been considered a 'search' within the meaning of the Fourth Amendment when it was adopted."[71] After asserting that "[i]t is beyond dispute that a vehicle is an '*effect*' as that term is used in the [Fourth] Amendment,"[72] the majority had no problem finding a Fourth Amendment violation. The Court declined to address much deeper issues such as the significance of the vehicle's ownership, which was registered in Jones's wife's name, or whether Jones had a reasonable expectation of privacy in the vehicle's undercarriage or in the vehicle's movements along public roads.[73] The majority supports its refusal to delve into these deeper issues by asserting that historically the Fourth Amendment has always embodied concerns regarding governmental intrusion into areas—"persons, houses, papers, and effects."[74] The majority states that this understanding was not repudiated by *Katz*.[75] Although the majority did not altogether ignore *Katz*, stating that *Katz* was not a substitute for earlier Fourth Amendment jurisprudence and the use of the trespass doctrine, but rather that *Katz* provided an additional test to be applied when there was no physical trespass involved,[76] the majority nevertheless refused to address any *Katz*-related issues in the absence of a physical trespass, stating that "[w]e may have to grapple with these 'vexing

68. 277 U.S. 438 (1928), *overruled by* Katz v. United States, 389 U.S. 347 (1967), *and* Berger v. New York, 388 U.S. 41 (1967). In *Olmstead*, federal agents installed wire taps in the streets outside the defendant's home. *Id.* at 456-57. The *Olmstead* court held that the defendant's Fourth Amendment rights were not violated since there was no trespassing into the defendant's home or curtilage. *Id.* at 466; *accord* Goldman v. United States, 316 U.S. 129, 131-32 (1942).

69. 389 U.S. at 361 (Harlan, J., concurring).

70. *See Jones*, 132 S. Ct. at 949-50.

71. *Id.* at 949.

72. *Id.* (emphasis added) (citing United States v. Chadwick, 433 U.S. 1, 12 (1977)).

73. *Id.* at 949-50. The Court stated: "Fourth Amendment rights do not rise or fall with the *Katz* [reasonable expectation of privacy test]." *Id.* at 950.

74. *See id.* at 953.

75. *Id.* at 950.

76. *Id.* at 952-53.

problems' in some future case where a classic trespassory search is not involved and resort must be had to *Katz* analysis; but there is no reason for rushing forward to resolve them here."[77]

Nevertheless, in response to Justice Alito's concurrence and the government's contentions, the majority seemed compelled to address the Court's previous constitutional precedent by distinguishing the Court's earlier precedent from the present case.[78] Responding to Justice Alito's argument that post-*Katz* precedent explained that "an actual trespass is neither necessary nor sufficient to establish a constitutional violation,"[79] the majority found that this argument was "undoubtedly true [yet] undoubtedly irrelevant,"[80] since the cases upon which Justice Alito (and the government) relied are factually distinguishable.[81] Arguing from the premise that the *Katz* reasonable expectation of privacy test has been added to, and is not a substitute for, the trespass doctrine,[82] the majority reasoned that *Knotts* and *Karo* were not applicable because neither addressed the issue of trespass.[83] In each case, as noted by the majority, the beeper was placed in the container prior to coming into the possession of the defendant and, therefore, neither defendant could object to the beeper's presence.[84] For this reason, the majority concluded

77. *Id.* at 954.

78. *Id.* at 951-52. *But see* Myers Morrison, *supra* note 8, at 118.

> [T]o distinguish *Jones* from *Knotts* and *Karo* on the basis that the former involved a trespass and the latter two did not seems to deliberately ignore the more salient difference between the cases. The surveillance in *Knotts* lasted a single trip and the surveillance in *Karo* only a couple trips. The surveillance in *Jones* was a 24-hour a day, 28-day operation.

Id.

79. *Jones*, 132 S. Ct. at 960 (Alito, J., concurring in judgment) (quoting United States v. Karo, 468 U.S. 705, 713 (1984)).

80. *Id.* at 951 n.5 (majority opinion).

81. *Id.* at 951-52.

82. *Id.* at 952. The majority stated that *Katz* "established that 'property rights are not the sole measure of Fourth Amendment violations,' but did not 'snuf[f] out the previously recognized protection of property.'" *Id.* (quoting Soldal v. Cook Cnty., Ill., 506 U.S. 56, 64 (1992). The majority went on the explain that "[a]s Justice Brennan explained in his concurrence in *Knotts*, *Katz* did not erode the principle 'that, when the [g]overnment 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.'" *Id.* (quoting United States v. Knotts, 460 U.S. 276, 286 (1983)).

83. *See id.* at 952.

84. *See id.*

that the defendant in *Jones* "is on much different footing,"[85] since the defendant possessed the vehicle prior to the government's trespassory invasion.[86] In addition, though the majority saw no need to delve into any *Katz*-like analysis,[87] it did make clear that the *Katz* analysis would apply in cases involving "merely the transmission of electronic signals without trespass."[88]

Although in accord with the Court's decision, Justice Alito's concurring opinion, which is joined by Justices Ginsburg, Breyer, and Kagan, is very critical of the majority's opinion because the latter entirely ignores post-*Katz* constitutional precedent (namely *Knotts* and *Karo*), which primarily focused on determining whether expectations of privacy are reasonable.[89] The true issue for Justice Alito is "whether respondent's reasonable expectations of privacy were violated by the long-term monitoring of the movements of the vehicle he drove"[90]—a question Justice Alito answers affirmatively.[91] This, according to Justice Alito, is the case's most important issue and one Justice Alito contends the majority largely ignored.[92] While Justice Alito was clear to note that the *Katz* reasonable expectation of privacy test has its complications, he also notes that the *Katz* test avoids several key problems raised by the majority opinion, including potential incongruous results.[93] According to Justice Alito, the majority's approach would have led to a different result if the defendant in *Jones* had gained exclusive possession of the vehicle in question after the GPS was installed.[94] Similarly, Justice Alito notes that if the ownership of the vehicle in which the defendant was driving *is*

85. *Id.*
86. *Id.*
87. *Id.* at 947.
88. *Id.* at 953.
89. *See id.* at 959-60 (Alito, J., concurring in judgment).
90. *Id.* at 958.
91. *Id.* at 964.

> In this case, for four weeks, law enforcement agents tracked every movement that respondent made in the vehicle he was driving. We need not identify with precision the point at which the tracking of this vehicle became a search, for the line was *surely* crossed before the 4-week mark.

Id. (emphasis added).

92. *Id.* at 961.
93. *Id.*
94. *Id.*

relevant, an issue the majority refuses to address,[95] results "may vary from State to State" depending on marital property laws.[96] Moreover, as further noted by Justice Alito, the majority's opinion fails to address issues involving surveillance without a physical trespass.[97] As Justice Alito sees it, in this day and age of new technology where law enforcement is no longer constrained by practical considerations,[98] the best that the Court can do is apply current constitutional doctrine and ask "whether the use of GPS tracking in a particular case involved a degree of intrusion that a reasonable person would not have anticipated."[99] Under this approach, Justice Alito would find that the government's use of the GPS device over a four-week period was sufficient to violate the Fourth Amendment, although he declined to state at what point within the four-week period the tracking became a search.[100]

Justice Sotomayor, though joining the majority, wrote a separate concurring opinion that also criticizes the narrow focus of the majority's opinion and its refusal to address critical issues involving the use of advanced technology that do not involve a physical trespass.[101] Justice Sotomayor joined in the majority opinion only because she agreed that, at a minimum, a search occurs within the meaning of the Fourth Amendment "'[w]here . . . the [g]overnment obtains information by physically intruding on a constitutionally protected area.'"[102] However, Justice Sotomayor thought the Court should focus on social norms and societal expectations.[103] Justice Sotomayor explains that she "would take the[] attributes of GPS monitoring into account when considering the existence of a reasonable societal expectation of privacy in the sum of one's public movements."[104] She states specifically that she "would ask whether people reasonably expect that their movements will be recorded

95. *See id*. at 949 n.2 (majority opinion) (concluding that there was no issue regarding the status of Jones as merely the user of the vehicle rather than the vehicle's owner since the government did not object to the Court of Appeals' determination that registration of the vehicle did not affect Jones's Fourth Amendment rights.)

96. *Id*. at 961-62 (Alito, J., concurring in judgment).

97. *See id.* at 958-59.

98. *See id*. at 963 ("In the pre-computer age, the greatest protections of privacy were neither constitutional nor statutory, but practical.").

99. *Id*. at 964.

100. *Id*. at 964 ("We need not identify with precision the point at which the tracking of this vehicle became a search . . . .").

101. *See id*. at 954-55 (Sotomayor, J., concurring).

102. *Id.* at 954 (quoting *id.* at 950 n.3 (majority opinion)).

103. *See id*. at 956.

104. *Id.*

and aggregated in a manner that enables the [g]overnment to ascertain, more or less at will, their political and religious beliefs, sexual habits, and so on."[105] Under this rubric, Justice Sotomayor would find, as Justice Alito does, that long-term GPS tracking impinges on reasonable expectations of privacy and would therefore violate the Fourth Amendment.[106] However, she saw no reason why shorter term monitoring in certain situations involving GPS technology, because of its unique attributes, would not also require particular attention by the Court.[107]

To be sure, the Court's ruling leaves many unanswered questions regarding the use of GPS technology in the wake of privacy concerns. So what are we to take from the Court's decision? Since many of the significant issues were left unanswered,[108] the *Jones* decision may be of little relevance for future cases involving technologically advanced surveillance and tracking, especially in light of emerging technology, including social media, that allows the tracking or monitoring of a person without any physical trespass.[109] Moreover, even with the Court's clarification that *Katz* should be applied in cases without a physical trespass, because the Court, including Justices Alito and Sotomayor in their respective concurring opinions, declined to address at which point within the four-week period the surveillance of Jones became a search (i.e., exceeded reasonable expectations society is prepared to recognize),[110] *Jones* adds very little to the post-*Katz* formulation of

105. *Id.*

106. *Id.* at 955 ("I agree with Justice Alito that, at the very least, 'longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy.'" (quoting *id.* at 964 (Alito, J., concurring in judgment)).

107. *Id.* at 955. Justice Sotomayor was very concerned with the sheer quality and quantity of information the government was capable of collecting on the defendant in *Jones*, noting that "GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious, and sexual associations." *Id.*

108. Justices Sotomayor and Alito each criticized the majority for failing to address several key questions, the most significant of which was whether the actions of the police in *Jones* constituted a "search" within the meaning of the Fourth Amendment regardless of whether there was a common law trespass, given the realities of enhanced surveillance technology and societal expectations. *See id.* at 955 (Sotomayor, J., concurring); *id.* at 958-61 (Alito, J., concurring in judgment).

109. Justices Sotomayor and Alito each made passionate arguments about the pervasiveness of emerging technology and its effects on societal norms and reasonable expectations. *See id.* at 955 (Sotomayor, J., concurring); *id.* at 963 (Alito, J., concurring in judgment).

110. *See id.* 955 (Sotomayor, J., concurring); *id.* at 964 (Alito, J., concurring in judgment).

reasonable expectations.

Notwithstanding that *Jones* may clarify certain doctrinal principles regarding what constitutes a "search" within the meaning of the Fourth Amendment, this clarification may be merely a matter of form over substance in this wireless digital information age because *Jones* did not add any additional insight into the otherwise murky area of Fourth Amendment jurisprudence regarding electronic surveillance and tracking.

D. *Fourth Amendment Jurisprudence After* Jones

The Court in *Jones* ultimately failed to address the sweeping Fourth Amendment implications of the use of GPS or similar tracking devices, specifically, whether the warrantless use of GPS or similar tracking devices constitutes a "search" within the meaning of the Fourth Amendment when there is no physical trespass involved. However, the *Jones* decision does provide some marginal insight into the Court's likely future interpretation of the doctrinal definition of what constitutes a "search" under the Fourth Amendment.

1. Doctrinal Definition of "Search" Prior to *Jones*

Historically, the doctrinal definition of a "search" within the meaning of the Fourth Amendment involved some physical intrusion into a constitutionally protected area and, thus, trespass became the driving force behind Fourth Amendment protection.[111] This concept became known as the "trespass doctrine" and is based on the concept that "the [F]ourth [A]mendment protect[s] 'persons, houses, papers, and effects' when these entities [are] located in a 'constitutionally protected area.'"[112] The "trespass doctrine" was the primary force behind Fourth Amendment protection for more than three decades,[113] until the Court

111. *See* Olmstead v. United States 277 U.S. 438 (1928), *overruled by* Katz v. United States, 389 U.S. 347 (1967), *and* Berger v. New York, 388 U.S. 41 (1967); Goldman v. United States, 316 U.S. 129 (1942); Renée McDonald Hutchins, *Tied Up in* Knotts*? GPS Technology and the Fourth Amendment*, 55 UCLA L. REV. 409, 423 (2007) ("Prior to *Katz*, the Court largely defined a search as a function of some physical invasion by the government."); Miraldi, *supra* note 62, at 710-11 (discussing the Supreme Court's use of the "trespass doctrine" as the thrust behind Fourth Amendment protection).

112. Miraldi, *supra* note 62, at 710.

113. *See* McDonald Hutchins, *supra* note 111, at 425 ("The Court continued to explicitly and implicitly endorse the analytical model requiring actual physical invasion

began to slowly break away from a property-based paradigm to a privacy-based paradigm.[114] The Court's decision in *Katz* marked the break from the use of the trespass doctrine.[115] The *Katz* Court vehemently rejected any Fourth Amendment arguments based on whether there was a physical trespass, stating 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."[116] Instead, the Court, aided by Justice Harlan's concurring opinion, adopted the *Katz* reasonable expectation of privacy test,[117] which requires a showing that a person has a legitimate expectation of privacy that society is prepared to recognize as reasonable.[118] It is against this backdrop that the *Jones* decision becomes relevant.

2. Doctrinal Definition of "Search" After *Jones*

As discussed earlier, the majority opinion in *Jones* declined to use the pre-existing *Katz* reasonable expectation of privacy test as the basis for its holding, asserting that "Jones's Fourth Amendment rights do not rise or fall with the *Katz* formulation."[119] Instead, Justice Scalia formulated what may be deemed a new test, or at least a clarification of the previous test, to determine when a government intrusion constitutes a "search" under the Fourth Amendment. Justice Scalia's new definition of a "search" provides that a government intrusion will constitute a search

as a necessary element of any Fourth Amendment search for another three decades before rejecting it in its entirety.").

114. *See* Jace C. Gatewood, *Warrantless GPS Surveillance: Search and Seizure – Using the Right to Exclude to Address the Constitutionality of GPS Tracking Systems Under the Fourth Amendment*, 42 U. MEM. L. REV. 303, 363-65 (2011) (discussing the shift from a property-based paradigm to a privacy based-paradigm under the Fourth Amendment).

115. *Id.* at 365 ("*Katz* marked the first articulation of the Court's outright rejection of a property-based analysis, stating that the Fourth Amendment's reach 'cannot turn upon the presence or absence of physical intrusion into any enclosure.'").

116. *Katz*, 389 U.S. at 353.

117. *Id*. at 361 (Harlan, J., concurring) ("My understanding of the rule that has emerged from prior decisions is that there is a twofold requirement, 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.'").

118. *See id.*; Rakas v. Illinois, 439 U.S. 128, 143 (1978) ("[The] capacity to claim the protection of the Fourth Amendment depends . . . upon whether the person who claims the protection of the Amendment has a legitimate expectation of privacy in the invaded place." (citing *Katz*, 389 U.S. at 353)).

119. United States v. Jones, 132 S. Ct. 945, 950 (2012).

within the meaning of the Fourth Amendment if the intrusion: (i) constitutes a common law physical trespass;[120] (ii) invades a constitutionally protected area enumerated in the Fourth Amendment: "persons, houses, papers, and effects";[121] and, (iii) is done "for the purpose of obtaining information,"[122] or is "an attempt to find something or to obtain information."[123] In addition, the majority opinion makes clear that this new formulation does not prevent the use of the *Katz* reasonable expectation of privacy test in cases involving government intrusion where there is no physical trespass, thus preserving *Katz* and its progeny.[124] Hence, after *Jones*, there are now two doctrinal bases upon which a defendant may challenge investigative techniques employed by law enforcement: the *Katz* reasonable expectation of privacy test and the *Jones* newly formulated trespassory test.[125]

However, notwithstanding the new formulation and clarification under *Jones*, in this technologically advanced society with the advent of computers, smartphones, and other wireless electronics devices capable of remotely eliciting information so vast and comprehensive, neither *Katz* nor *Jones* may be far reaching enough to find a Fourth Amendment violation for such an elicitation—a *Katz* analysis is not satisfied because of the complexity and the pervasiveness of the technology used, and a *Jones* analysis is not satisfied because there is no common-law trespass.

120. *Id*. at 949. After finding that a vehicle was an "effect" for purposes of the Fourth Amendment, the Court concluded that "[t]he [g]overnment physically occupied private property for the purpose of obtaining information. We have no doubt that such a physical intrusion would have been considered a 'search' within the meaning of the Fourth Amendment when it was adopted." *Id.* The Court further clarified that "obtaining . . . information is not alone a search unless it is achieved by such . . . trespass or invasion of privacy." *Id.* at 951 n.5.

121. *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.").

122. *Id.* at 949. In defining "search" the Supreme Court explains "[a] trespass on 'houses' or 'effects,' or a *Katz* invasion of privacy, is not alone a search unless it is *done to obtain information* . . . ." *Id.* at 951 n.5 (emphasis added).

123. *Id.* at 951 n.5. The Court makes a further clarification in defining search: "Trespass alone does not qualify, but there must be conjoined with that what was present here: *an attempt to find something or to obtain information*." *Id.* (emphasis added).

124. *Id*. at 953. The majority states, in response to Justice Alito's concurrence, "[f]or unlike the concurrence, which would make *Katz* the *exclusive* test, we do not make trespass the exclusive test. Situations involving merely the transmission of electronic signals without a trespass would *remain* subject to *Katz* analysis." *Id.* (emphasis in original).

125. *See id*.

3. Practical Value of *Jones*

Jones may be of little value in this ever-advancing digital age where the breadth and depth of technology make police investigative methods less physically intrusive, less costly, and more comprehensive. As stated by Justice Sotomayor in her concurring opinion, "physical intrusion is now unnecessary to many forms of surveillance."[126] For this reason, Justice Sotomayor points out that the majority opinion's trespassory test provides little guidance on "cases of electronic or other novel modes of surveillance that do not depend upon a physical invasion on property . . . ."[127] Justice Alito shares in this sentiment and raises a very thought-provoking question. Assuming that what matters most to the majority's position is "the law of trespass as it existed at the time of the adoption of the Fourth Amendment,"[128] would sending of an unwanted electronic signal that makes contact with an electronic device constitute a trespass?[129] His point being that there remains a question as to whether an electronic transmission equates to a physical touching as required by common-law trespass.[130]

But, perhaps even more troublesome to Justice Alito was the majority's outright refusal to engage in any *Katz* analysis,[131] even though both Justices Alito and Sotomayor also had concerns over the application of *Katz*.[132] While pointing out observations made by Justice Alito, Justice Sotomayor states "the same technological advances that . . . [make] possible nontrespassory surveillance techniques will also affect the *Katz* test by shaping the evolution of societal privacy expectations."[133] On this point, Justice Alito adds, "[t]he availability and use of [smartphones and other wireless devices] will continue to shape the average person's expectations about the privacy of his or her daily movements."[134] Justice

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

127. *Id.*

128. *Id.* at 962 (Alito, J., concurring in judgment).

129. *Id.*

130. *See id.*

131. *See id.* at 961 ("Disharmony with a substantial body of existing case law is only one of the problems with the Court's approach in this case.").

132. *See id.* at 955 (Sotomayor, J., concurring) ("[T]he same technological advances that have made possible nontrespassory surveillance techniques will also affect the *Katz* test by shaping the evolution of societal privacy expectations."); *id.* at 962 (Alito, J., concurring in judgment) (acknowledging that *Katz* is "not without its own difficulties.").

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

134. *Id.* at 963 (Alito, J., concurring in judgment).

Alito's position is that, with the reshaping of societal expectations, the Court's only role should be to assess whether the particular use of the device in question "involved a degree of intrusion that a reasonable person would not have anticipated,"[135] and that the rest should be left to Congress and the States.[136]

According to the majority, the problems posed by the application of *Katz* extend far beyond the mere determination of whether it was necessary to engage in a *Katz* analysis to resolve the issue in *Jones*.[137] The issue that the majority finds "particularly vexing"[138] is why, as indicated by Justice Alito, under a *Katz* analysis a "[four]-week investigation [was] 'surely' too long and why a drug-trafficking conspiracy involving substantial amounts of cash and narcotics is not an 'extraordinary offens[e]' which may permit longer observation."[139] The majority's query therefore considers the extent to which the Court should consider the nature of the offense being investigated[140] in order to determine the scope of reasonableness of the investigation.[141] These and other perplexing questions present a "novelty into [Fourth Amendment] jurisprudence"[142] for which there is no precedent.[143]

Clearly the "sound and fury"[144] of the Justices leaves in flux the precise application of *Jones* and *Katz* to future cases involving electronic surveillance and tracking. Furthermore, several critical questions remain unanswered—some of which are raised by the Justices themselves—regarding the application of *Jones* or *Katz* to purely electronic intrusions, whether in terms of duration of the intrusion, the physical nature of the intrusion, the scope or depth of the intrusion, or the nature of the investigation. Whatever the case, *Jones* provides very little guidance to law enforcement officials and lower courts concerning permissible Fourth Amendment conduct when electronic, technologically advanced

135. *Id.* at 964.

136. *See id.* at 964.

137. *See id.* at 953-54 (majority opinion).

138. *Id.* at 953.

139. *Id.* at 954.

140. *See id.* The majority questioned "[w]hat of a 2-day monitoring of a suspected purveyor of stolen electronics? Or of a 6-month monitoring of a suspected terrorist?" *Id.*

141. *See id.* The Court ultimately concluded that it was necessary to "grapple with these 'vexing problems' in some future case where a classic trespassory search is not involved and resort must be had to *Katz* analysis . . . ." *Id.*

142. *Id.*

143. *See id.*

144. SHAKESPEARE, *supra* note 4.

devices or investigatory methods are used as a means to gather evidence.

III. Emerging Technology and the Limitations of *Jones* and *Katz*

The boundary between privacy and emerging technologies goes far beyond the recent debate over the use of GPS technology. With the rise of social networking technologies—smartphones, factory installed GPS-equipped vehicles, smartcards, electronic toll and highway security cameras, license-plate recognition systems, and other wireless devices—privacy concerns are becoming more important and more prevalent.[145] These emerging technologies pose numerous challenges in the wake of privacy concerns.[146] While would-be criminals have found it increasingly easier to commit sophisticated crimes while evading detection using advanced technology, law enforcement officials have similarly used this advanced technology to become more cost effective and efficient in foiling the would-be criminal. Alas, however, criminals are not constrained by the Fourth Amendment, only the government is.

The government's use of sophisticated surveillance and investigatory methods—like the GPS technology at issue in *Jones*—raises serious concern over the degree of permissible government intrusion.[147] However, it is plainly evident that the most common uses of

145. *Jones*, 132 S. Ct. at 963 (Alito, J., concurring in judgment).

> Recent years have seen the emergence of many new devices that permit the monitoring of a person's movements. In some locales, closed-circuit television video monitoring is becoming ubiquitous. On toll roads, automatic . . . collection systems create a precise record of the movements of motorists . . . . Many motorists purchase cars that are equipped with devices that permit a central station to ascertain the car's location at any time . . . .

Id.

146. *See Protecting Civil Liberties in the Digital Age*, ACLU, http://www.aclu.org/protecting-civil-liberties-digital-age (last visited Feb. 3, 2013) ("A constant stream of revolutionary new technologies erode existing protections, and greatly expanded powers for our security agencies allow the government to peer into our lives without due process or meaningful oversight. Our rights and liberties have undergone constant erosion since 9/11.").

147. Justice Sotomayor had very serious concerns, specifically stating that she would "consider the appropriateness of entrusting to the Executive, in the absence of any oversight from a coordinate branch, a tool so amenable to misuse, especially in light of the Fourth Amendment's goal to curb arbitrary exercises of police power to and [sic] prevent 'a too permeating police surveillance.'" *Jones*, 132 S. Ct. at 956 (Sotomayor, J. concurring) (quoting United States v. Di Re, 332 U.S. 581, 595 (1948)).

technological investigatory methods employed by the government do not actually violate the Fourth Amendment under the proscriptions of *Jones* or *Katz* as currently interpreted. A few examples of emerging technology and other investigatory techniques used by law enforcement as investigatory tools illustrate this point.

A. *Automatic License-Plate Recognition Systems*

According to some estimates, automatic license-plate recognitions systems are capable of scanning more than 1500 license-plates per minute.[148] These systems are used by numerous law enforcement agencies as a method to electronically collect tolls or for recording the movements of traffic or individuals, among other things.[149] Police departments in Maryland are using license-plate recognition systems and are sharing the collected data with an antiterrorism agency run jointly by federal, state, and local authorities.[150] In Connecticut, license-plate recognition systems are being used to track parking violations,[151] while Florida uses the technology to track gang members.[152] The federal government is also using license-plate scanners in Texas and California along known drug trafficking corridors.[153] Local media outlets are reporting almost daily on the ever-expansive use of license-plate scanners.[154] These systems use optical character recognition software to read vehicle registration plates.[155] The issue that these license-plate recognition systems present is their indiscriminate use, capturing the license-plate information of all passing vehicles and storing the information into databases which over time can be used to track the movements of unsuspecting individuals—both criminals and law abiding

148. *See* Hilary Hylton, *License-Plate Scanners: Fighting Crime or Invading Privacy?*, TIME (July 30, 2009), http://www.time.com/time/nation/article/0,8599,1913258,00.html.

149. *See* Adam Cohen, *Is Your Car Being Tracked by a License-Plate Scanner?*, TIME (Aug. 13, 2012), http://ideas.time.com/2012/08/13/is-your-car-being-tracked-by-a-license-plate-scanner/ (reporting that the American Civil Liberties Union is looking at how the government uses license-plate recognition systems in at least 38 states.).

150. *Id.*

151. Hylton, *supra* note 148.

152. *Id.*

153. Cohen, *supra* note 149.

154. One only needs to perform a Google search of the phrase "license-plate scanners" for an on-going list of reports concerning the use and privacy concerns of license-plate scanners.

155. Hylton, *supra* note 148.

citizens.[156] As one author sees it, "[t]he real problem is that when the government stores that information, it is not trying to solve an ongoing crime—it is building a database. These databases can quickly fill up with all sorts of details about how people lead their lives."[157] More critical to his argument is the fact that the details in the database may be pieced together over time to create a profile about certain aspects of an individual's life, including whether they attend church, have any political affiliations, or have a mistress.[158] This aggregating effect, known as the "mosaic theory,"[159] was precisely what mostly concerned Justice Sotomayor in *Jones*.[160] Yet, evaluating the use of these automatic license-plate recognition systems under *Jones* or *Katz* makes clear that the constitutionality of such a system is dubious at best.

156. *See id.*

157. Cohen, *supra* note 149.

158. *See id.*

159. "Mosaic theory" refers to the theory that the whole is greater than the sum of its parts and that the aggregation of information may be covered by a reasonable expectation of privacy even if the individual parts are not. *See* United States v. Maynard, 615 F.3d 544, 558 (D.C. Cir. 2010) *aff'd sub nom.* United States v. Jones, 132 S. Ct. 945 (2012). In rejecting the government's contention that no distinction should be drawn between the information discovered by use of a beeper in a single discrete journey at issue in *Knotts* and the more comprehensive monitoring at issue in *Maynard*, the circuit court applied the mosaic theory, stating that

> [T]he totality of Jones's movements over the course of a month—was not exposed to the public: First, unlike one's movements during a single journey, the whole of one's movements over the course of a month is not *actually* exposed to the public because the likelihood anyone will observe all those movements is effectively nil. Second, the whole of one's movements is not exposed *constructively* even though each individual movement is exposed, because that whole reveals more—sometimes a great deal more—than does the sum of its parts.

Id.; *accord* Madelaine Virginia Ford, Comment, *Mosaic Theory and the Fourth Amendment: How* Jones *Can Save Privacy in the Face of Evolving Technology*, 19 AM. U. J. GENDER SOC. POL'Y & L. 1351, 1364 (2011) ("The mosaic theory is a novel theory in the Fourth Amendment context and it could dramatically change privacy jurisprudence"). *But see* Benjamin M. Ostrander, Note, *The "Mosaic Theory" and Fourth Amendment Law*, 86 NOTRE DAME L. REV. 1733, 1748 (2011) ("The application of the 'mosaic theory' to the Fourth Amendment would not only be wrong in principle, it would be impractical in application.").

160. *See Jones*, 132 S. Ct. at 955-56 (Sotomayor, J., concurring). Concerned about the degree of intrusiveness capable with GPS technology, Justice Sotomayor questioned "whether people reasonably expect that their movements will be recorded and aggregated in a manner that enables the [g]overnment to ascertain, more or less at will, their political and religious beliefs, sexual habits, and so on." *Id.* at 956.

First, under *Jones*, there would be no Fourth Amendment violation since automatic license-plate systems require no physical touching of the vehicle.[161] Even assuming, arguendo, that the electronic transmission used to read the license-plate is deemed a physical touching, *Jones* still presents a problem. Generally, these license-plate recognition systems are used indiscriminately on all drivers within its vicinity and not for the purpose of obtaining information in connection with an investigation.[162] If nothing else, *Jones* made clear that "[a] trespass on 'houses' or 'effects,' or a *Katz* invasion of privacy, is not alone a search unless it is done to obtain information; and the obtaining of information is not alone a search unless it is achieved by such trespass or invasion of property."[163] Obviously, such devices obtain information. However, it is not clear from *Jones* whether the information must be obtained in connection with an investigation occurring at the time the information is collected, or whether the information can be collected fortuitously and then used later to investigate potential crimes.

Likewise under *Katz*, the use of license-plate recognition systems should not be objectionable. Since these systems only record short bursts of information at designated points, either while mounted on police cars or at toll booths, they may be even more analogous to visual surveillance than the beeper technology in *Knotts* and *Karo*, and certainly much less intrusive than the GPS technology at issue in *Jones*. Moreover, the *Jones* court left open the question whether shorter periods of surveillance or tracking would amount to a search under *Katz*.[164] At least three other

161. This argument necessarily assumes that the electronic transmission used to read a license-plate is not considered a physical touching. This issue is raised by Justice Alito, who questioned whether "the sending of a radio signal to activate [a vehicle detection system would] constitute a trespass of chattels . . . ." *Id.* at 962 (Alito, J., concurring in judgment). Justice Alito also questioned whether the application of common law trespass could reconcile recent decisions involving unwanted electronic contact with computer systems, as he notes that some courts have held "that even the transmission of electrons that occurs when a communication is sent from one computer to another is enough." *Id.* at 962 (citations omitted); *accord* Katz v. United States, 389 U.S. 347, 360 (1967) (Harlan, J., concurring) (interpreting the *Katz* majority as holding that "electronic as well as physical intrusion into a place that is in this sense private" constitutes a search under the Fourth Amendment).

162. *See* Cohen, *supra* note 149.

163. *Jones*, 132 S. Ct. at 951 n.5.

164. Justice Scalia criticizes the concurring opinions for stating that investigations lasting four weeks are "surely" too long. *Jones*, 132 S. Ct. at 954. Justice Sotomayor questioned whether shorter periods of surveillance than the four-week period in *Jones* might be unreasonable under certain circumstances, but never resolved the issue. *Id.* at 955 (Sotomayor, J., concurring). Justice Alito thought that the "line was surely crossed

Justices support Justice Alito's position that "relatively short-term monitoring of a person's movements on public streets accords with expectations of privacy that our society has recognized as reasonable."[165] Hence the primary issue that neither *Jones* nor *Katz* addresses is whether the "mosaic theory" accords with the proscriptions of the Fourth Amendment.[166] As alluded to by Justice Sotomayor and Justice Alito in their respective concurring opinions, there may be situations in which tracking is so comprehensive it may be deemed unreasonable for purposes of the Fourth Amendment.[167]

B. *Smartphone/Cell Phone Tracking*

Most smartphones today are equipped with GPS tracking capability,[168] meaning they can be tracked in the same manner as a GPS-equipped vehicle. In this sense, a GPS equipped smartphone can be used to track its own location, and by extension, the person or vehicle carrying it.[169] In addition, it was recently reported that many smartphones are equipped with Carrier IQ software that monitors keystrokes, location, and received messages.[170] Even the smartphone's predecessor, the cell

before the 4-week mark," but declined to address at what point in the four-week investigation the surveillance amounted to a search. *Id.* at 964 (Alito, J., concurring in judgment).

165. *Id.*

166. Justice Sotomayor indicated that she would "take the[] attributes of GPS monitoring into account when considering the existence of a reasonable societal expectation of privacy in the sum of one's public movements." *Id.* at 956 (Sotomayor, J., concurring). Justice Alito also seems to be in accord with Justice Sotomayor when he states, "for four weeks, law enforcement agents *tracked every movement* that respondent made in the vehicle he was driving." *Id.* at 964 (Alito, J., concurring in judgment) (emphasis added).

167. *See id.* at 955 (Sotomayor, J., concurring); *id.* at 964 (Alito, J., concurring in judgment).

168. *See* Bonnie Cha, *Road Warrior: Smartphones with Built-in GPS*, CNET (May 14, 2010), http://reviews.cnet.com/4321-6452_7-6564140.html ("GPS on smartphones is no longer an emerging trend. It's almost a must-have feature nowadays, and more and more handsets are offering it.").

169. Smartphones may also be tracked using Wi-Fi. *See* Adrian Kingsley-Hughes, *Your Smartphone Allows You to be Tracked Wherever You G*o, FORBES (Apr. 21, 2012, 11:19 AM), http://www.forbes.com/sites/adriankingsleyhughes/2012/04/21/your-smartphone-allows-you-to-be-tracked-wherever-you-go/ ("New technology by locations services firm Navizon allows anyone carrying a Wi Fi-equipped [S]martphone to be tracked without their knowledge or consent.").

170. *See* Kevin Dolak, *Carrie IQ: Does Your Smartphone Have It, and Is It Tracking You?*, ABC NEWS (Dec. 1, 2011, 10:51 AM),

phone, may be tracked as long as it is turned on.[171] Cell phones register their location with the nearest cell tower every few minutes, whether or not the cell phone is in use.[172] Mobile carriers often retain location and other personal data for months, and in some cases years.[173] As a result, an individual's location history and other detailed personal information may be accessed by law enforcement directly from the cell phone carrier using a third-party subpoena, including what establishments they frequent, where they buy their groceries, what friends they visit, where they go to church, and so on.[174] All of this is obtained without a warrant and without the individual's knowledge.[175]

While the Supreme Court has yet to directly evaluate the constitutionality of smartphone or cell phone tracking, the Sixth Circuit's recent decision in *United States v. Skinner* sheds light on how the Court may view this issue under *Jones* or *Katz*.[176] In *Skinner*, the government obtained a court order authorizing the defendant's cell phone company to release certain data pertaining to a pay-as-you-go phone, and ultimately discovered that the cell phone was used by the defendant in connection with drug trafficking.[177] The data obtained by the government from the cell phone company included, "subscriber information, cell site information, GPS real-time location, and 'ping' data . . . ."[178] Using this information, agents tracked the defendant as he transported drugs between Arizona and Tennessee[179] by continuously "pinging"[180] his

http://abcnews.go.com/blogs/technology/2011/12/is-your-smartphone-tracking-your-keystrokes-texts-and-location/.

171. *See Government Location Tracking: Cell Phones, GPS Devices, and Licence Plate Readers*, ACLU, http://www.aclu.org/government-cell-phone-and-gps-location-tracking (last visited Feb. 7, 2013) [hereinafter *Government Location Tracking*].

172. *Id.*

173. *See Cell Phone Location Tracking Request Response – Cell Phone Company Data Retention Chart*, ACLU, http://www.aclu.org/cell-phone-location-tracking-request-response-cell-phone-company-data-retention-chart (last visited Mar. 16, 2013).

174. *See Government Location Tracking*, *supra* note 171.

175. *Id.*

176. 690 F.3d 772 (6th Cir. 2012).

177. *Id.* at 774.

178. *Id.* at 776.

179. *Id.* at 774.

180. *Id.* at 776.

> A cell phone "ping" is quite simply the process of determining the location, with reasonable accuracy, of a cell phone at any given point in time by utilizing the phone GPS location aware capabilities, it is very similar to GPS vehicle tracking systems. To "ping" in this

phone to locate its whereabouts.[181] As a result of the tracking information, the defendant was eventually apprehended in Texas with more than 1100 pounds of marijuana.[182] After the defendant's motion to suppress this evidence was denied, he was convicted on two counts of drug trafficking and one count of conspiracy to commit money laundering.[183] The Sixth Circuit, applying a *Katz* analysis, held that the defendant did not have a reasonable expectation of privacy in the location from which the data was emanating from his cell phone.[184] The court reasoned that "[i]f a tool used to transport contraband gives off a signal that can be tracked for location, certainly the police can track the signal."[185] The court equated the use of the phone's trackability to the trackability of a car by use of its license-plate or the trackability of a fugitive by use of his scent.[186] In this sense, the court found that the inherent trackability of the phone negated reasonable expectations of privacy in the same way a "driver of a getaway car has no expectation of privacy in the particular combination of colors of the car's paint."[187] Interestingly enough, the court would similarly apply this rationale to all cell phone users because of the phone's "inherent external locatability."[188]

The Sixth Circuit found support for its decision in *Knotts*, stating that "[s]imilar to the circumstances in *Knotts*, Skinner was traveling on a public road before he stopped at a public rest stop. While the cell site information aided the police in determining Skinner's location, that same information could have been obtained through visual surveillance."[189] In addition, the Sixth Circuit found support in its own precedent. In *United*

> context means to send a signal to a particular cell phone and have it respond with the requested data. The term is derived from SONAR and echolocation when a technician would send out a sound wave, or ping, and wait for its return to locate another object.

L. Scott Harrell, *Locating Mobile Phones through Pinging and Triangulation*, PURSUIT MAG. (July 1, 2008), http://pursuitmag.com/locating-mobile-phones-through-pinging-and-triangulation/.

181. *Skinner*, 690 F.3d at 776.
182. *Id.*
183. *Id.* at 777.
184. *Id.*
185. *Id.*
186. *Id.*
187. *Id.*
188. *Id.* at 777 n.1.
189. *Id.* at 778.

States v. Forest,[190] DEA agents, who suspected that the defendant was traveling to meet alleged drug couriers, called the defendant's cell phone several times, hanging up before it could ring, in order to "ping" the cell phone's location.[191] The agents tracked the defendant using this location information, and the next day they arrested the defendant at a gas station.[192] Following the *Knotts* rationale, the Sixth Circuit found that there was no Fourth Amendment violation because the agents could have obtained the same information by visually following the defendant's vehicle.[193]

Arguably, the issue in *Skinner* would have been patently different if the GPS technology at issue in *Jones* had been used in a similar manner to track the cell phone rather than the "pinging" system, which may be arguably more similar to the beeper technology used in *Knotts* and *Karo*, because of the level of comprehensive tracking that took place in *Jones*.[194] For this reason, the Sixth Circuit was quick to distinguish the level of tracking in *Skinner* with the level of tracking in *Jones*,[195] noting that, while the Supreme Court in *Jones* "recognized that there is little precedent for what constitutes a level of comprehensive tracking that would violate the Fourth Amendment,"[196] the *Skinner* case "comes nowhere near that line."[197] The Sixth Circuit was also quick to point out that *Jones* provided no support for the defendant's position in *Skinner*[198] since there was no physical trespass involved.[199] As with *Knotts* and *Karo*, *Skinner* can be distinguished from *Jones* based on the fact that the cell phone obtained by the defendant included the GPS technology prior

190. 355 F.3d 942 (6th Cir. 2004), *judgment vacated on other grounds sub nom.* Garner v. United States, 543 U.S. 1100 (2005).

191. *Id.* at 947.

192. *Id.* at 948.

193. *Id.* at 951.

194. While the pinging method utilizes the GPS capabilities of the cell phone, it does not relay the type of 24/7 tracking information that was at issue in *Jones*. *See* Cha, *supra* note 168.

195. United States v. Skinner, 690 F.3d 772, 779-81 (6th Cir. 2012).

196. *Id.* at 780 (citation omitted).

197. *Id.*

198. *Id.* at 780 ("*Jones* does not apply to Skinner's case because, as Justice Sotomayor stated in her concurrence, 'the majority opinion's trespassory test' provides little guidance on 'cases of electronic or other novel modes of surveillance that do not depend upon a physical invasion on property.'" (quoting United States v. Jones, 132 S. Ct. 945, 955 (2012) (Sotomayor, J., concurring)).

199. *Id.* at 780 ("[T]he majority in *Jones* based its decision on the fact that the police had to 'physically occup[y] private property for the purpose of obtaining information.'" (quoting *Jones*, 132 S. Ct. at 949)).

to coming into the defendant's possession. Thus, the defendant could not object to the use of the phones inherent trackability,[200] just as the defendants in *Knotts* and *Karo* had no standing to object to the trackability of the beeper-laden containers, because the beepers were placed in the containers prior to coming into the possession of the defendants.[201]

Another issue inherent in the use of smartphones, cells phones, and other wireless devices, which issue was raised as a concern by Justice Alito in his concurrence in *Jones*, is the pervasive use of such technology.[202] As Justice Alito notes, as of June 2011, "more than 322 million wireless devices" were in use in the United States.[203] His concern is that, as availability and use of these devices continues to grow, they "will continue to shape the average person's expectations about the privacy of his or her daily movements."[204] Justice Alito may find persuasive support for this argument in *Kyllo v. United States*,[205] which involved the use of thermal imaging technology to detect heat emanating from the home of the defendant. In an opinion ironically written by Justice Scalia, the Court held that use of thermal imaging technology constituted a search under the Fourth Amendment, despite the fact that there was no physical intrusion into defendant's home, because the technology allowed the government to obtain information about the inside of the home that was otherwise inaccessible without a physical intrusion.[206] Justice Scalia went on to say, however, that "[i]t would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology[,]"[207] and intimated that only when technology is not in general public use, such that privacy could be reasonably expected, will use of such technology constitute a search for purposes of the Fourth Amendment.[208] The inference being that when technology is more

200. *Id.* at 777.

201. *See* United States v. Karo, 468 U.S. 705 (1984); United States v. Knotts, 460 U.S. 276 (1983).

202. *See Jones*, 132 S. Ct. at 963 (Alito, J., concurring in judgment) ("Recent years have seen the emergence of many new devices that permit the monitoring of a person's movements.").

203. *Id.*

204. *Id.*

205. 533 U.S. 27 (2001).

206. *Id.* at 40.

207. *Id.* at 33-34.

208. *Id.* at 40 ("Where, as here, the [g]overnment uses a device that is not in general

pervasively used the scope of reasonable expectations of privacy diminishes. However, notwithstanding Justice Alito's persuasive argument in *Jones*, he seems quite willing to allow acceptable societal norms or legislative actions to decide the issue of persuasive use.[209]

Yet another issue that plagues the use of smartphones and other wireless devices is the "third-party doctrine" and the government's ability to access a tremendous amount of personal information, including by means of tracking, directly from third-party service providers, through the subpoena process or otherwise.[210]

C. *Third-Party Service Providers and the "Third-Party Doctrine"*

Privacy concerns over social networking sites, such as Facebook and Twitter, where people share the utmost intimate details, photos, and information about their personal lives, and service providers, like Amazon, Google, and iTunes, that collect vast amounts of information about our choices, have become a major topic of concern among the legal community.[211] When considering the vast amount of information stored with some of these sites and service providers, the issue becomes immediately apparent. When a user shares his or her personal information with social networking sites or decides to shop with third-party service providers, his or her data is stored and hosted on the third-party's hardware.[212] In most instances, there is nothing to prevent government investigators from trying to subpoena the information without an individual's knowledge or consent.[213] Under the long-

public use, to explore details of the home that would previously have been unknowable without physical intrusion, the surveillance is a 'search' and is presumptively unreasonable without a warrant.").

209. *Jones*, 132 S. Ct. at 962 (Alito, J., concurring in judgment) ("New technology may provide increased convenience or security at the expense of privacy, and many people may find the tradeoff worthwhile. . . . On the other hand, concern about new intrusions on privacy may spur the enactment of legislation to protect against these intrusions.").

210. *See* discussion *infra* Part III.C.

211. *See*, Adam Cohen, *Should the FBI Be Allowed to Wiretap Facebook*, TIME (May 29, 2012), http://www.ideas.time.com/2012/05/29/should-the-fbi-be-allowed-to-wiretap-facebook/.

212. *See, e.g.*, *Facebook's Privacy Policy – Full Version*, FACEBOOK, http://www.facebook.com/note.php?note_id=%20322194465300 (last updated Oct. 29, 2009). Sections Two and Three of Facebook's Privacy Policy make clear that the information one provides to Facebook may not only be stored but shared under various circumstances.

213. *Id*. Section Five of Facebook's Privacy Policy states in pertinent part: "We

standing "third-party doctrine,"[214] these instances of government intrusion into an individual's personal life will fall outside of the purview of *Jones* and *Katz.*

Under *Jones*, since the shared information is stored and hosted on someone else's hardware, there can be no physical intrusion. Even if the government is successful in obtaining the information for an "investigatory purpose," since there is no trespass, there would be no Fourth Amendment violation under *Jones*.[215]

Likewise, no reasonable expectation of privacy exists under *Katz* precisely because the information was shared with a third-party and thus became the property of the third-party. The "third-party doctrine" line of cases directly supports this view. In *United States v. Miller*,[216] the defendant was charged with various federal offenses, and moved to suppress certain financial records relating to certain accounts maintained with two banks pursuant to the Bank Secrecy Act of 1970.[217] The financial information included microfilms of checks, deposit slips, and other financial records.[218] The Court held that that there was no reasonable expectation of privacy in the financial records maintained by the bank since the defendant voluntarily conveyed the information to a third-party.[219] Similarly, in *Smith v. Maryland*,[220] the Court held that the use and installation of a "pen register" to record numbers which the defendant dialed did not constitute a "search" under the Fourth Amendment because the numbers dialed were made public to the phone company.[221]

Justice Sotomayor for one thought the "third-party doctrine" deserved another look as being "ill suited to the digital age, in which people reveal a great deal of information about themselves to third

may disclose information pursuant to subpoenas, court orders, or other requests (including criminal and civil matters) if we have a good faith belief that the response is required by law."

214. The "third-party doctrine" provides that by disclosing information to a third-party, such person gives up all of his or her Fourth Amendment rights pertaining to the information disclosed. *See* Orin S. Kerr, *The Case for the Third-Party Doctrine*, 107 MICH. L. REV. 561, 563 (2009).

215. *See Jones*, 132 S. Ct. at 951 n.5 ("[T]he obtaining of information is not alone a search unless it is achieved by . . . a trespass or invasion of property.").

216. 425 U.S. 435 (1976).

217. *See id.* at 437-39.

218. *Id.* at 438.

219. *Id.* at 440.

220. 442 U.S. 735 (1979).

221. *See id.* at 742-46.

parties in the course of carrying out mundane tasks."[222] She writes, "[p]eople disclose the phone numbers that they dial or text to their cellular providers; the URLs that they visit and the e-mail addresses with which they correspond to their Internet service providers; and the books, groceries, and medications they purchase to online retailers."[223] Justice Sotomayor concludes by saying, "I would not assume that all information voluntarily disclosed to some member of the public for a limited purpose is, for that reason alone, disentitled to Fourth Amendment protection[,]"[224] but, nevertheless, she was content to resolve the issue in *Jones* on the narrower basis of trespass.[225]

IV. Conclusion

While *Jones* failed to answer all the questions that technology creates, it did serve to highlight a previously glossed-over privacy issue—whether there is a privacy interest in the sum total of one's movements.[226] Though *Jones* dealt exclusively with GPS technology, which is capable of generating "a precise, comprehensive record of a person's public movements that reflects a wealth of detail about . . . familial, political, professional, religious, and sexual associations,"[227] other technologies, including smartphones, manufacturer GPS-equipped vehicles, license-plate scanners, and roadside video cameras, to name a few, all may be used in a similar manner to track and record isolated instances of an individual's movements. These can then be stored and later aggregated to create a unique profile of an individual's movements, and which can reveal personal information in a way not previously considered. This mosaic effect deeply concerned at least one Justice as it relates to GPS technology, and presumably any technology with the attributes of GPS monitoring.[228] Justice Sotomayor wrote that

222. United States v. Jones, 132 S. Ct. 945, 957 (2012) (Sotomayor, J., concurring).

223. *Id*.

224. *Id.*

225. *Id.*

226. *See id.* at 956. Justice Sotomayor seemed convinced that there should be when she states: "I would ask whether people reasonably expect that their movements will be recorded *and aggregated in a manner that enables the [g]overnment to ascertain, more or less at will, their political and religious beliefs, sexual habits, and so on*." *Id.* (emphasis added); *see also infra* text accompanying note 227.

227. *Id.* at 955.

228. *Id.* at 956 ("I would take the[] attributes of GPS monitoring into account when considering the existence of a reasonable societal expectation of privacy in the sum of

"[a]wareness that the [g]overnment may be watching chills associational and expressive freedoms. And the [g]overnment's unrestrained power to assemble data that reveal private aspects of identity is susceptible to abuse."[229] She further added, "I would also consider the appropriateness of entrusting to the Executive, in the absence of any oversight from a coordinate branch, a tool so amenable to misuse, especially in light of the Fourth Amendment's goal to curb arbitrary exercises of police power to and [sic] prevent 'a too permeating police surveillance.'"[230]

Ultimately, with each new advancement in technology will come even greater and more precise methods of recording, storing, and aggregating information in a manner that may be later used to determine, with particular detail, how we travel, what we buy, what we read, who we visit, and so on. No physical intrusion of any kind will be necessary to acces the information generated by many forms of these technologies, and some may even become so common-placed we may just accept the loss of privacy that comes with the convenience.[231] Yet still other technology may be used to record only isolated pockets of information comparable to visual observation so as to be unobjectionable. Whatever the case, it is clear that the constitutional tests articulated in *Jones* and *Katz* will fail in these instances. Consequently, as GPS and other technology with similar attributes continue to be employed by law enforcement without judicial oversight, the Court will be inundated with ever vexing and complex issues regarding privacy rights. As such, the Court must be willing to look beyond the facts of a particular case and address the issues in light of their overall effect on Fourth Amendment privacy rights.

At the end of the day, *Jones* missed a huge opportunity for the Court to finally address critical issues on how the government uses technology (and not just GPS technology) to amass large sums of isolated information about an individual's movements that can be later aggregated, and over time, used to develop a profile on how an individual lives his or her life. Because the Court chose to resolve these crucial issues another day, the true significance of *Jones* may be in what

one's public movements.").

229. *Id.*

230. *Id.* (citation omitted).

231. Justice Alito alluded to the same conclusion when he stated: "Dramatic technological change may lead to periods in which popular expectations are in flux and may ultimately produce significant changes in popular attitudes. New technology may provide increased convenience or security at the expense of privacy, and many people may find the tradeoff worthwhile." *Id.* at 962 (Alito, J., concurring in judgment).

it did not say rather than what it did say—a case of "sound and fury, [s]ignifying nothing."[232]

232. SHAKESPEARE, *supra* note 4.