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# Herding *Katz*: GPS Tracking and Society's Expectations of Privacy in the 21st Century

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## I. Introduction

For nearly forty-four years, the United States Supreme Court has adhered to the same, remarkably resilient “test” for its Fourth Amendment jurisprudence.<sup>1</sup> In what may be criminal procedure’s most famous concurring opinion, Justice Harlan articulated the *Katz* two-prong test to determine whether police action constitutes a search. To amount to a search, the Court must find “first, that a person [has] exhibited an actual (subjective) expectation of privacy and, second, that the *expectation be one that society is prepared to recognize as ‘reasonable.’*”<sup>2</sup> If police actions do amount to a search, “[s]earches 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.”<sup>3</sup> That is to say, if the police conduct a search and do so without a warrant, it will usually be considered a violation of the Fourth Amendment. To remedy a Fourth Amendment violation, the Supreme Court has adopted the “exclusionary rule” that states, “evidence obtained by searches and seizures in violation of the Constitution is . . . inadmissible in court.”<sup>4</sup> With the admission of critical evidence on the line, it should be no surprise that the threshold issue of whether a police action amounts

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1. *Katz v. United States*, 389 U.S. 347 (1967).
2. *Id.* at 361 (emphasis added).
3. *Id.* at 357.
4. *Mapp v. Ohio*, 367 U.S. 643 (1961).

to a search has become one of the most thoroughly litigated areas in the field of criminal law.

Despite the impressive endurance of the *Katz* two-prong test, the ensuing holdings from the application of this rule have been anything but consistent. The Supreme Court's subsequent rulings have resulted in "a series of inconsistent and bizarre results" that have left law professors, students, and lower courts struggling to determine whether or not state action constitutes a "search."<sup>5</sup> Scholarly consensus appears to blame this phenomenon on the test itself,<sup>6</sup> asking typical questions like "Who is 'society' and how do Supreme Court Justices know what it thinks?"<sup>7</sup> But if this criticism explains the apparent failure of the Court's Fourth Amendment jurisprudence, one must be prepared to question much more than the Court's Fourth Amendment analysis. The entire premise of tort law is founded on the "reasonable person standard" and if our juries can adequately define a "reasonable person" then there is no reason our courts should not be able to accurately channel the beliefs of a "society" presumably composed of such "reasonable" people.

Regardless of the explanation, in the decades since *Katz* was decided, the judiciary's application has yielded unpredictable and often inconsistent results. With the availability of increasingly technologically sophisticated tools available to law enforcement, its struggles have been exacerbated. This struggle is exemplified by the federal circuit courts' recent attempts to determine whether the use of GPS tracking devices constitutes a search within the current conception of the Fourth Amendment. As of 2012, they were divided on the issue, with the Seventh, Eighth, and Ninth Circuits concluding that the use of GPS tracking was not a search<sup>8</sup> and the D.C. Circuit Court of Appeals<sup>9</sup> concluding otherwise. However, the circuit courts

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5. Silas J. Wasserstrom & Louis Michael Seiderman, *The Fourth Amendment as Constitutional Theory*, 77 GEO. L.J. 19, 29 (1988).

6. See Richard G. Wilkins, *Defining the "Reasonable Expectation of Privacy": An Emerging Tripartite Analysis*, 40 VAND. L. REV. 1077, 1078-80 (1987); see also Sherry F. Colb, *What is a Search? Two Conceptual Flaws in Fourth Amendment Doctrine and Some Hints of a Remedy*, 55 STAN. L. REV. 119, 122 (2002).

7. Orin S. Kerr, *Four Models of Fourth Amendment Protection*, 60 STAN. L. REV. 503, 505 (2007).

8. *United States v. Cuevas-Perez*, 640 F.3d 272 (7th Cir. 2011), *vacated*, 132 S. Ct. 1534 (2012); *United States v. Marquez*, 605 F.3d 604 (8th Cir. 2010); *United States v. Pineda-Moreno*, 591 F.3d 1212 (9th Cir. 2010), *vacated*, 132 S. Ct. 1533 (2012). All three held that the placement and utilization of tracking devices did not constitute a search.

9. *United States v. Maynard*, 615 F.3d 544 (D.C. Cir. 2010) (holding that the placement and use of GPS tracking device did constitute a search).

unanimously agreed that the issue would be analyzed under the *Katz* framework.<sup>10</sup>

In *United States v. Jones*, the Supreme Court decided the circuit courts were all in error. The Court resolved its first GPS tracking case not on the basis of the *Katz* two-prong test, but on the basis of common-law trespass doctrine.<sup>11</sup> Ultimately, the Court held that the dispositive issue was the government's intrusion in a constitutionally protected space, which occurred when they placed the tracking device on Jones' vehicle.<sup>12</sup> In a majority opinion invoking mid-eighteenth century British tort law,<sup>13</sup> Justice Scalia found it may be true that GPS tracking "without an accompanying trespass, is an unconstitutional invasion of privacy, but the present case does not require us to answer that question."<sup>14</sup> In the end, the Court declined to rule on whether the government's use of GPS, or any other technology to monitor an individual's every movement constituted a search within the *Katz* framework.<sup>15</sup>

Assuming it is true that history has a habit of repeating itself, the day will soon arrive when resolving the issue of GPS tracking on the basis of trespass doctrine will no longer suffice. As discussed *infra*,<sup>16</sup> the *Katz* two-prong test was itself developed in response to the inescapable reality that technological advances had rendered physical trespass-doctrine woefully insufficient for protecting society's right to be free from unreasonable searches and seizures.<sup>17</sup> Consequently, there will soon be a day when our courts will have no choice but to determine whether such ubiquitous tracking methods impinge upon a reasonable expectation of privacy. This paper attempts to contribute to the resolution of this inevitable issue in several ways. At a basic level, it asks whether or not individual members of society believe that the use of GPS technology to track individuals violates reasonable social expectations of privacy. After surveying more than 300 individuals, the answer is yes. Second, this paper explores why our courts have had such trouble reaching consistent results in their

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10. *Cuevas-Perez*, 640 F.3d at 277; *Marquez*, 605 F.3d at 609–10; *Pineda-Moreno*, 591 F.3d at 1217; *Maynard*, 615 F.3d at 558.

11. *United States v. Jones*, 132 S. Ct. 945 (2012).

12. *Id.* at 951.

13. *Id.* at 949 (citing *Entick v. Carrington*, (1765) 95 Eng. Rep. 807 (C.P.)).

14. *Id.* at 954.

15. *Id.*

16. See *infra* Part II.A.

17. *Katz v. United States*, 389 U.S. 347, 348-49 (1967).

application of *Katz*.<sup>18</sup> Contrary to the suggestions of some scholars, this paper argues that the problem lies not in some intrinsic deficiency with the *Katz* two-prong test. Instead, this paper demonstrates that the problem lies in the proxy tests that have evolved since the advent of *Katz*, tests that have led the court astray from the original inquiry contemplated by Justice Harlan. Finally, it suggests basic doctrinal changes to harmonize society's contemporary expectations of privacy with existing case precedent.

## II. Setting the Stage for *Jones*

### A. Origins of the Court's Contemporary Fourth Amendment Jurisprudence

*Katz* was the first in a line of cases that asked the Supreme Court to balance the competing interests of civil liberties and public safety, particularly in light of advanced and (at the time) cutting-edge technological innovations employed by law enforcement. While technological breakthroughs were by no means the advent of the 1960s, this period was unique because it was the first time in history that law enforcement had the tools to infiltrate previously impenetrable barriers to infringe on privacy interests that traditionally would have been taken for granted as being free from government intrusion. In light of these advances, the Court pivoted toward a new paradigm for Fourth Amendment analysis that no longer revolved around the physical penetration of a constitutionally protected area.<sup>19</sup>

In *Katz*, the defendant was convicted of transmitting wagering information by telephone.<sup>20</sup> As evidence of the crime, the Government introduced a recording of the defendant's conversation.<sup>21</sup> FBI agents obtained evidence of the conversation by placing a recording device on the outside of the public telephone booth used by the defendant.<sup>22</sup> In deciding whether this method of obtaining evidence violated the defendant's Fourth Amendment rights, Justice

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18. Richard G. Wilkins, *Defining the Reasonable Expectation of Privacy: An Emerging Tripartite Analysis*, 40 VAND. L. REV. 1077, 1107 (1987) (describing a court's Fourth Amendment jurisprudence as "distressingly unmanageable.").

19. *Katz*, 389 U.S. at 350. In doing so, the Supreme Court explicitly overruled *Olmstead v. United States*, 277 U.S. 438 (1928), and *Goldman v. United States*, 316 U.S. 129 (1942), both of which relied upon trespass doctrine to define the scope of Fourth Amendment protections.

20. *Id.* at 348.

21. *Id.*

22. *Id.*

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Stewart eloquently redefined the scope of the Fourth Amendment when he announced, “the Fourth Amendment protects people, not places.”<sup>23</sup>

Moreover, in *Katz*, Justice Stewart articulated a new delineation between public and private—“[w]hat a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. But what he seeks to preserve as private, *even in an area accessible to the public*, may be constitutionally protected.”<sup>24</sup> In the concurrence, Justice Harlan established the critical inquiry into whether government action constituted a search i.e. the two-prong test, requiring courts to consider (1) whether the individual manifested a subjective expectation of privacy and if so, (2) whether that expectation is one that society is willing to recognize as reasonable.<sup>25</sup> The *Katz* holding revolutionized America’s Fourth Amendment jurisprudence. Most importantly, the Fourth Amendment would no longer be constrained by the public/private divide and by a simplistic analysis of physical location. Or would it?

#### **B. On the Road to GPS: Beepers and Transmitters, *Knotts* and *Karo***

By the early 1980s, technology had advanced so as to enable police to place beepers (radio transmitters) on or in objects of interest and then to track the object at a distance by using a receiver, which would register the proximity of the beeper based on the strength of the signal. The technology presented authorities with a valuable tool that enabled them to track items beyond their visual range, so long as the transmitter and the receiver were within operating distance of one another. Authorities were quick to utilize this technology and it was not long before the Supreme Court would be afforded the chance to rule on whether the use of these devices constituted a search under the *Katz* analysis.<sup>26</sup> But by the time that the Court finally heard *United States v. Karo*<sup>27</sup> and *United States v. Knotts*,<sup>28</sup> Justice Stewart’s extension of Fourth Amendment protection to public areas<sup>29</sup> fell on deaf ears and in both cases the Court held that when the suspect was

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23. *Id.* at 351–52.

24. *Id.* (citations omitted) (emphasis added).

25. *Id.* at 361.

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

27. 468 U.S. at 705.

28. 460 U.S. at 276.

29. *Katz*, 389 U.S. at 352.

traveling on “public” roads, he had no reasonable expectation of privacy.<sup>30</sup>

The Supreme Court heard *Knotts*<sup>31</sup> and *Karo*<sup>32</sup> in 1983 and 1984 respectively. Less than two decades after declaring that Fourth Amendment analysis would no longer be constrained to a determination of “whether or not a given ‘area’, viewed in the abstract is ‘constitutionally protected,’”<sup>33</sup> it appeared as though the analysis would once again be determined by physical location. Perhaps the greatest evidence that Fourth Amendment jurisprudence was devolving to protect places and not people can be found in the reasoning employed by the Court in these two decisions. Both cases presented similar factual scenarios and involved state agents placing beepers in containers that were subsequently transferred to the possession of the defendants.<sup>34</sup> In *Knotts*, the beeper was placed in a drum of chloroform, which was picked up by the defendant, who was then trailed by police to a Wisconsin cabin.<sup>35</sup> In *Karo*, the officers placed a beeper in a can of ether and proceeded to monitor its movements over the course of several months.<sup>36</sup> However, unlike *Knotts*<sup>37</sup> the officers in *Karo* continued to monitor the location of the ether while it was located in the defendant’s home.<sup>38</sup> This would turn out to be the decisive issue, as *Knotts* held that the use of the beeper did not constitute a search,<sup>39</sup> while the *Karo* court concluded it was a “search,” but only insofar as the tracking device was used on his private property.<sup>40</sup> In so holding, the *Karo* court affirmed that the use of the beeper to track movements on public streets did not constitute a search and did not implicate the defendant’s Fourth Amendment rights.<sup>41</sup>

In her article, Kaitlyn Kerrain explored the two decisions and identified the *public exposure consideration* as paramount to the

30. *Karo*, 468 U.S. at 731–32 (citing *Knotts*, 460 U.S. at 281); *Knotts*, 460 U.S. at 285.

31. *Knotts*, 460 U.S. at 276.

32. *Karo*, 468 U.S. at 705.

33. *Katz v. United States*, 389 U.S. 347, 351 (1967).

34. *Karo* 468 U.S. at 708; *Knotts*, 460 U.S. at 278, 286.

35. *Knotts*, 460 U.S. at 278–79.

36. *Karo*, 468 U.S. at 708–11.

37. *Knotts*, 460 U.S. at 278–79 (“The record before us does not reveal that the beeper was used after the location in the area of the cabin had been initially determined.”).

38. *Karo*, 468 U.S. at 710.

39. *Knotts*, 460 U.S. at 285.

40. *Karo*, 468 U.S. at 735.

41. *Id.* at 730–31.

Courts' conclusions that using a beeper to track the movements on public property did not constitute a search.<sup>42</sup> In both cases, the Court found that no reasonable expectation of privacy exists where the defendant's movements are *publicly exposed* and thus such actions did not invoke the privacy expectations necessary to trigger a "search" as defined by *Katz* and the Fourth Amendment.<sup>43</sup> In short, the analysis now turned on whether someone or something was theoretically exposed to the public eye. The Court was quick to point out the tracking took place on "public thoroughfares" and therefore the expectation of privacy was lessened.<sup>44</sup> By superficially relying on the simple fact that the defendant was publicly exposed, the Court fell back on the same argument the *Katz* court explicitly rejected.<sup>45</sup> In *Katz*, the government argued that because the phone booth was made of glass, the defendant was publicly visible and therefore could not reasonably assert an expectation of privacy.<sup>46</sup> Justice Stewart rejected this argument, pointing out that "what [the defendant] sought to exclude when he entered the booth was not the intruding eye—it was the uninvited ear."<sup>47</sup> Yet this fact—that just because the defendants in *Knotts* and *Karo* were publicly visible did not mean they had necessarily waived their expectation of privacy—eluded the Court in both instances. Consequently, by adopting the public exposure doctrine, the Court came full circle back to the very problem it had attempted to address in *Katz*: the simplistic link between Fourth Amendment and physical trespass.

### III. Circuit Court Rulings on Fourth Amendment GPS Cases

#### A. *Pineda-Moreno, Marquez, Cuevas-Perez*

The beginning of the 21st century introduced a series of federal appellate cases asking circuit courts to rule on the constitutionality of using GPS devices in the absence of a search warrant. Given the nature of our common law system and its emphasis on *stare decisis*, it was only natural that these courts would look to Supreme Court precedent for guidance. The question then was whether the Court

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42. Kaitlyn A. Kerrane, *Keeping Up With Officer Jones: A Comprehensive Look at the Fourth Amendment and GPS Surveillance*, 79 *FORDHAM L. REV.* 1695, 1716 (2011).

43. *Id.*

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

45. *Katz v. United States*, 389 U.S. 347 at 352 (1967).

46. *Id.*

47. *Id.*

ruled on a sufficiently similar issue to guide the lower courts' decision-making process. According to the Seventh, Eighth and Ninth Circuits, the answer was yes.<sup>48</sup> These courts held that *Knotts* already determined that "a person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another"<sup>49</sup> and therefore, the use of GPS devices to track vehicles on public roads was clearly not a search within the meaning of the Fourth Amendment.

The first circuit court to deal with this issue<sup>50</sup> was the Ninth Circuit Court of Appeals, which heard *United States v. Pineda-Moreno* in January of 2010.<sup>51</sup> The court dealt predominantly with issues concerning when, where, and how the device was placed on the vehicle.<sup>52</sup> Much of the decision centered on the fact that the vehicle was parked in the curtilage when the device was planted and relegates the actual monitoring of the device as a secondary issue.<sup>53</sup> But Mr. Pineda-Moreno's last claim dealt with the actual use of the device, arguing, "*Knotts* should not control his case because the [Supreme] Court heavily modified the Fourth Amendment analysis applicable to such technological devices in *Kyllo*."<sup>54</sup>

The court replied that Mr. Pineda-Moreno "misstates the relationship between the two cases."<sup>55</sup> The court went on to attribute Mr. Pineda-Moreno with contending that "officers conduct a 'search' whenever they use sense-enhancing technology not available to the general public to obtain information."<sup>56</sup> Had this been Mr. Pineda-Moreno's contention he would clearly have misinterpreted the

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48. *United States v. Cuevas-Perez*, 640 F.3d 272 (7th Cir. 2011), *vacated*, 132 S. Ct. 1534 (2012); *United States v. Marquez*, 605 F.3d 604 (8th Cir. 2010); *United States v. Pineda-Moreno*, 591 F.3d 1212 (9th Cir. 2010), *vacated*, 132 S. Ct. 1533 (2012).

49. *Knotts*, 460 U.S. 276, 282 (1983); *See, e.g., Pineda-Moreno*, 591 F.3d at 1214.

50. It should be noted that there were previous circuit court decisions, but this was the first in the line of widely recognized cases leading to the Supreme Court's granting of certiorari to *United States v. Jones*.

51. *Pineda-Moreno*, 591 F.3d 1212.

52. *Id.* at 1214–15.

53. *Id.*

54. *Id.* at 1216. In *Kyllo*, the Court held that using thermal imaging technology to obtain "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—at least where the technology in question is not in general use." *Kyllo v. United States*, 533 U.S. 27, 34 (2001) (emphasis added) (quoting *Silverman v. United States*, 365 U.S. 505, 512 (1961)).

55. *Pineda-Moreno*, 591 F.3d at 1216.

56. *Id.*



holding in *Kyllo*, but this was not the case. He was actually arguing that *Kyllo* be applied in full to require that a search only occurs when officers use sense-enhancing technology not otherwise available to the public *to obtain information not otherwise lawfully obtainable*.<sup>57</sup> If his argument is understood to include this caveat, the assertion becomes vastly more reasonable and would seem to strike a reasonable balance between our civil liberties and public safety considerations. Instead, the court fell back on a simplistic analysis of whether the search took place in a “constitutionally protected area,” an analysis that although explicitly disavowed by the Court forty-three years prior in *Katz*,<sup>58</sup> would prove dispositive in *Jones*.<sup>59</sup>

The next case at the circuit court level attacked the issue head on, arguing simply that *Knotts* did not control on the facts alone. Four months after *Pineda-Moreno* was published, the Eighth Circuit decided *United States v. Marquez* in May 2010.<sup>60</sup> In *Marquez*, the court held that the defendant did not actually have standing since he neither owned nor drove the vehicle on which the device was attached.<sup>61</sup> Nonetheless, the court went out of its way to state that even if he did have standing, *Knotts* foreclosed the argument that GPS tracking on public roads constitutes a search.<sup>62</sup> The court did acknowledge the concern expressed by Judge Posner in a previous decision that “the cost of technology is decreasing while the ability of police to monitor and install such devices is increasing,” enabling “wholesale surveillance” by attaching devices at random and then mining the data for possible criminal behavior.<sup>63</sup> But the court dismissed this concern, citing the fact that the police had reasonable suspicion and thus need not have sought a warrant.<sup>64</sup> In essence, though done in dicta, the court created a reasonable suspicion standard for GPS tracking.

But the greatest illustration of some courts’ dogged reliance on the public-exposure doctrine comes from the Seventh Circuit, which

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57. *Kyllo*, 533 U.S. at 34.

58. *Katz v. United States*, 389 U.S. 347, 352 (1967) (the “effort to decide whether or not a given ‘area,’ viewed in the abstract, is ‘constitutionally protected’ deflects attention from the problem presented . . .”).

59. *United States v. Jones*, 132 S. Ct. 945, 945 (2012).

60. 605 F.3d 604, 604 (8th Cir. 2010).

61. *Id.* at 609.

62. *Id.*

63. *Id.* at 610 (quoting *United States v. Garcia*, 474 F.3d 994, 998 (7th Cir. 2007)).

64. *Id.*

heard the case of *United States v. Cuevas-Perez* in 2011.<sup>65</sup> In *Cuevas-Perez*, Immigration and Customs Enforcement agents suspected the defendant of being involved in a drug-distribution ring.<sup>66</sup> After lawfully obtaining video footage of the defendant altering the panels and rear hatch on his vehicle so as to create hidden compartments, police officers decided to place a GPS tracking unit on the suspect's Jeep.<sup>67</sup> The particular tracking device used was capable of sending text messages every four minutes to the detective's cellular phone to keep him apprised of the suspect's location.<sup>68</sup> Unlike *Pineda-Moreno* and *Marquez*, where police tracked suspects with GPS devices for four and five months respectively, the detective in this case used the device to track the suspect for a sixty-hour road-trip through Phoenix, Arizona to the Illinois border.<sup>69</sup> Upon reaching Illinois, the suspect was detained for a traffic violation, during which authorities discovered heroin in the paneling and roof of the vehicle.<sup>70</sup>

In its holding, the court explicitly stated that “[t]he foundational Supreme Court precedent for GPS-related cases is *United States v. Knotts*, which held that the use of a beeper device to track a drug suspect did not violate the Fourth Amendment because it did not amount to a search or seizure.”<sup>71</sup> To bolster its contention that *Knotts* provided the proper analysis, the court noted the relatively short duration of the tracking time (sixty hours, as opposed to a period of one month) and the fact that the tracking was limited in scope, i.e., a single trip from Arizona to Illinois.<sup>72</sup> Having established the framework for its analysis, the Seventh Circuit adopted the same language, and thus rationale, employed by the Supreme Court in *Knotts*. Namely, that a “person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another.”<sup>73</sup> Since the suspect had no

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65. *United States v. Cuevas-Perez*, 640 F.3d 272 (7th Cir. 2011).

66. *Id.* at 272.

67. *Id.*

68. *Id.*

69. *Id.* at 273.

70. *Id.*

71. *Id.*

72. *Id.* at 274.

73. *Id.* at 273 (quoting *United States v. Knotts*, 460 U.S. 276, 281 (1983)) (internal quotation marks omitted).

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reasonable expectation, the action did not constitute a search and therefore did not implicate the suspect's Fourth Amendment rights.<sup>74</sup>

Of all three cases, *Cuevas-Perez* unequivocally involved facts most similar to those dealt with in *Knotts*. It follows then, that the "principal rationale for allowing warrantless tracking of beepers . . . that beepers are merely a more effective means of observing what is already public,"<sup>75</sup> could reasonably be applied to the *Cuevas-Perez* case. However, the court did acknowledge that if the facts had been different, the aspects of the case might favor the finding of a search;<sup>76</sup> aspects that were present in a case decided prior to *Cuevas-Perez* by the D.C. Circuit Court of Appeals.

### **B. *Maynard* and the Mosaic Theory<sup>77</sup>**

With *Marquez* and *Pineda-Moreno* decided,<sup>78</sup> it appeared the principle that the "Fourth Amendment protects people, not places," simply did not apply to GPS tracking.<sup>79</sup> Warrantless tracking, even over the course of months, was deemed lawful so long as it took place in public places. Fourth Amendment analysis had regressed. In seeking to determine whether society would deem an expectation of privacy to be reasonable, courts had chosen the public/private divide as its proxy test, in spite of *Katz's* prohibition on doing so.<sup>80</sup> So long as GPS tracking devices were analyzed in the framework of *Knotts*, this result was inevitable.

Then came *Maynard*, a case that began in 2004 when an FBI taskforce began to suspect Mr. Maynard and Mr. Jones (the U.S. Supreme Court granted certiorari in Mr. Jones' name) of narcotics violations.<sup>81</sup> The investigation involved conspiracy, wiretaps, GPS surveillance and took place over the span of more than a year.<sup>82</sup> Ultimately, in October of 2005 the two were charged with conspiracy to distribute and possession with intent to distribute cocaine and cocaine base, among other counts.<sup>83</sup> The case involved a number of

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74. *Id.* at 276.

75. *Knotts*, 460 U.S. at 284.

76. *Cuevas-Perez*, 640 U.S. at 274.

77. *United States v. Maynard*, 615 F.3d 544 (D.C. Cir. 2010).

78. *Cuevas-Perez* would come shortly after *Maynard*.

79. *See supra* Part III.A

80. *Katz v. United States*, 389 U.S. 347, 351–52 (1967).

81. *Maynard*, 615 F.3d at 549.

82. *Id.*

83. *Id.*

complex issues, but one that the D.C. Circuit focused on was whether the use of a GPS tracking device continuously over the course of twenty-eight days constituted a search under the Fourth Amendment.<sup>84</sup> In a break from its sister circuits, the D.C. Circuit determined that *Knotts* did not control this case because *Knotts* “explicitly distinguished between the limited information discovered by the use of the beeper—movements during a discrete journey—and more comprehensive and sustained monitoring of the sort at issue in this case.”<sup>85</sup> In fact, the court noted that *Knotts* itself foresaw this very distinction when it stated, “[i]f such dragnet-type law enforcement practices as respondent envisions should eventually occur, there will be time enough then to determine whether different constitutional principles may be applicable.”<sup>86</sup> As the *Maynard* court saw it, that day and time had come and the question was not whether new principles applied, but what those new principles would be.

Most importantly, the D.C. Circuit was the first court to recognize the limitations of *Knotts*; “*Knotts* held *only* that a ‘person travelling in an automobile on public thoroughfares has no reasonable expectation of privacy in his movements from one place to another,’ not that such a person has no reasonable expectation of privacy in his movements whatsoever, world without end.”<sup>87</sup> Having freed from the constraint of *Knotts*, the court was able to apply the facts at hand to the foundational test laid out in *Katz*—whether the defendant exhibited a subjective expectation of privacy and whether that expectation was one which society was prepared to accept as reasonable.<sup>88</sup> The court first addressed the public observation consideration,<sup>89</sup> the notion that if the actions took place where they could be publicly observed there can be no reasonable expectation of privacy. To do so, the court invoked what has been considered the “Mosaic Theory,” which suggests, “[t]he whole of one’s movements over the course of a month is not *constructively* exposed to the public because, like a rap sheet, that whole reveals far more than the individual movements it comprises.”<sup>90</sup> It went on to articulate the myriad of invasive conclusions about one’s private life that could be

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84. *Id.* at 555.

85. *Id.* at 556 (citing *United States v. Knotts*, 460 U.S. 276, 281 (1983)).

86. *Id.* (quoting *Knotts*, 460 U.S. at 283–84) (internal quotation marks omitted).

87. *Id.* at 557 (quoting *Knotts*, 460 U.S. at 281) (emphasis added).

88. *Katz v. United States*, 389 U.S. 347, 361 (1967).

89. Kerrane, *supra* note 42, at 1710.

90. *Maynard*, 615 F.3d at 561–62 (emphasis added).

drawn from ubiquitous monitoring, that would otherwise be implausible by monitoring discrete, singular movements.<sup>91</sup> Indeed, the whole is much greater than the sum of its parts.

Having concluded that movements were not constructively exposed, the court went on to consider the possibility that the defendant's movements were *actually* exposed, thereby negating a reasonable expectation of privacy.<sup>92</sup> The court adopted a probabilistic inquiry<sup>93</sup> that determines "not what another person may physically and lawfully do but rather what a reasonable person expects another might actually do."<sup>94</sup> Therefore, the proper inquiry was if it was unreasonable for the defendant *not* to conclude a watchful eye was tracking his every movement. Consequently, the court concluded that his movements were neither constructively, nor actually, exposed and thereby allowed itself to focus on *Katz*, rather than becoming tied up in *Knotts*.<sup>95</sup>

For the first time as applied to GPS cases, the court was able to faithfully channel the spirit that led Justice Stewart to opine that, "the Fourth Amendment protects people, not places."<sup>96</sup> The court reiterated that a "person does not leave his privacy behind when he walks out his front door," and unlike past courts which applied *Katz* to GPS surveillance, pointed out that *Katz* "clearly stated what [one] seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected."<sup>97</sup> To bolster its conclusion that society would concur that Mr. Maynard's expectations of privacy were reasonable, the court pointed to the fact that the California legislature, as well as a number of other state legislatures, had all adopted statutes requiring the police to obtain a warrant before placing a tracking device on people's vehicles.<sup>98</sup> Although the California legislature is not a proxy for nation-wide societal consensus, it was enough for the court to conclude that "[s]ociety

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91. *Id.* at 562.

92. *Id.* at 555–56.

93. Orin S. Kerr, *Four Models of Fourth Amendment Protection*, 60 STAN. L. REV. 503, 508–09 (2007).

94. *Maynard*, 615 F.3d at 559. *See also* *Bond v. United States*, 529 U.S. 334 (2000); *California v. Greenwood*, 486 U.S. 35, 40 (1988); *California v. Ciraolo*, 476 U.S. 207, 213–14 (1986).

95. *Id.* at 559–61.

96. *Katz v. United States*, 389 U.S. 347, 351 (1967).

97. *Maynard*, 615 F.3d at 564 (quoting *Katz*, 389 U.S. at 351) (internal quotation marks omitted).

98. *Id.*

recognizes Jones' expectation of privacy in his movements over the course of a month as reasonable, and the use of the GPS device to monitor those movements defeated that reasonable expectation."<sup>99</sup>

### C. *United States v. Jones*: The Decision

In a "highly artificial"<sup>100</sup> decision, the majority opinion—authored by Justice Scalia and joined by Chief Justice Roberts and Justices Kennedy, Thomas, and Sotomayor—affirmed the D.C. Circuit's holding in *Jones*, but did so for a dramatically different reason than the D.C. Circuit.<sup>101</sup> Justice Scalia framed the issue by emphasizing that, "[i]t is important to be clear about what occurred in this case: The Government physically occupied private property for the purpose of obtaining information."<sup>102</sup> Based on an eighteenth century English case, *Entick v. Carrington*, the majority concluded that there is "no doubt that such a physical intrusion would have been considered a 'search' within the meaning of the Fourth Amendment when it was adopted."<sup>103</sup> Trespass doctrine, a legal theory that had proved so wanting in its protection of Fourth Amendment rights that it was expressly rejected by the Court in favor of the *Katz* two-prong test,<sup>104</sup> was now being revived for the first time in more than forty-five years. Perhaps even more surprising, it was being invoked in lieu of the two-prong test, essentially reversing the trajectory taken in Fourth Amendment case law since the Court's decision in *Katz*.

The remainder of the decision is devoted to preempting the arguments made by Justice Alito in his concurrence; that the appellate court's decision should have been affirmed on the basis of the two-prong test.<sup>105</sup> In sum, the majority revived the long dead common-law trespass doctrine in order to avoid addressing the "vexing" problem of distinguishing *Jones* from cases like *Knotts* and *Karo*.<sup>106</sup> To be fair, this response merits consideration and even the

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99. *Id.*

100. *United States v. Jones*, 132 S. Ct. 945, 958 (2012) (Alito, J., concurring).

101. *Id.* at 954 (majority opinion).

102. *Id.* at 949.

103. *Id.* at 950.

104. *United States v. Karo*, 468 U.S. 705, 713 (1984) (stating that "an actual trespass is neither necessary nor sufficient to establish a constitutional violation").

105. *Jones*, 132 S. Ct. at 953–54.

106. *Id.* at 954.

minority struggled to distinguish *Jones* from its previous cases.<sup>107</sup> However, the critical observation is that in requiring that *Jones* be in some way distinguished from *Knotts* and *Karo*, both the majority and Justice Alito's concurrence implicitly reaffirm the validity of the public-exposure doctrine underlying the decisions in these cases.<sup>108</sup>

Where the majority opinion does discuss the public-exposure doctrine, their discussion is sure to lead to further confusion for courts and scholars alike. Initially, the Court seemed to affirm the contemporary application of the doctrine, stating, "to date [the Court] has not deviated from the understanding that mere visual observation does not constitute a search."<sup>109</sup> But in the same paragraph, it seems to suggest a willingness to reconsider the public-exposure doctrine, opining that GPS tracking could amount to an unconstitutional invasion of privacy even without the accompanying trespass.<sup>110</sup> But rather than taking the opportunity to restore consistency and predictability to Fourth Amendment jurisprudence, the majority leaves it to lower courts to continue struggling to determine whether or not privacy expectations, with respect to acts, voluntarily publicly exposed, are still *per se* unreasonable.<sup>111</sup>

Justice Alito filed a concurring opinion, in which he was joined by Justices Ginsburg, Breyer, and Kagan. Justice Alito immediately points out that although the majority held that the placement *and use* of a GPS device constitutes a search, it is patently unclear from its opinion how either of the discrete elements of the government's actions—(1) the placement of the device and (2) the use of the device to monitor Jones' movements—constitute a search if the Court accepts the *Knotts* proposition that the use of a small electronic device to monitor an individual's movements is not a search.<sup>112</sup> The placement alone, as argued by Justice Alito, could not conceivably amount to a search if, for example, the GPS device failed to work and therefore no information was obtained from the placement.<sup>113</sup>

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107. *Id.* at 964 (Alito, J., concurring) (Justice Alito's only guidance seems to be that "short-term" tracking does not violate the Fourth Amendment, but that long-term tracking does.).

108. *Id.* at 954 (majority opinion); *Id.* at 964 (Alito, J., concurring).

109. *Id.* at 953 (majority opinion).

110. *Id.* at 954.

111. *Id.* at 952–53.

112. *Id.* at 958 (Alito, J., concurring).

113. *Id.*

Assuming *arguendo* that the analysis must turn on one of these discrete actions, Justice Alito's concurrence proceeds to examine the use of the GPS device to monitor Jones' movements, as the only action that by definition, could constitute a search within the framework of Fourth Amendment jurisprudence.<sup>114</sup> To determine the appropriate test, Justice Alito proceeds to articulate the same argument the Court laid out in *Katz* establishing the inefficacy of the trespass doctrine as a prophylactic measure for protecting society's Fourth Amendment rights.<sup>115</sup> The concurrence even points out the Court's language in *Karo*, a decision cited numerous times by the majority, states that in "addressing the relevance of a technical trespass, an actual trespass is neither necessary *nor sufficient* to establish a constitutional violation."<sup>116</sup>

In addition to arguing that the trespass doctrine lacked the legal sufficiency to adequately resolve *Jones*, the concurrence also points out the practical concerns with disposing of the case on such narrow grounds;<sup>117</sup> there already exists a number of personal devices which U.S. citizens voluntarily carry and that could easily be utilized to achieve the same degree of invasive monitoring as undertaken by the government in *Jones*.<sup>118</sup> As Justice Alito notes, "with more than 322 million wireless devices in use in the United States" the government need only change its method of GPS monitoring to render the majority's holding irrelevant.<sup>119</sup>

While the concurring Justices listed four additional shortcomings of the majority's reliance on trespass-doctrine, the latter three generally derive from the first—the fundamental fact that:

[T]he Court's reasoning largely disregards what is really important (the use of a GPS for the purpose of long-term tracking) and instead attaches great significance to something that most would view as relatively minor (attaching to the bottom of a car a small, light object that does not interfere in any way with the car's operation). Attaching such an object is

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114. *Id.* at 958–59.

115. *Id.* at 959–60. *Katz* also cited *Olmstead v. United States*, 277 U.S. 438 (1928) and *Goldman v. United States*, 316 U.S. 129 (1942) as indicative of the shortcomings of a trespass doctrine for Fourth Amendment analysis. *Katz v. United States*, 389 U.S. 347, 354 (1967). In fact, *Katz* expressly overruled these two cases. *Id.*

116. *Jones*, 132 S. Ct. at 960 (internal citations omitted).

117. *Id.* at 963.

118. *Id.*

119. *Id.*



generally regarded as so trivial that it does not provide a basis for recovery under modern tort law. But under the Court's reasoning, this conduct may violate the Fourth Amendment. By contrast, if long-term monitoring can be accomplished without committing a technical trespass—suppose, for example, that the Federal Government required or persuaded auto manufacturers to include a GPS tracking device in every car—the Court's theory would provide no protection.<sup>120</sup>

In discrediting the trespass doctrine and simultaneously establishing that the use of the GPS device, as opposed to the placement of the device, is the dispositive issue, the concurrence established the *Katz* two-prong test as the preferred means of resolving the issue before the Court in *Jones*.<sup>121</sup>

Although the concurrence disagreed with the majority's mode of analysis, it did concur in the judgment that the use of the GPS device to monitor Jones' movements did constitute a search, as it violated a reasonable expectation of privacy.<sup>122</sup> It noted that “[t]he *Katz* expectation of privacy test . . . is not without its own difficulties,” specifically its subjective nature in light of the ever changing technology and privacy norms.<sup>123</sup> As pointed out by the majority, the concurring Justices' decision to decide the issue under the rubric of *Katz* requires that any holding that a search occurred must be reconciled with the Court's previous opinions in *Knotts* and *Karo*.<sup>124</sup> To do so, the concurrence embraced the duration of the monitoring as the dispositive issue, stating that under its approach “relatively short-term monitoring of a person's movements on public streets accords with expectations of privacy that our society has recognized as reasonable. But the use of longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy.”<sup>125</sup> Unfortunately, beyond seizing on the length of time of the tracking as potentially dispositive, Justice Alito failed to provide further guidance as to the point at which GPS tracking would last long enough to require a warrant.<sup>126</sup> And while Justice Scalia was

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120. *Id.* at 961 (internal citations omitted).

121. *Id.* at 962.

122. *Id.* at 964.

123. *Id.* at 962.

124. *Id.* at 954.

125. *Id.* at 964 (Alito, J., concurring) (internal citations omitted).

126. *Id.*

quick to point this out as a potential problem, he does not appear to have been compelled to venture an answer either.<sup>127</sup>

It was Justice Sotomayor's concurrence that made the most poignant observations to come out of the *Jones* opinion. It is fitting that it was once again a concurrence that reflected the purest invocation of the ethos of Justice Harlan's famous opinion.<sup>128</sup> More importantly, Justice Sotomayor's concurrence demonstrated a faithful application of the two-prong test. Only by adopting the flexible and subjective approach that is the strength of the *Katz* two-prong test, did it enable Justice Sotomayor to probe the Court's otherwise assumed wisdom and to lay the foundation for a meaningful exploration of the relevance of cases like *Knotts* and *Karo* in the contemporary era of GPS and *Jones*.

Although Justice Sotomayor ultimately concluded with the majority that *Jones* could be disposed of on the basis of physical trespass,<sup>129</sup> the majority of her concurrence is devoted to applying the facts of *Jones* to the legal standard established in *Katz* and also concurring with the minority of her peers that "at the very least, longer term GPS monitoring in investigations of most offenses impinges on expectations of privacy."<sup>130</sup> But it is Sotomayor's insightful way of arriving at that conclusion that proves particularly useful in guiding this discussion of Fourth Amendment protections. Although this holding alludes to the length of tracking as potentially significant in determining whether government monitoring violates reasonable expectations of privacy,<sup>131</sup> her concurrence embraces a more holistic analysis of reasonableness and in doing so, demonstrates that the duration of GPS tracking may ultimately be irrelevant.

By recognizing that *Katz* was itself an invention necessitated by the rapidly evolving technological innovations available to law enforcement, Justice Sotomayor was unique in her observation that "GPS monitoring [makes] available at a relatively low cost such a substantial quantum of intimate information about a person . . . [that it] may alter the relationship between citizen and government in a

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127. *Id.* at 954 (majority opinion).

128. Harlan's opinion was itself a concurrence. *Katz v. United States*, 389 U.S. 347, 360 (1967) (Harlan, J., concurring).

129. *Jones*, 132 S. Ct. at 957 (Sotomayor, J., concurring).

130. *Id.* at 955.

131. *Id.*

way that is inimical to democracy.”<sup>132</sup> Her recognition of the uniquely pervasive potential of GPS was the catalyst for her observation that perhaps GPS tracking requires an altogether different analysis from the ones applied by the Court in cases like *Knotts* and *Karo*. She alone recognized that the power of GPS tracking is so “inimical” to our Fourth Amendment rights, that in order to ensure our Fourth Amendment protections do not rise and fall with technology:

[I]t 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. People 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.<sup>133</sup>

As discussed above,<sup>134</sup> *Knotts* and *Karo*—cases which both the majority and Justice Alito’s concurrence imply would condone “short-term” GPS tracking—were based on the legal conclusion that privacy expectations are nullified once conveyed to the public, now reexamined by Justice Sotomayor. The willingness to question this conclusion enabled Justice Sotomayor to expand the scope of her analysis beyond the issue of how long the tracking took place, since *Knotts* and *Karo* no longer *necessarily* stand for the proposition that GPS tracking is permissible, even for short periods of time.<sup>135</sup>

Justice Sotomayor’s skepticism directs us to the reconsider the assumption that society finds unreasonable any privacy expectation in information voluntarily disclosed, and the research demonstrates that she is correct to call for the reevaluation of this legal conclusion.<sup>136</sup>

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132. *Id.* at 956 (citing *United States v. Cuevas-Perez*, 640 F.3d 272, 285 (7th Cir. 2011)) (internal quotation marks omitted).

133. *Id.* at 957 (internal citations omitted).

134. *See supra* Part II.B.

135. This is not to say that these two cases would be overruled. They would still stand for the proposition that the use of transmitters utilizing radio signals does not violate reasonable expectations of privacy. But at the same time, the use of GPS devices under the same circumstances would violate society’s expectations of privacy.

136. *Jones*, 132 S. Ct. at 957 (Sotomayor, J., concurring).

Unconstrained by the legal conclusion that privacy expectations are extinguished once exposed to the public, Justice Sotomayor was able to freely contemplate society's privacy expectations from an unencumbered position—asking “whether people reasonably expect that their movements will be recorded and aggregated in a manner that enables the Government to ascertain, more or less at will, their political and religious beliefs, sexual habits, and so on.”<sup>137</sup> In conclusion, Justice Sotomayor wrote, “I do not regard as dispositive the fact that the Government might obtain the fruits of GPS monitoring through lawful conventional surveillance techniques.”<sup>138</sup> It should be no surprise then, that Justice Sotomayor's concurrence came closest to recognizing and adopting the views of individual members of society, when asked whether GPS tracking offends their conceptions of reasonable privacy expectations.<sup>139</sup>

#### IV. The Research

##### A. Data Collection

The *Katz* Court made a laudable move when it made society the arbiter of its own Fourth Amendment protections. But before any further speculation can ensue as to whether the Court has or should have decided *Jones* within the framework of the *Katz* two-prong test, the principal purpose of the research component of this note was to ask everyday people whether they believed that GPS tracking violated their own personal sense of privacy expectations. While there is no shortage of scholarly proposals for ways to apply the two-prong test, it would appear that no one has bothered to query “society” as to its contemporary privacy expectations in light of Facebook, cookies, and what appears to be the daily encroachment of technology (be it willfully, voluntarily, or in ignorance) in our daily lives.

In light of this conspicuous absence, 321 randomly selected individuals were asked whether they believed the use of GPS tracking devices constitutes an unjustified infringement on our civil liberties and whether they have a reasonable expectation of privacy while generally moving about society. To answer this question, each respondent was given one of four potential scenarios in which the police used GPS devices to track an individual's movements. After

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137. *Id.* at 956.

138. *Id.*

139. *See infra* Part V.

reading the hypothetical, respondents were asked to determine whether the officer's conduct was justified and whether the individual's privacy was violated.<sup>140</sup> By distinguishing between whether the officer was justified and whether the individual's privacy was violated, it allowed respondents to distinguish their sentiments about the exercise of police authority and the reasonableness of the individual's expectation of privacy. This allowed respondents who believed that the officer's actions were unjustified, yet also felt that the individual still did not have a reasonable expectation of privacy to answer accordingly; ensuring that people who disagreed with the officer's actions but did not believe the suspect's privacy was violated to say so without feeling compelled to agree with the premise that his privacy was violated to channel their disapproval of the officer's actions.

The first portion of the survey contained a GPS hypothetical coming in one of four different variations, loosely adapting the factual scenarios from *Pineda-Moreno* and *Jones*. Version one presented a scenario in which the police officer's decision to place the tracking device on the vehicle was based on limited circumstantial evidence. In this scenario the individual was tracked for four months.<sup>141</sup> In version two, the officer placed the tracking device on the vehicle based on extensive information that the individual was engaged in cocaine distribution. In version two, the individual was tracked for the same duration as in version one (four months).<sup>142</sup> Versions three and four parallel versions one and two, differing only with respect to the length of time that the GPS unit was employed to track the suspect.<sup>143</sup> In these cases, suspects were tracked for 48 hours.

The remaining portions of all four potential surveys were identical; each containing an additional identical hypothetical, followed by a series of demographic questions. The second hypothetical presented to all respondents was taken loosely from the facts of *Katz* and was included as an attempt to determine whether the *Katz* Court properly administered its own test.<sup>144</sup> If the research

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140. While it may be argued that the question presupposes that there is an expectation of privacy, thereby distorting the data by biasing the respondent, this author contends that the bias is mitigated by the ability to answer strongly in the negative and that any and all such responses are interpreted to mean that the respondent did not believe the individual had a reasonable expectation of privacy.

141. See Appendix, survey one.

142. See Appendix, survey two.

143. See Appendix, surveys three and four.

144. See Appendix, the second hypothetical from any one of the four surveys.

indicates that the original Court did get it correct, it demonstrates that perhaps the test is not as flawed as has been suggested and that with an honest and deliberative process, our courts can accurately apply the *Katz* test to any factual scenario no matter how complex the technology involved.

### B. The Results

Society overwhelmingly believes that GPS tracking is unjustifiable and violates an individual's privacy rights, a conclusion which indicates that the use of GPS tracking devices undoubtedly qualifies as a "search" for purposes of Fourth Amendment protections. Had the Court decided the issue on the basis of *Katz*, the concurring Justices were clearly correct in concluding that GPS tracking constitutes a search.

In all four GPS tracking scenarios modeled, the respondents firmly believed that GPS tracking was unjustifiable and violated social norms about reasonable expectations of privacy:

Officer's Actions Justified:	Agree	Disagree
4 Months/Low Suspicion	88%	6%
4 Months/High Suspicion	66%	23%
48 Hours/Low Suspicion	73%	15%
48 Hours/High Suspicion	72%	15%

Privacy Violated:	Agree	Disagree
4 Months/Low Suspicion	94%	2%
4 Months/High Suspicion	73%	15%
48 Hours/Low Suspicion	84%	12%
48 Hours/High Suspicion	74%	14%

When police utilize GPS devices based on limited probable cause and utilize these devices for an extended period of time, respondents resoundingly rejected state actions as a violation of the suspected individual's privacy rights. Respondents were asked to read the following hypothetical and respond accordingly:

Officer Jones, who was off-duty, was running routine personal errands at a local Home Depot when he noticed Gary loading several large bags of fertilizer into his vehicle. Gary caught Officer Jones' attention because the officer recognized the fertilizer he was loading as a kind often used for growing marijuana. Based on this knowledge, Officer

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Jones followed Gary back to his home, where the officer noticed that Gary did not appear to have a yard which would require the amount of fertilizer that he had recently purchased. The next day, without getting a warrant, Officer Jones returned to Gary's home and attached a GPS tracking device to the underside of Gary's vehicle. The police tracked Gary's movements for the next four months.

The police officer was justified in tracking Gary's movements over four months.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Gary's right to privacy was violated by the police.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

The average answer to question one was 4.323, meaning that the average respondent fell somewhere in between strongly disagreeing and disagreeing that the officer's actions were justified. Eighty-eight percent of respondents disagreed that the officer's actions were justified, with only 6 percent agreeing.<sup>145</sup> More importantly, 94 percent of respondents agreed that the individual's privacy was violated, with only 2 percent disagreeing with the statement; the average answer to question two was 1.635. When the officer tracked the defendant for 48 hours instead of four months, respondents were nearly as vigorous in their responses. The average response to question one was 4.024, with 73 percent of respondents disagreeing that the officer's actions were justified and only 15 percent agreeing with the statement. The average response to question two was 1.854, with 84 percent of respondents agreeing that the individual's privacy was violated and only 12 percent disagreeing.

Even when respondents were presented with significant probable cause to believe an individual is actually engaged in criminal activity, their responses still indicate that GPS tracking violates reasonable expectations of privacy and therefore amounts to a search as defined

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145. All following percentages combine respondents who strongly agree and agree into one category, agree. Similarly, percentages of those who "disagree" represent the aggregate of all respondents who either disagree or strongly disagree.

by the *Katz* test. Respondents were presented with the following scenario and then asked to respond accordingly:

Police received a tip from a credible informant that Ben was selling large amounts of cocaine. Based on this tip, police obtained permission to wiretap Ben's phone and were able to record numerous conversations implicating Ben in the sale of cocaine. In an attempt to gather further evidence, police decided they would track Ben's movements with a GPS tracking device. Without obtaining a warrant, Officer Willis secretly placed a GPS unit on the underside of Ben's vehicle. The police tracked Ben's movements for the next four months.

Officer Willis was justified in tracking Ben's movements over four months.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Ben's right to privacy was violated by the police.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

The average response to question one was 3.676 and a significant majority still believed the actions were unjustified. Sixty-six percent of respondents disagreed with the premise that the officer's actions were justified under these circumstances, while only 23 percent believed the actions were justified. More importantly, the average response to question two was 2.203, indicating respondents agree that the right to privacy is violated when the police utilize GPS tracking devices under these circumstances. Seventy-three percent of respondents still believed the individual's right to privacy was violated while only 15 percent of respondents disagreed with this statement. The same scenario was also presented to another 69 respondents, with the officer tracking the suspected cocaine dealer's movements for 48 hours instead of four months. Of these respondents, 72 percent still disagreed that the actions were justified, while only 15 percent believed they were. The average of all 69 responses was 3.754 for question one. Finally, even though this scenario arguably presented the most defensible grounds for the use



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of GPS tracking, 74 percent of respondents agreed that the individual's privacy was violated and only 14 percent disagreed.<sup>146</sup>

From circumstances in which the State has probable cause to believe an individual is engaged in criminal activity to those in which the belief is merely a hunch—and from tracking that lasts anywhere from four months to 48 hours—society consistently recognizes that GPS tracking is unjustified. The strong inverse correlation between the belief that it is justified and the belief that it violates expectations of privacy indicates a strong correlative and arguably causal relationship between these beliefs.

Clearly then, Justice Sotomayor's skepticism about the public exposure doctrine was warranted.<sup>147</sup> The fact this exact legal conclusion—that privacy expectations are unreasonable once something is publicly viewed—led the Seventh, Eighth, and Ninth Circuit Courts to incorrectly conclude society would not perceive GPS tracking as violating an individual's reasonable expectations of privacy, further undermines the credibility of this doctrine. However, before concluding that the public exposure doctrine is responsible for our judiciary's shortcomings, the viability of the *Katz* test itself needs to be explored.

### C. Did *Katz* Get It Right?

The Supreme Court itself observed that the *Katz* test “has often been criticized as circular, and hence subjective and unpredictable.”<sup>148</sup> But provided society's privacy expectations are consistent and discernible, the test provides a powerful bulwark for our Fourth Amendment rights against increasingly technologically sophisticated and intrusive law enforcement tools. The beauty of the test is that it endows society with the ability to determine for itself the appropriate balance between public safety considerations and civil liberty considerations. If society narrowly circumscribes its privacy interests to prioritize law and order, then society will circumscribe the scope of what it considers reasonably private. Conversely, if society chooses to prioritize its civil liberties then it will broaden the scope of activities for which its members are accorded reasonable expectations of privacy. Either way, it makes society the arbiter of its own constitutional protections, an ideal that rests at the heart of our democratic system. Although society's expectations may change on

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146. The average response for question two was 2.116.

147. *Jones*, 132 S. Ct. at 957 (Sotomayor, J., concurring).

148. *Kyllo v. United States*, 533 U.S. 27, 34 (2001).

this issue over time, this does not reflect unpredictability as much as adaptability, something to be desired if the Constitution is to remain relevant for decades to come. But the test is only as good as our courts are at applying it and if the courts prove unable to accurately determine what society's expectations are, then the application of the *Katz* test *will* result in unpredictability and unmanageability.

It has already been demonstrated that at least with respect to the Seventh, Eighth, and Ninth Circuits, our courts have a troubling track record in applying the *Katz* test to determine whether traditional Fourth Amendment jurisprudence properly applies to GPS tracking. Is it simply impossible for our courts to accurately interpret society's privacy expectations, or does the problem lie in the proxy tests that the Court has developed to determine "reasonable" expectations of privacy e.g., the public exposure doctrine? While this research does not statistically prove that the *Katz* test *is* judicially manageable, demonstrating that the *Katz* Court itself failed to accurately measure society's privacy expectations can prove the opposite. That is, there is no better way to prove the unmanageability of the test than to prove that the *Katz* Court itself was mistaken in the application of its own test. Conversely, if the Court was correct in concluding that society recognized Mr. Katz's expectation of privacy inside a phone booth as reasonable, then we have evidence that at least one group of Justices was capable of applying the test. To determine if the *Katz* Court was correct in its holding, every respondent was asked to read the following hypothetical and respond accordingly:

Dan's cell phone ran out of batteries and he entered a phone booth to make a phone call. Officer Green had probable cause that Dan was involved in illegal gambling. Without obtaining a warrant, Officer Green attached a device to the outside of the booth, which allowed him to hear Dan's side of the conversation.

Officer Green was justified in attaching the device and listening to Dan's side of the conversation.

1. Strongly agree 2. Agree 3. Not sure 4. Disagree 5. Strongly disagree

Dan's right to privacy was violated by the police.

1. Strongly agree 2. Agree. 3. Not sure 4. Disagree 5. Strongly disagree

Had the members of the *Katz* majority been asked to predict society's responses, they would have anticipated that society would disagree with the first premise and agree with the second premise. According to the 321 individuals who were posed with the fact pattern from *Katz* and asked if the officer's actions were justified, 131 people strongly disagreed, 112 people disagreed, 20 were unsure, 47 agreed and 11 strongly agreed. Thus, society disagreed with the actions taken by the FBI agents in *Katz*.<sup>149</sup>

But did this belief stem from a general conviction that the officer's actions violated a perceived privacy norm or was this reaction to the officer's actions a result of something else? If the disapproval of the officer's actions was based on the belief that the state had unacceptably infringed on Dan's privacy expectations, we would expect that question two would produce comparably significant results. When asked if Dan's "privacy was violated by the police," 127 people strongly agreed, 129 people agreed, 12 people were unsure, 44 people disagreed and 9 people strongly disagreed. Translated into a function of percentages, the responses broke down as follows:

	Agree	Unsure	Disagree
Officer's Actions Justified:	18%	6%	76%
Privacy Violated:	80%	4%	16%

Thus, society overwhelmingly agreed that the officer's actions violated Mr. Katz's right to privacy.<sup>150</sup> In fact, a comparison of the average responses to each question reveals that people felt even stronger that his right to privacy was violated than they did that the officer's actions were unjustified.<sup>151</sup> On the whole, responses to these questions were remarkably similar. The vast majority of people who found the actions unjustified also found that privacy was violated. Conversely, the people who found the actions justified also found that privacy was not violated. Whether this is the result of a causal or

149. The actual average of all of these answers was 3.9506.

150. The actual average of all 321 respondent answers was 1.9938.

151. 3.9502, an answer that falls slightly on the weaker side of disagree (that the officer's actions were justified) as compared to 1.9938, an answer that falls slightly on the stronger side of agree (that his privacy was violated.)

merely correlative relationship is yet to be determined, but it is clear that there is a distinct and discernible relationship between justifiable state action and respect for its citizens' right to privacy.

Most importantly, it is clear that *Katz* was correct when it held that an individual's expectation of privacy inside of a phone booth is an expectation that "society is prepared to recognize as reasonable."<sup>152</sup> Despite the anachronistic nature of a phone booth in contemporary society, respondents clearly believed that state action to monitor the conversation taking place inside that phone booth violated a clearly defined privacy norm and that it was unjustifiable for the authorities to do so. While this does not incontrovertibly demonstrate that the test is administrable in all circumstances, it does demonstrate that with careful consideration our courts can accurately determine society's privacy expectations. However, when the Court attempts to develop proxy tests in an attempt to circumvent a case-by-case, factual analysis, what the Court makes up in predictability it more than loses in terms of the ability to freely and flexibly contemplate society's *actual* privacy expectations. A careful juxtaposition of Justice Sotomayor's and Justice Alito's opinions illustrates how these tests have the potential to lead the Court astray from the ultimate question before them.

#### **D. How Duration Affects Privacy Expectations**

In *Jones*, police tracked Mr. Jones' movement for twenty-eight days while investigating him for charges related to the sale of cocaine.<sup>153</sup> The minority accepted *Knotts*—and therefore the public exposure doctrine—as controlling, leading the analysis to be deflected away from a careful consideration of what society itself might find reasonable, as required by *Katz*.<sup>154</sup> *Knotts* held that tracking an individual's movements from point A to point B was not a "search" because an individual did not have a reasonable expectation of privacy in his discrete movements on public thoroughfares.<sup>155</sup> Consequently, Justice Alito was careful to acknowledge that although "relatively short-term monitoring of a person's movements on public streets accords with expectations of privacy that our society has

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152. *Katz v. United States*, 389 U.S. 347, 361 (1967).

153. *United States v. Maynard*, 615 F.3d 544, 549–50 (D.C. Cir. 2010) (note that *Maynard* is the companion case to *Jones* and as such, contains the factual citations for the latter case as well.)

154. *United States v. Jones*, 132 S. Ct. 945, 964 (2012) (Alito, J., concurring).

155. *United States v. Knotts*, 460 U.S. 276, 285 (1983).

recognized as reasonable,” longer term monitoring, as was the case in *Jones*, “impinges on expectations of privacy.”<sup>156</sup>

Detractors have criticized similar holdings—such as the D.C. Circuit Court holding in *Jones*’ companion case, *Maynard*—as indefensibly vague and impractical, since it would seemingly permit GPS tracking for hours or even several days, but not for twenty-eight days.<sup>157</sup> Tellingly, even Justice Alito’s concurrence was unable to provide meaningful guidance for determining at what point the line between a permissible and impermissible search could be drawn.<sup>158</sup> Similarly, Justice Scalia saw “no reason to go rushing forward” to “grapple with these vexing problems” when the case could otherwise be determined on alternate grounds.<sup>159</sup> Scholars and academics have already spent considerable time discerning where, when, and how to draw this line, and with the *Jones* concurrence garnering four votes,<sup>160</sup> the fervor of this debate will only grow.

On the other hand, Justice Sotomayor’s simple act of questioning the public exposure doctrine nullifies the entire debate, potentially streamlining and simplifying Fourth Amendment jurisprudence for courts and scholars alike.<sup>161</sup> By considering society’s privacy expectations, uninhibited by the public exposure doctrine, the concurrence was able to avoid reconciling *Knotts* with *Jones* because contemporary technological advances rendered the underlying rationale of the former inapplicable to the latter. The merit of this approach—a holistic, subjective, and flexible consideration of society’s expectations—is underscored by the research, which demonstrates that not only was the concurrence correct in opining that the GPS monitoring in *Jones* would offend society’s reasonable expectations of privacy, but also that the duration of time is largely irrelevant to this analysis.

Roughly 50 percent of respondents were given hypothetical scenarios that involved GPS tracking for 48 hours, while the other 50 percent were given hypothetical scenarios that took place continuously for four months. Of the individuals given the marijuana

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156. *Jones*, 132 S. Ct. at 964 (Alito, J., concurring).

157. Case Comment, *Constitutional Law—Fourth Amendment—D.C. Circuit Deems Warrantless Use of GPS Device an Unreasonable Search*, 124 Harv. L. Rev. 827, 833 (2011).

158. *Jones*, 132 S. Ct. at 964 (Alito, J., concurring).

159. *Id.* at 954 (majority opinion).

160. The minority arguably had five votes, if one includes J. Sotomayor’s, who agreed in everything but her vote.

161. *Jones*, 132 S. Ct. at 956 (Sotomayor, J., concurring).

scenario in which the officer tracked the individual for four months, the average response among the 96 respondents asked whether the individual's privacy was violated was 1.635, with 1 being strongly agree and 2 being agree; as compared to the 82 individuals presented with the same hypothetical in which the individual was tracked for 48 hours, the average answer was 1.854. Thus, while individuals were less likely to strongly agree that privacy was violated when the tracking commenced more than 48 hours than when it took place over four months, they were still firmly convinced that his privacy was indeed violated.<sup>162</sup>

Privacy Violated:	Agree	Disagree
4 Months/Low Suspicion	94%	2%
48 Hours/Low Suspicion	84%	12%
4 Months/High Suspicion	73%	15%
48 Hours/High Suspicion	74%	14%
Officer's Actions Justified:	Agree	Disagree
4 Months/Low Suspicion	88%	6%
48 Hours/Low Suspicion	73%	15%
4 Months/High Suspicion	66%	23%
48 Hours/High Suspicion	72%	15%

Despite the importance placed on duration (of the tracking) by the Court, it appears that this variable has a marginal impact on society's determination of the reasonableness of the officer's actions and the defendant's privacy expectations. With palpable data demonstrating that even short-term GPS tracking offends privacy expectations deemed reasonable by our society, Justice Sotomayor was correct in calling for the Court to reconsider the assumption the public exposure doctrine remains viable as a per se rule in applying the Katz two-prong test.

#### **E. How Prior-Confirmed Suspicion Affects Privacy Expectations**

For this comparison, the models standardized the duration variable and compared the results when the prior confirmed suspicion varied. Therefore, the results from the marijuana survey and the cocaine survey were compared when the tracking took place for the

162. Comparable results were present for the scenario involving high degree of confirmed suspicion, in which longer tracking resulted in stronger consensus that privacy was violated, but only to a marginal degree.

same amount of time.<sup>163</sup> When asked to read the hypothetical that contained the relatively innocuous facts on which the officer elected to base the decision to track the suspected marijuana dealer for four months, 88 percent of respondents disagreed that the officer's actions were justified while 6 percent agreed.<sup>164</sup> Similarly, 94 percent of respondents agreed that the individual's privacy was violated, with only 2 percent disagreeing with the statement. But when presented with the scenario in which the officer had a high degree of confirmed probable cause that the suspect was involved in the sale of narcotics and tracked the suspect for four months, 66 percent of respondents disagreed with the premise that the officer's actions were justified while 23 percent believed the actions were justified. Similarly, 73 percent of respondents still believed the individual's right to privacy was violated while only 15 percent of respondents disagreed with this statement.

Officer's Actions Justified:	Agree	Disagree
Low Suspicion	88%	6%
High Suspicion	66%	23%

Privacy Violated:	Agree	Disagree
Low Suspicion	94%	2%
High Suspicion	73%	15%

Society was nearly as vigorous in its responses when the same scenario was modeled but when the officer tracked the defendant for 48 hours:

Officer's Actions Justified:	Agree	Disagree
Low Suspicion	73%	15%
High Suspicion	72%	15%

Privacy Violated:	Agree	Disagree
Low Suspicion	84%	12%
High Suspicion	74%	14%

163. See appendix for full surveys.

164. All following percentages combine respondents who strongly agree and agree into one category, agree. Similarly, percentages of those who "disagree" represent the aggregate of all respondents who either disagree or strongly disagree.

In both the 48-hour and the four-month models, what would legally be considered the elements of probable cause in a warrant affidavit significantly altered the percentage of respondents who believed that the police actions violated the individual's reasonable expectations of privacy. This demonstrates that probable cause has an impact on society's readiness to believe an individual has a reasonable expectation of privacy in her movements. However, it is possible that these results should not be perceived as a willingness of society to strip individuals of their privacy expectations under these circumstances. Rather, it can be interpreted as further evidence of society's disposition toward the role that the judiciary plays in protecting society's privacy expectations—the requirement that the courts determine the existence of probable cause before authorizing a warrant to track an individual with GPS technology. By finding that the government actions constituted a search on the trespass grounds, the Court left open the possibility that the determination of probable cause by a neutral and detached magistrate may yet be taken away, a process which this data plausibly demonstrates society believes is critical to the reasonableness of both the officer's actions and the individual's privacy expectations.

#### **F. The Impact of Gender and Ethnicity on Privacy Expectations**

By including the *Katz* hypothetical in this research, it provided the study with a standardized question from which to analyze individual segments of “society” and attempt to determine whether society has a monolithic view of privacy expectations or whether different socioeconomic groups vary amongst themselves with respect to their privacy expectations. To accomplish this, all 321 responses were broken down by gender, ethnicity, income, and education to determine if these characteristics could predict how individuals viewed expectations of privacy and authority in general. To begin with, the study considered the impact of gender on privacy expectations. When presented with the hypothetical from *Katz*, male and female respondents answered accordingly:

Were the officer's actions justified:

	Agree	Unsure	Disagree
Women	18%	7%	75%
Men	18%	6%	76%



Was the individual's privacy violated:

	Agree	Unsure	Disagree
Women	79%	6%	15%
Men	80%	2%	18%

These responses were remarkably close with regards to both questions, indicating that gender is irrelevant in the analysis.

Responses varied more significantly when broken down by self-reported ethnicity, a factor that did appear to have some impact on whether individuals were willing to accept the police actions as justified and to conclude that an individual's privacy was not violated by the officer's actions in the *Katz* scenario:

Were the officer's actions justified:

	Agree	Unsure	Disagree
Latino <sup>165</sup>	18%	6%	76%
African American	3%	6%	91%
Caucasian	20%	7%	73%
Asian American	38%	11%	51%

Was the individual's privacy violated:

	Agree	Unsure	Disagree
Latino	76%	0%	24%
African American	88%	3%	9%
Caucasian	77%	5%	18%
Asian American	72%	6%	22%

165. The sample of Latino respondents only contained seventeen respondents and may be too small of a sample size to get an appropriate representation. Regardless, the results are printed here for full disclosure and accuracy.

When considering this data, it appears that ethnic groups have marginally different privacy expectations and in some cases, significantly different perspectives on what degree of state intrusion they are willing to tolerate as justifiable. At the opposite ends of the spectrum in both of these cases lie African Americans and Asian Americans. Asian-American respondents were 40 percent more likely to believe that the officer's actions in *Katz* were justified than their African American peers. This was also mirrored in the two groups' perception that the individual's privacy was violated by the officer's actions, where African-Americans were 13 percent more likely to conclude that Mr. Katz' privacy was violated than Asian American respondents. In between these two extremes lie respondents who self-identified as Caucasian and Latino.

The most important conclusion for the purposes of this analysis is the fact that while these groups differed as to whether the officer's actions were justifiable, there was a significantly greater consensus that the individual's privacy was violated. Viewed from this perspective the results indicate that the *Katz* test, with its emphasis on society's perception of reasonable privacy expectations, is prone to represent the beliefs of broad swaths of society and ensures that large groups of individuals are not held to standards that fail reflect their beliefs. For example, in theory, it would be possible for the Court to define a search by the justifiability of the officer's actions. However, as this data demonstrates, society is much more apt to disagree as to whether police action is justified than it is about the reasonableness of one's privacy. This data further establishes the desirability of the *Katz* test as best representative of society's expectations. It reflects the fact that despite relative differences in our individual privacy expectations, society broadly rejects warrantless GPS tracking as a violation of the reasonable expectations of privacy in our day-to-day lives.<sup>166</sup>

## V. Conclusion

In conclusion, the *Katz* two-prong test still presents a viable and administrable formulation for determining whether the actions of the State constitute a "search" within the meaning of the Fourth Amendment. Its democratic nature and innate flexibility empower our courts with the means to ensure that the Fourth Amendment remains relevant well into the 21st century. The data from this study

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166. In some regressive models, income proved significant but on the whole neither education nor incomes were significant predictors of people's privacy expectations.

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is unequivocal; society firmly believes that in the vast majority of circumstances the use of GPS tracking devices impedes on a reasonable expectation of privacy. Furthermore, it demonstrates that factors previously thought to be dispositive, namely the duration of the tracking, do not in fact influence society's conviction that GPS tracking violates reasonable expectations of privacy.

The Court had an opportunity to reassert itself as the steward of society's Fourth Amendment protections in *Jones*. Instead, five Justices balked and decided to kick the proverbial "can" down the road. But if we dig a little further, we find that their opinion was one of necessity, born from the conflicting conclusions that while such invasive tracking surely requires a warrant, *Knotts*, *Karo*, and the public-exposure doctrine preclude them from finding as such. To be sure, fidelity to precedent is an admirable quality that one can hope our Justices continue to embrace. But when that precedent no longer applies, our Court should not be afraid to reexamine, and if necessary, overrule it. The *Katz* two-prong test was established under these very circumstances and for the past 45 years it has served its purpose well.<sup>167</sup> It can continue to do so, but only if the Court consistently and conscientiously applies this test, as Justice Sotomayor so artfully did in *Jones*.

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167. *Katz v. United States*, 389 U.S. 347, 353 (1967) (holding that technology had advanced to such a degree, that a Fourth Amendment test based on physical intrusion into a constitutionally protected area was no longer viable).

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## APPENDIX

### Survey One

My name is Zachary Gray and I am conducting this survey as part of a law school seminar study at UC Hastings College of the Law. Answering the survey will take less than five minutes of your time. Your answers will remain confidential and no record will be kept of your identity. Thank you very much for your cooperation!

Please, read the following two stories and indicate the extent to which you agree or disagree with the statements that follow.

A. Officer Jones, who was off-duty, was running routine personal errands at a local Home Depot when he noticed Gary loading several large bags of fertilizer into his vehicle. Gary caught Officer Jones' attention because the officer recognized the fertilizer he was loading as a kind often used for growing marijuana. Based on this knowledge, Officer Jones followed Gary back to his home, where the officer noticed that Gary did not appear to have a yard which would require the amount of fertilizer that he had recently purchased. The next day, without getting a warrant, Officer Jones returned to Gary's home and attached a GPS tracking device to the underside of Gary's vehicle. The police tracked Gary's movements for the next four months.

The police officer was justified in tracking Gary's movements over four months.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Gary's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

B. Dan's cell phone ran out of batteries and he entered a phone booth to make a phone call. Officer Green had probable cause that Dan was involved in illegal gambling. Without obtaining a warrant, Officer Green attached a device to the outside of the booth, which allowed him to hear Dan's side of the conversation.

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Officer Green was justified in attaching the device and listening to Dan's side of the conversation.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Dan's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Finally, please tell me a little bit about yourself:

Gender: 1. Male 2. Female 3. Other

Race: substitute by the two questions in the US Census

Education:

- Didn't get my high school diploma
- High School Diploma
- Some College/AA Degree
- College Degree, B.A./B.S.
- M.S./Ph.D./J.D./MBA/Other advanced degree

Income (if you are a student, please answer according to your parents' income):

\$1,000-\$24,000 - \$25,000-\$45,000 - \$46,000-\$65,000 - \$66,000-\$100,000 - \$101,000+

### **Survey Two**

My name is Zachary Gray and I am conducting this survey as part of a law school seminar study at UC Hastings College of the Law. Answering the survey will take less than five minutes of your time. Your answers will remain confidential and no record will be kept of your identity. Thank you very much for your cooperation!

Please, read the following two stories and indicate the extent to which you agree or disagree with the statements that follow.

A. Officer Jones, who was off-duty, was running routine personal errands at a local Home Depot when he noticed Gary loading several

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large bags of fertilizer into his vehicle. Gary caught Officer Jones' attention because the officer recognized the fertilizer he was loading as a kind often used for growing marijuana. Based on this knowledge, Officer Jones followed Gary back to his home, where the officer noticed that Gary did not appear to have a yard which would require the amount of fertilizer that he had recently purchased. The next day, without getting a warrant, Officer Jones returned to Gary's home and attached a GPS tracking device to the underside of Gary's vehicle. The police tracked Gary's movements for the next 48 hours.

The police officer was justified in tracking Gary's movements over 48 hours.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Gary's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

B. Dan's cell phone ran out of batteries and he entered a phone booth to make a phone call. Officer Green had probable cause that Dan was involved in illegal gambling. Without obtaining a warrant, Officer Green attached a device to the outside of the booth, which allowed him to hear Dan's side of the conversation. Officer Green was justified in attaching the device and listening to Dan's side of the conversation.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Dan's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Finally, please tell me a little bit about yourself:

Gender: 1. Male 2. Female 3. Other

Race: substitute by the two questions in the US Census

**Education:**

- Didn't get my high school diploma
- High School Diploma
- Some College/AA Degree
- College Degree, B.A./B.S.
- M.S./Ph.D./J.D./MBA/Other advanced degree

Income (if you are a student, please answer according to your parents' income):

\$1,000-\$24,000 - \$25,000-\$45,000 - \$46,000-\$65,000 - \$66,000-\$100,000 - \$101,000+

**Survey Three**

My name is Zachary Gray and I am conducting this survey as part of a law school seminar study at UC Hastings College of the Law. Answering the survey will take less than five minutes of your time. Your answers will remain confidential and no record will be kept of your identity. Thank you very much for your cooperation!

Please, read the following two stories and indicate the extent to which you agree or disagree with the statements that follow.

A. Police received a tip from a credible informant that Ben was selling large amounts of cocaine. Based on this tip, police obtained permission to wiretap Ben's phone and were able to record numerous conversations implicating Ben in the sale of cocaine. In an attempt to gather further evidence, police decided they would track Ben's movements with a GPS tracking device. Without obtaining a warrant, Officer Willis secretly placed a GPS unit on the underside of Ben's vehicle. The police tracked Ben's movements for the next four months.

Officer Willis was justified in tracking Ben's movements over four months.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

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Ben's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

B. Dan's cell phone ran out of batteries and he entered a phone booth to make a phone call. Officer Green had probable cause that Dan was involved in illegal gambling. Without obtaining a warrant, Officer Green attached a device to the outside of the booth, which allowed him to hear Dan's side of the conversation.

Officer Green was justified in attaching the device and listening to Dan's side of the conversation.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Dan's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Finally, please tell me a little bit about yourself:

Gender: 1. Male 2. Female 3. Other

Race: substitute by the two questions in the US Census

Education:

- Didn't get my high school diploma
- High School Diploma
- Some College/AA Degree
- College Degree, B.A./B.S.
- M.S./Ph.D./J.D./MBA/Other advanced degree

Income (if you are a student, please answer according to your parents' income):

\$1,000-\$24,000 - \$25,000-\$45,000 - \$46,000-\$65,000 - \$66,000-\$100,000 - \$101,000+



**Survey Four**

My name is Zachary Gray and I am conducting this survey as part of a law school seminar study at UC Hastings College of the Law. Answering the survey will take less than five minutes of your time. Your answers will remain confidential and no record will be kept of your identity. Thank you very much for your cooperation!

Please, read the following two stories and indicate the extent to which you agree or disagree with the statements that follow.

A. Police received a tip from a credible informant that Ben was selling large amounts of cocaine. Based on this tip, police obtained permission to wiretap Ben's phone and were able to record numerous conversations implicating Ben in the sale of cocaine. In an attempt to gather further evidence, police decided they would track Ben's movements with a GPS tracking device. Without obtaining a warrant, Officer Willis secretly placed a GPS unit on the underside of Ben's vehicle. The police tracked Ben's movements for the next 48 hours.

Officer Willis was justified in tracking Ben's movements for 48 hours.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

Ben's right to privacy was violated by the police.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

B. Dan's cell phone ran out of batteries and he entered a phone booth to make a phone call. Officer Green had probable cause that Dan was involved in illegal gambling. Without obtaining a warrant, Officer Green attached a device to the outside of the booth, which allowed him to hear Dan's side of the conversation.

Officer Green was justified in attaching the device and listening to Dan's side of the conversation.

1. Strongly Agree 2. Agree 3. Not Sure 4. Disagree 5. Strongly Disagree

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Dan's right to privacy was violated by the police.

1. Strongly Agree 2. Agree. 3. Not Sure 4. Disagree 5. Strongly Disagree

Finally, please tell me a little bit about yourself:

Gender: 1. Male 2. Female 3. Other

Race: substitute by the two questions in the US Census

Education:

- Didn't get my high school diploma
- High School Diploma
- Some College/AA Degree
- College Degree, B.A./B.S.
- M.S./Ph.D./J.D./MBA/Other advanced degree

Income (if you are a student, please answer according to your parents' income):

\$1,000-\$24,000 - \$25,000-\$45,000 - \$46,000-\$65,000 - \$66,000-\$100,000 - \$101,000+