BIG BROTHER'S GROWN WINGS: THE DOMESTIC PROLIFERATION OF DRONE SURVEILLANCE AND THE LAW'S RESPONSE

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I. INTRODUCTION

The words "drone" and "unmanned aerial vehicle"[1] are not unfamiliar terms in modern American vernacular. From Afghanistan to Yemen, drones have come to play a conspicuous role in the United States' wartime strategy.[2] On the domestic front, however, drones have only recently begun to take on a much more surreptitious assignment: surveillance. The introduction of these drones into domestic airspace is unprecedented in its effect. Unlike surveillance cameras, telephoto lenses, infrared imaging, and wireless microphones, a drone is not merely an evolutionary tool that provides a different perspective or better reception. A drone is a new platform that incorporates the capabilities of these individual tools, becoming an affordable, tireless, and mobile surveillance post.[3] Modern drones can carry sensors that provide facial recognition[4] and identify license plates from more than a thousand feet above ground level.[5]

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[1] Congress has defined a drone or unmanned aerial vehicle to be "an aircraft that is operated without the possibility of direct human intervention from within or on the aircraft." FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 331, 126 Stat 11, 72 (2012). However, perhaps a more intuitive definition would be that a drone is an unmanned vehicle that is capable of flight and is able to carry a significant payload. An example of a drone would be an autonomous airplane or helicopter.

[2] Aaron Mehta, *UAV Strikes Have Increased Annually Since 2009*, ARMY TIMES (Nov. 10, 2012, 9:42 AM), http://www.armytimes.com/news/2012/11/air-force-drone-strikes-increase-annually-2009-111012w/.

[3] David Axe, *Refueling Gear Makes Navy's Next Drone Even Deadlier*, WIRED MAG. (Nov. 4, 2011, 2:00 PM), http://www.wired.com/dangerroom/2011/11/navy-killer-drone-refuel/. *See also More than a third fear drone use in U.S.: Poll*, CBS NEWS (Sept. 27, 2012, 4:20 PM), http://www.cbsnews.com/8301-201_162-57521768/more-than-a-third-fear-drone-use-in-u.s.-poll/ ("'A lot of the public doesn't understand how the technology is being used,' said Gretchen West, vice president of the Association for Unmanned Vehicle Systems International. 'Law enforcement use (drones) to do the same thing they've used manned aircraft for years, it's just that (drones) are more affordable and usually a more efficient option.'").

[4] Noah Schachtman, *Army Tracking Plan: Drones That Never Forget a Face*, WIRED (Sept. 28, 2011, 6:30 AM), http://www.wired.com/dangerroom/2011/09/drones-never-forget-a-face/.

[5] Kris Gutierrez, *Drone Gives Texas Law Enforcement Bird's-Eye View on Crime*, FOX

Building upon improved technology and experience gained from more than ten years at war, manufacturers have built a wide array of drones to fit a multitude of missions.[6] As a result, more than fifty police forces and federal agencies have applied for certificates to fly unmanned aircraft in domestic airspace.[7] Manufacturers have met this growing demand by providing a broad palette of offerings, from a full-scale civilian version of a current military drone,[8] to a compact helicopter that is nearly undetectable to the human ear and eye when operating.[9] The cumulative effect of these forces has already rendered real outcomes. In June 2011, the Grand Forks Police Department in North Dakota recorded the first drone-assisted arrest in history.[10]

As interest in domestic drone surveillance has increased, so has Congress' attention to introducing drones as part of the national airspace.[11] Through the National Defense Authorization Act for Fiscal Year 2012, Congress unambiguously expressed its intention to facilitate drone use within the United States by directing the Federal Aviation Administration ("FAA") to "establish a program to integrate unmanned aircraft systems into the national airspace system" within six months of the Act's passage in 2011.[12] Unsatisfied with this initial timeframe to integrate drones into domestic airspace, Congress then instructed the Secretary of Transportation to "develop a comprehensive plan to safely *accelerate* the integration of civil unmanned aircraft systems into the national

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NEWS (Nov. 16, 2011), http://www.foxnews.com/us/2011/11/16/drone-gives-texas-law-enforcement-birds-eye-view-on-crime/#ixzz2BydDYt00.

[6] Richard Conniff, *Drones Are Ready for Takeoff*, SMITHSONIAN (June 2011), http://www.smithsonianmag.com/science-nature/Drones-are-Ready-for-Takeoff.html.

[7] *FAA List of Certificates of Authorizations*, ELEC. FRONTIER FOUND., https://www.eff.org/document/faa-list-certificates-authorizations-coas (last visited July 22, 2014) (the list of applicants range from the Federal Bureau of Investigation to the City of Herrington, Kansas).

[8] A prime example of a de-militarized aircraft is the "Guardian UAS," a civilian version of the MQ-9 Reaper drone. *See Guardian UAS Maritime Variant Predator B*, Fact Sheet, U.S. CUSTOMS & BORDER PROT. (Aug. 2012), http://www.cbp.gov/linkhandler/cgov/newsroom/fact_sheets/marine/guardian_b.ctt/guardian_b.pdf.

[9] *Features of the ShadowHawk Unmanned Aerial System*, VANGUARD DEF. INDUS., http://vanguarddefense.com/productsservices/uavs/ (last visited July 22, 2014).

[10] Jason Koebler, *First Man Arrested With Drone Evidence Vows to Fight Case*, U.S. NEWS & WORLD REP. (Apr. 9, 2012), http://www.usnews.com/news/articles/2012/04/09/first-man-arrested-with-drone-evidence-vows-to-fight-case. The suspect, Rodney Brossart, was arrested, charged, and convicted of one count of Terrorizing after a July 2011 standoff with the North Dakota Police Department, during which the police used a drone to locate Brossart. Jason Koebler, *North Dakota Man Sentenced to Jail In Controversial Drone-Arrest Case*, U.S. NEWS & WORLD REP. (Jan. 15, 2014), http://www.usnews.com/news/articles/2012/04/09/first-man-arrested-with-drone-evidence-vows-to-fight-case. *See also* North Dakota v. Rodney Brossart, 32-2011-CR-00071 (Dist. Ct. 2011).

[11] *See* National Defense Authorization Act for Fiscal Year 2012, Pub. L. No. 112-81, § 1097, 125 Stat. 1298, 1608 (2011).

[12] *Id.*

airspace system."[13] Congress' primary intent behind this bill was not to settle issues of privacy, but rather to address matters of aviation safety and to develop certification standards for operators and manufacturers.[14] Like the FAA, the Department of Homeland Security ("DHS") is jumpstarting numerous police drone programs through purchase grants and "drone loans," which allow local and state agencies access to the federal government's drones for use in investigations and arrests.[15]

As Congress wades into the new universe of domestic drones, courts also enter an uncharted area of law with little guidance from the Fourth Amendment.[16] Nonetheless, prior judicial opinions regarding law enforcement surveillance may hint toward the Fourth Amendment's application to drone usage.[17] The Supreme Court, as seen in *United States v. Jones*,[18] continues to frame privacy questions around a person's reasonable expectation of privacy[19] and the common law doctrine of trespass.[20] Still, the lack of direct guidance regarding what is constitutionally permissible and what is not has led to confusion among police forces and local governments. For example, the cities of Charlottesville and Seattle halted their respective plans for police drone use within days of each other, citing privacy concerns.[21]

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[13] FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 11, 73 (2012) (emphasis added). In 2013, the FAA announced that in accordance with Congress's directive to integrate drones into domestic airspace, the agency selected drone "test sites" across the country. These test sites "will explore how to set safety standards, train and certify ground-based pilots, ensure that the aircraft will operate safely even if radio links are lost and, most important, how to replace the traditional method for avoiding collisions." Matthew L. Wald, *F.A.A. Picks Diverse Sites to Carry Out Drone Tests*, N.Y. TIMES, Dec. 30, 2013, at A14, *available at* http://www.nytimes.com/2013/12/31/us/politics/us-names-domestic-test-sites-for-drone-aircraft.html.

[14] *See* FAA Modernization and Reform Act § 332.

[15] Kimberly Dvorak, *Homeland Security Increasingly Lending Drones to Local Police*, WASH. TIMES (Dec. 10, 2012), http://www.washingtontimes.com/news/2012/dec/10/homeland-security-increasingly-loaning-drones-to-l/.

[16] Brian Bennett and Joel Rubin, *Drones are Taking to the Skies in the U.S.*, L.A. TIMES (Feb. 15, 2013), http://articles.latimes.com/2013/feb/15/nation/la-na-domestic-drones-20130216.

[17] The Supreme Court, in *United States v. Jones*, framed privacy questions around a person's reasonable expectation of privacy in concert with the common law doctrine of trespass. 132 S. Ct. 945 (2012).

[18] *Id.*

[19] *Id.* at 946 (citing Katz v. United States, 389 U.S. 347, 360 (1967)).

[20] *Id.* at 949.

[21] *See* Christine Clarridge, *Seattle Grounds Police Drone Program*, SEATTLE TIMES (Feb. 8, 2013, 8:52 AM), http://seattletimes.com/html/localnews/2020312864_spddronesxml.html; W.J. Hennigan, *City in Virginia Passes Anti-Drone Resolution*, L.A. TIMES (Feb. 6, 2013, 7:00 AM), http://www.latimes.com/business/money/la-fi-mo-drone-regulation-20130205,0,7365434.story.

To understand the origins of modern American ideas on privacy and surveillance, Part II of this Note will discuss the Judiciary's analysis of relevant Fourth Amendment issues relating to surveillance, privacy, and searches.[22] Part II will also discuss the respective legislative responses that Congress and the states have considered. Armed with this framework, Part III of this Note will provide a novel approach to analyzing the privacy limits of drone use. Courts and legislatures may find Part III's methodology and reasoning beneficial in reconciling the modern drone's unprecedented capabilities with past and current understandings of privacy.

II. LEGAL BACKGROUND

A. *The Supreme Court Framework*

1. The Physicality Approach to the Fourth Amendment

The Fourth Amendment states:

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.[23]

The purpose of the Fourth Amendment "is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials."[24] Generally, defining what is an unreasonable search or seizure unfolds a two-part inquiry: establishing when a search or seizure occurs, and "deciding what makes a search or seizure 'unreasonable.'"[25] This two-part inquiry is deceivingly simple, however, for the very concept of reasonableness has changed over time, and often in response to changes in technology.[26]

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[22] While this Note will focus on the Supreme Court's jurisprudence, it is important to keep in mind that various lower courts have also had the opportunity to discuss the Fourth Amendment's reach into government surveillance, using the Supreme Court's framework as a guidepost. *See, e.g.*, United States v. Ortkiese, 208 F. App'x. 436 (6th Cir. 2006) (holding that defendant's challenge of helicopter surveillance was unwarranted because the police were not targeting him specifically, but performing a generalized flyover); United States v. Ishmael, 48 F.3d 850 (5th Cir. 1995) (ruling that warrantless use of a thermal imager in an "open field" does not violate the Fourth Amendment). This Note will not use these lower court opinions as a reference point because they are not controlling precedent nationwide.

[23] U.S. CONST. amend. IV. It is important to note that the Fourth Amendment applies to the states through the Due Process Clause of the Fourteenth Amendment. *See* Ker v. California, 374 U.S. 23, 30 (1963); Mapp v. Ohio, 367 U.S. 643, 655 (1961).

[24] Camara v. Municipal Court, 387 U.S. 523, 528 (1967).

[25] David A. Sklansky, *Back to the Future: Kyllo, Katz, and Common Law*, 72 MISS. L.J. 143, 150 (2002).

[26] *See generally,* Thomas K. Clancy, *The Fourth Amendment's Concept of Reasonableness*, 2004 UTAH L. REV. 977 (2004) (discussing various models of the reasonableness con-

Within the realm of Fourth Amendment jurisprudence, remote surveillance involving unmanned platforms presents a unique privacy problem. Such technology is an invention of the twenty-first century and was not explicitly contemplated by the Constitution's drafters.[27] Additionally, modern drone surveillance is only beginning to mature to its potential,[28] and the Supreme Court thus has not had the opportunity to incorporate drone surveillance into its Fourth Amendment jurisprudence.

From the late nineteenth century to the mid-twentieth century, "the Supreme Court defined the Fourth Amendment largely in terms of property rights."[29] Surveillance efforts that did not invade the physical sphere of one's property simply failed to qualify as "searches," and therefore failed to invoke Fourth Amendment protection.[30] Justice Taft, in his landmark opinion in *Olmstead v. United States*,[31] distinguished a telephone wiretap from a physical intrusion of a letter's seal by analogizing a telephone wire to a highway.[32] According to Justice Taft, the Fourth Amendment did not extend beyond its words "persons, houses, papers, and effects," and certainly did not "forbid hearing or sight."[33] Drawing from the common law's focus on shielding property rights, *Olmstead* mechanically limited Fourth Amendment refuge to tangible items or spaces

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cept in Fourth Amendment jurisprudence and noting that "the reasonableness analysis employed by the Supreme Court has repeatedly changed and each new case seems to modify the Court's view of what constitutes a reasonable search or seizure."). The Supreme Court in in *Ker v. California* constructed a reasonableness inquiry to evaluate which intrusions of privacy violate the Fourth Amendment, an approach that allows the trial court to make a judgment based on "the facts and circumstances of the case and in the light of the 'fundamental criteria' laid down by the Fourth Amendment and in opinions of th[e] [Supreme] Court applying that Amendment." Ker v. California, 374 U.S. 23, 33 (1963). This vague standard barely, if at all, demarcates what is and what is not constitutionally acceptable; the Court did not elaborate on what it considered to be "fundamental criteria."

[27] *See* United States v. Jones, 132 S. Ct. 945, 958 (2012) (Alito, J., concurring) (noting that "is almost impossible to think of late–18th-century situations that are analogous" to satellite tracking).

[28] *See generally* Somini Sengupta, *Rise of Drones in U.S. Drives Efforts to Limit Police Use*, N.Y. TIMES (Feb. 15, 2013), http://www.nytimes.com/2013/02/16/technology/rise-of-drones-in-us-spurs-efforts-to-limit-uses.html?pagewanted=all.

[29] Clancy, *supra* note 26, at 991. The Court's property-rights analysis was based on English conceptions of privacy revolving around one's property. *See also* Entick v. Carrington, 95 Eng. Rep. 807 (K.B. 1765).

[30] Olmstead v. United States, 277 U.S. 438, 464 (1928) ("There was no searching. There was no seizure. The evidence was secured by the use of the sense of hearing and that only. There was no entry of the houses or offices of the defendants.").

[31] *Id.*

[32] *Id.* at 464–65.

[33] *Id.* at 464–65 (holding that "[t]he amendment itself shows that the search is to be of material things-the person, the house, his papers, or his effects.").

that the government physically invaded.[34] However, while the *Olmstead* Court explicitly relied on a narrow interpretation of the Fourth Amendment's text, it implicitly applied a constricted reasonable-expectation-of-privacy rationale in its holding.[35] Justice Taft wrote that individuals could not rely on their telephone conversations being private because government entities did not carry telephone calls, unlike letters, and because consumers did not pay "to secure protection" of their telephone calls.[36] In essence, individuals who correspond by mail have a reasonable expectation that their letters will not be opened in transit, while individuals who communicate by telephone do not, because unlike a letter, a telephone message is not physically sealed.[37]

Justice Brandeis' dissent in *Olmstead* provides an illuminating glimpse into how the Court would later approach remote surveillance issues arising under the Fourth Amendment.[38] Brandeis implored the Court to impute upon the Constitution's clauses a "capacity of adaptation to a changing world,"[39] and emphasized that at the time of Fourth Amendment's adoption, the country only witnessed government surveillance action that was inherently overt, if not conspicuous.[40] With technological change and the inevitable passage of time the government could now "obtain disclosure in court of what is whispered in the closet."[41] Brandeis argued that by drawing thin distinctions between the telephone call and the letter, and adopting a near-literal reading of the Fourth Amendment, the *Olmstead* majority effectively permitted the very threat the Fourth Amendment purports to defend against:[42]

> Whenever a telephone line is tapped, the privacy of the persons at both ends of the line is invaded, and all conversations between them upon any

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[34] Thomas K. Clancy, *What Does the Fourth Amendment Protect: Property, Privacy, or Security?*, 33 WAKE FOREST L. REV. 307, 316 (1998).

[35] *Olmstead*, 277 U.S. at 464.

[36] *Id.*

[37] *Id.* Despite the forcefulness of the Justice Taft's opinion in *Olmstead*, subsequent cases eventually expanded *Olmstead*'s narrow interpretation of the Fourth Amendment. *See* United States v. Jones, 132 S. Ct. 945 (2012); Kyllo v. United States, 533 U.S. 27 (2001); Katz v. United States, 389 U.S. 347 (1967).

[38] *See* Smith v. Maryland, 442 U.S. 735 (1979); *Katz*, 389 U.S. 347; *Olmstead*, 277 U.S. at 472 (Brandeis, J., dissenting).

[39] *Olmstead*, 277 U.S. at 472 (Brandeis, J., dissenting) (referring to Weems v. United States, 217 U.S. 349 (1910) and M'Culloch v. Maryland, 17 U.S. 316 (1819)).

[40] *Id.* at 473 (Brandeis, J., dissenting).

[41] *Id.* (Brandeis, J., dissenting).

[42] *Id.* at 476 (Brandeis, J., dissenting). Other commentators agree with Justice Brandeis that *Olmstead*'s "literal interpretive theory . . . guaranteed that the Fourth Amendment would be irrelevant as a device for regulating the use of new technologies that allowed the government to invade formerly private places without committing a common law trespass." *See* Morgan Cloud, *The Fourth Amendment During the Lochner Era: Privacy, Property, and Liberty in Constitutional Theory*, 48 STAN. L. REV. 555, 611 (1996).

> subject, and although proper, confidential, and privileged, may be overheard. Moreover, the tapping of one man's telephone line involves the tapping of the telephone of every other person whom he may call, or who may call him. As a means of espionage, writs of assistance and general warrants are but puny instruments of tyranny and oppression when compared with wire tapping.[43]

Thus, Justice Brandeis' dissent in *Olmstead* foreshadowed the abandonment of the literal, physical-spatial requirement that the *Olmstead* majority championed.[44] Rather than a literal and narrow interpretation of the Fourth Amendment, Brandeis and his fellow dissenters in *Olmstead* argued for a liberal interpretation of the Amendment's words, so as to preserve the spirit—not just the verbiage—of the text.[45] Despite Justice Brandeis' groundbreaking viewpoint, the Court did not adopt his argument until nearly four decades after *Olmstead*.[46]

2. The Tide Turns and *Olmstead* Begins to Fade

In the years immediately following *Olmstead*, the Court reaffirmed its strict and narrow approach to the Fourth Amendment.[47] In 1942, the New Deal-era Court unabashedly maintained that *Olmstead*'s physicality rule controlled and declined to overturn *Olmstead*.[48] The Court ruled that federal agents who, without a warrant, listened in on a conversation conducted in a room next door did not violate the Fourth Amendment because the agents did not physically violate the target room's space.[49] In 1952, the Court again tied Fourth Amendment protections to the common law ideas of trespass and physical invasion, ruling that without trespass, there can be no cognizable Fourth Amendment claim.[50]

In 1961, however, the Court signaled that it was preparing to change its interpretation of the Fourth Amendment.[51] In *Silverman v. United States*,[52] po-

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[43] *Olmstead*, 277 U.S. at 476 (Brandeis, J., dissenting).

[44] *See* Carol S. Steiker, *Brandeis in Olmstead: "Our Government is the Potent, the Omnipresent Teacher,"* 79 MISS. L.J. 149, 156–57 (2009).

[45] *See Olmstead*, 277 U.S. at 487 (Butler, J., dissenting); Cloud, *supra* note 42, at 614 (noting that "Brandeis' arguments captured both the instrumental and contextual sides of pragmatist theory. Central to his dissent was the idea of a living Constitution that adapted to a changing world and whose meaning was not frozen at the moment of drafting.").

[46] *See generally* Katz v. United States, 389 U.S. 347 (1967).

[47] *See* On Lee v. United States, 343 U.S. 747 (1952); Goldman v. United States, 316 U.S. 129 (1942).

[48] *Goldman*, 316 U.S. at 135–36 (holding that eavesdropping on an adjacent room was not a physical violation of space, and thus indistinguishable from the facts of *Olmstead*).

[49] *Id.*

[50] *See On Lee*, 343 U.S. at 751–52. This particular case involved an undercover federal agent who recorded the defendant's conversation surreptitiously.

[51] *See* Silverman v. United States, 365 U.S. 505 (1961).

[52] *Id.*

lice officers used a "spike" microphone and amplifier to listen in on the defendants' conversation from an adjoining building.[53] While the *Silverman* Court found that the government physically penetrated the defendants' premises by laying the microphone against the defendants' heating ducts,[54] it also stated that "[i]nherent Fourth Amendment rights are not inevitably measurable in terms of ancient niceties of tort or real property law."[55] In making this pronouncement, the Court loosened the strict restraints of common law trespass and conceptions of property rights when analyzing Fourth Amendment claims involving remote surveillance.[56]

Of greater significance, the Court noted that its focus on the definition of invasion of privacy shifted from a purely physical notion to a more abstract, functional meaning.[57] Thus, after more than thirty years of insisting that any Fourth Amendment claim on surveillance required a physical invasion,[58] the Court tacitly softened this approach with *Silverman*.[59] In light of this bold announcement, *Silverman* emerged as accepted precedent, for the Court later reiterated that a physical invasion was no longer a necessary condition to Fourth Amendment surveillance claims.[60]

The Court under Chief Justice Earl Warren accelerated *Olmstead*'s retreat from the physicality rule with *Berger v. New York*[61] and *Katz v. United States*.[62] Both cases effectively set aside *Olmstead* and validated Justice Brandeis' view nearly forty years after he penned it.[63] In *Berger*, the Court found

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[53] *Id.* at 506.

[54] *Id.* at 509.

[55] *Id.* at 511.

[56] Catherine Hancock, *Warrants for Wearing a Wire: Fourth Amendment Privacy and Justice Harlan's Dissent in United States v. White*, 79 MISS. L.J. 35, 45 (2009); *Silverman*, 365 U.S. at 511.

[57] *Silverman*, 365 U.S. at 512.

[58] *See* On Lee v. United States, 343 U.S. 747 (1952); Goldman v. United States, 316 U.S. 129 (1942); Olmstead, 277 U.S. 438 (1928).

[59] Hancock, *supra* note 56, at 45.

[60] *See* Wong Sun v. United States, 371 U.S. 471 (1963); Lopez v. United States, 373 U.S. 427 (1963).

[61] 388 U.S. 41 (1967).

[62] 389 U.S. 347 (1967). *See also* Susan Freiwald, *Online Surveillance: Remembering the Lessons of the Wiretap Act*, 56 ALA L. REV. 9, 21–22 (2004); George Dery III, *Remote Frisking Down to the Skin: Government Searching Technology Powerful Enough to Locate Holes in Fourth Amendment Fundamentals*, 30 CREIGHTON L. REV. 353, 362 (1997) (discussing *Katz*'s abandonment of *Olmstead*'s physicality rule).

[63] *See Katz*, 389 U.S. at 353 (stating "that the underpinnings of *Olmstead* and *Goldman* have been so eroded by our subsequent decisions that the 'trespass' doctrine there enunciated can no longer be regarded as controlling"); *Berger*, 388 U.S. at 64 (Douglas, J., concurring) ("I join the opinion of the Court because at long last it overrules sub silentio *Olmstead* . . . and its offspring and brings wiretapping and other electronic eavesdropping fully within the purview of the Fourth Amendment").

that the Fourth Amendment may shield conversations between individuals, "and that the seizure of conversations constitutes a Fourth Amendment search."[64] In recognizing the spoken word's inclusion within Fourth Amendment protection, the Court also stressed the importance of restricting the duration, extent, and scope of modern eavesdropping techniques under the Fourth Amendment.[65] In *Katz*, the Court for the first time directly addressed *Olmstead*'s physicality requirement, asking "[w]hether physical penetration of a constitutionally protected area is necessary before a search and seizure can be said to be violative of the Fourth Amendment to the United States Constitution."[66]

3. *Berger* and *Katz* Shift the Fourth Amendment Paradigm

Berger recognized that while rapid technological change greatly enhanced the efficacy of government surveillance, advances in technology often rendered existing state privacy laws helpless to regulate increasingly intrusive surveillance methods.[67] To better address the continuously improving capabilities of modern surveillance, *Berger* framed remote surveillance privacy questions as an examination of what was being monitored, to what extent, and for how long.[68] As such, because modern surveillance methods like electronic eavesdropping and recordings are so broadly effective in their application, their in-

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[64] Kimberly A. Horn, Note, *Privacy Versus Protection: Exploring the Boundaries of Electronic Surveillance in the Internet Age*, 29 FORDHAM URB. L.J. 2233, 2240 (2002).

[65] *Berger*, 388 U.S. at 55–56. Here, the State of New York obtained an "eavesdrop order" from the state's trial court that allowed a recording device to be placed within a suspected official's office where the state suspected its officers of perpetrating a bribery conspiracy. *Id.* at 44–45.

[66] *Katz*, 389 U.S. at 350.

[67] *Berger*, 388 U.S. at 46–48. The Court does credit some state legislatures for addressing electronic issues through legislation, noting that seven states outlawed clandestine eavesdropping, but that all states except Illinois allow court-ordered eavesdropping. *Id.* at 47–48. Notably, the Court's analysis of eavesdropping surveillance under the Fourth Amendment did not focus on the reasonableness of the act, but on the probable cause requirement of the Fourth Amendment. *Id.* at 54–56.

[68] *Id.* at 55–56. *See also* Larry Downes, *Electronic Communications and the Plain View Exception: More "Bad Physics"*, 7 HARV. J.L. & TECH. 239, 250–51 (1994) ("[t]he *Berger* Court recognized that electronic 'searches and seizures' were different enough from those of tangible property to require special treatment, however, and specified four conditions necessary for a judge to approve a wiretap: (1) particular descriptions of the relevant crime, the information sought, the place where the interception will occur, and the persons whose conversations are to be seized; (2) a search designed to minimize the interception of parties unconnected to the investigation; (3) limited duration, and a new requirement of probable cause for each extension; and (4) notice to the parties searched unless there is a showing of 'exigent circumstances.' A wiretap that did not meet these conditions would constitute a general search in violation of the Fourth Amendment.").

trusion on privacy is equally broad;[69] both federal and state laws must not allow the government to indiscriminately monitor private citizens in a manner that gives the government a general warrant to conduct dragnet searches.[70] *Berger* championed the proposition that surveillance authorizations must be particularized regarding the nature of the crime being committed, the "property" sought, and the conversations to be monitored.[71]

Despite the *Berger* Court's finding that electronic eavesdropping qualified for Fourth Amendment scrutiny,[72] the justices did not unanimously agree that a statute's narrowness sufficiently protects an individual's right to privacy.[73] Justice Douglas' concurrence in *Berger* demonstrated exceptional concern for the inherent power of electronic surveillance to catch material unassociated with the suspected crime, regardless of whether the authorization itself is narrow.[74] Douglas argued that it is exactly this concern that the Fourth Amendment was designed to prevent:[75]

> I do not see how any electronic surveillance that collects evidence or provides leads to evidence is or can be constitutional under the Fourth and Fifth Amendments. We could amend the Constitution and so provide-a step that would taken [sic] us closer to the ideological group we profess to despise. Until the amending process ushers us into that kind of totalitarian regime, I would adhere to the protection of privacy which the Fourth Amendment, fashioned in Congress and submitted to the people, was designed to afford the individual.[76]

Justice Douglas' viewpoint highlights the significant chasm between members of the Warren Court in privacy issues.[77] On one hand, the Douglas's concurrence shows Douglas's antipathy toward the *Olmstead* holding.[78] On the other hand, *Berger* dissenters Justices Black and White believed in maintaining *Olmstead*'s physicality requirement for a Fourth Amendment claim.[79] In his

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[69] *Berger*, 388 U.S. at 56.

[70] *Id.* at 58. The court references general warrants to remind the reader of the pre-revolutionary general warrants issued by British customs officials, in which "customs officials were given blanket authority to conduct general searches for goods imported to the Colonies in violation of the tax laws of the Crown." *Id.*

[71] *Id.*; *see also* Denise Troy, Comment, *Video Surveillance—Big Brother May be Watching You*, 21 ARIZ. ST. L.J. 445, 457–58 (1989) (discussing *Berger*'s particularity requirement for surveillance warrants).

[72] *Berger*, 388 U.S. at 63–64.

[73] *See id.* at 64–65 (Douglas, J., concurring); *id.* at 78 (Black, J., dissenting).

[74] *Id.* at 64–65 (Douglas, J., concurring). Justice Douglas insisted that "such a limitation would not alter the fact that the order authorizes a general search." *Id.* at 66.

[75] *Id.* at 66–67 (Douglas, J., concurring).

[76] *Id.* at 67–68 (Douglas, J., concurring).

[77] *Id.* at 64–68 (Douglas, J., concurring); *cf. id.* at 78 (Black, J., dissenting).

[78] *See id.* at 64–68 (Douglas, J., concurring).

[79] *Id.* at 78 (Black, J., dissenting).

dissent, Black argued that the Court acted out "of fear that rapidly advancing science and technology" would make surveillance techniques more effective,[80] rather than acting because electronic eavesdropping created a substantive constitutional problem.[81] Justice Black firmly believed that the societal benefits of better surveillance outweighed the private costs of increased privacy intrusions.[82] Moreover, since the Fourth Amendment does not have "clear unambiguous prohibitions or commands,"[83] Black argued that the Fourth Amendment's drafters recognized the inherent value of searches and seizures to law enforcement; thus, the drafters did "not impose any precise limits on the spatial or temporal extent of the search or the quantitative extent of the seizure."[84] The differing approaches of the *Berger* Court demonstrate that while *Olmstead* was in its last throes as valid law, the Supreme Court continued to struggle with reconciling the modern realities of government surveillance with the Fourth Amendment.

Any doubts about *Olmstead* were resolved months later when the Supreme Court in *Katz* declared to the world that *Olmstead* was no longer the law of the land,[85] and that "the Fourth Amendment protects people, not places."[86] Individuals who knowingly expose their activities to the world, regardless of where they are physically located, cannot claim Fourth Amendment protections.[87] However, the Fourth Amendment may protect an individual who seeks privacy in a public area.[88] Equipped with this new ideal, the Court shifted the Fourth Amendment surveillance inquiry from property to people.[89]

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[80] *Id.* at 71 (Black, J., dissenting).

[81] *Id.* (Black, J., dissenting).

[82] *Id.* at 73–74 (Black, J., dissenting).

[83] *Id.* at 74 (Black, J., dissenting). Justice Black noted that this omission stood in stark contrast to the explicit prohibitions and commands of the First and Fifth Amendments. *Id.*

[84] *Id.* at 75 (Black, J., dissenting).

[85] *See* Katz v. United States, 389 U.S. 347, 353 (1967) (declaring that "the underpinnings of *Olmstead* and *Goldman* have been so eroded by our subsequent decisions that the 'trespass' doctrine there enunciated can no longer be regarded as controlling."). Notably, only one justice, Justice Black, continued to espouse the merits of *Olmstead*. *See id.* at 364-373 (Black, J., dissenting).

[86] *Id.* at 351. *Katz* involved federal agents recording conversations made in a public telephone booth. *See id.* at 348.

[87] *Id.* at 351.

[88] *Id.* The Court notes that the Government argued that because the telephone booth was enclosed in glass, and thereby visible to the outside world, defendant Katz did not qualify for Fourth Amendment protection. *Id.* at 352. The Court rebuffed this argument, noting that "what he sought to exclude when he entered the booth was not the intruding eye-it was the uninvited ear." *Id.*

[89] Clancy, *supra* note 26, at 320. Professor David Sklansky argues that *Katz* represented a dramatic departure from *Olmstead* not just on the issue as to whether a Fourth Amendment search required physical trespass, but also on the broader debate regarding history's role in the Court's interpretation of the Fourth Amendment. *See* Sklansky, *supra* note 25, at 153

To perform a reasonable search under *Katz*, the government's procedure to monitor and record an individual's actions and conversations must be "precise and discriminate" under the circumstances; the order to record must be "for the narrow and particularized purpose of ascertaining the truth of the . . . allegations" that arise from a "detailed factual affidavit alleging the commission of a specific criminal offense."[90] Moreover, before initiating surveillance efforts that would qualify as searches within Fourth Amendment jurisprudence, the government generally must first seek judicial approval through a magistrate or judge,[91] even if the government had probable cause to conduct a search through surveillance.[92] The Court noted that while exceptions, such as instances of "hot pursuit" or searches made contemporaneously with arrests exist, the surreptitious and covert nature of electronic surveillance prevents the government from using these exceptions as *outright* permission to conduct electronic surveillance without a warrant.[93] Finally, in line with its declaration that the "the Fourth Amendment protects people, not places,"[94] the Court cautioned that "[t]hese considerations do not vanish when the search in question is transferred from the setting of a home, an office, or a hotel room to that of a telephone booth. Wherever a man may be, he is entitled to know that he will remain free from unreasonable searches and seizures."[95] Despite these declarations, the *Katz* majority provided vague and unclear guidance for the government to follow.[96]

Building upon the foundations the *Katz* majority established, Justice

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(mentioning that "Justice Stewart's opinion for the Court in *Katz* was strikingly forward-looking—or at least present-looking. It alluded repeatedly to the realities of modern life, but contained not a word about the background of the Fourth Amendment").

[90] *Katz*, 389 U.S. at 355 (quoting Osborn v. United States, 385 U.S. 323, 329-330 (1966)).

[91] *Id.* at 356. Without the approval of a magistrate or judge, government searches are generally "per se unreasonable under the Fourth Amendment." *Id.*

[92] *Id.* at 357 (citing Agnello v. United States, 269 U.S. 20, 33 (1925)).

[93] *Id.* at 357–58. Exceptions to the judicial-approval rule include police responding to an emergency (McDonald v. United States, 335 U.S. 451, 454 (1948)), when an individual is already under arrest (Carroll v. United States, 267 U.S. 132, 158 (1925)), where the search is contemporaneous with the individual's arrest (*Agnello*, 269 U.S. at 30) and in exigent circumstances in which delaying an investigation to seek a warrant would endanger lives, such as a hot pursuit (Warden, Md. Penitentiary v. Hayden, 387 U.S. 294, 298–99 (1967)).

[94] *Katz*, 389 U.S. at 351.

[95] *Id.* at 359.

[96] Of note, Justices Douglas and White's concurrences address warrantless surveillance in matters relating to national security. *Id.* at 363 (White, J., concurring). Justice Douglas strongly believed that national security concerns could not create an exception to the warrant requirement, for "[n]either the President nor the Attorney General is a magistrate." *Id.* at 359 (Douglas, J., concurring). Justice White, however, argued that the Court should defer to the Attorney General and President's consideration of whether warrantless surveillance in the interest of national security is reasonable. *Id.* at 363 (White, J., concurring).

Harlan's concurrence in *Katz* suggested a new test for the Supreme Court to follow.[97] Under Justice Harlan's "reasonable expectation of privacy" test, the Court would examine Fourth Amendment claims under a two-part framework: first, whether the targeted individual "exhibited an actual (subjective) expectation of privacy," and second, whether that expectation is "one that society is prepared to recognize as 'reasonable.'"[98] While merely a concurring opinion at the time, Justice Harlan's novel test quickly superseded the majority opinion in longevity – the Supreme Court applied his "reasonable expectation of privacy" test within a year of *Katz*.[99] This fluid test represented a dramatic departure from the days of *Olmstead*'s literal interpretation of the Fourth Amendment and "gave courts more flexibility to protect a broader concept of human dignity at a time when information technology had outstripped what property rights alone could protect."[100]

4. The *Jones* Wrinkle in the Framework

As the latest Supreme Court holding to discuss remote surveillance and the effect that technology has on the Court's approach to Fourth Amendment issues, *United States v. Jones*[101] expanded Fourth Amendment protections, but also obfuscated the Fourth Amendment standard that courts should apply.[102] In an unexpected change of course, the *Jones* Court proclaimed that *Katz*'s "reasonable expectation of privacy" test did not replace *Olmstead*'s physical invasion test.[103] Rather, the Court held that *Katz* complemented the *Olmstead* re-

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[97] *Id.* at 360–61 (Harlan, J., concurring).

[98] *Id.* at 361 (Harlan, J., concurring) (noting that "a man's home is, for most purposes, a place where he expects privacy, but objects, activities, or statements that he exposes to the 'plain view' of outsiders are not 'protected' because no intention to keep them to himself has been exhibited. On the other hand, conversations in the open would not be protected against being overheard, for the expectation of privacy under the circumstances would be unreasonable.").

[99] *See* Mancusi v. DeForte, 392 U.S. 364, 368 (1968) (the first case to apply Justice Harlan's "reasonable expectation of privacy test"). *See also* Peter Winn, *Katz and the Origins of the "Reasonable Expectation of Privacy" Test*, 40 McGeorge L. Rev. 1, 6 (2009). By 1979, the Court formally adopted Harlan's test in *Smith v. Maryland*, 442 U.S. 735 (1979).

[100] Winn, *supra* note 99, at 9.

[101] 132 S. Ct 945 (2012).

[102] *See id.* At issue in *Jones* was whether attaching a Global Positioning System tracker to the underbody of a person's vehicle amounts to a search or seizure. *Id.* The surveillance effort was continuous and yielded significant information on the vehicles' whereabouts: "[b]y means of signals from multiple satellites, the device established the vehicle's location within 50 to 100 feet, and communicated that location by cellular phone to a Government computer. It relayed more than 2,000 pages of data over the 4-week period." *Id.* at 948.

[103] *Id.* at 949–50. The Court made this proclamation despite an overwhelming consensus that *Katz* overturned *Olmstead*'s physicality approach. *See id.* at 959 (Alito, J., concurring) (recalling that *Katz* "finally did away with the old approach, holding that a trespass was not

gime: *Katz* never rejected the notion that a warrantless physical invasion on one's property constitutes a Fourth Amendment violation.[104] Writing for the majority, Justice Scalia, "in a bit of jurisprudential legerdemain,"[105] surmised that since "for most of our history the Fourth Amendment was understood to embody a particular concern for government trespass upon the areas ('persons, houses, papers, and effects') it enumerates,"[106] a person's "Fourth Amendment rights do not rise or fall with the *Katz* formulation."[107] Thus, determining whether a surveillance action is constitutional requires one to ask two threshold questions: can the surveillance action be found unconstitutional under the traditional *Olmstead* physical invasion test? If not, can the surveillance action be found unconstitutional under the *Katz* "reasonable expectation of privacy" test?[108]

As opposed to clarifying the standard the government should follow in surveillance procedures, the *Jones* majority's revival of *Olmstead*'s physicality requirement created a split in the Supreme Court about whether *Katz*'s "reasonable expectation of privacy" test applied exclusively in government surveillance cases, or whether *Katz* merely supplemented an *Olmstead*-based physical invasion approach.[109] Justice Alito's concurrence, joined by Justices Ginsburg,

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required for a Fourth Amendment violation."). *See also* Maryland v. Garrison, 480 U.S. 79, 90-91 (1987) (Blackmun, J., dissenting) (stating that Justice Harlan formulated "the proper test" in *Katz*); Desist v. United States, 394 U.S. 244, 248 (1969) (describing *Katz*'s holding as "a clear break with the past"). Even Justice Scalia once declared that "[w]e have since decoupled violation of a person's Fourth Amendment rights from trespassory violation of his property." Kyllo v. United States, 533 U.S. 27, 31 (2001). *See also* Winn, *supra* note 99, at 4; Clancy, *supra* note 34, at 323–24 (declaring that *Katz* "rejected the trespass theory and its property law premise.").

[104] *Jones*, 132 S. Ct. at 950. Justice Scalia made this declaration despite simultaneously acknowledging the fact that the Supreme Court's holdings after *Katz* but before *Jones* reflected the belief that the reasonable expectation of privacy test controlled Fourth Amendment inquiries. *Id.* Justice Alito's concurrence in *Jones* rebuffs Justice Scalia's characterization of history, insisting that only *Katz*'s reasonable-expectation-of-privacy test should apply in Fourth Amendment cases. *Id.* at 958 (Alito, J., concurring). However, Justice Sotomayor, in her concurrence, agreed with Justice Scalia that the Fourth Amendment encompassed both the physicality and reasonableness tests. *Id.* at 954 (Sotomayor, J., concurring).

[105] Kevin Emas & Tamara Pallas, *United States v. Jones: Does Katz Still have Nine Lives?*, 24 ST. THOMAS L. REV. 116, 147 (2012) (discussing Justice Scalia's majority opinion in *Jones*). Judge Emas notes that "[i]n justifying the conclusion that the installation and use of the GPS device was a search, Justice Scalia climbs into a jurisprudential time machine, resuscitating cases that had been viewed by many as the jetsam of modern Fourth Amendment jurisprudence." *Id.*

[106] *Jones*, 132 S. Ct. at 950.

[107] *Id.*

[108] *Id.* at 952.

[109] *See Jones*, 132 S. Ct. 945. Some scholars argue that *Katz* negates the need for *Olmstead* because "the reasonable expectation of privacy test incorporates the old trespass stan-

Breyer, and Kagan, argued that resurrecting the physicality requirement neglects the realities of modern surveillance; Justice Scalia's reasoning would ban an arguably trivial attachment of a small object to a car, but simultaneously could provide no protection from long-term monitoring without a technical trespass.[110] Relying on trespass as a Fourth Amendment trigger in the realm of remote and electronic surveillance also poses an additional problem: would the act of sending electronic signals over private property constitute trespass?[111] Justice Alito argued that *Katz* gets around the inconsistencies that arise with Justice Scalia's approach by exclusively relying upon what the modern public perceives to be acceptable.[112] Applying Justice Harlan's concurrence in *Katz*, Justice Alito's concurrence in *Jones* maintains that the inquiry should "ask whether the use of GPS tracking in a particular case involved a degree of intrusion that a reasonable person would not have anticipated."[113]

From *Olmstead*, to *Katz*, and to *Jones*, the Supreme Court has developed a Fourth Amendment framework that displays the Court's evolving interpretation of what the Fourth Amendment seeks to protect.[114] While the Court's framework is shifting and indeterminate, the framework nonetheless highlights the continued struggle between the Fourth Amendment's purpose and the emergence of new surveillance methods and technologies.[115] Applying the Court's

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dard, more broadly understood." Winn, *supra* note 99, at 9 ("However, the [*Katz*] test also provides something more; something that trespass, restricted to traditional rights of property, could not do by itself. By explicitly basing the protections of the Fourth Amendment on a right of privacy, the test gave courts more flexibility to protect a broader concept of human dignity at a time when information technology had outstripped what property rights alone could protect."); Emas & Pallas, *supra* note 105, at 150 ("[w]e have embodied that preservation of past rights in our very definition of 'reasonable expectation of privacy' . . . *Katz* did not narrow the Fourth Amendment's scope.").

[110] *Jones*, 132 S. Ct. at 961 (Alito, J., concurring).

[111] *Id.* at 962 (Alito, J., concurring).

[112] *Id.* at 962-963 (Alito, J., concurring). Justice Alito hypothesized that like during the aftermath of *Katz*, Congress would be concerned enough about privacy invasions to act before allowing the courts to develop a significant body of law. *Id.* (Alito, J., concurring). Congress heavily relied on the Court's opinions in *Berger* and *Katz* when it created and passed "Title III," a wiretapping law that closely followed the *Berger* and *Katz* requirements for wiretapping and surveillance. *See* Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 849-850 (2004) ("[f]ar from being sui generis constitutional developments, the major constitutional decisions in *Berger* and *Katz* were carefully timed to influence the shape of statutory law. The Court was eyeing Congress, and decided both *Berger* and *Katz* very much with Congress in mind.").

[113] *Jones*, 132 S. Ct. at 964 (Alito, J., concurring).

[114] *See* Emas & Pallas, *supra* note 105 (discussing the Supreme Court's evolution of Fourth Amendment cases from *Olmstead* to *Jones*).

[115] *See generally* Emas & Pallas, *supra* note 105; Fabio Arcila, Jr., *GPS Tracking Out of Fourth Amendment Dead Ends: United States v. Jones and the Katz Conundrum*, 91 N.C. L.

framework to a revolutionary technological advancement like drones, however, requires further insight into the Judiciary's decisions on Fourth Amendment surveillance issues surrounding the home, curtilage, open fields, and technological advances in surveillance.

5. Applying the Supreme Court's Framework to Common Situations

a. *Remote Surveillance of the Home*

Privacy in the home, while referenced in the Fourth Amendment,[116] does not enjoy blanket protection under all circumstances.[117] The "reasonable expectation of privacy" test provides specific application for the most intimate of settings, but that application does not necessarily apply in a home at all times; the home is, "for most purposes, a place where [an individual] expects privacy, but objects, activities, or statements that he exposes to the [open view] of outsiders are not 'protected' because no intention to keep them to himself has been exhibited."[118] Similarly, the "open view" doctrine typifies the Court's hesitancy to invoke Fourth Amendment protections in situations where government agents do not have warrants or fall under a warrant exception, yet have an unobstructed view of the target object.[119]

REV. 1 (2012); Courtney E. Walsh, *Surveillance Technology and the Loss of Something a lot Like Privacy: an Examination of the "Mosaic Theory" and the Limits of the Fourth Amendment*, 24 ST. THOMAS L. REV. 169 (2012).

[116] *See* U.S. CONST. amend. IV.

[117] Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

[118] *Id.* (Harlan, J., concurring). While Justice Harlan uses the term, "plain view," other commentators use the term, "open view" to distinguish Harlan's words from the "plain view" doctrine, which only applies to Fourth Amendment seizures. *See* Seth H. Ruzi, *Reviving Trespass-Based Search Analysis Under the Open View Doctrine: Dow Chemical Co. v. United States*, 63 N.Y.U L. REV. 191, 205-209 (1988); Jane Becker, *Warrantless Aerial Observation of a Backyard*, 73 CORNELL L. REV. 97, 108-109 (1987).

[119] *See* Horton v. California, 496 U.S. 128, 133 (1990) (noting that "[i]f an article is already in plain view, neither its observation nor its seizure would involve any invasion of privacy."). As a comparison, within the realm of Fourth Amendment seizure jurisprudence, circumstances where the "plain view" doctrine applies include police discoveries that are incident to the execution of a search warrant, *see id.* at 135; police discoveries during an accepted exception to the warrant requirement, such as during the course of a hot pursuit, Warden, Md. Penitentiary v. Hayden, 387 U.S. 294, 298-299 (1967) (police properly searched for and seized defendant's weapons and ammunition without a warrant because "[t]he Fourth Amendment does not require police officers to delay in the course of an investigation if to do so would gravely endanger their lives or the lives of others."); police discoveries that occur during a narrow-scope search that is incident to an arrest, Arizona v. Gant, 556 U.S. 332 (2009) (police unreasonably searched defendant's car after his arrest because the police did not have reasonable belief that the defendant had access to the passenger compartment "at the time of the search," nor did they have reasonable belief that "the vehicle contains evidence of the offense of arrest"); where the police unintentionally "come across an incriminating object," Harris v. United States, 390 U.S. 234 (1968) (finding that a regis-

The Court's tolerance of government surveillance in the home, however, is limited. In *Kyllo v. United States*,[120] the Supreme Court interpreted the Fourth Amendment to prohibit scenarios where the government, without a warrant or existence of exigent circumstances, uses "sense-enhancing technology" (1) that is not "in general public use" to (2) pry into the interior of a person's home and (3) reveal intimate details in (4) a manner that could not have previously been accomplished without physical trespass.[121] The Court's holding in *Kyllo* continues to hold a profound effect on Fourth Amendment jurisprudence; in 2013, the Court relied on *Kyllo*'s multi-part test in its holding limiting the warrantless use of drug-detection dogs to sniff out drug scents emanating from an individual's home.[122] Thus, surveillance that allows government agents to peer into homes and spaces that members of the general public cannot peer into will bring significant judicial scrutiny.[123]

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tration card bearing the defendant's victim name was plainly visible when it fell after the police officer lawfully opened the defendant's car door).

[120] 533 U.S. 27 (2001),

[121] Kyllo v. United States, 533 U.S. 27, 34 (2001). Here, the "sense-enhancing technology" involved an infrared camera that was capable of picking up heat radiating beyond the walls of a home. *Id.* The *Kyllo* dissenters, in a close five-to-four loss, vigorously opposed the Court's sweeping holding; the dissenters argued that the Court should have distinguished between "through-the-wall" surveillance and "off-the-wall" surveillance. *Id.* at 41–46 (Stevens, J., dissenting).

[122] Florida v. Jardines, 133 S. Ct. 1409, 1419 (2013). The *Jardines* Court directly applied *Kyllo*'s bright-line rule in its analysis: "[t]he police officers here conducted a search because they used a 'device . . . not in general public use' (a trained drug-detection dog) to 'explore details of the home' (the presence of certain substances) that they would not otherwise have discovered without entering the premises." *Id.* (quoting *Kyllo*, 533 U.S. at 40).

[123] *See generally* Christopher Slobogin, *Peeing Techno-Toms and the Fourth Amendment: Seeing Through Kyllo's Rules Governing Technological Surveillance*, 86 MINN. L. REV. 1393 (2002). Professor Slobogin posits several key considerations that "courts often look at in determining whether police use of technology is a search. In addition to the availability of the technology to the general public, courts consider six other factors: (1) the nature of the place to be observed; (2) the steps taken to enhance privacy; (3) the degree to which the surveillance requires a physical intrusion onto private property; (4) the nature of the object or activity observed; (5) the extent to which the technology enhances the natural senses; and (6) the extent to which the surveillance is unnecessarily pervasive, invasive, or disruptive (i.e., steps taken by the police to minimize the intrusion)." *Id.* at 1406. Additionally, *Kyllo* implied that courts should ask whether the government could have gathered the same information using another technique that does not require a physical invasion of the home. *Kyllo*, 533 U.S. at 34–35, 40. However, *Kyllo* exempts any sense-enhancing technology that is "in general public use" from this strict analysis. *Id.* at 34.

b. *Surveillance of the "Curtilage," "Open Fields," and Commercial Property*

i. The Curtilage

Not strictly part of the home, yet not technically part of the public space, the curtilage presents a unique privacy issue in relation to remote surveillance.[124] The Fourth Amendment generally guards the curtilage with nearly as equal fervor as it does the home;[125] the curtilage is "an area intimately linked to the home, both physically and psychologically, where privacy expectations are most heightened."[126] Four factors determine whether an area qualifies as curtilage: (1) the area's proximity to the home; (2) whether the area is enclosed in the same space as the home; (3) how the area is used; (4) whether, and to what extent, the land's resident has obscured a passerby's view of the area.[127]

In regards to aircraft fly-overs and aerial surveillance over curtilages, the Supreme Court has declared that aerial surveillance that relies on the unaided eye is presumptively constitutional.[128] *California v. Ciraolo*[129] involved a police surveillance flight over Mr. Ciraolo's fenced-in backyard after an anonymous tip suggested he was growing marijuana.[130] The police rented a private airplane and overflew Ciraolo's curtilage at 1,000 feet; the officers inside the aircraft promptly recognized marijuana plants growing in the yard, took photographs, and then obtained a warrant for the plants.[131] The Court narrowly held that because Ciraolo's activities were visible to "any member of the flying pub-

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[124] A curtilage is "[t]he land or yard adjoining a house, usually within an enclosure." BLACK'S LAW DICTIONARY 192 (4th pocket ed. 2011). Traditionally at common law, "the curtilage is the area to which extends the intimate activity associated with the 'sanctity of a man's home and the privacies of life,' and therefore has been considered part of home itself for Fourth Amendment purposes." Oliver v. United States, 466 U.S. 170, 180 (1984) (quoting Boyd v. United States, 166 U.S. 616, 630 (1886)).

[125] *See* California v. Ciraolo, 476 U.S. 207, 212–13 (1986).

[126] *Id.* at 213.

[127] United States v. Dunn, 480 U.S. 294, 301 (1987). When analyzing an individual's subjective intent to maintain privacy over his or her curtilage, the Supreme Court has distinguished between preventing all observations of one's curtilage and observations from the ground level. *See Ciraolo*, 476 U.S. at 212–13. However, "the mere fact that an individual has taken measures to restrict some views of his activities [does not] preclude an officer's observations from a public vantage point where he has a right to be and which renders the activities clearly visible." *Id.*

[128] *Ciraolo*, 476 U.S. at 213–14. This declaration regarding aircraft surveillance also applies generally to visual observations carried out by the naked eye. *See* Kyllo v. United States, 533 U.S. 27, 31–32 (2001) (asserting that visual surveillance is not a search); United States v. Martinez-Fuerte, 428 U.S. 543, 558 (1976) (stating that visual inspection of a vehicle's interior at an immigration checkpoint is not a search).

[129] 476 U.S. 207 (1986),

[130] *Ciraolo*, 476 U.S. at 209.

[131] *Id.*

lic," the police officers spotted the plants with their eyes, and the police flew within a navigable airspace without being physically intrusive, Ciraolo did not possess a reasonable expectation of privacy.[132]

In *Florida v. Riley*,[133] the Supreme Court revisited *Ciraolo* and its holding on warrantless aerial surveillance.[134] The *Riley* plurality significantly broadened *Ciraolo* by adding a general premise that "the police may see what may be seen 'from a public vantage point where [they have] a right to be.'"[135] In addition, *Riley* indicated that the frequency and prevalence of a particular surveillance technique significantly affects the *Katz* reasonableness inquiry: residents who see helicopters and airplanes routinely traffic the airways may not reasonably claim an expectation of privacy from these modes of surveillance.[136]

The *Riley* Court did not unanimously decide to broaden *Ciraolo*, however.[137] Justice O'Connor disagreed with the plurality's approach, and instead framed the analysis as "whether the helicopter was in the public airways at an altitude at which members of the public travel with sufficient regularity that Riley's expectation of privacy from aerial observation was not 'one that society is prepared to recognize as 'reasonable.'"[138] The four dissenting justices in *Riley* agreed with Justice O'Connor's argument that the plurality improperly emphasized the legal right of the surveillance helicopter to be where it was.[139] Thus,

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[132] *Id.* at 213–14. The dissent in *Ciraolo* vilified the majority's focus on the manner in which the police surveyed Mr. Ciraolo's property: "[r]eliance on the *manner* of surveillance is directly contrary to the standard of *Katz*, which identifies a constitutionally protected privacy right by focusing on the interests of the individual and of a free society. Since *Katz*, we have consistently held that the presence or absence of physical trespass by police is constitutionally irrelevant to the question whether society is prepared to recognize an asserted privacy interest as reasonable." *Id.* at 222 (Powell, J., dissenting). One commentator accuses the *Ciraolo* majority of creating a "superficial application of the 'open view' doctrine," articulating the "open view" doctrine to include "not only what is apparent to the casual, curious passerby, but also what the public hypothetically might see if the public were particularly concerned with what is contained within a private citizen's yard and had the power to arrange and charter observational flyovers." Becker, *supra* note 118, at 108–09.

[133] 488 U.S. 445 (1989).

[134] The basic facts of *Riley* are similar to that of *Ciraolo*. However, in *Riley* the police employed the use of a helicopter, not an airplane, to fly over the suspect's yard at 400 feet above ground, not 1000 feet. *See* Florida v. Riley, 488 U.S. 445, 448 (1989); *Ciraolo*, 476 U.S. 207.

[135] *See Riley*, 488 U.S. *at* 449 (quoting *Ciraolo*, 476 U.S. at 213).

[136] *Id.* at 450–51.

[137] *Id.* at 454 (O'Connor, J., concurring).

[138] *Id.* at 454 (O'Connor, J., concurring). Despite her disagreement with the plurality regarding the proper test, Justice O'Connor agreed that the police helicopter surveillance did not constitute a search that required a warrant under the Fourth Amendment, as the flying public subject the airspace at and above 400 feet to substantial use. *Id.* at 455 (O'Connor, J., concurring).

[139] *See id.* at 456 (Brennan, J., dissenting); *id.* at 467 (Blackmun, J., dissenting).

while the plurality's opinion appeared to carry the day with its final ruling, five justices accepted Justice O'Connor's formulation of the Fourth Amendment inquiry as the correct test.[140] Accordingly, while one majority of the Court agreed that the helicopter may conduct surveillance at a height of four hundred feet above an individual's curtilage, a separate majority, most of whom did not agree with that premise, agreed that the *Katz* "reasonable expectation of privacy" test still exclusively controls aerial surveillance, with little regard as to whether an aircraft has or has not violated statutory or regulatory provisions that deal with minimum aircraft altitudes.[141]

Riley provides a distinct baseline the government can look toward for guidance: that "the police may see what may be seen 'from a public vantage point where [they have] a right to be.'"[142] To be sure, the government's aerial surveillance programs should continue to conform to the strict meaning of *Katz*'s "reasonable expectation of privacy test.[143] Moreover, proof that the aircraft had a legal right to occupy the airspace from which it surveyed an individual's curtilage will further push the surveillance action into permissible status.[144]

ii. The Open Field

The distinction between an open field and a curtilage is attenuated but nonetheless recognizable:[145] an open field, unlike a curtilage, does not "provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance."[146] Framed in *Katz*'s

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[140] *Id.* at 467 (Blackmun, J., dissenting) (stating, "I find little to disagree with Justice O'Connor's concurrence, apart from its closing paragraphs. A majority of the Court thus agrees that the fundamental inquiry is not whether the police were where they had a right to be under FAA regulations, but rather whether Riley's expectation of privacy was rendered illusory by the extent of public observation of his backyard from aerial traffic at 400 feet."); *id.* at 454 (1989) (O'Connor, J., concurring).

[141] *See generally Riley*, 488 U.S. 445.

[142] *Id. at* 449 (quoting California v. Ciraolo, 476 U.S. 207, 213 (1986)).

[143] See *id.* at 454 (O'Connor, J., concurring).

[144] *Id.* at 451–52. Since *Riley* and *Ciraolo*, lower courts have continued the Supreme Court's trend of watering down the minimum altitude threshold. *See, e.g.*, United States v. Breza, 308 F.3d 430 (4th Cir. 2002) (finding that a police helicopter that flew about 200 feet above the defendant's property did not conduct a "search" under the Fourth Amendment because such helicopter flights were a regular occurrence in the area around the defendant's farm).

[145] For a more in-depth discussion of the history of curtilage and the difficulty of its definition, *see* Brendan Peters, Note, *Fourth Amendment Yard Work: Curtilage's Mow-Line Rule*, 56 STAN. L. REV. 943 (2004).

[146] *See* Oliver v. United States, 466 U.S. 170, 179 (1984). For the purposes of the Fourth Amendment, an open field may be publicly or privately owned. Florida v. Jardines, 133 S. Ct. 1409, 1415 (2013) (inferring that "[t]he Fourth Amendment does not, therefore, prevent all investigations conducted on private property; for example, an officer may (subject to *Katz*) gather information in what we have called "open fields"—even if those fields are privately owned—because such fields are not enumerated in the Amendment's text").

"reasonable expectation of privacy" format, a person simply cannot have any reasonable expectation of privacy "for activities out of doors in fields, except in the area immediately surrounding the home."[147] Not only are open fields publicly accessible in a manner that a home is not, open fields accommodate activities, such as farming, that do not warrant the same societal concerns for privacy that homes do.[148] This is not to say, however, that only literal "open fields" fall within the open fields doctrine.[149] The Supreme Court in *Dow Chemical Co. v. United States*[150] enunciated that a particular "area 'need be neither 'open' nor a 'field' as those terms are used in common speech'" to qualify under the open fields doctrine.[151] Thus, should an individual find him or herself within this amorphous and broad definition of an open field, he or she "has no legitimate expectation that open fields will remain free from warrantless intrusion by government officers."[152]

iii. Surveillance of Commercial Property

Commercial property occupies an indeterminate position as to whether and when a court should apply the Fourth Amendment.[153] On one hand, The Supreme Court has previously declared that government agents possess "'greater latitude to conduct warrantless inspections of commercial property' because . . . unlike a homeowner's interest in his dwelling, '[t]he interest of the owner of commercial property is not one in being free from any inspections.'"[154] On the other hand, the Court has also acknowledged that "[t]he businessman, like the occupant of a residence, has a constitutional right to go about

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[147] *Id.* at 178.

[148] *Id.* at 179.

[149] *See, e.g.*, Dow Chemical Co. v. United States, 476 U.S. 227 (1986) (industrial complex); Andree v. Ashland Cnty., 818 F.2d 1306 (7th Cir. 1987) (fenced-off area used for rock concert).

[150] 476 U.S. 227 (1986).

[151] *Dow Chemical Co.*, 476 U.S. at 236 (quoting *Oliver*, 466 U.S. at 180, n. 11).

[152] Waltman v. Payne, 535 F.3d 342, 346 (5th Cir. 2008) (quoting *Oliver*, 466 U.S. at 181). *See also* Tom Bush, Comment, *A Privacy-Based Analysis for Warrantless Aerial Surveillance Cases*, 75 CALIF. L. REV. 1767, 1778 (1987) (noting that "the [Supreme] Court's juxtaposition of curtilage with open fields suggests that a landowner can claim no fourth amendment protection for aerial surveillance of areas outside the curtilage.").

[153] *See* Diane R. Skalak, Note, *Dow Chemical Co. v. United States: Aerial Surveillance and the Fourth Amendment*, 3 PACE ENVTL. L. REV. 277, 281–86 (1986) (discussing *Dow Chemical Co.* in-depth and the Supreme Court's handling of commercial property surveillance and searches).

[154] *Dow Chemical Co.* 476 U.S. at 237–38. The term, "warrantless inspections," refers solely to surveillance methods that do not physically enter the property's grounds. *Id.* (stating that entering the enclosed commercial property "would raise significantly different questions, because '[t]he businessman, like the occupant of a residence, has a constitutional right to go about his business free from unreasonable official entries upon his private commercial property.'").

his business free from unreasonable official entries upon his private commercial property."[155] Thus, commercial properties, especially large industrial facilities, do not neatly qualify as either a curtilage or an open field.[156] Accepting this reality, the Supreme Court in *Dow Chemical Co.* declined to articulate a broad rule for commercial property, and opted instead to essentially decide such Fourth Amendment claims on a case-by-case basis:

> The open areas of an industrial plant complex with numerous plant structures spread over an area of 2,000 acres are not analogous to the 'curtilage' of a dwelling for purposes of aerial surveillance; such an industrial complex is more comparable to an open field and as such it is open to the view and observation of persons in aircraft lawfully in the public airspace immediately above or sufficiently near the area for the reach of cameras . . . We hold that the taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment.[157]

B. *The Legislative Response to Drones*

Beyond the Judiciary's analysis of surveillance and privacy, Congress and the states have also had the opportunity to address privacy concerns surrounding drone surveillance.[158]

1. The Federal Congressional Response

Congress has moved slowly to react to the rise of domestic drone use. Rather than address the relevant privacy concerns surrounding drones, Congress has instead focused on rapidly integrating drones into domestic airspace.[159] None-

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[155] See v. City of Seattle, 387 U.S. 541, 543 (1967).

[156] *Dow Chemical Co.*, 476 U.S. at 236 (conceding that an enclosed plant complex "can perhaps be seen as falling somewhere between 'open fields' and curtilage, but lacking some of the critical characteristics of both.").

[157] *Id.* at 239. Consequently, a court will likely be much more deferential to the Government's warrantless surveillance of industrial areas openly visible to the airspace above them. *Id.*

[158] *See, e.g.*, Michael Fabey, *Domestic UAV Use Raises Privacy Questions For Congress, Report Says*, AVIATION WEEK (Sept. 11, 2012), http://www.aviationweek.com/Article.aspx?id=/article-xml/asd_09_11_2012_p04-01-493913.xml; Jennifer Curington, *Florida to be Among First States to Regulate Drones*, ORLANDO SENTINEL (Apr. 17, 2013), http://articles.orlandosentinel.com/2013-04-17/news/os-legislature-passes-drone-regulations-20130417_1_drone-aircraft-unmanned-aircraft-rick-scott.

[159] Press Release, Congressional Unmanned Systems Caucus, Law Enforcement Agencies Brief Congressional Unmanned Systems Caucus, (Jul. 20, 2012), http://unmannedsystemscaucus.mckeon.house.gov/press/2012/07/law-enforcement-agencies-brief-congressional-unmanned-systems-caucus.shtml. The Caucus explicitly declared its intention to "recognize the urgent need to rapidly develop and deploy more of these systems in support of ongoing civil, military, and law enforcement operations. The members of the bipartisan

theless, individual members of Congress have raised their concerns with domestic drone use, and some have gone so far as to introduce legislation to restrict the government's ability to use drones as surveillance platforms.[160]

Senator Rand Paul's proposed bill, the Preserving Freedom from Unwarranted Surveillance Act of 2013, would require a warrant for most situations in which drones are used "to gather evidence or other information pertaining to criminal conduct or conduct in violation of a statute or regulation."[161] Exceptions to the blanket warrant requirement would include border patrol missions, prevention of terrorist attacks, and circumstances in which police have reasonable suspicion that an imminent danger to life is at hand and are thus required to take immediate action.[162]

Representative Austin Scott's proposal largely mirrors Senator Paul's bill, but also includes situations where the police have reasonable suspicion that imminent property damage is at hand, a suspect has escaped, or an immediate threat of evidence destruction, as exceptions to the blanket warrant requirement.[163]

Applying a narrower focus, Representative Edward Markey's Drone Aircraft Privacy and Transparency Act of 2013 ("DAPTA") proposes to establish a privacy study that would pinpoint potential privacy issues associated with the inte-

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caucus are committed to the growth and expansion of these systems in all sectors." *Id.*; *see also* FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 11, 73 (2012); National Defense Authorization Act for Fiscal Year 2012, Pub. L. No. 112-81, § 1097, 125 Stat. 1298, 1608 (2011).

[160] *See* Press Release, Senator Rand Paul, Sen. Paul Introduces Bill to Protect Americans Against Unwarranted Drone Surveillance, (Jun. 12, 2012), http://paul.senate.gov/?p=press_release&id=545; Press Release, Representative Austin Scott, Scott Takes Stand for 4th Amendment, (Jun.19, 2012), http://austinscott.house.gov/index.php?option=com_content&view=article&id=4323:scott-takes-stand-for-4th-amendment&catid=73:press-releases.

[161] S. 1016, 113th Cong. § 3 (2013); *see also* Conor Friedersdorf, *Rand Paul Launches a Preemptive Strike Against Domestic Drone Use*, THE ATLANTIC (Jun. 12, 2012, 5:16PM), http://www.theatlantic.com/politics/archive/2012/06/rand-paul-launches-a-preemptive-strike-against-domestic-drone-use/258422/.

[162] S. 1016 § 4. Despite the seemingly strict blanket warrant requirement, the reasonable suspicion exception is amorphous and flexible. *See* Terry v. Ohio, 392 U.S. 1, 37 (1968) (stating, "the term 'probable cause' rings a bell of certainty that is not sounded by phrases such as 'reasonable suspicion.'"). Indeed, the Supreme Court has deliberately constructed the reasonable suspicion standard in an indeterminate manner so as to prevent courts from "reduc[ing] [the standard] to a neat set of legal rules." Omelas v. United States, 517 U.S. 690, 695-696 (1996) (quoting Illinois v. Gates, 462 U.S. 213, 232 (1983)). Reasonable suspicion implies that the government actor possesses a "particularized and objective basis" for his or her action. United States v. Arvizu, 534 U.S. 266, 273 (2002). In reviewing a government agent's reasonable suspicion, the court should look to "totality of the circumstances" surrounding the agent's determination. *Id.*

[163] H.R. 5925, 112th Cong. § 3 (2012).

gration of drones into domestic airspace.[164] Moreover, DAPTA would limit the government from using any ancillary information collected during the drone's mission:[165] any collected data that is not part of the mission's narrow focus must be destroyed.[166] Failure to comply with DAPTA's privacy provisions would trigger an outright suppression on any information collected during the drone's warrantless mission from being used as evidence in court or in any other adjudicatory hearing.[167]

In a unique approach to addressing the public's privacy concerns about drones, Representatives Ted Poe of Texas and Zoe Lofgren of California have suggested limiting drone use, even under the cover of a warrant, to "a stipulated public area" and for less than 48 hours at a time.[168] Their proposed legislation, the Preserving American Privacy Act ("PAPA"), would require the government to publicize, after obtaining a warrant and within 48 hours prior to employing a drone, where the drone will operate and for how long.[169] Besides the other warrant exceptions noted above, PAPA would also create a warrant exception that applies when the government "reasonably believes that an emergency situations exists that involves . . . conspiratorial activities characteristic of organized crime."[170]

2. State Legislative Responses

While Congress struggles to address privacy concerns surrounding drone use, the states have taken the lead in both considering and enacting certain drone restrictions. In 2013, forty-three states introduced 130 drone-related legislative proposals.[171] However, as of April 2014, less than a third of the fifty states have passed laws regulating domestic drone use.[172]

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[164] H.R. 1262, 113th Cong. § 3 (2013).

[165] *Id.*

[166] *Id.*

[167] *Id.*

[168] H.R. 637, 113th Cong. § 2 (2013). *See also* Press Release, Representative Zoe Lofgren, Reps. Zoe Lofgren and Ted Poe Introduce Bipartisan Bill to Protect Americans' Privacy Rights from Domestic Drones, (Feb. 15, 2013), http://lofgren.house.gov/index.php?option=com_content&view=article&id=785:reps-zoe-lofgren-and-ted-poe-introduce-bipartisan-bill-to-protect-americans-privacy-rights-from-domestic-drones&catid=22:112th-news&Itemid=161.

[169] H.R. 637 § 2

[170] *Id.*

[171] *See 2013 Unmanned Aircraft Systems (UAS) Legislation*, NAT'L CONF. OF ST. LEGISLATURES, (Apr. 9, 2014), http://www.ncsl.org/research/civil-and-criminal-justice/unmanned-aerial-vehicles.aspx. In the same period, only thirteen states enacted drone-related bills into law. *Id.*

[172] *See Current Unmanned Aircraft State Law Landscape*, NAT'L CONF. OF ST. LEGISLATURES, (Apr. 9, 2014), http://www.ncsl.org/research/civil-and-criminal-justice/current-uas-state-law-landscape.aspx. According to the National Conference of State Legislatures, as of

a. *A Sampling of Enacted Bills that Regulate Government Drone Use*

The enacted bills from Florida, Idaho, Oregon, Virginia, and Wisconsin arise out of a common concern for individuals' right of privacy from drone surveillance.[173] However, each State attempts to ameliorate this concern through different means, and to different extents.

Florida's Freedom from Unwarranted Surveillance Act ("FUSA") largely mirrors Congressman Austin Scott's proposal to limit drone surveillance.[174] FUSA requires a warrant for any law enforcement drone surveillance mission, except where there is a "high risk of a terrorist attack," where law enforcement have reasonable suspicion under particular circumstances that drone use is necessary to prevent immediate threats to life or property, and where law enforcement seek to prevent a suspect's escape or illegal evidence destruction.[175]

Unlike Florida's FUSA, Idaho's drone law creates two standards for drone surveillance: one for surveillance of private property and another for surveillance targeted at public property.[176] Warrantless drone surveillance of private property is strictly controlled; drones may conduct warrantless surveillance on private property only if (1) the property's owner or targeted individual on the private property consents; or (2) drone surveillance is used for "emergency response[s] for safety, search and rescue or controlled substance investigations."[177] In contrast to its clear restrictions on surveillance targeting private property,[178] the Idaho law does not explicitly limit drone surveillance of public

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April 2014 only sixteen states have enacted drone-use bills into laws. These states are Florida, Hawaii, Idaho, Illinois, Indiana, Maryland, Montana, Nevada, North Carolina, North Dakota, Oregon, Tennessee, Texas, Utah, Virginia, and Wisconsin. *Id. See also, e.g.*, S.B. 92, 2013 Reg. Sess. (Fla. 2013); IDAHO CODE ANN. § 21-213 (2013); H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013); 2013 Va. Acts 755; S.B. 196, 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

[173] *See, e.g.*, David Hill, *Va. Senate Sends Moratorium on Drones to McDonnell*, WASH. TIMES (Feb. 21, 2013), http://www.washingtontimes.com/news/2013/feb/21/senate-sends-drone-moratorium-to-mcdonnell/; Statesman Staff, *Idaho Adopts Privacy Standards for Drones*, IDAHO STATESMAN (Apr. 12, 2013), http://www.idahostatesman.com/2013/04/12/2531808/idaho-adopts-privacy-standards.html; Curington, *supra* note 158.

[174] Fla. S.B. 92; *cf.* H.R. 5925, 112th Cong. § 3 (2012).

[175] Fla. S.B. 92 § 1 (3)–(4). While not within the focus of this Note, Florida's bill also allows law enforcement to use drones to search for missing persons. *Id.*

[176] *See* IDAHO CODE ANN. § 21-213. *Cf.* Fla. S.B. 92.

[177] IDAHO CODE ANN. § 21-213 (2)(a).

[178] The statute's definition of private property is expansive. It includes, "but [is] not limited to" dwellings, curtilages, farms, dairies, ranches, and "other agricultural industry." *Id.* at (2)(a)(i)–(ii). This explicit protection of agricultural and farming sites is not unique—the Missouri General Assembly in 2013 briefly considered a comprehensive ban on any government drone use that "conduct[s] surveillance of any individual, property owned by an individual, farm, or agricultural industry without the consent of that individual, property owner,

property—the statute merely states that a drone may not "photograph or otherwise record an individual, without such individual's written consent, for the purpose of publishing or otherwise publicly disseminating such photograph or recording."[179] Outside this specific scenario, the statute appears to have no restrictions on warrantless drone surveillance of individuals standing on public property. Thus, the Idaho law appears to resemble the *Jones*-ian notion of property rights as a vehicle to protect privacy rights on private property.[180]

Despite its novelty, Idaho's public-private property distinction does not stand alone. Following Idaho's lead, Wisconsin has also passed a like-minded statute that clearly distinguishes privacy restrictions for private and public properties.[181] The Wisconsin statute, known as Act 213, proscribes warrantless drone surveillance "to gather evidence or other information in a criminal investigation from or at a place or location where an individual has a reasonable expectation of privacy."[182] However, the statute's privacy protections *do not* apply "to the use of a drone in a public place." The use of the word "place," as opposed to "property," leaves Act 213 vulnerable to a broad interpretation of the statute's exceptions so as to possibly include private property that is open to the public.[183] Regardless of whether one applies a broad or narrow definition of "place," Act 213's intent resembles the Supreme Court's interpretation of privacy rights in *Riley*, where the Court held that "the police may see what may be seen 'from a public vantage point where [they have] a right to be.'"[184] However, the similarities do not end there: Wisconsin's refusal to provide privacy protections "in public places"[185] also channels the Court's denial of Fourth Amendment coverage to areas like open fields, which do not "provide the set-

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farm or agricultural industry," barring exigent circumstances or a warrant. *See* H.B. 46, 97th Gen. Assemb., 1st Reg. Sess. (Mo. 2013).

[179] IDAHO CODE ANN. § 21-213 (2)(b).

[180] *See* United States v. Jones, 132 S. Ct. 945 (2012).

[181] *See generally* S.B. 196, 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

[182] *Id.* § 2. Besides its relaxed stand on drone surveillance over public place, Act 213 also allows law enforcement to conduct warrantless drone surveillance "to surveil a place or location for the purpose of executing an arrest warrant." *Id.* This exception to the statute's restrictions applies to *both* public and private places, and thus represents a dramatic weakening of Act 213's seemingly tough restrictions. *Id.*

[183] *Id.* As a result, individuals in Wisconsin and Idaho may only be afforded constitutional protections while standing on public property, whereas individuals in other states like Florida receive both constitutional and statutory privacy protections. In addition, because Act 213's warrant exception applies to drones operating "*in* a public place," as opposed to targeting or observing a public place, it is unclear whether a drone flying over a public road while using a telephoto zoom lens to view private property would trigger Act 213's privacy protections. *Id.* (emphasis added).

[184] Florida v. Riley, 488 U.S. 445, 449 (1989) (quoting California v. Ciraolo, 476 U.S. 207, 213 (1986)).

[185] Wis. S.B. 196 § 2.

ting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance."[186]

In Oregon, the state legislature has not only limited when a drone may be used, but what forms of information it may collect as well.[187] Like Florida, Oregon has imposed a blanket warrant requirement for all drone use, except when law enforcement officials possess "probable cause to believe that a person has committed a crime, is committing a crime or is about to commit a crime, and exigent circumstances exist that make it unreasonable for the law enforcement agency to obtain a warrant authorizing use of a drone."[188] Regardless of whether the drone is operating under a warrant or warrant exception, the state may not operate a drone for more than 30 days at a time without judicial approval.[189] State law enforcement agencies also face strict controls over when it may acquire and use information and images collected during a drone operation.[190]

While Florida, Idaho, and Oregon have enacted significant curbs on warrantless drone surveillance, none go as far as Virginia in severely limiting law enforcement drone use. In 2013, Virginia enacted a two-year moratorium on nearly all drone use, irrespective of whether the law enforcement agency has a warrant.[191] Under Virginia law, the only permitted uses of drones are for responses to Amber Alerts,[192] Senior Alerts,[193] Blue Alerts,[194] search-and-rescue missions,[195] and "training exercises related to such uses."[196]

b. *North Dakota's Unique Proposal*

Despite the fact that few states have enacted laws restricting the government's use of drones, nearly every state legislature has taken up drone surveil-

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[186] *See* Oliver v. United States, 466 U.S. 170, 179 (1984).

[187] *See generally* H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

[188] *Id.* § 3.

[189] *Id.*

[190] *See generally* Or. H.B. 2710. For example, section 5 of H.B. 2710 allows law enforcement agencies to gather and disseminate information collected by drones in a search and rescue operation, as well as when the drone is assisting in an emergency. *Id.* However, these allowances still bring with them further restrictions on information gathering.

[191] 2013 Va. Acts 755 § 1 (available at http://law.lis.virginia.gov/uncodifiedacts/2013/session1/chapter755).

[192] An Amber Alert is a "notice of child abduction provided to the public by the media or other methods." *See* VA. CODE ANN. § 52-34.1 (2007).

[193] A Senior Alert is a "notice of a missing senior adult provided to the public by the media or other methods." *See* VA. CODE ANN. § 52-34.4 (2007).

[194] A Blue Alert is a notice of an unapprehend suspect who "may be a serious threat to the public." *See* VA. CODE ANN. § 52-34.9 (2011).

[195] Va. Acts 755 § 1.

[196] *Id.* In addition to placing a two-year moratorium on government drone use, Virginia has put into place a blanket ban on weaponized drones. *Id.*

lance as a discussion point.[197] Yet, of all the proposed legislative actions that seek to restrict drone use within domestic airspace, none currently are as specific as North Dakota's House Bill 1373.[198]

Like many other proposed statutes, Bill 1373 seeks to ban warrantless drone use while allowing certain enumerated exceptions.[199] Unlike most other proposals, however, Bill 1373 sets forth a comprehensive scheme that earnestly attempts to integrate current legal infrastructure with future drone applications.[200] Bill 1373 sets out specific warrant requirements for police drone use: the warrant must include information describing who will use the aircraft, where the drone will be used, and the maximum time the drone will be flown.[201] In addition, the warrant must state whether the drone will collect any information about persons.[202] If so, the warrant must describe any and all situations in which the drone will be used for the particular mission, the specific forms of information that the drone will gather, and how long the information will be stored and whether the data will be destroyed.[203] Bill 1373 would also prohibit any state agency from outfitting, using, or granting the use of weaponry aboard drones.[204] In regards to surveillance equipment and techniques, Bill 1373 would also require any electronic, videography, and imaging surveillance methods to comply with existing state law "relevant to the interception of such voice communications, digital communications, physical surveillance data, or to capture the still or video images of a person or interior or a place for which a search warrant is prerequisite to its lawful search."[205] This particular requirement would thus streamline the state law's treatment of a drone's capabilities with that of traditional surveillance methods, closing a gaping loophole that would otherwise allow law enforcement agencies to employ methods that are prohibited in traditional forms of surveillance.

While the aforementioned federal and state bills provide some restrictions on warrantless drone use, these legislative proposals would leave significant discretion to police forces and trial judges when determining when "reasonable

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197 *See* NAT'L CONF. OF ST. LEGISLATURES, *supra* note 171.

198 H.B. 1373, 63rd Leg. Assemb., Reg. Sess. (N.D. 2013).

199 *See, e.g.*, S. 1016, 113th Cong. § 3 (2013); Fla. S.B. 92; Or. H.B. 2710.

200 *See generally* N.D. H.B. 1373.

201 *Id* at § 3.

202 *Id.*

203 *Id.* Like Oregon House Bill 2710, this bill seeks to prevent government dragnet information gathering operations by limiting how long data can be kept if not to be used as evidence. Section seven of the Act requires destruction of any evidence the drone collects "for which there is not a reasonable and articulable suspicion that those images or data contain evidence of a crime, or are relevant to an ongoing investigation or trial" within ninety days, "unless the retention is attendant to general agency guidelines regarding the retention of evidence in criminal cases." N.D. H.B. 1373 § 7. *Cf.* Or. H.B. 2710.

204 N.D. H.B. 1373 § 5.

205 *Id.* § 7.

suspicion" exists.[206] Because most of the legislative proposals possess the "reasonable suspicion" standard for warrant exceptions,[207] this fact may reflect a deliberate choice on behalf of the legislature to defer some interpretive authority to the Judiciary. Thus, it appears that the Judiciary will hold a significant role in forming policy limits on domestic drone surveillance.

III. ARGUMENT

In light of the Supreme Court's framework for analyzing Fourth Amendment claims,[208] the framework's application to common scenarios,[209] and various legislative proposals and responses,[210] this Note will now examine and recommend a course of action that both legislatures and the courts can look to when analyzing privacy issues related to drone surveillance.

A. *The Legislatures and Courts Should Not View Drones as Merely an Evolution of Remote Surveillance, but as a Revolution in Surveillance*

The arrival of drones within United States airspace calls for the creation of a new judicial analysis and for the enactment of new bedrock principles in state and federal legislative bodies. Drone use should not be subject to a mere application of the current judicial framework because unmanned drones have the ability to negate the inherent weaknesses that current manned surveillance techniques possess,[211] much in the same way current surveillance techniques can perform tasks that previously required physical trespass.[212] Because drones are quieter,[213] smaller,[214] cheaper,[215] tireless,[216] and are more capable than tradi-

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[206] Even the United States Supreme Court has admitted that "the concept of reasonable suspicion is somewhat abstract." *See* United States v. Arvizu, 534 U.S. 266, 273 (2002) (requiring the test for reasonable suspicion for Fourth Amendment cases to be "totality of the circumstances").

[207] *See, e.g.*, S.B. 92, 2013 Reg. Sess. § 1(4)(c) (Fla. 2013); S. 1016, 113th Cong. § 3 (2013); H.R. 5925, 112th Cong. § 3 (2012); S.B. 196 § 2(b)(2), 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

[208] *See supra* Part II(A).

[209] *See supra* Part II(A)(5).

[210] *See supra* Part II(B).

[211] *See* RICHARD M. THOMPSON II, CONG. RESEARCH SERV.,R42701, DRONES IN DOMESTIC SURVEILLANCE OPERATIONS: FOURTH AMENDMENT IMPLICATIONS AND LEGISLATIVE RESPONSES 2–4 (2012).

[212] *See* United States v. Jones, 132 S. Ct. 945, 962 (2012) (Alito, J., concurring); Kyllo v. United States, 533 U.S. 27, 33–34 (2001).

[213] The Intelligence Advanced Research Projects Activity ("IARPA") is currently developing drone systems that operate at significantly lower noise levels than currently attainable. *See* IARPA, GREAT HORNED OWL (GHO) PROGRAM, http://www.iarpa.gov/Programs/sc/GHO/gho.html (last visited Feb. 4, 2013); Robert Beckhusen, *Super-Silent Owl Drone Will*

tional platforms of observation,[217] the legal standards by which they are tested must reflect these realities. Mere application of current law is inadequate because current law already struggles to keep up with technological change.[218] The legislature and Judiciary must not fall into *Olmstead*'s trap of stubborn rigidity; these institutions must allow for "more flexibility to protect a broader concept of human dignity at a time when information technology [has] outstripped what property rights alone [can] protect."[219]

Any new standard that courts and legislatures could reasonably be expected to apply must be grounded in law, reality, and logic. For the purposes of this Note's analysis, this Note will lay out a general proposition that using a warrant-focused scheme incorrectly addresses the privacy problem that drones present. Following this proposition, this Note will then recommend an alternative to the blanket warrant requirement for drone surveillance missions.

B. *Replacing the Blanket Warrant Requirement with Bright-Line Rules*

While popular among both state and federal legislative responses,[220] compelling a government entity or agent to obtain a warrant before allowing most drone surveillances mission to take off prohibitively disadvantages government

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Spy on You Without You Ever Noticing, WIRED MAG. (July 19, 2012, 1:00 PM), http://www.wired.com/dangerroom/2012/07/owl/.

[214] *See* PD-100 PRS, Proxdynamics, http://www.proxdynamics.com/products/pd_100_prs/ (last visited Feb. 4, 2013). The PD-100 "Black Hornet" drone weighs just sixteen grams and is only four inches long. *See also* Spencer Ackerman, *Palm-Sized Nano-Copter Is the Afghanistan War's Latest Spy Drone*, WIRED MAG. (Feb. 4, 2013, 12:00 PM), http://www.wired.com/dangerroom/2013/02/black-hornet-nano/.

[215] Rafe Needleman, *Flying Drones Getting Smaller, Smarter, Cheaper, and Scarier*, CNET (Jul. 14, 2012, 6:00 AM), http://www.cnet.com/8301-30976_1-57472321-10348864/flying-drones-getting-smaller-smarter-cheaper-and-scarier/#ixzz2JyUYhrAE.

[216] Press Release, Lockheed Martin, Laser Powers Lockheed Martin's Stalker UAS for 48 Hours (Jul. 11, 2012), http://www.lockheedmartin.com/us/news/press-releases/2012/july/120711ae_stalker-UAS.html. *See also* Mark Prigg, *The Silent Spy Drone That Could Stay in the Sky Forever*, DAILY MAIL (July 17, 2012, 1:54 PM), http://www.dailymail.co.uk/sciencetech/article-2174976/The-silent-spy-drone-stay-sky-forever.html#ixzz2JylMODFl.

[217] *See* Alexis Madrigal, *DARPA's 1.8 Gigapixel Drone Camera Could See You Waving At It From 15,000 Feet*, ATLANTIC (Feb. 1, 2013, 5:09 PM), http://www.theatlantic.com/technology/archive/2013/02/darpas-18-gigapixel-drone-camera-could-see-you-waving-at-it-from-15-000-feet/272796/.

[218] *See generally* Allyson W. Haynes, *Virtual Blinds: Finding Online Privacy in Offline Precedents*, 14 VAND. J. ENT. & TECH. L. 603 (2012) (discussing how courts may look to non-technological, "offline," case law to adapt to technology cases). *See also* Lauren H. Rakower, Note, *Blurred Line: Zooming in on Google Street View and the Global Right to Privacy*, 37 BROOK. J. INT'L L. 317 (2011) (discussing technology's growing threat to privacy in the context of street-level, roaming cameras).

[219] Winn, *supra* note 99, at 9.

[220] *See generally supra* Part II(B).

drone use because such a broad requirement imprecisely applies the blunt force of a warrant's power. Here, the inexact application of a broad restriction inevitably leads to an odd and unreasonable result: under a blanket warrant requirement scheme drones would be unable to perform, without a warrant, some of the same surveillance tasks from the same locations that helicopters and airplanes have been authorized to execute without warrants for decades.[221] Society should not simply hamstring drone use because of its "fear that rapidly advancing science and technology is making [surveillance] more and more effective."[222] Rather, there should balance a between legitimate government needs and society's privacy interest.

Instead of employing a blanket warrant requirement that overly burdens drone use, legislatures should focus on bringing drones into parity with traditional forms of aerial surveillance, such as airplanes and helicopters. Rather than focus almost exclusively on methods applied, legislatures should also look to results attained: "what information does the government acquire as a result of making the observations?"[223] This conception of privacy runs in tandem with the Supreme Court's line of opinions that look to the functional result of government action, including Justice Brandeis's dissent in *Olmstead* and the majority opinion in *Katz*.[224] However, abandoning a blanket warrant requirement does not necessary entail abandoning warrants altogether; the following Six Rules for Drone Usage ("Rules") apply warrant requirements in certain situations and scenarios.

Being prophylactic measures, a violation of these Rules does not necessarily imply a constitutional violation.[225] Instead, the primary deterrent against unauthorized drone use should be evidentiary rules: should a government entity or agent impermissibly use, or consent to use a drone to observe and gather information, any information gathered from the drone during that flight must not be admitted into evidence in any court of law or adjudicative proceeding.[226] The bright-line Rules listed below should be considered as a holistic guide—not as

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[221] *See generally* Florida v. Riley, 488 U.S. 445 (1989); California v. Ciraolo, 476 U.S. 207 (1986).

[222] Berger v. New York, 388 U.S. 41, 71 (1967) (Black, J., dissenting).

[223] *See* Ric Simmons, *From Katz to Kyllo: a Blueprint for Adapting the Fourth Amendment to Twenty-First Century Technologies*, 53 HASTINGS L.J. 1303, 1323 (2002).

[224] *See* Katz v. United States, 389 U.S. 347, 351 (1967); Olmstead v. United States, 277 U.S. 438, 476 (1928) (Brandeis, J., dissenting).

[225] *Cf.* United States v. Patane, 542 U.S. 630, 636–37 (2004).

[226] This blanket exclusion from evidence should not be confused with the "exclusionary rule," which is a constitutional concept applied to violations of the Fourth Amendment to the United States Constitution. For a further discussion on the exclusionary rule, *see* TRACEY MACLIN, THE SUPREME COURT AND THE FOURTH AMENDMENT'S EXCLUSIONARY RULE (2013). As a secondary measure, members of the public who are targeted by drone surveillance in violation of these rules should be given a private right of action to sue for an injunction against such drone surveillance.

individual suggestions that work in isolation. Thus, a drone should confide by all six Rules contemporaneously—no one Rule holds greater weight than any of the others:

THE SIX RULES FOR DRONE USAGE

RULE 1: WARRANTLESS DRONE USE

Subject to the restrictions of Rules 2 through 5, Drone operations that are confined to (1) non-law enforcement operations; (2) situations where a high risk of terrorist attack exists; (3) or situations where imminent danger to life or property exists, generally do not require a warrant.

For (2) and (3), the government bears the burden of demonstrating probable cause that such actual emergencies did in fact exist.[227]

RULE 2: MAXIMUM DURATION RESTRICTION

In the course of a criminal investigation or evidence gathering, a drone surveillance mission that exceeds twenty-four hours within a twenty-two hour period requires a warrant to continue beyond the twenty-four-hour mark.

This Rule does not apply to criminal investigations involving a high risk of terrorist attack.

RULE 3: DRONE PROXIMITY RESTRICTIONS

In the course of a criminal investigation or evidence gathering, if a drone flies in unreasonably close proximity to private property, flies in violation of an applicable airspace regulation or law, or flies so close as to present a nuisance or otherwise adversely affect the private property owner's normal use and enjoyment of the property, a warrant is required.

Warrants issued pursuant to Rule 3 must be founded upon probable cause that a drone must necessarily fly (1) unreasonably close to private property; (2) in violation of an applicable airspace regulation or law; or (3) in a manner that causes a nuisance, to effectuate its mission.

This Rule does not apply where an imminent danger to life exists.

RULE 4: SENSE-ENHANCING TECHNOLOGY RESTRICTIONS

Except where a high risk of terrorist attack or imminent danger to life or property exist, no drone shall use sense-enhancing technology that is not in general public use, on a target that is private property, without a warrant.

For the purposes of this Rule, sense-enhancing technology generally encompasses any tool, method, technology, or software that artificially increases, expands, and/or improves an individual's ability to hear, see, smell, or perceive.

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[227] The relevant legislature may choose to provide a definite list of criteria that defines when a high risk of terrorist attack exists, or when there is an imminent danger to life or property.

For the purposes of this Rule, "in general public use" means that a particular sense-enhancing technology can be bought or sold on the open market in the United States without significant governmental restriction.

Examples of significant governmental restriction include minimum age limitations, limitations on who can purchase or possess such technology, mandatory licensure and mandatory registration.

RULE 5: PRIVATE PROPERTY TRESPASS RESTRICTIONS

A drone may only enter a home, place of business, or enclosed private structure without a warrant when an imminent danger to life exists, and only if the drone's operation is critical to preventing or mitigating danger to life.

RULE 6: DATA COLLECTION RESTRICTIONS

Information or data obtained by a drone may not be retained and stored for more than thirty days unless the government holds probable cause that the information or data contains evidence of a felony or is relevant to an ongoing investigation or trial.

Information or data obtained by a drone may not be intentionally distributed or shared with any unauthorized person or entity, unless approved by law.

Information or data obtained by a drone in violation of any of the above Rules may not be used as evidence in a court of law or adjudicative proceeding against any individual or entity.

Individuals hold a private right of action to sue for an injunction against separate and repeated violations of the above Rules.

1. Discussion of the Rules

a. *Rule 1: Warrantless Drone Use*

Rule 1 embodies the desire of both federal and state legislatures to exclude certain situations from the burden of a warrant requirement.[228] Common examples of non-law enforcement operations include, but are not limited to, land surveying,[229] weather and climate observation and scientific research,[230] wildlife management and protection,[231] and search and rescue missions.[232] In addition to Rule 1's exemption of non-law enforcement uses of drones, Rule 1 also exempts situations where a high risk of terrorist attack or imminent danger to life or property exists. This specific provision finds its inspiration in Virginia's

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[228] *See supra* Part II(B).

[229] Frank Willis, *How Can Drones Transform Surveying?*, POINT OF BEGINNING, (Aug. 13, 2013), http://www.pobonline.com/articles/96996-how-can-drones-transform-surveying

[230] *See, e.g.*, Brian Handwerk, *5 Surprising Drone Uses (Besides Amazon Delivery)*, NAT'L GEOGRAPHIC (Dec. 2, 2013), http://news.nationalgeographic.com/news/2013/12/131202-drone-uav-uas-amazon-octocopter-bezos-science-aircraft-unmanned-robot/.

[231] *Id.*

[232] *Id.*

warrant exception that allows drone use for responses to Amber Alerts,[233] Senior Alerts,[234] and search-and-rescue missions."[235] While the Fourth Amendment covers all government intrusions of privacy, government activity that does not involve criminal investigation tends to involve "a less hostile intrusion than the typical policeman's search for the fruits and instrumentalities of crime."[236] Moreover, drones can be a potent tool to assist in searching for missing persons and in police emergencies, much in the same way that police helicopters and aircraft currently provide aerial support, albeit at a much higher cost and with less flexibility.[237] Rule 1 reflects a desire by federal and state legislative proposals to exempt exigent circumstances from restrictions on drone use.[238] Thus, where a law enforcement agency believes that a particular area, event, or situation poses a high risk of attack by terrorists; or that there is an imminent and articulable threat to a specific person's life or property, substantial legal obstacles should not hamper that agency.

Rule 1's first paragraph is a compromise measure that allows the government to promptly respond to urgent situations, while ensuring that the government, and particularly law enforcement agencies, adhere to the privacy protections of the Rule by demonstrating that probable cause of a high risk of terrorist attack existed or that an imminent danger to life or property existed at the time and general location of the drone's operation.[239]

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[233] *See supra* note 192.

[234] *See supra* note 193.

[235] Va. Acts 755 § 1. In addition, Virginia has put into place a blanket ban on weaponized drones.

[236] Camara v. Municipal Court, 387 U.S. 523, 530 (1967). This is not to say that such investigations are per se reasonable. The Supreme Court has stated that mere administrative investigations still pose "significant intrusions upon the interests protected by the Fourth Amendment." *Id.* at 534.

[237] *See* Jason Koebler, *Industry: Drones Could have Helped Boston Marathon Bombing Responders*, U.S. NEWS & WORLD REP. (Apr. 16, 2013), http://www.usnews.com/news/articles/2013/04/16/industry-drones-could-have-helped-boston-marathon-bombing-responders; Kelsey Atherton, *5 Ways Drones Could Help In A Disaster Like The Boston Marathon Bombing*, POPULAR SCI. (Apr. 17, 2013, 5:00 PM), http://www.popsci.com/technology/article/2013-04/5-drones-help-disaster-boston-marathon-bombing.

[238] *See, e.g.*, S. 1016, 113th Cong. § 4 (2013) (exemptions include border patrol missions, preventing terrorist attacks, and circumstances in which police have reasonable suspicion that an imminent danger to life is at hand and thus requires immediate action); S.B. 92, 2013 Reg. Sess. (Fla. 2013) (exemptions include situations where there is a high risk of terrorist attack, an immediate threat to life or property, or where law enforcement seek to prevent a suspect's escape or illegal evidence destruction).

[239] The text of the Rule is not meant to evince a new constitutional standard or theory on drone operations. Rather, Rule 1 merely acts as a single cog on the entire wheel that is the Rules.

b. *Rule 2: Maximum Duration Restriction*

In light of the Supreme Court's concern that modern technology allows for extreme durations of monitoring,[240] and considering various legislative proposals that explicitly restrict the lengths of time a drone can operate,[241] there is a need to draw a line at which a drone's actions shift from being mere observation to an offensive "search" that requires warrant protection. As Justice Sotomayor noted in *Jones*, the low economic costs of modern surveillance "evades the ordinary checks that constrain abusive law enforcement practices: 'limited police resources and community hostility.'"[242] As a result, government surveillance proliferates and the public feels a chill over "associational and expressive freedoms."[243]

This chilling effect is exacerbated by the voluminous amounts of information modern surveillance can obtain on the subject being tracked,[244] as well as the fact that drones are capable of flying much longer than manned aircraft.[245] Current drones, such as the *Global Observer*, have the ability to survey 280,000 square miles, at an altitude invisible to the naked eye, for days at a time.[246] Even if drone surveillance is inherently covert and often unnoticeable to the target, a chilling effect remains, for "[t]he simple fact that the state has the power to monitor the private activities of property owners at its whim violates a reasonable privacy interest. If anything, surveillance may be even more invidious when it is surreptitiously conducted."[247] Put together, the lower police costs and higher societal costs of long-term surveillance demand additional scrutiny.[248] Thus far, five of the nine justices who presided over *Jones* believe that these societal costs are so large that long-term surveillance may encroach on

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[240] *See* United States v. Jones, 132 S. Ct. 945, 956 (2012) (Sotomayor, J., concurring).

[241] *See generally* Part II(B).

[242] *Id.* (Sotomayor, J., concurring).

[243] *Id.* (Sotomayor, J., concurring).

[244] *Id.* (Sotomayor, J., concurring).

[245] *See* Needleman, *supra* note 215.

[246] *See* W.J. Hennigan, *AeroVironment Confirms Successful Test of Global Observer Spy Plane*, L.A. TIMES (Jan. 12, 2011), http://articles.latimes.com/2011/jan/12/business/la-fi-drone-20110112; *Stratospheric Persistent UAS: Global Observer*, AEROVIRONMENT (last visited July 23, 2014), http://www.avinc.com/uas/stratospheric/global_observer/.

[247] Bush, *supra* note 152, at 1795.

[248] United States v. Jones, 132 S. Ct. 945, 956 (2012) (Sotomayor, J., concurring). Justice Sotomayor proposed a new inquiry for short-term GPS monitoring: "I would ask 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. I do not regard as dispositive the fact that the Government might obtain the fruits of GPS monitoring through lawful conventional surveillance techniques." *Id.*

the public's reasonable expectations of privacy.[249]

Among the previously discussed legislative proposals,[250] the congressional bill "PAPA" and North Dakota's Bill 1373 are forerunners in the discussion surrounding restrict drone operation duration.[251] PAPA, for example, prohibits any warrant-authorized drone operation that exceeds forty-eight hours.[252] Bill 1373 does not go as far as PAPA in creating such a bright-line rule, but does require warrants for drone surveillance operations to state "[t]he maximum period for which the unmanned aircraft system will operate in each flight."[253] Despite the forward thinking of these legislative proposals, neither addresses the heart of the matter: warrantless drone surveillance. Rule 2 addresses this unresolved issue by instituting a limit on warrantless drone operation durations. By holding a warrant drone operation to twenty-four hours within a seventy-two-hour window, Rule 2 provides flexibility to law enforcement needs while simultaneously reining in unlimited drone operations. The Rule does not have a simple twenty-four-hour time limit because such a construction of would render the Rule susceptible to situations where the government flies a drone for twenty-four hours, lands the drone down for a miniscule amount of time, and then sends the drone back into the air again for another twenty-four hours.

c. *Rule 3: Drone Proximity Restrictions*

Rule 3 serves to strike a balance between allowing police surveillance operations to function while simultaneously maintaining the current level of privacy that individuals are constitutionally and legally entitled to enjoy. As *Riley* and *Ciraolo* demonstrate, modern law enforcement tradecraft often involves warrantless remote surveillance.[254] However, as the Supreme Court in *Jones* and the legislatures in Idaho and Wisconsin have proclaimed, society and the law often view private property as sanctuaries that are at least partially shielded from the prying eyes and ears of the government.[255]

Unlike Idaho's law on drone restrictions, Rule 3 does not go so far as to

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[249] *Id.* at 955 (Sotomayor, J., concurring); *id.* at 964 (Alito, J., concurring). Justices Breyer, Ginsburg, and Kagan joined Justice Alito's concurring opinion. *Id.*

[250] *See generally* Part II(B).

[251] *See* H.R. 637, 113th Cong. § 2 (2013); H.B. 1373, 63rd Leg. Assemb., Reg. Sess. § 3 (N.D. 2013).

[252] H.R. 637 § 2.

[253] H.B. 1373 § 3 (3).

[254] *See generally* Florida v. Riley, 488 U.S. 445 (1989); California v. Ciraolo, 476 U.S. 207 (1986).

[255] United States v. Jones, 132 S. Ct. 945, 949 (2012) (stating that "[t]he Government physically occupied private property for the purpose of obtaining information. We have no doubt that such a physical intrusion would have been considered a "search" within the meaning of the Fourth Amendment when it was adopted."); IDAHO CODE ANN. § 21-213 (2013); S.B. 196, 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

practically outlaw warrantless drone surveillance targeting private property because such a broad prohibition unreasonably restricts drone use to the point of negation.[256] When considering the fact that Idaho's drone restrictions apply to farmlands and other "open fields,"[257] the sheer breadth of that state's pronouncement becomes clear.[258] Measures like those adopted in Idaho prevent drones from operating in a similar capacity and function to airplanes and helicopters[259] and they neglect that "[p]articularly in the context of felonies or crimes involving a threat to public safety, it is in the public interest that the crime be solved and the suspect detained as promptly as possible."[260] While legislatures should provide additional privacy protections that go beyond what the Constitution provides, legislators should not adopt all-encompassing restrictions that prevent drones from conducting valid and rational police work that airplanes and helicopters legally perform everyday. Thus, to better combat unreasonable and unpalatable invasions on privacy, courts and legislatures should look to the limits of surveillance on private property, as Rule 3 does.

Rule 3 seeks to protect private individuals' privacy while balancing the state's need to compete "in the often competitive enterprise of ferreting out crime."[261] By using the terms, "unreasonably," and "close proximity," Rule 3 allows for a combination of a *Jones*-ian property right analysis and *Katz*'s "reasonable expectation of privacy" test to determine whether a drone's operation

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[256] *See* IDAHO CODE ANN. § 21-213.

[257] *See* Mo. H.B. 46; IDAHO CODE § 21-213.

[258] Of course, if the target location for surveillance qualifies for curtilage status under *United States v. Dunn*, 480 U.S. 294 (1987), a court generally will be more willing to find the drone's observation and activity to be a "search" under the Fourth Amendment. *See generally id.* However, if the target location qualifies as an open field, "an individual has no legitimate expectation that open fields will remain free from warrantless intrusion by government officers." Waltman v. Payne, 535 F.3d 342, 346 (5th Cir. 2008) (quoting Oliver v. United States, 466 U.S. 170, 181 (1984)). Thus, any warrantless surveillance conducted over private open fields is presumptively constitutional. *See generally* United States v. Ishmael, 48 F.3d 850 (5th Cir. 1995) (ruling that warrantless use of a thermal imager in an "open field" does not violate the Fourth Amendment). As noted in Part II of this Note, commercial property occupies an indeterminate position as to whether a "reasonable expectation of privacy" applies. *See supra* Part II(A)(5)(b)(iii); *see also* Skalak, *supra* note 153, at 281–86 (discussing *Dow Chemical Co.* in-depth and the Supreme Court's handling of commercial property surveillance and searches). Thus, commercial property cases require a fact-intensive approach to privacy. Dow Chemical Co. v. United States, 476 U.S. 227, 239 (1986).

[259] *See generally* Florida v. Riley, 488 U.S. 445 (1989); California v. Ciraolo, 476 U.S. 207 (1986).

[260] United States v. Hensley, 469 U.S. 221, 229 (1985) (holding that the government's interest in solving crimes outweighs an individual's expectation of being free from an investigatory stop).

[261] Johnson v. United States, 333 U.S. 10, 14 (1948) (discussing the Fourth Amendment's warrant requirement and exceptions to it).

violates societal notions of privacy.[262]

Allowing an ambiguous term like "close proximity" to dictate the legality of drone surveillance necessarily resurrects common law conceptions of property rights. In light of Justice Scalia's opinion in *Jones*, the trail to find the baseline of constitutionality for drone surveillance leads to a single maxim: "[w]hen the Government physically invades personal property to gather information, a search occurs."[263] Although it may be difficult to imagine a situation where a drone physically comes into contact with property and lives to continue its mission, one may apply traditional trespass doctrine when determining whether a particular drone mission constitutes a "search."[264] While the Supreme Court "has repeatedly suggested that local tort and property laws are all but irrelevant in assessing whether particular expectations of privacy are 'reasonable' and hence constitutionally protected,"[265] the Court has at least implicitly incorporated tort and property law concepts into its opinions: the plurality in *Riley* mentioned common law ideas of nuisance as a possible factor in its inquiry.[266]

In addition to looking to nuisance and trespass, Rule 3 allows one to turn to aviation-related statutory and regulatory schemes for guidance on how drones should be restricted and what is an unreasonably close distance from a particular home or object.[267] For example, *Riley* left open the question of whether violating an aviation regulation or statute transformed a surveillance operation into a per se unconstitutional search.[268] The plurality indicated that compliance with regulations and statutes "is of obvious importance" to the Fourth Amendment inquiry, although not determinative in and of itself.[269] Rule 3's prohibi-

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[262] *See* United States v. Jones, 132 S. Ct. 945, 955 (2012) (Sotomayor, J., concurring); *see also* Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) (noting that "a man's home is, for most purposes, a place where he expects privacy, but objects, activities, or statements that he exposes to the 'plain view' of outsiders are not 'protected' because no intention to keep them to himself has been exhibited. On the other hand, conversations in the open would not be protected against being overheard, for the expectation of privacy under the circumstances would be unreasonable.").

[263] *Jones*, 132 S. Ct. at 955 (Sotomayor, J., concurring).

[264] *See generally id.* at 945 (applying common law trespass to Fourth Amendment claims).

[265] *See* Sklansky, *supra* note 25, at 208.

[266] Florida v. Riley, 488 U.S. 445, 452 (1989). The plurality noted that during the surveillance operation in question, "there was no undue noise, and no wind, dust, or threat of injury." *Id.* One weakness that the nuisance concept brings is that it may not account for low-observable drones that the average person may not notice. *See* 8A AM. JUR. 2D *Aviation* § 19 (2013); Kristin L. Falzone, *Airport Noise Pollution: Is There a Solution in Sight?*, 26 B.C. ENVTL. AFF. L. REV. 769 (1999).

[267] *See, e.g. Riley*, 488 U.S. at 451.

[268] *Id.*

[269] *Id.* at 452. Justice O'Connor reiterated this in her concurrence, arguing that the Court should not lean on a safety regulation or statute to help determine privacy matters. *See id.* at 453-454 (O'Connor, J., concurring).

tion on warrantless drone surveillance operations that result in violations of an applicable airspace regulation or law comports with the Supreme Court's analysis in *Riley*.

Generally, when analyzing whether a particular drone's location and accompanying actions are unreasonable, one begins with *Katz*'s "reasonable expectation of privacy" test. With the *Katz* test, one should ask two main questions. First, whether the targeted individual "exhibited an actual (subjective) expectation of privacy."[270] Second, whether that expectation is "one that society is prepared to recognize as 'reasonable.'"[271] From these broad questions, one may tailor the *Katz* analysis to fit specific factual scenarios. For example, Justice O'Connor in a concurrence famously adapted *Katz*'s "reasonable expectation of privacy" test to situations where an aircraft's altitude and location are in question.[272] In such scenarios, O'Connor posited that one should ask whether the drone is "in the public airways at an altitude at which members of the public travel with sufficient regularity that [an individual's] expectation [of privacy] was not one that society is prepared to recognize as 'reasonable.'"[273] By explicitly allowing both property-law and "reasonable expectation of privacy" analyses to govern warrantless drone operations targeting private property, Rule 3 merges the *Jones* and *Katz* approaches to provide a comprehensive inquiry into a drone's actions and its effect on a person's privacy.

d. *Rule 4: Sense-Enhancing Technology Restrictions*

Rule 4 essentially functions as a clarified adaptation of the Supreme Court's opinion in *Kyllo*, which held that the government may not use a drone's "sense-enhancing technology," such as an infrared camera, to observe the home's interior without a warrant.[274] *Kyllo* stands for the proposition that the government may not seek refuge under the "open view" doctrine in circumstances where it applies sense-enhancing technology without a warrant;[275] onboard surveillance equipment that is not within the general public's reach ostensibly renders the drone's observations as "searches" under the Fourth Amendment.[276] The takeaway from *Kyllo* is that the Supreme Court seeks to prevent the govern-

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[270] Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring) (noting that "a man's home is, for most purposes, a place where he expects privacy, but objects, activities, or statements that he exposes to the 'plain view' of outsiders are not 'protected' because no intention to keep them to himself has been exhibited. On the other hand, conversations in the open would not be protected against being overheard, for the expectation of privacy under the circumstances would be unreasonable.").

[271] *Id.*

[272] *Riley*, 488 U.S. at 454 (O'Connor, J., concurring).

[273] *Id.* (O'Connor, J., concurring). In *Riley*, the Court placed heavy emphasis on the surveillance platform's regularity of travel. *Id.* at 445.

[274] Kyllo v. United States, 533 U.S. 27, 34 (2001).

[275] *Id.*

[276] *Id.* at 34–35, 40.

ment from divulging intimate details that it could not have previously attained without committing physical trespass and without using technology to which the general public has not been sufficiently acquainted to.[277] Rule 4 tracks *Kyllo*'s ruling by explicitly restricting "sense enhancing" technology that is not in general public use—since *Kyllo* appears to exempt from its holding any "sense enhancing technology" that is "in general public use,"[278] so too does Rule 4.

The term, "in general public use" in Rule 4 can be misleading because of its inherent vagueness and indefinite boundaries. Because the Supreme Court in *Kyllo* failed to define its meaning,[279] Rule 4 applies its own definition of "in general public use": "in general public use" means a particular sense-enhancing technology can be bought or sold on the open market in the United States without significant governmental restriction. This definition conforms to the phrase's "plain meaning, case precedent . . . [and] dictionary meaning."[280] Equipped with this description of "in general public use," courts would not ask whether the surveillance target *actually used* that particular technology, but whether someone could purchase that technology without significant governmental restriction. As mentioned in the Rule, examples of significant governmental restriction include mandatory licensure and mandatory registration.

While Rule 4 explicitly restricts the use of sense-enhancing technology, it does not place a comprehensive prohibition on such technology. The Rule only insulates private property, such as homes, private businesses, and vehicles, from the revealing power of sense-enhancing technology. This conscious limitation finds its impetus in the Supreme Court's established jurisprudence on surveillance of the home,[281] curtilage,[282] the open field,[283] and commercial property.[284] Because the Supreme Court and the States have displayed a greater

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[277] *Id.* at 34. Here, the "sense-enhancing technology" involved an infrared camera that was capable of picking up heat radiating beyond the walls of a home. *Id.*

[278] *Id.* Some commentators suggest that the Court's holding reflected its belief that a society's reasonable expectations are closely tied to whether a particular piece of technology is available to the general public. *See* Christian M. Halliburton, *How Privacy Killed Katz: A Tale of Cognitive Freedom and the Property of Personhood as Fourth Amendment Norm*, 42 AKRON L. REV. 803, 880 (2009); Slobogin, *supra* note 123, at 1397–1406.

[279] *See generally Kyllo*, 533 U.S. 27; *see also* Douglas Adkins, *The Supreme Court Announces a Fourth Amendment "General Public Use" Standard for Emerging Technologies but Fails to Define it: Kyllo v. United States*, 27 U. DAYTON L. REV. 245, 252 (2002) (discussing possible interpretations of the "General Public Use" phrase used in *Kyllo*).

[280] Adkins, *supra* note 279, at 254. Adkins argues that such a "generic definition is inherently broad and does not balance the individual's needs for privacy against society's need to prevent crime and to protect public safety." *Id.* However, Adkins does not advocate for an alterative, workable, definition. *Id.*

[281] *See supra* Part II(A)(5)(a).

[282] *See supra* Part II(A)(5)(b)(i).

[283] *See supra* Part II(A)(5)(b)(ii).

[284] *See supra* Part II(A)(5)(b)(iii).

concern of government surveillance that targets homes and other private property,[285] Rule 4 answers such concerns with a near-blanket ban on the government's use of non-public, sense-enhancing technology to peer into an individual's dwelling or home, or a private business's place of business, without a warrant. As it pertains to private property, Rule 4 restricts the government to "see[ing] what may be seen 'from a public vantage point where [they have] a right to be.'"[286]

e. *Rule 5: Private Property Trespass Restrictions*

As manufacturers produce smaller[287] and quieter[288] drones, restrictions on drone surveillance must account for just such a development. Fortunately, the Fourth Amendment already speaks to physical invasions of private property,[289] and thus Rule 5 is a reaffirmation of the Supreme Court's line of opinions that afford increased Fourth Amendment protections for the home and other private property.[290] The Supreme Court has indicated, over the course of numerous opinions, that the Fourth Amendment provides enhanced protection inside the home.[291] Both within and beyond the legal landscape, homes occupy a unique and longstanding position of sanctity, "a tradition reflected in the wording of the Fourth Amendment itself, in the earlier history of search and seizure law, and in ancillary doctrines such as the crime of burglary."[292] As a matter of law,

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[285] *See*, e.g., Kyllo v. United States 533 U.S. 27 (2001) (for homes); See v. City of Seattle, 387 U.S. 541, 543 (1967) (for private businesses); IDAHO CODE ANN. § 21-213 (2013); S.B. 196, 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

[286] *See* Florida v. Riley, 488 U.S. 445, 449 (1989) (quoting California v. Ciraolo, 476 U.S. 207, 213 (1986)).

[287] The "Black Hornet" drone weighs just sixteen grams and is only four inches long. *See* Ackerman, *supra* note 214.

[288] *See* Beckhusen, *supra* note 213.

[289] U.S. CONST. amend. IV. *See also* United States v. Jones, 132 S. Ct. 945, 950 (2012) (stating that "for most of our history the Fourth Amendment was understood to embody a particular concern for government trespass upon the areas ('persons, houses, papers, and effects') it enumerates").

[290] *See Jones*, 132 S. Ct. at 950. *See also supra* Part II(A)(5) (discussing Fourth Amendment protections for the home, the curtilage, and private commercial property). Even though the Fourth Amendment already addresses Rule 5's purpose, for the sake of completeness it is important to include Rule 5 in the overall conversation about drone operations. Rule 5 directly addresses the potential ability of smaller drones to physically enter a home or enclosed private structure.

[291] *See* Wilson v. Layne, 526 U.S. 603 (1999); Karo v. United States, 468 U.S. 705, 714 (1984); Segura v. United States, 468 U.S. 796, 810 (1984); Payton v. New York, 445 U.S. 573 (1980). *See also* Sklansky, *supra* note 25, at 159.

[292] Sklansky, *supra* note 25, at 191–92 (stating that "[t]he ability to enjoy solitude in one's home seems both a aspect of human dignity and a prerequisite of a free society."). Professor Sklansky notes that as a reaction to the Court's amplified protection for the home,

"physical entry of the home [is] the chief evil against which the wording of the Fourth Amendment is directed."[293] Under the "reasonable expectation of privacy" test, the home is "for most purposes, a place where [an individual] expects privacy, but objects, activities, or statements that he exposes to the [open view] of outsiders are not 'protected' because no intention to keep them to himself has been exhibited."[294] Not to be left out, the states also share the Supreme Court's view that the home enjoys greater protection from the Fourth Amendment. Specifically, Wisconsin and Idaho have enacted drone laws that provide significantly heightened protection of the home and other private property.[295] Given this line of judicial and legislative intent to affirm special privacy protections for the home,[296] Rule 5 generally prohibits warrantless drone entry into the home or any other enclosed private structure.

Despite its near-total restriction on drone use, Rule 5 also allows one exception: the operation of a drone in furtherance of a mission that resolves, or will help resolve, a situation that involves an imminent danger to life. This exception tracks the Supreme Court's acceptance that in certain exigent circumstances, such as when police officers respond to an emergency[297] or when delaying an investigation to seek a warrant would endanger lives,[298] a warrant is not required.[299] Notably, besides the "imminent danger to life" exception, Rule 5 is not concerned with whether a government agency is operating a drone in the course of a criminal investigation or for any other purpose. Thus, even if a drone satisfies the conditions of Rule 1, that drone may not enter a home or other enclosed private structure if it does not meet Rule 5's "imminent danger to life" exception.

f. *Rule 6: Data Collection Restrictions*

Rule 6 is an outgrowth of the various state and federal proposals that substantially limit a drone's ability to serve as a dragnet tool for government surveillance.[300] While the Fourth Amendment does not explicitly prohibit dragnet

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privacy advocates "worry this means 'the streets . . . belong to the police.'" *Id.* at 193 (quoting David Cole, *Scalia's Kind of Privacy*, NATION (July 12, 2001), http://www.thenation.com/article/scalias-kind-privacy#).

293 United States v. U.S. Dist. Court, S. Div., 407 U.S. 297, 313 (1972).

294 Katz v. United States, 389 U.S. 347, 361 (1967) (Harlan, J., concurring).

295 *See supra* Part II(B)(2)(a); IDAHO CODE ANN. § 21-213 (2013); S.B. 196 § 2, 2013 Leg., Reg. Sess. (Wis. 2013), 2013 Wis. Act. 213, *available at* https://docs.legis.wisconsin.gov/2013/related/acts/213.

296 *See* Kyllo v. United States, 533 U.S. 27 (2001); *Wilson*, 526 U.S. at 612 (stating that the home is the "core of the Fourth Amendment.").

297 McDonald v. United States, 335 U.S. 451, 454 (1948)

298 Warden, Md. Penitentiary v. Hayden, 387 U.S. 294, 298–99 (1967).

299 *See generally supra* note 93.

300 *See, e.g.*, H.B. 1373 § 7, 63rd Leg. Assemb., Reg. Sess. (N.D. 2013); H.R. 1262, 113th Cong. § 3 (2013); H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

searches, "the Supreme Court has insisted that 'to be reasonable under the Fourth Amendment, a search ordinarily must be based on individualized suspicion of wrongdoing,' save in cases of 'special need' based on 'concerns other than crime detection.'"[301] Massive, unabridged and unfiltered information gathering presents a significant threat to privacy.[302] Thus far, society has expressed an "uneasiness about the collection of vast amounts of data about each person and not knowing what one will find when one opens Pandora's box."[303] Rule 6 addresses this concern by explicitly limiting the circumstances in which the government may retain information or data gathered and obtained during the course of a drone's operation. While inspired by North Dakota's Bill 1373, Rule 6 goes further than Bill 1373 in constraining the government's ability to store information captured from drones.[304] For example, where Bill 1373 allows the government to hold data for 90 days, Rule 6 only permits 30 days.[305] Where Bill 1373 states that evidence obtained in violation of its provisions may not be used in a criminal prosecution, Rule 6 proscribes such information from being used in *any* court of law.[306] These increased protections for data privacy and restrictions on unlimited data collection aim to prevent drone users from circumventing the intent of the Fourth Amendment through the use of an unfiltered and unchecked information gathering operation. Thus, by restricting a drone's ability to capture and store superfluous information, Rule 6 prevents the unlimited proliferation of information gathering and dissemination, and the privacy threat that data dragnets pose.[307]

Rule 6 explicitly disallows the intentional distribution to unauthorized persons any data or information gathered by a drone. This provision is derived from Representative Markey's DAPTA bill, which also contained a similar restriction on information sharing,[308] and is designed to prevent individuals and

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[301] *See* Edmond v. Goldsmith, 183 F.3d 659, 662 (7th Cir. 1999).

[302] *See generally,* Nicolas P. Terry, *Protecting Patient Privacy in the Age of Big Data*, 81 UMKC L. REV. 385 (2012) (discussing the threat that "big data" presents to medical practitioners and patients).

[303] *See* John Pavolotsky, *Demystifying Big Data*, 2012-NOV BUS. L. TODAY 1, 2 (2012).

[304] *Cf.* N.D. H.B. 1373 § 7.

[305] *Id.* While the thirty-day rule is an arbitrary construction, the reduced time allowance is a compromise intended to balance the needs of law enforcement for flexibility with a hard limit on extended drone operations.

[306] *Id.* The rationale behind this restriction mirrors that of the thirty-day data storage rule: the evidentiary exclusion in this case is a compromise intended to balance the needs of law enforcement for flexibility with a hard limit on extended drone operations.

[307] A particularly apt example of the public's uncomfortable relationship with widespread surveillance programs can be found in the public backlash surrounding the National Security Agency's dragnet surveillance programs. *See, e.g.,* Jonathan Weisman, *Momentum Builds Against N.S.A. Surveillance*, N.Y. TIMES (July 28, 2013), http://www.nytimes.com/2013/07/29/us/politics/momentum-builds-against-nsa-surveillance.html?pagewanted=all.

[308] H.R. 1262, 113th Cong. § 3 (2013). The exact text of DAPTA reads: "[a] person or

entities from walking around Rule 6's data retention limits by passing on information to unauthorized third parties, such as another government agency or a member of the media.

Because no set of commands would be followed without an incentive, the third and fourth paragraphs of Rule 6 provide the main thrust behind enforcing *every* Rule mentioned in this Note. By excluding from evidence any information or data that is obtained in violation of Rules 1 through 6, and by providing individuals with the ability to sue for an injunction against further violations of the Rules, Rule 6 works to incentivize the government to operate in compliance with the Rules and in conjunction with the spirit of the Fourth Amendment.

IV. CONCLUSION

Drones present a revolutionary problem that requires both the Judiciary and legislatures to modify their approaches to regulating and controlling government surveillance.[309] Upholding the spirit of the Fourth Amendment, a spirit that embodies notions of privacy and security from unwarranted government intervention,[310] requires that society at least attempt to maintain a similar degree of privacy with drones that people enjoyed without drones. The Supreme Court's framework for analyzing Fourth Amendment questions underlines the difficulty and sheer magnitude of this task, however.[311] Over the course numerous terms, the Supreme Court has oscillated between the rigid interpretations of *Olmstead*, to practical yet indeterminate constructions of privacy in *Katz,* and back to a mixture of both in *Jones*.[312] Even when discussing narrowly tailored issues such as aerial surveillance, the Court struggles to maintain a firm footing as to what constitutes a "search," and what does not.[313] Nonetheless, the Supreme Court's framework provides useful guidance for forming a solution that answers how society can successfully assimilate drone surveillance into the American landscape without further deteriorating individual privacy rights and expectations.

Beyond the Supreme Court's guidance, the various federal and state legislative responses to the rise of drone surveillance provide yet another insight into how drone surveillance should be treated.[314] Analyzing legislative responses generally yields a much closer view of how the general public views drone use,

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entity shall not intentionally divulge information collected in accordance with this section with any other person or entity, except as authorized by law." *Id.*

309 *See supra* Part I.

310 *See* Katz v. United States, 389 U.S. 347, 351 (1967); Olmstead v. United States, 277 U.S. 438, 487 (1928) (Butler, J., dissenting).

311 *See supra* Part II.

312 *See generally* United States v. Jones, 132 S. Ct. 945 (2012); *Katz*, 389 U.S. 347; *Olmstead*, 277 U.S. 438.

313 *See generally* Kyllo v. United States, 533 U.S. 27 (2001).

314 *See supra* Part II(B).

simply because "[a] legislative body is well situated to gauge changing public attitudes, to draw detailed lines, and to balance privacy and public safety in a comprehensive way."[315] The near-ubiquitous warrant requirements among both the federal and state proposals clearly indicate that the legislatures intend to restrict drone use above and beyond the Supreme Court's baseline rules.[316] Nevertheless, neither the Supreme Court nor the various legislative proposals properly address how to define and restrict drone surveillance; the Court simply has not addressed the limits of drone use as of yet, and the legislatures have misapplied warrant requirements to drones when such requirements are too broad, too blunt, and unreasonably restrictive.[317]

To effectively address the privacy issues that surround drone surveillance, one needs to apply a new approach that is founded on legal precedent and embraces a balance between society's interest in effective law enforcement and the individual's interest in personal privacy. Instead of applying a near-universal warrant requirement, courts and legislatures should look to bright-line rules that are more precise, attuned, and reasonable, while affording a similar level of protection that an ordinary person enjoys today.[318] This Note presents six bright-line rules to assist legislatures and courts in their determinations of how drone surveillance should be regulated.[319] Each of the six rules restates the Supreme Court's understanding of the Fourth Amendment, yet simultaneously incorporate suggestions from various federal and state legislative proposals that addressed the public's concerns.[320]

As the world of privacy law and the Fourth Amendment wander into the uncertain caverns of drone surveillance, this Note aims to shed some light onto the right path forward. While society may currently see drones as an unknown entity, society may soon find a path that preserves its fundamental values and security, while enabling genuine law enforcement work to carry out its duty to protect us all.

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

316 *See supra* Part II(B).

317 *See supra* Part III(B).

318 *See generally supra* Part III(C).

319 *See supra* Part III(C).

320 *See supra* Part III(C).