Drone Regulations and Fourth Amendment Rights: The Interaction of State Drone Statutes and the Reasonable Expectation of Privacy

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Current federal case law allows warrantless observation of property from manned aerial vehicles if they are in publicly navigable airspace. The increasing domestic use of unmanned aerial vehicles, colloquially known as "drones," and the Federal Aviation Administration's (FAA) efforts to develop regulations to integrate them into national airspace implicate sensitive constitutional privacy issues. In response, several states are enacting or have already enacted statutes to regulate drone use. This Note discusses how state drone statutes may inform the Supreme Court's interpretation of the Fourth Amendment and its protection against unreasonable searches by drones — specifically, whether state drone statutes may influence the Court's current understanding of the "reasonable expectation of privacy" when it is inevitably applied in warrantless drone surveillance cases.

First, this Note reviews Fourth Amendment jurisprudence regarding surveillance technologies and searches. It then provides a survey of state drone statutes currently in effect, their purposes, and their practical effects on the use of drones by the government and private parties. Next, this Note discusses how state drone statutes may interact with Fourth Amendment jurisprudence and inform the Supreme Court's understanding of reasonable expectations of privacy in the context of drones. As drone technology develops, state statutes can influence and reflect social norms

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and expectations regarding drone use and the type of information discoverable by drones, while creating a source of protection for privacy interests that is independent of the Fourth Amendment. Furthermore, policy arguments made during the development of state drone statutes may legitimate people's expectations of privacy against drones. Ultimately, this Note predicts that state drone statutes will likely influence the Court's jurisprudence on the reasonable expectation of privacy, whether explicitly or implicitly, as drones develop technologically and are regulated.

I. INTRODUCTION

In February 2012, President Barack Obama signed the FAA Modernization and Reform Act into law, heralding the official introduction of unmanned aerial vehicles ("drones") into domestic airspace.[1] The Act calls on the Federal Aviation Administration (FAA) to begin integrating drones into the national airspace system by 2015.[2]

Drones are aircrafts that do not carry human operators and are capable of operating remotely or autonomously on a preprogrammed flight path.[3] They can be as small as an insect or the size of a commercial airplane.[4] Drones can be equipped with high-power cameras,[5] thermal scanners,[6] license plate readers,[7]

1. *See* FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, 126 Stat. 11 (2012). *See also* Greg McNeal, *A Primer on Domestic Drones: Legal, Policy, and Privacy Implications*, FORBES (Apr. 10, 2012, 8:12 PM), http://www.forbes.com/sites/gregorymcneal/2012/04/10/a-primer-on-domestic-drones-and-privacy-implications/.

2. BART ELIAS, CONG. RESEARCH SERV., R42718, PILOTLESS DRONES: BACKGROUND AND CONSIDERATIONS FOR CONGRESS REGARDING UNMANNED AIRCRAFT OPERATIONS IN THE NATIONAL AIRSPACE SYSTEM 2 (2012).

3. RICHARD M. THOMPSON II, CONG. RESEARCH SERV., R42701, DRONES IN DOMESTIC SURVEILLANCE OPERATIONS: FOURTH AMENDMENT IMPLICATIONS AND LEGISLATIVE RESPONSES 2 (2013) (citing DEP'T OF DEFENSE, DICTIONARY OF MILITARY AND ASSOCIATED TERMS 331 (2012)).

4. JEREMIAH GERTLER, CONG. RESEARCH SERV., R42136, U.S. UNMANNED AERIAL SYSTEMS SUMMARY (2012); *see also* Allen McDuffee, *Navy's 757-Sized Drone Will Provide Big-Time Surveillance*, WIRED (Jan. 7, 2014, 1:37 PM), http://www.wired.com/dangerroom/2014/01/triton/ ("A new drone with the mammoth wingspan of a Boeing 757 is set to give the U.S. Navy some serious surveillance power."); Michael Kelley, *"Bug-Sized" Drones are the Most Frightening Type of Killer Robot Yet*, BUSINESS INSIDER (Feb. 20, 2013, 12:53 PM), http://www.businessinsider.com/air-force-bug-sized-drones-are-scary-2013-2 (discussing "an animated video showing bug- and-bird-like micro-drones that 'swarm through alleys, crawl across windowsills, and perch on power lines'").

5. *U.S. Army Unveils 1.8 Gigapixel Camera Helicopter Drone*, BBC NEWS (Dec. 29, 2011), http://www.bbc.co.uk/news/technology-16358851.

6. *See Fire Officials Excited About Drones' Potential*, CBS DENVER (Oct. 23, 2014, 11:37 PM), http://denver.cbslocal.com/2014/10/23/fire-officials-excited-about-drones-potential/.

7. *Unmanned Aerial Vehicles Support Border Security*, CUSTOMS AND BORDER PROTECTION TODAY (July 2004) (on file with author).

moving target indicators,[8] LADAR (laser radar),[9] LIDAR (light detection and ranging),[10] and facial recognition software.[11] Non-weaponized domestic uses for drones are boundless. They can be used for mapping,[12] crop dusting,[13] environmental protection,[14] wildlife tracking,[15] delivering packages,[16] search and rescue missions,[17] and a host of other purposes.[18] The FAA predicts that 30,000 drones will fill domestic skies within ten years.[19] As drones are introduced into American skies, they will likely change the landscape of national airspace.

However, drones' benefits do not come without a cost. Legal scholars and politicians have already voiced concerns indicating the perception that current safeguards for protecting individual privacy are insufficient, particularly from the use of drones by

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8. U.S. ARMY, U.S. ARMY ROADMAP FOR UNMANNED AIRCRAFT SYSTEMS 2010–2035 83 (2010), *available at* http://www.rucker.army.mil/usaace/uas/US%20Army%20UAS%20RoadMap%202010%202035.pdf.

9. LADAR produces three-dimensional images and can see through tress and foliage. *Id.*

10. LIDAR can detect explosive hazards and predict the weather. *Id.*

11. Andrew Conte, *Drones with Facial Recognition Technology Will End Anonymity, Everywhere*, BUS. INSIDER, (May 27, 2013, 8:58 PM), http://www.businessinsider.com/facial-recognition-technology-and-drones-2013-5.

12. Lauren Hockenson, *Watch This Drone Automatically Map a Countryside*, GIGAOM (Nov. 19, 2013, 2:53 PM), http://gigaom.com/2013/11/19/watch-this-drone-automatically-map-a-countryside/.

13. Caleb Garling, *Drone, Drone on the Range*, MODERN FARMER (July 8, 2013), http://modernfarmer.com/2013/07/drones-drones-on-the-range/.

14. *Drones Used for Environmental and Wildlife Protection Accessible by Tablets*, ENVTL. PROT. (May 29, 2013), http://eponline.com/articles/2013/05/29/drones-used-for-environmental-and-wildlife-protection-accessible-by-tablets.aspx.

15. *Ecology Drones Track Endangered Wildlife*, THE GUARDIAN (Aug. 20, 2012, 6:25 PM), http://www.theguardian.com/environment/2012/aug/20/ecology-drones-endangered-wildlife?CMP=twt_fd.

16. Steve Banker, *Amazon and Drones — Here Is Why It Will Work*, FORBES (Dec. 19, 2013, 10:24 AM), http://www.forbes.com/sites/stevebanker/2013/12/19/amazon-drones-here-is-why-it-will-work/.

17. *Drones Come Home, Privacy Concerns Fly High*, NAT'L PUB. RADIO (Mar. 6, 2013, 1:00 PM), http://www.npr.org/2013/03/05/173532173/drones-come-home-privacy-concerns-fly-high.

18. John Villasenor, *Observations from Above: Unmanned Aircraft Systems and Privacy*, 36 HARV. J.L. & PUB. POL'Y 457, 459 (2013). The use of drones has also been considered for surveying, Frank Willis, *How Can Drones Transform Surveying?*, POINT OF BEGINNING (Aug. 13, 2013), http://www.pobonline.com/articles/96996-how-can-drones-transform-surveying, and responding to natural disasters. Dougal Shaw, *Disaster Drones: How Robot Teams Can Help in a Crisis*, BBC NEWS (July 22, 2012), http://www.bbc.co.uk/news/technology-18581883.

19. Robert Johnson, *FAA: Look for 30,000 Drones to Fill American Skies by the End of the Decade*, BUS. INSIDER (Feb. 8, 2012, 2:12 PM), http://www.businessinsider.com/robert-johnson-bi-30000-drones-by-2020-2012-2.

law enforcement.[20] This apprehension is compounded by scholars' perceptions that neither the FAA, whose responsibility is to ensure safety and efficiency in national airspace,[21] nor any other regulatory body, is currently equipped to protect privacy interests.[22]

In the meantime, some states are enacting legislation in an effort to regulate drone use and protect individual privacy.[23] As drones proliferate, individuals will look to state laws and the Fourth Amendment to provide protection against intrusions of privacy. The Fourth Amendment's reasonable expectation of privacy test, used to delineate the bounds of Constitutional protection, will be central to determining the scope of permissible warrantless drone use by law enforcement.

This Note considers how state drone statutes may interact with Fourth Amendment jurisprudence and inform contemporary reasonable expectations of privacy. Part II reviews Fourth Amendment precedents and applications of the reasonable expectation of privacy test in tracking cases and in cases where the Supreme Court distinguishes between the home, curtilage, and open fields. Part III provides a survey of state drone statutes currently in effect, their purposes, and their practical effects on

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20. *See* RICHARD M. THOMPSON II, CONG. RESEARCH SERV., R42701, DRONES IN DOMESTIC SURVEILLANCE OPERATIONS: FOURTH AMENDMENT IMPLICATIONS AND LEGISLATIVE RESPONSES 2 (2013) [hereinafter *CRS Drones Report*]; *see also The Future of Drones in America: Law Enforcement and Privacy Considerations: Hearing Before The S. Comm. on the Judiciary*, 113th Cong. 12 (2013) [hereinafter *Future of Drones Hearing*] (statement of Ryan Calo, Assistant Professor, Univ. of Wash. Sch. of Law) (testifying that Supreme Court cases regarding the constitutionality of aerial surveillance are inadequate to guide courts and law enforcement in the area of unmanned surveillance); *id.* at 20 (statement of Sen. Amy Klobuchar) (stating that existing laws should be updated in order to properly regulate drone use); *id.* at 24 (statement of Sen. Richard Blumenthal) (stating that laws must be updated in order to protect people's privacy).

21. *Future of Drones Hearing*, *supra* note 20, at 55 (statement of Michael Toscano, President and Chief Executive Officer, Association for Unmanned Vehicle Systems International).

22. *See CRS Drones Report*, *supra* note 20, at 2; *see Future of Drones Hearing*, *supra* note 20, at 28 (statement of Michael Toscano, President and Chief Executive Officer, Association for Unmanned Vehicle Systems International) (stating that the FAA has "very limited, if any expertise in the area of privacy" and that their responsibility is to ensure safety). *But see Future of Drones Hearing*, *supra* note 20, at 29 (statement of Ryan Calo, Assistant Professor, Univ. of Wash. Sch. of Law) ("[I]t is true historically that the FAA has looked at safety, but I do not see any reason why the FAA could not gain expertise around privacy.").

23. Allie Bohm, *Status of 2014 Domestic Drone Legislation in the States*, ACLU (April 22, 2014, 10:32 PM), https://www.aclu.org/blog/technology-and-liberty/status-2014-domestic-drone-legislation-states; *infra* Part III.

the use of drones by the government and private parties.[24] Part IV discusses how state drone statutes may inform the Supreme Court's understanding of what expectations of privacy are "reasonable" within an interpretive framework delineated by Orin S. Kerr's *Four Models of Fourth Amendment Protections*.[25] Finally, Part V predicts that state drone statutes will influence the Court's current understanding of the reasonable expectation of privacy, whether explicitly or implicitly, as drones develop technologically and are regulated.

II. FOURTH AMENDMENT SURVEILLANCE JURISPRUDENCE

Although the Supreme Court has never addressed the Fourth Amendment and the privacy concerns implicated by the use of drones, there is ample relevant precedent from non-aerial surveillance, aerial surveillance, and non-surveillance search cases.

The Fourth Amendment provides:

> 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.[26]

The Court initially interpreted the Fourth Amendment as protecting against trespass and the physical invasion of real property by law enforcement.[27] However, it departed from the "trespass doctrine" in *Katz v. United States*, when it found that "the Fourth Amendment protects people, not places."[28] Since *Katz*, the Court

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24. This Note does not address possible federal legislation on drones, which some argue is necessary in order to protect privacy interests. *See, e.g.*, Hillary B. Farber, *Eyes in the Sky: Constitutional and Regulatory Approaches to Domestic Drone Deployment*, 64 SYRACUSE L. REV. 1, 30 (2014).

25. Orin S. Kerr, *Four Models of Fourth Amendment Protection*, 60 STAN. L. REV. 503, 505–06 (2007).

26. U.S. CONST. amend. IV.

27. Olmstead v. United States, 277 U.S. 438, 464–66 (1928) (finding no search within the meaning of the Fourth Amendment where the police, without committing any trespass or invasion of the suspects' properties, attached wires to telephone lines located outside the suspects' residences).

28. Katz v. United States, 389 U.S. 347, 351, 353 (1967) ("[T]he underpinnings of *Olmstead* and *Goldman* have been so eroded by our subsequent decisions that the 'trespass' doctrine there enunciated can no longer be regarded as controlling.").

has consistently held that "the application of the Fourth Amendment depends on whether the person invoking its protection can claim a justifiable, a reasonable, or a legitimate expectation of privacy that has been invaded by government action."[29]

The "reasonable expectation of privacy" test was first articulated by Justice Harlan in his concurrence in *Katz*[30] and has become the analytical guide used to determine whether a search was conducted in violation of the Fourth Amendment.[31] In order to find a Fourth Amendment violation, two criteria must be satisfied under the test: (1) "that a person have exhibited an actual (subjective) expectation of privacy" and (2) "that the expectation be one that society is prepared to recognize as 'reasonable.'"[32]

A. TRACKING

Drones' unique identification and flight capabilities[33] could enable sophisticated, long-term tracking of cars or people. Largely as a result of practical, temporal, and monetary restrictions that have rendered long-term aerial tracking impossible, the Court has not addressed an aerial tracking case to date.[34] The Court has addressed several non-aerial tracking cases, however, which may inform our understanding of how the reasonable expectation of privacy test will be applied in the context of warrantless drone tracking.

In *United States v. Knotts*,[35] the Court determined that individuals do not have a reasonable expectation of privacy against

29. Smith v. Maryland, 442 U.S. 735, 740 (1979).

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

31. United States v. Jones, 132 S.Ct. 945, 950 (2012); *see, e.g.*, Bond v. United States, 529 U.S. 334 (2000); California v. Ciraolo, 476 U.S. 207 (1986); Smith v. Maryland, 442 U.S. 735 (1979).

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

33. *See supra* Part I.

34. Justice Alito refers to similar practical limitations on ground surveillance in *United States v. Jones*. "[S]ociety's expectation has been that law enforcement agents and others would not — and indeed, in the main, simply could not — secretly monitor and catalogue every single movement of an individual's car for a very long period." 132 S. Ct. at 964 (Alito, J., concurring).

35. 460 U.S. 276 (1983). In *Knotts*, police officers placed a beeper in a drum of chloroform purchased by defendant Knotts and then followed the defendant's vehicle on public thoroughfares. The police lost visual contact with Knotts's vehicle, but shortly thereafter picked up the beeper signal from a location in the area of the defendant's residence. The police conducted visual surveillance of the residence for three days before obtaining a search warrant. The Supreme Court found no indication in the record "that the beeper signal was received or relied upon after it had indicated that the drum . . . had ended its

surveillance when traveling in a car on public roads,[36] even if the surveillance is conducted with the assistance of technology that enhances human perception.[37] The majority opinion, written by Justice Rehnquist, pointed out that driving a car on public roads "convey[s] to anyone who want[s] to look the fact that [a person is] traveling over particular roads in a particular direction, the fact of whatever stops he made, and the fact of his final destination when he exited from public roads onto private property."[38] The very next term, the Court limited this rule in *United States v. Karo*,[39] holding that the Fourth Amendment does protect against the continued use of technology to surveil beyond travel along public roads when the technology provides law enforcement agents with information from inside an individual's private residence.[40] Justice White, writing for the majority, noted that "private residences are places in which the individual normally expects privacy free of governmental intrusion not authorized by a warrant, and that expectation is plainly one that society is prepared to recognize as justifiable."[41]

Almost three decades later, the Court addressed the use of tracking devices again in *United States v. Jones*.[42] In *Jones*, law enforcement agents installed a GPS tracking device onto the exterior of a car owned by a suspected narcotics trafficker.[43] The agents tracked the device for 28 days, generating over 2,000 pages of data related to the suspect's travel habits.[44] The Government then used the data to charge the suspect and prove his involvement in a drug trafficking conspiracy at trial.[45]

While the Court unanimously found that law enforcement conducted an unconstitutional search, the Justices diverged on the logic behind finding a Fourth Amendment violation. Justice Scalia's majority opinion did not apply *Katz*, instead holding that

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automotive journey" or that it was "used in any way to reveal information as to the movement of the drum within the [residence], or in any way that would not have been visible to the naked eye from outside the [residence]." *Id.* at 278–79, 284–85.

36. *Id.* at 281.
37. *Id.* at 282.
38. *Id.* at 281–82.
39. 468 U.S. 705, 708 (1984).
40. *Id.* at 714–15.
41. *Id.* at 714.
42. 132 S. Ct. 945 (2012).
43. *Id.* at 948.
44. *Id.*
45. *Id.* at 948–49. The Government used the same GPS-derived data against Jones in a first trial, which resulted in a hung jury. *Id.* at 948.

the "reasonable expectation of privacy" formulation coexisted with the property protections established by the Fourth Amendment.[46] Justice Scalia therefore found a Fourth Amendment violation in the act of the Government's "trespassorily" inserting an information-gathering GPS device on the suspect's car.[47] This action, Justice Scalia wrote, "would have been considered a search within the meaning of the [Fourth] Amendment at the time it was adopted."[48]

Justice Sotomayor agreed with the majority in her concurrence, stating that the "trespassory test" "reflects an irreducible constitutional minimum."[49] Justice Sotomayor continued to discuss the problems raised by the Government's ability to collect information about "the sum of one's public movements."[50] She questioned "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."[51]

Justice Alito's concurrence criticized the majority's use of trespass law, instead applying the "reasonable expectation of privacy" test.[52] He found that society's expectation of privacy is such that law enforcement would not, indeed could not, "secretly monitor and catalogue every single movement of an individual's car for a very long period."[53] Without defining a "very long period," Justice Alito concluded that four weeks would qualify.[54] Thus, Justice Alito concluded that a search was conducted in violation of the Fourth Amendment.[55]

These cases provide guidance for law enforcement agencies seeking to use drones to conduct surveillance without a warrant, but ambiguity remains. While government agencies could likely

46. *Id.* at 950–51. According to Scalia, the Court should "assure preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted." *Id.* at 950 (quoting Kyllo v. United States, 533 U.S. 27, 34 (2001)). While *Katz* established that "property rights are not the sole measure of Fourth Amendment violations," it "did not snuff out the previously recognized protection for property." *Id.* at 951 (quoting Soldal v. Cook County, 506 U.S. 56, 64 (1992)) (internal alterations omitted).

47. *Id.* at 952.

48. *Id.* at 947.

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

50. *Id.* at 956.

51. *Id.*

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

53. *Id.* at 964.

54. *Id.*

55. *Id.*

use drones to track an individual's movements along public roads for short periods of time without offending the Fourth Amendment,[56] long-term warrantless surveillance akin to that in *Jones* would probably fail under the Court's jurisprudence.[57] While the majority opinion in *Jones* notably rested on the Fourth Amendment's protection of property, the facts of the case involved the attachment of a GPS device to the defendant's car.[58] Drones equipped with facial detection devices and license plate readers, however, could track cars and people without committing trespass as it is traditionally understood. Practically, this means that *Jones* may not govern drone-tracking cases, which would consequently only be subjected to *Katz*'s reasonable expectation of privacy analysis. Thus, as drone surveillance becomes increasingly common among law enforcement agencies, the Court will inevitably have to address the parameters under which drones can be used to surveil.[59]

B. THE HOME, CURTILAGE, AND OPEN FIELDS

In the context of continued tracking, the Court established a line between surveillance of an individual on public roads, which does not violate the Fourth Amendment, and surveillance that provides law enforcement agencies with information from inside an individual's private residence, which does violate the Fourth Amendment.[60] The Court further distinguishes between constitutional and unconstitutional searches in the context of residences, curtilage, and open fields.

1. *Residences*

In *Karo*, the Court held that "[s]earches and seizures inside a home without a warrant are presumptively unreasonable absent exigent circumstances."[61] The gathering of information about the interior of a residence, otherwise unobtainable from outside the

56. *See* United States v. Knotts, 460 U.S. 276, 281–82 (1983).

57. A finding of unconstitutionality would likely reflect the concerns expressed by Justice Sotomayor in her concurring opinion and would likely follow Justice Alito's proposed approach. *See Jones*, 132 S. Ct. at 964 (Alito, J., concurring).

58. *Id.* at 948.

59. For more discussion of how state drone laws might shape the Court's understanding of permissible warrantless drone use, see *infra* Part IV.

60. *See Knotts*, 460 U.S. at 281; United States v. Karo, 468 U.S. 705, 714–15 (1984).

61. *Karo*, 468 U.S. at 714–15.

curtilage, constitutes an unconstitutional search.[62] Overnight guests can also claim the protection of the Fourth Amendment as overnight stays are a longstanding social custom and "society recognizes that a houseguest has a legitimate expectation of privacy in his host's home."[63]

The protection afforded to the home under the Fourth Amendment seemed clear until 2001, when the Court decided *Kyllo v. United States*.[64] In *Kyllo*, two officers used a thermal scanner to detect infrared radiation in an effort to determine whether the amount of heat emanating from the defendant Kyllo's house was consistent with indoor marijuana growth.[65] The scan showed that the roof and one side of the house were significantly warmer than other parts of the defendant's house and neighboring homes, but did not reveal any other information about the inside of the house.[66] Justice Scalia, writing for the majority, wrote that the officers' use of "sense-enhancing technology" to obtain "information regarding the interior of the home that could not otherwise have been obtained without physical 'intrusion into a constitutionally protected area,' constitute[d] a search — at least where (as here) the technology in question [was] not in general public use."[67] The Court determined that a reasonable "minimal expectation" of privacy existed regarding searches of the interior of a home, which is "the prototypical and hence most commonly litigated area of protected privacy."[68]

The interaction between drone use and existing Fourth Amendment jurisprudence on searches of residences is uncertain. While it seems likely that the warrantless use of drones to gather information about the interior of a home would constitute an unconstitutional search,[69] *Kyllo* suggests the possibility of an alternative conclusion if drone technology is in general use.[70]

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62. *Id.* at 715.

63. Minnesota v. Olson, 495 U.S. 91, 98 (1990). In July 1987, Olson was involved in an armed robbery. The police discovered that he was staying with two women and obtained a warrant for Olson's arrest. The police subsequently entered the residence without permission and arrested Olson. Soon after his arrest, Olson made an inculpatory statement. *Id.* at 93–94.

64. 533 U.S. 27, 31 (2001).

65. *Id.* at 29.

66. *Id.* at 30.

67. *Id.* at 34–35 (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)).

68. *Id.*

69. *See* United States v. Karo, 468 U.S. 705, 714–15 (1984) ("At the risk of belaboring the obvious, private residences are places in which the individual normally expects privacy free of governmental intrusion not authorized by a warrant, and that expectation is

2. *Curtilage*

Curtilage "is the area to which extends the intimate activity associated with the 'sanctity of a man's home and the privacies of life.'"[71] As property owners may "reasonably . . . expect that [this] area immediately adjacent to the home will remain private,"[72] the Court has found that curtilage is protected under the Fourth Amendment.

Although the Fourth Amendment's protections extend to curtilage, the Court has held that property owners do not have a reasonable expectation of privacy against naked-eye observation of curtilage from publicly navigable airspace.[73] While *California v. Ciraolo* and *Florida v. Riley* involved similar facts — in both, law enforcement agents flew over defendants' properties and observed marijuana plants[74] — the Court decided the cases on different grounds. Without determining whether the defendant in *Ciraolo* maintained a subjective expectation of privacy,[75] Chief Justice Burger's majority opinion held that society would not be prepared to honor the defendant's expectation that his yard was constitu-

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plainly one that society is prepared to recognize as justifiable. . . . For purposes of the Amendment, the result is the same where, without a warrant, the Government surreptitiously employs an electronic device to obtain information that it could not have obtained by observation from outside the curtilage of the house. The beeper tells the agent that a particular article is actually located at a particular time in the private residence and is in the possession of the person or persons whose residence is being watched. Even if visual surveillance has revealed that the article to which the beeper is attached has entered the house, the later monitoring not only verifies the officers' observations but also establishes that the article remains on the premises.").

70. *See Kyllo*, 533 U.S. at 34. Justice Scalia did not conclude that the gathering of information regarding the interior of a home using sense-enhancing technology that is in general public use would be constitutional. But by qualifying *Kyllo*'s holding with the requirement that the sense-enhancing technology not be in general public use, Justice Scalia leaves open possibility that a technology in general use could be used to gather information about the interior of a residence without violating the Fourth Amendment. *See infra* Part IV.

71. Oliver v. United States, 466 U.S. 170, 180 (1984) (citing Boyd v. United States, 116 U.S. 616, 630 (1886)).

72. *Id.*

73. *See* California v. Ciraolo, 476 U.S. 207, 213–14 (1986); Florida v. Riley, 488 U.S. 445, 450–52 (1989).

74. In *Ciraolo*, two officers observed marijuana plants growing in the defendant's yard from a private plane flying through publicly navigable airspace over the defendant's house at an altitude of 1,000 feet and used a standard camera to photograph the area. The officers later obtained a search warrant using information from their aerial observation. *Ciraolo*, 476 U.S. at 209-10. In *Riley*, an investigating officer flew over defendant Riley's property in a helicopter at an altitude of 400 feet and was able to see marijuana plants with his naked eye through openings in a greenhouse roof. 488 U.S. at 448.

75. *Ciraolo*, 476 U.S. at 212.

tionally protected from observation by officers from a public vantage point, such as public airspace.[76] In *Riley*, Justice White's majority opinion stated that the defendant "could not reasonably have expected that his greenhouse was protected from public or official observation from a helicopter" flying at a legal altitude, despite having erected fences around the property.[77] Thus, the Court's 1986 decision in *Ciraolo* was based on the second prong of the reasonable expectation of privacy test, which asks whether society would be prepared to recognize the individual's subjective expectation of privacy, while its decision in *Riley* only three years later rested on the first prong of the test, which seeks to determine whether the individual exhibited a subjective expectation of privacy.

While curtilage can be observed from publicly navigable airspace without necessarily violating the Fourth Amendment,[78] the Court held in *Florida v. Jardines* that the Fourth Amendment protected curtilage against physical intrusion by law enforcement agents.[79] In 2006, law enforcement agents approached the home of defendant Jardines, who was suspected of growing marijuana inside his home, with a dog trained to detect the scent of certain drugs.[80] The dog exhibited behavioral changes that indicated the presence of drugs.[81] Based on this information, the police obtained a warrant to search Jardines' house.[82] Justice Scalia's 2013 majority opinion held that the investigation was accomplished "through an unlicensed physical intrusion."[83] Justice Scalia went on to clarify that although the agents were permitted to approach Jardiness door and knock, they did not have a license to use a trained drug-sniffing dog to explore the area.[84] The Court invoked *Jones* and reiterated that *Katz*'s reasonable expectation of privacy test supplemented the traditional property-

76. *Id.* at 213–14. The parties agreed that the surveilled area was within the curtilage of the defendant's home but disagreed as to whether the officers' warrantless observation of the curtilage violated the Fourth Amendment. *Id.* at 213.

77. *Riley*, 488 U.S. at 450–52. The Court's holding was made in spite of the fact that the helicopter was flying at an altitude below 500 feet, the lower limit of navigable airspace for other aircraft. The Court noted that helicopters are not bound by that navigable airspace limit. *Id.* at 451.

78. *See Ciraolo*, 476 U.S. at 212; *Riley*, 488 U.S. at 450–52.

79. 133 S. Ct. 1409, 1413–15 (2013).

80. *Id.* at 1413.

81. *Id.*

82. *Id.*

83. *Id.* at 1415, 1417–18.

84. *Id.* at 1416.

based understanding of the Fourth Amendment, and determined that it need not decide whether the agents' investigation violated Jardines' expectation of privacy under *Katz*.[85]

Justice Kagan concurred, writing separately to note that the case could have been decided under the reasonable expectation of privacy test.[86] According to Justice Kagan, *Kyllo* should have resolved the case at hand since the law enforcement agents explored Jardines's home with a device not in general use, namely a drug-sniffing dog.[87] The alignment of property concepts and privacy interests seemed natural, Justice Kagan wrote, because property law reflects social expectations of "what places should be free from governmental incursions."[88]

Justice Alito dissented, criticizing the majority's reliance on property law.[89] He concluded that the agents acted within the scope of their license to approach the defendant's front door[90] and that the presence of the dog did not render the agents' presence a trespass.[91] Even under the reasonable expectation of privacy test, Justice Alito concluded that the search was constitutional as

> [a] reasonable person understands that odors emanating from a house may be detected from locations that are open to the public, and a reasonable person will not count on the strength of those odors remaining within the range that, while detectible by a dog, cannot be smelled by a human.[92]

As previously discussed, drones permit law enforcement to conduct surveillance without committing a trespass,[93] so drone surveillance is unlikely to implicate the majority's reliance on the Fourth Amendment's protection of property in *Jardines*. Yet five justices agreed that the reasonable expectation of privacy analysis could apply,[94] thereby leaving room for future drone cases to

85. *Id.* at 1417.
86. *Id.* at 1418 (Kagan, J., concurring).
87. *Id.* at 1419.
88. *Id.*
89. *Id.* at 1420–21 (Alito, J. dissenting).
90. *Id.* at 1423.
91. *Id.* at 1424.
92. *Id.* at 1421.
93. *See supra* Part II.A.
94. *Jardines*, 133 S. Ct. at 1418–20 (Kagan, J., concurring); *id.* at 1420–26 (Alito, J., Roberts, C.J., Kennedy, J., Breyer J., dissenting).

draw on *Jardines* in instances where a drone collects information about the inside of an individual's home.

Drones will likely be used in curtilage overflights, raising the same issues seen in *Ciraolo* and *Riley*. Based on existing jurisprudence, warrantless drone surveillance of curtilage may not violate the Fourth Amendment if the drone operates within airspace legally navigable by drones. This will depend on the Court finding that individuals cannot expect their curtilage to be protected from public or official observation by drones flying at legal altitudes,[95] or that society would not be prepared to recognize such a subjective expectation of privacy against drone overflights in public airspace.[96] It is possible that society's expectation of privacy will vary depending on whether the overflight is conducted by private individuals or law enforcement, but existing precedent establishing such a distinction is limited to physical intrusions.[97]

3. *Open Fields*

In the 1984 case *Oliver v. United States*, the Court held that law enforcement agents' trespass in an "open field" did not violate the Fourth Amendment.[98] The Court first noted that open fields, as distinguished from "the house," do not receive the "special protection accorded by the Fourth Amendment to the people in their 'persons, houses, papers, and effects.'"[99] The Court next considered "whether a person has a constitutionally protected reasona-

95. *See* Florida v. Riley, 488 U.S. 445, 450–52 (1989).

96. *See* California v. Ciraolo, 476 U.S. 207, 213–14 (1986).

97. In *Bond v. United States*, 529 U.S. 334 (2000), the defendant was a passenger on a bus traveling between California and Arkansas. A Border Patrol agent boarded the bus at a checkpoint in Texas to check the immigration status of the bus passengers. *Id.* The agent squeezed passengers' luggage in the overhead storage bins as he walked through the aisle and detected a "brick-like" object in Bond's bag. *Id.* Bond admitted that the bag was his and consented to a search of the bag. *Id.* The agent discovered a "brick" of methamphetamine inside Bond's bag. *Id.* The Court ultimately determined that passengers expect people to handle bags placed in the overhead bin, but that the border patrol agent's handling of the defendant's bag violated the Fourth Amendment in light of its "exploratory" nature. *Id.* By analogy, the Court may find that individuals expect privately operated drones to fly over their property and capture images of them but that "exploratory" flyovers can still violate an individual's reasonable expectation of privacy.

98. 466 U.S. 170, 178–79 (1984). In *Oliver*, two narcotics agents bypassed a "No Trespassing" sign on the defendant's property and found a field of marijuana plants over a mile from the defendant's home. *Id.* at 173.

99. *Id.* at 176 (quoting U.S. CONST. amend. IV); *see also* Hester v. United States, 265 U.S. 57, 59 (1924).

ble expectation of privacy" in open fields, distinguishing open fields from the "home" and "curtilage" in determining whether the agents violated the Fourth Amendment.[100] In contrast to curtilage, "open fields do not provide the setting for those intimate activities that the [Fourth] Amendment is intended to shelter from government interference or surveillance."[101] Thus, the Court determined that there is no societal interest in providing Fourth Amendment protection to open fields.[102] Since the searched area in *Oliver* was an "open field," the defendant could not have a societally-recognized reasonable expectation of privacy against a warrantless search.[103]

Two years later, in *Dow Chemical Co. v. United States*,[104] the Court held that aerial photography of open fields from publicly navigable airspace does not violate the Fourth Amendment.[105] The Court determined that the open areas of Dow's industrial facility were more similar to an "open field" than to the curtilage of a home.[106] While Dow had a reasonable expectation of privacy against ground-level surveillance in light of "elaborate security . . . barring ground-level public views" of the facility,[107] it did not have a reasonable expectation of privacy against aerial photographs taken using commonly available technology from public airspace.[108] However, the Court left unresolved whether warrantless surveillance of private property using sophisticated technology not generally available to the public is constitutional.[109]

Although the parameters of publicly navigable airspace for drones have yet to be established, existing Fourth Amendment jurisprudence indicates that warrantless drone surveillance of open fields will pass constitutional muster if conducted from navigable airspace.[110] As drone technology makes surveillance signif-

100. *Oliver*, 466 U.S. at 177–78 (internal quotation marks omitted).
101. *Id.* at 177, 179.
102. *Id.* at 179.
103. *Id.* at 181.
104. 476 U.S. 227 (1986). *Dow Chemical* involved a Fourth Amendment challenge to the Environmental Protection Agency's (EPA) aerial photography, at altitudes within navigable airspace, of Dow Chemical Co.'s 2000-acre plant. *Id.* at 230.
105. *Id.* at 239.
106. *Id.* at 236.
107. *See id.* at 229, 236–37.
108. *Id.* at 231, 236.
109. *Id.* at 231, 238.
110. *See id.* at 239.

icantly cheaper,[111] the Court will eventually have to address the privacy implications of drone use over open fields.

III. STATE DRONE STATUTES

In 2013, 96 domestic drone bills were considered by 43 states to regulate the use of drones in state airspace.[112] Eight states enacted drone laws.[113] In an effort to understand how state drone laws may impact the Court's "reasonable expectations of privacy" jurisprudence, this Note provides a survey of drone laws enacted in 2013, who and what they regulate, their practical effects, and the remedies available upon violation.

A. DRONE: A DEFINITION

The definitions provided for "drone" vary in specificity and detail across state statutes. Illinois,[114] Oregon,[115] and Montana[116] provide sparse definitions that leave significant room for interpretation, while Florida,[117] Idaho,[118] and Tennessee[119] include

111. *Talk of the Nation: Drones Come Home, Privacy Concerns Fly High*, NAT'L PUB. RADIO (Mar. 5, 2013), http://www.npr.org/2013/03/05/173532173/drones-come-home-privacy-concerns-fly-high ("I would say most of [the Mesa County Sheriff's Office's] use for unmanned aircraft is basically a low-cost alternative to manned aviation. . . . I mean, helicopters are millions of dollars, and they cost thousands of dollars an hour to operate. . . . [W]e operate right now [with drones] for about $25 an hour.").

112. Allie Bohm, *The Year of the Drone: An Analysis of State Legislation Passed This Year*, ACLU (Nov. 7, 2013, 8:50 PM), https://www.aclu.org/blog/technology-and-liberty/year-drone-roundup-legislation-passed-year. In 2014, drone legislation was introduced in 36 states and enacted in 4 states. Bohm, *supra* note 23.

113. FLA. STAT. ANN. tit. 47 § 934.50 (West 2013); IDAHO CODE ANN. § 21-213 (West 2013); 725 ILL. COMP. STAT. ANN. 167/1-167/35 (West 2013); MONT. CODE ANN. § 46-5-109 (West 2013); OR. REV. STAT. ANN. §§ 837.300–837.390 (West 2013); TENN. CODE ANN. § 39-13-609 (West 2013); TEX. GOV'T CODE ANN. §§ 423.001–423.008 (West 2013); and H.B. 2012, 2013 Leg., Reg. Sess. (Va. 2013). Bohm, *supra* note 112.

114. "'Drone' means any aerial vehicle that does not carry a human operator." 725 ILL. COMP. STAT. ANN. 167/5 (West 2013).

115. "'Drone' means an unmanned flying machine." OR. REV. STAT. ANN. § 837.300(1) (West 2013).

116. "'Unmanned aerial vehicle' means an aircraft that is operated without direct human intervention from on or within the aircraft." MONT. CODE ANN. § 46-5-109(3) (West 2013).

117. Florida defines "drone" as "a powered, aerial vehicle that: 1. Does not carry a human operator; 2. Uses aerodynamic forces to provide vehicle lift; 3. Can fly autonomously or be piloted remotely; 4. Can be expendable or recoverable; and 5. Can carry a lethal or nonlethal payload." FLA. STAT. ANN. tit. 47 § 934.50(2)(a) (West 2013).

118. Idaho defines "unmanned aircraft system" as "an unmanned aircraft vehicle, drone, remotely piloted vehicle, remotely piloted aircraft or remotely operated aircraft that is a powered aerial vehicle that does not carry a human operator, can fly autonomously or

more detailed definitions with several identifying elements. Virginia's moratorium[120] does not provide a definition of "drone" at all, instead instituting a blanket prohibition against government agencies' use of "unmanned aircraft systems."[121] Texas's statute similarly restricts use of "unmanned aircraft."[122]

Despite these differences, the state statutes that define "drone" describe it as an aerial vehicle that does not carry a human operator.[123] Other factors deemed significant include whether the craft can fly autonomously or remotely and is expendable or recoverable.[124]

B. THE STATUTES' TARGETS

State drone laws are primarily aimed at law enforcement's use of drones, but some statutes also regulate private party drone usage.

1. *Law Enforcement*

In passing drone laws, states sought to protect individual privacy by limiting the use of drones by law enforcement agencies.[125] Generally, a "law enforcement agency" is defined as a

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remotely and can be expendable or recoverable" and includes exclusions for model planes used for sport or recreation and unmanned aircrafts "used in mapping or resource management." IDAHO CODE ANN. § 21-213(1) (West).

119. Tennessee defines "drone" as "a powered, aerial vehicle that: (A) Does not carry a human operator and is operated without the possibility of direct human intervention from within or on the aircraft; (B) Uses aerodynamic forces to provide vehicle lift; (C) Can fly autonomously or be piloted remotely; and (D) Can be expendable or recoverable." TENN. CODE ANN. § 39-13-609(b)(1) (West 2013).

120. The moratorium places a two-year ban on the use of drones, set to expire on July 1, 2015. H.B. 1616, 2013 Gen. Assemb., Reg. Sess. (Va. 2013).

121. *Id.*

122. TEX. GOV'T CODE ANN. § 423.003(a) (West 2013).

123. *See, e.g.*, FLA. STAT. ANN. tit. 47 § 934.50(2)(a)(1) (West 2013); IDAHO CODE ANN. § 21-213(1)(a) (West 2013); 725 ILL. COMP. STAT. ANN. 167/5 (West 2013); MONT. CODE ANN. § 46-5-109(3) (West 2013); OR. REV. STAT. ANN. § 837.300(1) (West 2013); TENN. CODE ANN. § 39-13-609(b)(1)(A) (West 2013).

124. FLA. STAT. ANN. tit. 47 § 934.50(2)(a)(3)–(4) (West 2013); TENN. CODE ANN. §§ 39-13-609(b)(1)(C)–(D) (West 2013).

125. THE FLA. S. APPROPRIATIONS COMM., BILL ANALYSIS AND FISCAL IMPACT STATEMENT 5 (Mar. 28, 2013), *available at* http://www.flsenate.gov/Session/Bill/2013/0092/Analyses/2013s0092.ap.PDF ("The bill prohibits law enforcement agencies from using drones to gather evidence or other information, except in certain narrow circumstances."); DEP'T OF PLANNING AND BUDGET, 2013 FISCAL IMPACT STATEMENT 1 (Mar. 4, 2013), *available at* http://lis.virginia.gov/cgi-bin/legp604.exe?131+oth+HB2012FER122+PDF ("Places a moratorium on the use of unmanned aircraft systems by state and local law enforcement

government agency responsible for the prevention and detection of crime.[126]

The titles of state drone legislation reflect the goal of emancipating society from drones, including short titles such as the "Freedom from Drone Surveillance Act"[127] and the "Freedom from Unwarranted Surveillance Act."[128] Statistics show that Americans are concerned about drone surveillance. In a 2012 poll, only 30% of voters "favor[ed] the use of unmanned drones for domestic surveillance."[129] Another 2012 poll showed that 42% of Americans would be "very concerned" and 22% would be "somewhat concerned" about their privacy if law enforcement agencies started using unmanned drones with high-tech cameras.[130] During an Illinois State Senate session, Illinois State Senator Daniel Biss declared that Illinois' drone bill sought "to put in place a very common-sense set of regulations around [law enforcement agencies' use of unmanned aerial vehicles] so as to ensure that . . . privacy is not violated."[131] Biss drew on *Katz*'s Fourth Amend-

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and regulatory entities until July 1, 2015, except in emergency situations."); OR. LEG. ASSEMBLY, STAFF MEASURE SUMMARY, 77th Sess. 1 (June 25, 2013), *available at* https://olis.leg.state.or.us/liz/2013R1/Downloads/MeasureAnalysisDocument/22246 ("[The legislative measure p]rohibits law enforcement from using a drone to acquire information unless specifically authorized to do so by statute."); SEN. CHUCK WINDER STATEMENT OF PURPOSE / FISCAL NOTE ON IDAHO CODE ANN. § 21-213, RS22107, AT 1 (2013) ("This provides that no person, entity or state agency may use an unmanned aircraft system to conduct unwarranted surveillance or observation of an individual or a dwelling owned by an individual without reasonable, articulable suspicion of criminal conduct.").

126. Tennessee and Florida define "law enforcement agency" as "a lawfully established state or local public agency that is responsible for the prevention and detection of crime, local government code enforcement, and the enforcement of penal, traffic, regulatory, game, or controlled substance laws." TENN. CODE ANN. § 39-13-609(b)(2) (West 2013); FLA. STAT. ANN. tit. 47 § 934.50(2)(b) (West 2013). Oregon defines it as "an agency that employs police officers . . . or that prosecutes offenses." OR. REV. STAT. ANN. § 837.300(2) (West 2013). Illinois defines law enforcement agency as "any agency of this State or a political subdivision of this State which is vested by law with the duty to maintain public order and to enforce criminal laws." 725 ILL. COMP. STAT. ANN. 167/5 (West 2013).

127. 725 ILL. COMP. STAT. ANN. 167/1(1) (West 2013).

128. *See* FLA. STAT. ANN. tit. 47 § 934.50(1) (West 2013); TENN. CODE ANN. § 39-13-609(a) (West 2013).

129. *Voters Are Gung-Ho for Use of Drones but Not Over the United States*, RASMUSSEN REP. (Feb. 13, 2012), http://www.rasmussenreports.com/public_content/politics/current_events/afghanistan/voters_are_gung_ho_for_use_of_drones_but_not_over_the_united_states.

130. *U.S. Supports Some Domestic Drone Use but Public Registers Concern About Own Privacy*, MONMOUTH UNIV. POLL (June 12, 2012), *available at* http://www.monmouth.edu/assets/0/32212254770/32212254991/32212254992/32212254994/32212254995/30064771087/42e90ec6a27c40968b911ec51eca6000.pdf.

131. S. 98-36, Reg. Sess., at 29 (Ill. Apr. 28, 2013), *available at* http://www.ilga.gov/senate/transcripts/strans98/09800036.pdf.

ment privacy test, remarking that "the people of Illinois have a reasonable expectation for privacy."[132]

2. *Private Parties*

Of the bills currently in effect, three target the use of drones by private parties.[133] Idaho's statute excludes "model flying airplanes or rockets . . . that are used purely for sport or recreational purposes" from the definition of "unmanned aircraft system," thus carving out some private drone use (provided the craft meet all of the exception's other requirements).[134] Even so, the Idaho statute prohibits private parties from using drones "to photograph . . . an individual, without such individual's written consent, for the purposes of publishing or otherwise publicly disseminating such photograph."[135] These restrictions may raise First Amendment challenges,[136] however, as they are so broad as to potentially prohibit "a news station from using a drone to gather information for their traffic report absent written consent of everyone on the road" or "prevent an aerial photographer from using a drone to take pictures of the Idaho Capitol Building or the Idaho Potato Museum for publication in her upcoming book if there happened to be individuals caught in the frame."[137]

The Texas drone statute also restricts private use of drones by imposing a blanket ban on drone use and providing a lengthy list of exceptions to the prohibition.[138] The American Civil Liberties

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132. *Id.*

133. IDAHO CODE ANN. § 21-213 (West 2013); OR. REV. STAT. ANN. § 837.380 (West 2013); TEX. GOV'T CODE ANN. § 423.002(a) (West 2013).

134. IDAHO CODE ANN. § 21-213(1)(b)(i) (West 2013).

135. IDAHO CODE ANN. § 21-213(2)(b).

136. Bohm, *supra* note 112.

137. Allie Bohm, *The First State Laws on Drones*, ACLU (April 15, 2013, 3:13 PM), https://www.aclu.org/blog/technology-and-liberty-national-security/first-state-laws-drones.

138. Dan Solomon, *Texas's Drone Law is Pretty Much the Opposite of Every Other State's Drone Law*, TEXAS MONTHLY (Sept. 16, 2013), http://www.texasmonthly.com/daily-post/texass-drone-law-pretty-much-opposite-every-other-states-drone-law. The Texas statute allows use of an unmanned aircraft: (1) to capture information for the purpose of research and development by persons acting on behalf of institutions of higher education; (2) in airspace that the FAA has designated as a test site; (3) "as part of an operation, exercise, or mission of any branch of the United States military"; (4) for mapping purposes; (5) for maintenance or inspection of an electric or natural gas utility; (6) with the consent of the owner of the property captured in the image; (9) to survey a scene to "determine whether a state of emergency should be declared," preserve public safety and property, and conduct air quality monitoring; (10) at the scene of a spill of hazardous materials; (11) "for the purpose of fire suppression"; (12) to rescue a person "whose life or well-being is in imminent danger"; (13) for real estate marketing purposes; (14) within 25 miles of a

Union views Texas' statute as problematic because it provides "very few meaningful protections from drone surveillance by law enforcement."[139] The bill's sponsor, Texas State Representative Lance Gooden, stated that the bill was designed to protect the privacy of ordinary Texans.[140] The statute, for example, prevents business owners from using drones to spy on competitors.[141] Among the statutes currently in effect, Texas' is viewed as an outlier,[142] and "critics worry it gives police too much leeway while trampling on the constitutional rights of private citizens and media outlets."[143]

Finally, Oregon's statute also regulates private drone use. Oregon's drone statute provides that "a person who owns or lawfully occupies real property in this state may bring an action against any person or public body that operates a drone that is flown at a height of less than 400 feet over the property" if the drone operator has previously flown the drone over the property at an altitude below 400 feet and the property owner notified the drone operator that he did not want the drone flown over the property at an altitude below 400 feet.[144] Oregon's restriction on

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United States border; (15) "from a height no more than eight feet above ground level in a public place, if the image was captured without using any electronic, mechanical, or other means to amplify the image beyond normal human perception"; (16) to capture images of public property or a person on public property; (17) by owners and operates of oil, gas, water, or other pipelines for inspection, maintenance, and repair purposes; (18) "in connection with oil pipeline safety and rig protection"; and (19) "in connection with port authority surveillance and security." TEX. GOV'T CODE ANN. § 423.002(a)(1)–(19) (West 2013).

139. Bohm, *supra* note 112.

140. *See also Texas Law Gets Tough on Public, Private Drone Use*, ASSOCIATED PRESS (Sept. 14, 2013), *available at* http://www.foxnews.com/politics/2013/09/14/texas-law-gets-tough-on-public-private-drone-use/ ("Republican state Rep. Lance Gooden said he introduced the bill to address concerns that ordinary Texans could use drones to spy on private property, as well as in response to fears that animal rights groups or environmentalists could keep tabs on livestock ranches or oil pipelines. But he said exceptions were added after law enforcement agencies worried the drone bans would make it difficult to do their jobs.").

141. TexasPoliticsProject, *Texas State Representative Lance Gooden Discusses Regulating Drones*, YOUTUBE (Aug. 4, 2014), https://www.youtube.com/watch?v=ZfG6qnd7fSk#t=162. *See also Texas Law Gets Tough on Public, Private Drone Use*, *supra* note 140.

142. Solomon, *supra* note 138; *Texas Law Gets Tough on Public, Private Drone Use*, *supra* note 138.

143. *Texas Law Gets Tough on Public, Private Drone Use*, *supra* note 140.

144. OR. REV. STAT. ANN. § 837.380 (West 2013). This restriction does not apply if "[t]he drone is in the process of taking off or landing" and "[t]he drone is lawfully in the flight path for landing at an airport, airfield or runway."

the private use of drones is thus much more narrowly tailored than Idaho's and Texas'.

C. THE REGULATIONS

The state laws impose a number of requirements on drone use and mandate that law enforcement agencies obtain a warrant before using a drone. Most of the state statutes also provide for exceptions to the warrant requirement. Some of the statutes impose information retention, information disclosure, registration, and reporting requirements. Only two of the statutes mention the weaponization of drones.

1. *Warrant Requirement*

Each of the drone statutes enacted in 2013 has a warrant provision, which requires that law enforcement obtain a warrant based on probable cause before using a drone to gather evidence in a criminal investigation.[145] Montana and Oregon also prohibit the use of improperly gathered information in warrant applications.[146] The warrant requirement provisions are "a good indicator of how deeply the public and legislators value their privacy and how viscerally they view drones as a threat to that privacy."[147]

2. *Exceptions to the Warrant Requirement*

Most states' drone statutes include a number of exceptions to the warrant requirement. Some of the more common exceptions include use of a drone "to counter a high risk of a terrorist attack,"[148] in a state of emergency,[149] where swift action is needed "to prevent imminent harm to life, or to forestall the imminent

145. FLA. STAT. ANN. tit. 47 § 934.50(4)(b) (West 2013); IDAHO CODE ANN. § 21-213(2)(a) (West 2013); 725 ILL. COMP. STAT. ANN. 167/15(2) (West 2013); MONT. CODE ANN. § 46-5-109(1)(a) (West 2013); OR. REV. STAT. ANN. § 837.320(1)(a) (West 2013); TENN. CODE ANN. § 39-13-609(d)(2) (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(7) (West 2013). *See also* Bohm, *supra* note 112.

146. MONT. CODE ANN. § 46-5-109(2) (West 2013); OR. REV. STAT. ANN. § 837.310(2)(b) (West 2013).

147. Bohm, *supra* note 112.

148. FLA. STAT. ANN. tit. 47 § 934.50(4)(a) (West 2013); 725 ILL. COMP. STAT. ANN. 167/15(1) (West 2013); TENN. CODE ANN. § 39-13-609(d)(1) (West 2013).

149. OR. REV. STAT. ANN. § 837.335(2)–(3) (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(9)(B) (West 2013).

escape of a suspect or the destruction of evidence,"[150] under exigent circumstances,[151] with the consent of the individual who is being surveilled or whose property is being surveilled,[152] to locate a missing person,[153] for search and rescue missions,[154] for crime scene and traffic scene photography,[155] for crime scene reconstruction,[156] and for academic purposes.[157] Idaho also allows owners of facilities located on others' land to use unmanned aircraft to inspect the facilities.[158]

Texas' blanket ban against drone use only permits the use of drones in airspace designated by the FAA as a test site,[159] for mapping purposes,[160] for fire suppression purposes,[161] for real estate marketing,[162] and within 25 miles of the United States border,[163] amongst a few other specifically enumerated purposes.[164]

Montana does not detail exceptions in its drone law, instead stating that evidence gathered through a warrantless search using a drone is admissible in a judicial proceeding if the evidence was obtained "in accordance with judicially recognized exceptions to the warrant requirement."[165]

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150. 725 ILL. COMP. STAT. ANN. 167/15(3) (West 2013); FLA. STAT. ANN. tit. 47 § 934.50(4)(c) (West 2013); OR. REV. STAT. ANN. § 837.335(2)(a) (West 2013); TENN. CODE ANN. § 39-13-609(d)(3)–(4) (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(12) (West 2013).

151. OR. REV. STAT. ANN. § 837.320(1)(b) (West 2013).

152. OR. REV. STAT. ANN. § 837.330 (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(6) (West 2013).

153. 725 ILL. COMP. STAT. ANN. 167/15(4) (West 2013); TENN. CODE ANN. § 39-13-609(d)(5) (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(8)(D) (West 2013).

154. OR. REV. STAT. ANN. § 837.335(1) (West 2013).

155. 725 ILL. COMP. STAT. ANN. 167/15(5) (West 2013); TEX. GOV'T CODE ANN. § 423.002(a)(8)(B)–(C) (West 2013).

156. OR. REV. STAT. ANN. § 837.340(1) (West 2013).

157. TEX. GOV'T CODE ANN. § 423.002(a)(1) (West 2013); H.B. 1616, 2013 Leg., Reg. Sess. (Va. 2013).

158. IDAHO CODE ANN. § 21-213(4) (West 2013).

159. TEX. GOV'T CODE ANN. § 423.002(a)(2).

160. TEX. GOV'T CODE ANN. § 423.002(a)(4).

161. TEX. GOV'T CODE ANN. § 423.002(a)(11).

162. TEX. GOV'T CODE ANN. § 423.002(a)(13).

163. TEX. GOV'T CODE ANN. § 423.002(a)(14)

164. TEX. GOV'T CODE ANN. § 423.002(a)(1)–(19).

165. MONT. CODE ANN. § 46-5-109(1)(b) (West 2013).

Evidence gathered in violation of the warrant requirement and outside one of the enumerated exceptions is typically inadmissible in judicial and administrative proceedings.[166]

3. *Information Retention*

Some of the state statutes include an information retention provision, requiring law enforcement agencies to destroy information gathered by the drone after anywhere from twenty-four hours to thirty days.[167] Texas's statute provides that destruction of data is a defense against prosecution for intentional use of a drone to capture an image of an individual or privately owned property.[168]

4. *Information Disclosure*

Some state drone laws restrict information disclosure. Illinois allows a law enforcement agency that has collected data using a drone to disclose the acquired information to another government agency if "there is reasonable suspicion that the information contains evidence of criminal activity" or "the information is relevant to an ongoing investigation or pending criminal trial."[169] Texas and Tennessee prohibit the disclosure of information captured incidentally during the lawful use of a drone.[170]

5. *Registration and Reporting*

In an effort to ensure safety, understand how drones are being used in practice, and promote transparency, some states statutes impose registration and reporting requirements on public bodies that use drones. Oregon prohibits drone operation by public bodies without prior registration with the Department of Aviation

166. 725 ILL. COMP. STAT. ANN. 167/30 (West 2013); TEX. GOV'T CODE ANN. § 423.005(a)(1) (West 2013); FLA. STAT. ANN. tit. 47 § 934.50(6) (West 2013); TENN. CODE ANN. § 39-13-609(g)(2) (West 2013); OR. REV. STAT. ANN. § 837.310(2)(a) (West 2013).

167. 725 ILL. COMP. STAT. ANN. 167/20 (West 2013) (requiring destruction of information that does not evidence criminal activity and is not relevant to an ongoing investigation or pending trial within 30 days); TENN. CODE ANN. § 39-13-609(f) (requiring data "collected on an individual, home, or areas other than the target that justified deployment" to be deleted within 24 hours).

168. TEX. GOV'T CODE ANN. § 423.003 (West 2013).

169. 725 ILL. COMP. STAT. ANN. 167/25 (West 2013).

170. TENN. CODE ANN. § 39-13-609(f); TEX. GOV'T CODE ANN. § 423.005.

and requires public bodies with registered drones to provide an annual report summarizing the frequency and purposes of drone operation.[171] Illinois requires law enforcement agencies to annually report the number of drones it owns so that it can publish the information on a publicly available website.[172] Texas' statute requires government agencies located in counties or municipalities with populations over 150,000 to report all drone use and the type of information obtained via drones every two years.[173]

6. *Weaponization*

Only two of the statutes explicitly ban weaponized drones. Virginia's moratorium explicitly states that "[i]n no case may a weaponized unmanned aircraft system be deployed or its use facilitated by a state or local agency in Virginia."[174] Oregon's statute prohibits public bodies from using drones that are "capable of firing a bullet or other projectile, directing a laser or otherwise being used as a weapon."[175]

D. REMEDIES

In addition to rendering evidence obtained in violation of the statutes inadmissible in judicial proceedings, four state drone statutes provide for civil remedies[176] and one state drone statute provides for criminal penalties[177] for violators.

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171. OR. REV. STAT. ANN. § 837.360 (West 2013).
172. 725 ILL. COMP. STAT. ANN. 167/35 (West 2014).
173. TEX. GOV'T CODE ANN. § 423.008 (West 2013).
174. H.B. 2012, 2013 VA. ACTS OF ASSEMB. (Va. 2013).
175. OR. REV. STAT. ANN. § 837.365.
176. FLA. STAT. ANN. tit. 47 § 934.50(5) (West 2013) ("An aggrieved party may initiate a civil action against a law enforcement agency to obtain all appropriate relief in order to prevent or remedy a violation of this act."); Aeronautics, IDAHO CODE ANN. § 21-213(3) (West 2013) (creating a civil cause of action against violators and allowing for the recovery of liquidated damages in the amount of one thousand dollars and reasonable litigation costs); OR. REV. STAT. ANN. § 837.380 (allowing property owners to bring an action against anyone who flies a drone over their property at an altitude below 400 feet, who has previously flown a drone over their property below 400 feet and had been asked not to do it again, if they are not engaged in a lawful takeoff or landing); TENN. CODE ANN. § 39-13-609(e) (West 2013) ("An aggrieved party may initiate a civil action against a law enforcement agency to obtain all appropriate relief, as determined by the court, in order to prevent or remedy a violation of this section."); TEX. GOV'T CODE ANN. § 423.006 (West 2013) (creating a civil cause of action against violators for owners of property illegally surveilled by drones).
177. *See* TEX. GOV'T CODE ANN. §§ 423.003–423.004 (West 2013) ("A person commits an offense if the person uses an unmanned aircraft to capture an image of an individual or

IV. INTERACTION OF STATE DRONE STATUTES AND FOURTH AMENDMENT SURVEILLANCE JURISPRUDENCE

The reasonable expectation of privacy test, introduced in 1967 by Justice Harlan in *Katz v. United States*, is used to determine whether or not a government action is a "search" within the meaning of the Fourth Amendment.[178] The test has two components: (1) "that a person have exhibited an actual (subjective) expectation of privacy" and (2) "that the expectation be one that society is prepared to recognize as 'reasonable.'"[179]

The Court's understanding of society's stance on privacy expectations is amorphous and ambiguous.[180] Academics have critiqued existing jurisprudence as "opaque,"[181] "chao[tic],"[182] "unmanageable,"[183] "unstable,"[184] "inconsistent,"[185] and "bizarre."[186] Professor Orin S. Kerr of George Washington University Law School explains that no single test exists for what makes an expectation of privacy "reasonable."[187] Instead, Kerr posits that four approaches to the reasonable expectation of privacy test predominate: (1) the probabilistic model, which "considers the likelihood that the subject's information would become known to oth-

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privately owned real property in this state with the intent to conduct surveillance on the individual or property captured in the image.").

178. Kerr, *supra* note 25, at 507–08 ("If government conduct violates a reasonable expectation of privacy, then that conduct is a 'search' and is legal only if justified by a search warrant or a specific exception to the warrant requirement such as consent or exigent circumstances. On the other hand, if government action does not implicate a reasonable expectation of privacy, then the Fourth Amendment does not regulate it and investigators can take that step at any time without constitutional limitation.").

179. Katz v. United States, 389 U.S. 347, 361 (1967); *see supra* Part II.

180. Kerr, *supra* note 25, at 504 ("[N]o one seems to know what makes an expectation of privacy constitutionally 'reasonable.' The Supreme Court has repeatedly refused to offer a single test."). The Court's understanding of a person's subjective expectation of privacy, on the other hand, is made on a case-by-case basis according to the person's manifested efforts to maintain their privacy. *State v. Case*, 2014 Kan. App. Unpub. LEXIS 56, at *13–14 (Kan. Ct. App. 2014) (A defendant's subjective expectation of privacy is "inherently personal" and "a question of fact to be reviewed based on the evidence presented.").

181. Kerr, *supra* note 25, at 505.

182. *Id.*

183. Richard G. Wilkins, *Defining the "Reasonable Expectation of Privacy": An Emerging Tripartite Analysis*, 40 VAND. L. REV. 1077, 1107 (1987).

184. Sherry F. Colb, *What Is a Search? Two Conceptual Flaws in Fourth Amendment Doctrine and Some Hints of a Remedy*, 55 STAN. L. REV. 119, 122 (2002).

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

186. *Id.*

187. Kerr, *supra* note 25, at 505–06.

ers or the police"[188]; (2) the private facts model, which "asks whether the government's conduct reveals particularly private and personal information deserving of protection"[189]; (3) the positive law model, which "considers whether the government conduct interferes with property rights or other legal standards outside the Fourth Amendment"[190]; and (4) the policy model, which "focus[es] directly on whether the police practice should be regulated by the Fourth Amendment."[191] According to Kerr, the Court often uses multiple models in each opinion.[192] Thus, the models are fluid and may be used as a framework in which to categorize and interpret the Supreme Court's opinions on Fourth Amendment questions.

This Part discusses how state drone statutes may interact with the Court's approach to the second component of the reasonable expectation of privacy test, which asks whether an individual's subjective expectation of privacy is one that society would recognize as reasonable, as delineated within Kerr's models.

A. THE PROBABILISTIC MODEL

Under the probabilistic model, "a reasonable expectation of privacy depends on the chance that a sensible person would predict that he would maintain his privacy" based on prevailing social norms.[193] The Fourth Amendment thus serves as a protection against unexpected invasions of a person's privacy.[194]

1. *The Probabilistic Model in Existing Jurisprudence*

Bond v. United States[195] illustrates the probabilistic model. In *Bond*, the Court found that a Border Patrol agent violated the Fourth Amendment by engaging in an invasive, exploratory physical examination of the defendant's bag.[196] Chief Justice Rehnquist, in his opinion for the majority, noted that although bus employees and other travelers might handle a passenger's

188. *Id.* at 506.
189. *Id.*
190. *Id.*
191. *Id.*
192. *Id.* at 508.
193. *Id.*
194. *Id.* at 509.
195. 529 U.S. 334 (2000).
196. *Id.*; *see supra* Part II.B.2.

bags, social norms are such that a sensible person in the defendant's circumstances would not expect his belongings to be handled in an exploratory manner.[197] Thus, in light of prevailing norms, the Court determined that Bond exhibited a subjective expectation of privacy that society was prepared to recognize as reasonable.[198]

The Court also applied a probabilistic approach in *Minnesota v. Olson*.[199] In *Olson*, the Court looked to social custom and society's recognition of privacy expectations in finding that the police violated the defendant's reasonable expectation of privacy by entering his host's residence without permission.[200] The defendant, as an overnight guest, had a recognizable reasonable expectation of privacy in his host's home given "everyday expectations of privacy that we all share."[201]

Ciraolo provides another example in which the Court looked to societal norms to determine whether an expectation of privacy was one that society would find reasonable. The majority determined that the defendant had no reasonable expectation of privacy because anyone could fly over his property at the same altitude flown at by the police[202] such that sensible people would not expect to maintain their privacy from overflights in legally navigable airspace. In his dissent, Justice Powell instead found that "the actual risk to privacy from commercial or pleasure aircraft is virtually nonexistent."[203] Despite disagreement as to the conclusion to be reached, both the majority and the dissent looked to societal norms and the likelihood of a public overflight to determine whether the police surveillance at issue violated the defendant's reasonable expectation of privacy.[204]

Most recently, Justice Kagan and Justice Alito considered social norms when interpreting whether an expectation of privacy

197. *Bond*, 529 U.S. at 338–39. The Court distinguished *Ciraolo* and *Riley*, *supra*, because "they involved only visual, as opposed to tactile, observation" and were far less intrusive than the physically invasive inspection like the one at issue in *Bond*. *Id.* at 337.

198. *Id.* at 338–39. Justice Breyer dissented, finding that Bond knowingly exposed his bag to the public, where it would be touched and handled by strangers. Thus, Justice Breyer felt that the agent's handling of the bag was not in violation of Bond's reasonable expectation of privacy. *Id.* at 339–41.

199. Minnesota v. Olson, 495 U.S. 91 (1990); *see supra* Part II.B.1.

200. *Id.* at 98.

201. *Id.*

202. California v. Ciraolo, 476 U.S. 207, 213–14 (1986); *see supra* Part II.B.2.

203. *Ciraolo*, 476 U.S. at 223 (Powell, J., dissenting).

204. Kerr, *supra* note 25, at 510.

was reasonable in *Jardines*.[205] Justice Kagan felt that *Kyllo* controlled, and thus found that the police officers violated the defendant's reasonable expectation of privacy[206] because the drug-sniffing dog was a "sense-enhancing" device not in public use that was utilized to obtain information, not otherwise obtainable without a physical intrusion, about the interior of Jardines' home.[207] Justice Alito, meanwhile, concluded that reasonable people would expect that odors emanating from their residence may be detectible by dogs in areas that humans cannot smell them in.[208] Although the majority in *Jardines* did not rely on the reasonable expectation of privacy test, the Court still looked to social customs when ruling that law enforcement violated the Fourth Amendment.[209]

Despite these instances in which the Court has looked to prevailing social norms to determine whether an expectation of privacy is reasonable, the Court has also seemingly rejected the probabilistic model on several occasions. In *United States v. Ross*, the Court held that "the ease of opening [a] bag was completely irrelevant to whether it supported a reasonable expectation of privacy"[210] as the Fourth Amendment "forecloses . . . a distinction" between different types of containers.[211] Thus, a locked, hard-sided suitcase and a clear plastic bag would be subject to permissible searches under otherwise identical circumstances, a conclusion contrary to social expectations.[212] The chance that a sensible person would expect to maintain his privacy based on social custom was thus deemed irrelevant. More recently, in *Illinois v. Caballes*, the Court held that "the expectation 'that certain facts will not come to the attention of the authorities' is not the same as an interest in 'privacy that society is prepared to consider reasonable.'"[213] The Court seemed to say that the belief that

205. *See supra* Part II.B.2; Florida v. Jardines, 133 S. Ct. 1409, 1418–26 (2013).

206. *Jardines*, 133 S. Ct. at 1419 (Kagan, J., concurring).

207. Kyllo v. United States, 533 U.S. 27, 34 (2001) (quoting Silverman v. United States, 365 U.S. 505, 512 (1961)).

208. *Jardines*, 133 S. Ct. at 1421 (Alito, J., dissenting).

209. The majority found that, although the police had an implied license to "approach the home by the front path, knock promptly, wait briefly to be received, and then (absent invitation to linger longer) leave," they did not have license to introduce a trained police dog to the area. *Id.* at 1415–16.

210. Kerr, *supra* note 25, at 512.

211. United States v. Ross, 456 U.S. 798, 822 (1982).

212. *See id.*

213. Illinois v. Caballes, 543 U.S. 405, 408–09 (2005) (quoting United States v. Jacobsen, 466 U.S. 109, 122 (1984)). "The concept of an interest in privacy that society is pre-

something will remain undiscovered by the police, based on social norms and expectations, has little bearing on whether that expectation is one society would finds reasonable.

2. *The Probabilistic Model and Drones*

If the Court were to approach the second prong of the *Katz* test in drone cases from a probabilistic perspective, it would ask whether a sensible person in the party's circumstances would predict that he would maintain his privacy from drones given social norms.[214] As drones are a new and growing phenomenon, social expectations and customs surrounding their use are still developing. State drone laws can thus play a large role in the establishment of social norms.

Current drone laws generally restrict only law enforcement's use of drones, leaving the private use of drones largely unrestricted.[215] The lack of regulation of private drone use may inform the Court's understanding of Fourth Amendment protections. As recreational and commercial drone use increases in coming years, the Court may find that sensible people would not predict that they could maintain their privacy against drones in certain circumstances. This will depend on the social norms that develop surrounding unresolved drone operation issues, including the altitude at which drones can fly over private property without committing a trespass or being a nuisance, the length of time drones can linger over an individual's yard without creating a cause of action, and the types of technology private drone operators utilize on a regular basis. The Court may consider social norms and rule that law enforcement does not violate the Fourth Amendment when it uses a drone in a way that private drone users tend to, even if the use was in violation of a state law. Nevertheless, state drone statutes, although they may vary between states, can provide the first step to understanding how society will perceive drones and the norms that will emerge surrounding their operation.

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pared to recognize as reasonable is, by its very nature, critically different from the mere expectation, however well justified, that certain facts will not come to the attention of the authorities." *Jacobsen*, 466 U.S. at 122.

214. *See* Kerr, *supra* note 25, at 508.

215. Only Idaho, Texas, and Oregon touch on private party drone use. *See supra* Part III.B.2.

FAA regulations may work in conjunction with state drone statutes in influencing the Court's understanding of reasonable expectations of privacy. As the FAA develops drone regulations, drone use may be analogized to the aerial surveillance seen in *Ciraolo*, *Dow Chemical*, and *Riley*, such that the government would not violate an individual's reasonable expectations of privacy when utilizing a drone to conduct surveillance from publicly navigable airspace because social norms would be such that a sensible person would not expect to maintain his privacy in such circumstances.[216]

Even if private drone use becomes sufficiently common under the existing statutory and regulatory regime to the extent that people expect privately operated drones to fly over their property and incidentally or intentionally gather information, the Court may analogize to *Bond* and find any relatively "exploratory," warrantless use of a drone by law enforcement to be a search under the Fourth Amendment.[217] In *Bond*, the Court recognized that bus passengers expect others to handle or move their bags if they are placed in the overhead bin, but held that a border patrol agent's search of a bag placed in the overhead bin was a violation of the Fourth Amendment given its "exploratory," and thereby unexpected, nature.[218] Analogizing to the drone context, as drone use by government agencies and private parties proliferates, the Court may determine that drone use is such that individuals should expect drones to fly over their property or capture certain images of them. While typical flyovers and surveillance would not constitute an unconstitutional search under *Bond*, "exploratory" flyovers or surveillance, such as taking sophisticated photographs or tracking using facial recognition or license plate recognition technology, would violate an individual's Fourth Amendment rights.

It is also possible that the states that have yet to enact drone laws will enact regulations that restrict private drone use, such that society expects a degree of privacy against drones when on private property, whether within their residences or on property classified as "curtilage" or an "open field." Texas, for example, prohibits the use of drones over private property without the

216. *See* California v. Ciraolo, 476 U.S. 207, 213–14 (1986).
217. *See* Bond v. United States, 529 U.S. 334, 338–39 (2000).
218. *Id.*

permission of the property owner[219] and Oregon prohibits the operation of drones over private property in certain circumstances.[220] If the prohibition of drone use over private property becomes a common feature of state statutes,[221] the Court might translate the statutes as a reflection of society's recognition of privacy expectations and find a violation of the Fourth Amendment when a drone is used over an individual's private property.[222]

Finally, it is possible that the Court would decline to consider social norms altogether, whether influenced by state statutes or otherwise, in determining whether a Fourth Amendment violation has occurred.[223]

In light of the fact that drones are a relatively new technology, it is likely that state drone laws will play a role in the development of the social norms and expectations. As courts address drone issues of first impression, they may be similarly influenced by the social norms that state drone laws and the policies behind them have fostered.

B. THE PRIVATE FACTS MODEL

The private facts model looks to the information collected by the government and asks whether it is "private and worthy of constitutional protection."[224] The critical question is what information was collected rather than how the information was collected.[225] The action constitutes a search where intimate facts are revealed by the government action.

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219. TEX. GOV'T CODE ANN. §§ 423.001–423.008 (West 2013).

220. The statute provides that "a person who owns or lawfully occupies real property in this state may bring an action against any person or public body that operates a drone that is flown at a height of less than 400 feet over the property" if the drone operator has previously flown the drone over the property at an altitude below 400 feet and the property owner notified the drone operator that he did not want the drone flown over the property at an altitude below 400 feet. OR. REV. STAT. ANN. § 837.380 (West 2013). The restriction does not apply if "[t]he drone is in the process of taking off or landing" and "[t]he drone is lawfully in the flight path for landing at an airport, airfield or runway." *Id.*

221. This seems unlikely given the trend of states to regulate only law enforcement's drone use.

222. *See* Minnesota v. Olson, 495 U.S. 91, 98 (1990).

223. *See* United States v. Ross, 456 U.S. 798, 822 (1982); Illinois v. Caballes, 543 U.S. 405, 409 (2005).

224. Kerr, *supra* note 25, at 512.

225. *Id.* at 513.

1. *The Private Facts Model in Existing Jurisprudence*

United States v. Karo provides an excellent illustration of the private facts model. In *Karo*, law enforcement officers violated the defendant's reasonable expectation of privacy by placing a tracking device inside a can of ether,[226] which they continued to monitor after the can had entered a private residence.[227] This protracted surveillance revealed information otherwise unobtainable by the officers — namely, that the can remained in the private residence for a time before being moved elsewhere.[228] The Court found this was a "critical fact about the interior of the premises" and thus was protectable against warrantless surveillance.[229]

In contrast to *Karo*, the Court in *United States v. Jacobsen* found no Fourth Amendment violation because no "private fact" would be revealed by the government's action.[230] Similarly, in *Dow Chemical Co. v. United States,* the Court held that the EPA did not violate Dow's reasonable expectation of privacy in photographing Dow's facilities.[231] The Court determined that the open areas of Dow's industrial complex were not curtilage as they did not implicate the "intimate activities that the Fourth Amendment is intended to shelter from governmental interference or surveillance."[232] The EPA's action did not constitute a search because the photographs did not reveal "intimate details" and thus did not raise any constitutional concerns.[233]

As with the other models, the Court has also rejected the private facts model in some cases. In *Arizona v. Hicks*, the Court found the police violated the Fourth Amendment by moving stereo equipment to locate its serial number despite the fact that "the search uncovered nothing of any great personal value to [the defendant]."[234] Moving the equipment "exposed to view concealed

226. United States v. Karo, 468 U.S. 705, 708 (1984); *see supra* Part II.A.
227. *Id.* at 714.
228. *Id.* at 715.
229. *Id.*
230. United States v. Jacobsen, 466 U.S. 109 (1984) (internal quotation marks omitted) (involving a federal agent conducting drug-tracing tests on a white powdery substance observed in a damaged package on a private freight carrier).
231. Dow Chem. Co. v. United States, 476 U.S. 227, 236 (1986); *see supra* Part II.B.3.
232. *Dow Chem. Co.*, 476 U.S. at 235 (internal quotation marks omitted) (alterations omitted).
233. *Id.* at 238–39.
234. Arizona v. Hicks, 480 U.S. 321, 325 (1987).

portions of the apartment or its contents" and "produce[d] a new invasion of [the defendant's] privacy unjustified by the exigent circumstance that validated the entry."[235]

2. *The Private Facts Model and Drones*

As drones proliferate and are equipped with infrared cameras, license plate readers, facial recognition software, and other technologies, the type of information considered "private" may change.[236]

While the Court does not always consider the degree to which gathered information is "private" in deciding whether an individual's expectation of privacy was reasonable,[237] it will likely encounter many issues of first impression in drone use cases and may find such a consideration relevant. State drone statutes can influence which types of information remain "private" by regulating the methods and purposes of drone use. For example, some states prohibit photography of an individual without consent.[238] Thus, the Court may find state statutes instructive in determining whether photographs of an individual taken by drones are "private fact[s]" that merit Fourth Amendment protections,[239] or whether they are not "intimate detail[s]" protected by the Fourth Amendment.[240]

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235. *Id.*

236. Some anticipate that the proliferation of social media will have a similar impact on the Court's understanding of the reasonable expectation of privacy and society's perception of what a "private fact" is. *See* Steven D. Zansberg & Janna K. Fischer, *Privacy Expectations in Online Social Media — an Emerging Generational Divide?*, COMM. LAW (2011), *available at* http://www.lskslaw.com/documents/evolvingprivacyexpectations%2800458267%29.pdf. Courts' understanding of the reasonable expectation of privacy analysis is informed by what people share on social media. *Id.* at 27. Individuals are increasingly comfortable sharing "biographical information, photos, videos, personal hygiene habits, and other hobbies and interests publicly." *Id.* at 26; *see* Moreno v. Hanford Sentinel, Inc., 91 Cal. Rptr. 3d 858, 862 (Cal. Ct. App. 2009) (addressing whether or not information posted on online profiles is "private"); Farber, *supra* note 24, at 36.

237. *Hicks*, 480 U.S. at 325.

238. IDAHO CODE ANN. § 21-213(2)(a) (West 2013); TEX. GOV'T CODE ANN. § 423.003(a) (West 2013).

239. United States v. Jacobsen, 466 U.S. 109 (1984) (internal quotation marks omitted).

240. Dow Chem. Co. v. United States, 476 U.S. 238 (1986).

C. THE POSITIVE LAW MODEL

On occasion, the Court finds positive law instructive in interpreting whether an expectation of privacy is reasonable. Under the positive law model, the Court ask "whether there is some law that prohibits or restricts the government's action (other than the Fourth Amendment itself)."[241] If the government action violates any existing law, it violates a reasonable expectation of privacy and triggers Fourth Amendment protections.[242]

1. *The Positive Law Model in Existing Jurisprudence*

Over the past decades, the Court has considered property law, state laws, and federal regulations governing legally navigable airspace in determining whether law enforcement agents violated the Fourth Amendment.

a. *Property Law*

In *Rakas v. Illinois*, the Court recognized that "[l]egitimation of expectations of privacy by law must have a source outside of the Fourth Amendment, either by reference to concepts of real or personal property law or to understandings that are recognized and permitted by society."[243] The Court relied on property law in finding that the defendants had no reasonable expectation of privacy because they "asserted neither a property nor a possessory interest in the automobile searched or an interest in the property seized."[244] The correlation between property law and privacy expectations is hardly surprising — as Justice Kagan has noted, "the law of property 'naturally enough influences' our 'shared social expectations' of what places should be free from governmental incursion."[245]

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241. Kerr, *supra* note 25, at 516.

242. *Id.* at 518.

243. Rakas v. Illinois, 439 U.S. 128, 143 n.12 (1978); *see also, e.g.*, Georgia v. Randolph, 547 U.S. 103, 112 (2006) (When defendant refused police officers' requests to search his home, but his wife permitted the search, the Court found that "neither state-law property rights, nor common contractual arrangements, nor any other source points to a common understanding of authority to admit third parties generally without the consent of a person occupying the premises.").

244. *Rakas*, 439 U.S. 128 at 148.

245. Florida v. Jardines, 133 S. Ct. 1409, 1419 (2013) (Kagan, J., concurring) (internal alterations omitted) (quoting *Randolph*, 547 U.S. at 111).

In his opinion for the majority in *Riley*, Justice White referenced property law, noting that a helicopter overflight did not "interfere[ ] with [the defendant's] normal use of the greenhouse [observed] or of other parts of the curtilage," and that "there was no undue noise, and no wind, dust, or threat of injury."[246] Under these circumstances, he continued, "there was no violation of the Fourth Amendment."[247] In his analysis, Justice White implied that the lack of nuisance is a consideration relevant to determining whether there was a violation of the defendant's reasonable expectation of privacy.[248]

In other cases, individual Justices have looked to property law where the majority declined to do so. In his dissent in *Oliver*, Justice Marshall criticized the majority's assertion that the defendants' expectations of privacy were unreasonable.[249] Justice Marshall found that the defendants had reasonable expectations of privacy on their properties, referencing state positive law and its recognition of property owners' rights to exclude strangers and subject violators to criminal liability.[250]

While the Justices occasionally draw on property law in understanding what expectations of privacy are reasonable, there are also instances in which the Court has rejected property law as a guide to Fourth Amendment protection. In *Oliver*, the Court rejected trespass law as a basis for evaluating reasonable Fourth Amendment privacy expectations, stating that "trespass law extends to instances where the exercise of the right to exclude vindicates no legitimate privacy interest. Thus, in the case of open fields, the *general rights of property protected by the common law of trespass have little or no relevance to the applicability of the Fourth Amendment*."[251]

b. *Legally Navigable Airspace*

Property law is not the only source of outside authority available to inform the courts. In *Ciraolo*, the Court found no viola-

246. Florida v. Riley, 488 U.S. 445, 452 (1989).
247. *Id.*
248. *Id.* Justice White's implication is especially relevant in the drone context as drones have fewer nuisance-causing consequences. *See infra* Part IV.C.2.
249. Oliver v. United States, 466 U.S. 170, 191 (1984) (Marshall, J., dissenting).
250. *Id.* at 190–91.
251. *Id.* at 183–84 (majority opinion) (emphasis added); *see also* Florida v. Jardines, 133 S. Ct. 1409, 1420–21 (Alito, J. dissenting).

tion of defendant's reasonable expectation of privacy when law enforcement agents flew through legally navigable airspace over the defendant's property.[252] *Riley* similarly drew attention to the fact that the helicopter flight at issue was conducted within legally navigable airspace.[253] Although *Riley* emphasized that its conclusion was not so broad that all inspections of curtilage from an aircraft would "pass muster under the Fourth Amendment simply because the plane [was] within the navigable airspace specified by law," the Court found it to be of "obvious importance that the helicopter . . . was *not* violating the law."[254]

Ultimately, though the Court has not created a bright-line rule that no Fourth Amendment violation lies where surveillance is conducted from legally navigable airspace, the Court frequently makes reference to FAA regulations and those regulations will likely continue to be relevant when considering drone overflights.

c. *Other State Legislation*

State legislatures can also help define the bounds of socially accepted expectations of privacy by enacting legislation. Justice Powell's *Dow Chemical* dissent identifies state trade secret laws as societal legitimation of Dow's privacy interest in its commercial property.[255] As Dow engaged in security measures sufficient to trigger trade secret protections, it also had "a reasonable expectation of privacy in its commercial facility in the sense required by the Fourth Amendment."[256] The majority, however,

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252. California v. Ciraolo, 476 U.S. 207, 213–14 (1986); *see supra* Part II.B.2.

253. Florida v. Riley, 488 U.S. 445, 450 (1989); *see supra* Part II.B.2.

254. *Riley*, 488 U.S. at 451.

255. Dow Chem. Co. v. United States, 476 U.S. 227, 249 (1986) (Powell, J., dissenting). The District Court similarly found positive law instructive. The District Court noted:

> Society has spoken in this area through Congress, the State Legislatures, and the courts. Federal law . . . makes it a crime for government employees to disclose trade secret information. The Clean Air Act itself . . . addresses this concern for propriety information. Moreover, EPA has adopted regulations providing for protection of trade secrets. . . . Michigan law, in addition to recognizing a tort action, also makes it a crime to appropriate trade secrets . . . as well as to invade one's privacy by means of surveillance. . . . These legislative and judicial pronouncements are reflective of a societal acceptance of Dow's privacy expectation as reasonable.

Dow Chem. Co. v. United States, By and Through Gorsuch, 536 F. Supp. 1355, 1367 (E.D. Mich. 1982) (citations omitted), *rev'd sub nom.* Dow Chem. Co. v. United States, By and Through Burford, 749 F.2d 307 (6th Cir. 1984), *aff'd sub nom.* Dow Chem. Co. v. United States, 476 U.S. 227 (1986).

256. *Dow Chem. Co.*, 476 U.S. at 249 (Powell, J., dissenting).

rejected the notion that state trade secret laws would define the limits of the Fourth Amendment[257] and declined to look to positive law to determine whether Dow's expectations of privacy were reasonable.

More recently, in his concurrence in *Jones*, Justice Alito recognized that legislative bodies are "well situated to gauge changing public attitudes" to dramatic technological developments.[258] In light of the fact that "Congress and most States [had] not enacted statutes regulating the use of GPS tracking technology for law enforcement purposes," Justice Alito found the best the Court could do was to "apply existing Fourth Amendment doctrine and . . . ask whether the use of GPS tracking . . . involved a degree of intrusion that a reasonable person would not have anticipated."[259]

2. *The Positive Law Model and Drones*

State drone laws may influence Justices who adopt a positive law approach in determining whether an expectation of privacy is reasonable in drone cases.[260] As Justice Alito stated, practical protections of privacy are diminishing as technology develops.[261] Legislative bodies on both federal and state levels can provide "the best solution to privacy concerns" as they are "well situated to gauge changing public attitudes, to draw detailed lines, and to balance privacy and public safety in a comprehensive way."[262] Indeed, privacy concerns seemed to be prevalent in legislator's minds as they enacted drone statutes.[263] Thus, drone statutes may be viewed as a "reflect[ion of] the goals of the Fourth

257. *Id.* at 232 ("That such photography might be barred by state law with regard to competitors, however, is irrelevant to the questions presented here. State tort law governing unfair competition does not define the limits of the Fourth Amendment."); *see also* California v. Greenwood, 486 U.S. 35, 43 (1988) ("We have never intimated, however, that whether or not a search is reasonable within the meaning of the Fourth Amendment depends on the law of the particular State in which the search occurs.").

258. United States v. Jones, 132 S. Ct. 945, 964 (2012) (Alito, J., concurring); *see supra* Part II.B.2.

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

260. Justices may also consider regulations that FAA will issue, as in *Ciraolo* and *Riley*. California v. Ciraolo, 476 U.S. 207, 213 (1986); Florida v. Riley, 488 U.S. 445, 450 (1989).

261. *Jones*, 132 S. Ct. at 963 (Alito, J., concurring).

262. *Id.*

263. *See, e.g.*, S. 98-36, Reg. Sess. 29 (Ill. April 28, 2013), *available at* http://www.ilga.gov/senate/transcripts/strans98/09800036.pdf; Bohm, *supra* note 112.

Amendment" such that they could provide a "fixed boundary" for *Katz*'s reasonable expectation of privacy test.[264]

Analogizing state drone statutes to property laws[265] could lead to a finding that property law protects against unwanted intrusion or surveillance by drones,[266] but it could also result in a determination that drone use that does not cause a nuisance does not violate a property owner's privacy interests.[267] Unfortunately, it remains unclear whether the Court would rule that state drone laws have any bearing on the reasonability of an individual's expectation of privacy in light of inconsistencies in existing jurisprudence.[268]

State drone statutes could also be perceived as legitimation of individuals' proprietary and possessory interests[269] such that they have a protectable reasonable expectation of privacy in those interests.[270] Such a rule would reflect state laws' recognition of individuals' right to restrict surveillance of themselves and property owners' right to prohibit drone surveillance of their property.[271]

On the other hand, it is possible that the Court will reject state drone statutes as a guide to reasonable expectations of privacy, concluding that the protections provided by state laws have little relevance to constitutional rights.[272] Beyond the Court's general ambivalence towards positive law when interpreting Fourth Amendment rights, there are important differences between property law and state drone statutes. While property laws typically grant individuals the right to exclude anyone and everyone, the state drone laws currently in effect generally re-

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264. Daniel B. Yeager, *Search, Seizure and the Positive Law: Expectations of Privacy Outside the Fourth Amendment*, 84 J. CRIM. L. & CRIMINOLOGY 249, 284 (1993).

265. Justice Kagan has noted that the connection between property law and privacy expectations is strong. Florida v. Jardines, 133 S. Ct. 1409, 1419 (2013) (Kagan, J., concurring).

266. *See* Oliver v. United States, 466 U.S. 170, 190–91 (1984) (Marshall, J., dissenting).

267. *See* Florida v. Riley, 488 U.S. 445, 452 (1989); *supra* note 248 and accompanying text.

268. *Compare* Rakas v. Illinois, 439 U.S. 128 (1978) (drawing on property law in holding that the defendants had no reasonable expectation of privacy) *with* Oliver v. United States, 466 U.S. 170, 183–84 (1984) (stating that property rights protected by trespass law have little relevance to the applicability of the Fourth Amendment).

269. *See* Dow Chem. Co. v. United States, 476 U.S. 227, 249 (1986) (Powell, J., dissenting).

270. *Rakas*, 439 U.S. at 143 n.12.

271. *Oliver*, 466 U.S. at 190–91 (Marshall, J., dissenting).

272. *Id.* at 183–84 (majority opinion); *see also Dow Chem. Co.*, 476 U.S. at 232.

strict *only* the government's use of drones.[273] Thus, most state drone laws do not guard against invasions of privacy by drones operated by private parties. In light of this, the Court may find that state drone statutes do not reflect a societal expectation of privacy strong enough that a violation of a state drone statute reflects an intrusion on reasonable expectations of privacy.

More promising for those concerned about the effects of drones on privacy is the likelihood that the Court would consider whether the drone in question was within legally navigable airspace.[274] Though not determinative, whether the drone was violating airspace regulations could be of "obvious importance."[275] While most existing drone statutes do not currently delineate between legally navigable airspace and non-navigable airspace, they do provide restrictions for drone use.[276] For example, Oregon's statute limits private drone use below an altitude of 400 feet in certain circumstances.[277] A violation of these limitations by law enforcement may be viewed by the Court as a violation of a person's reasonable expectation of privacy.[278]

Despite the Court's inconsistent use of positive law in interpreting what expectations of privacy society is prepared to recognize as reasonable, it is likely that as drones proliferate, state drone statutes and FAA regulations regarding navigable airspace will at least implicitly influence the Court's understanding of Fourth Amendment protections against drones.

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273. *Supra* Part III.B.

274. California v. Ciraolo, 476 U.S. 207, 213 (1986); Florida v. Riley, 488 U.S. 445, 450 (1989).

275. *Riley*, 488 U.S. at 451.

276. OR. REV. STAT. ANN. § 837.380 (West 2013). It is unlikely that state regulations will specify what airspace is "legally navigable" in light of the FAA's intention to develop operational guidelines by the end of 2015. *See Federal Aviation Administration Reveals Drone Testing Sites in Six States*, THE GUARDIAN (Dec. 30, 2013, 12:09 PM), http://www.theguardian.com/world/2013/dec/30/states-host-drone-operational-tests-faa.

277. OR. REV. STAT. ANN. § 837.380 (West 2013). The statute provides that "a person who owns or lawfully occupies real property in this state may bring an action against any person or public body that operates a drone that is flown at a height of less than 400 feet over the property" if the drone operator has previously flown the drone over the property at an altitude below 400 feet and the property owner notified the drone operator that he did not want the drone flown over the property at an altitude below 400 feet. *Id.* This restriction does not apply if "[t]he drone is in the process of taking off or landing" and "[t]he drone is lawfully in the flight path for landing at an airport, airfield or runway." *Id.*

278. *See Ciraolo*, 476 U.S. at 213; *Riley*, 488 U.S. at 450–51.

D. THE POLICY MODEL

The policy model relies on the normative value judgment of judges.[279] Judges ask whether "a particular set of police practices" should be "regulated by the warrant requirement" or "remain unregulated by the Fourth Amendment."[280] In contrast with the other models, the Supreme Court has never rejected the policy model.[281]

1. *The Policy Model in Existing Jurisprudence*

The policy model is reflected in *Katz*, where the Court's decision turned in part on the fact that allowing the Government to wiretap public pay phones without a warrant would "ignore the vital role that the public telephone has come to play in private communication."[282]

The Court also employed the policy model in *Karo*, where it held that continued monitoring of a tracking device placed in a can of ether after the can had been brought into a private residence violated the defendant's Fourth Amendment rights.[283] The Court found that the Government's "monitoring of property that [had] been withdrawn from public view . . . present[ed] far too serious a threat to privacy interests in the home to escape entirely some sort of Fourth Amendment oversight."[284]

Kyllo provides another example of the policy model. In *Kyllo*, the Court recognized that technological developments affect "the degree of privacy secured to the citizens by the Fourth Amendment."[285] In order to assure the "preservation of that degree of privacy against government that existed when the Fourth Amendment was adopted," the Court held that Government's warrantless use of a thermal scanner constituted a search, at least as long as the technology in question was not in public use at the time.[286]

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279. Kerr, *supra* note 25, at 519.
280. *Id.*
281. *Id.* at 521–22.
282. Katz v. United States, 389 U.S. 347, 351 (1967).
283. United States v. Karo, 468 U.S. 705 (1984); *supra* Part II.B.1; Kerr, *supra* note 25, at 519–22.
284. *Karo*, 468 U.S. at 716.
285. Kyllo v. United States, 533 U.S. 27, 33–34 (2001); *see supra* Part II.B.1.
286. *Kyllo*, 533 U.S. at 34–35; *see also* United States v. Jones, 132 S. Ct. 945, 950 (2012).

The *Jones* Court made reference to both *Katz* and *Kyllo* in finding that the warrantless placement of a tracking device on a car was constitutionally impermissible.[287] In order to preserve Fourth Amendment protections, the *Jones* Court admittedly applied "an 18th-century guarantee against unreasonable searches, which [the Court] believe[d] must provide at a minimum the degree of protection [the Amendment] afforded when it was adopted."[288]

The Court also relied on the policy model in *Jardines*.[289] In finding that the warrantless use of a drug-detecting dog violated the defendant's constitutional rights, the Court concluded that the Fourth Amendment "would be of little practical value if the State's agents could stand in a home's porch or side garden and trawl for evidence with impunity."[290]

The policy model has also resulted in the curtailment of Fourth Amendment protections. In *Hudson v. Palmer*, the Court ruled in favor of institutional security after balancing society's interest in the security of its penal institutions with prisoners' interest in privacy.[291] The Court concluded that "[t]he recognition of privacy rights for prisoners in their individual cells simply cannot be reconciled with the concept of incarceration and the needs and objectives of penal institutions."[292]

2. *The Policy Model and Drones*

In ruling on Fourth Amendment questions in drone cases, the Court will likely ask whether a particular type of drone use *should* be regulated. State drone laws and the legal discussion surrounding them may influence the Court's understanding of the policy debate and inform normative assessments.

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287. *Jones*, 132 S. Ct. at 950. Although the *Jones* majority did not utilize the reasonable expectation of privacy test, the Court's approach to interpreting Fourth Amendment protections may still be informative. *See supra* Part II.B.2.

288. *Jones*, 132 S. Ct. at 953.

289. Although the majority did not utilize the reasonable expectation of privacy test in *Florida v. Jardines*, the Court's approach to interpreting Fourth Amendment protections may still be informative. *See supra* Part II.B.2.

290. Florida v. Jardines, 133 S. Ct. 1409, 1414 (2013).

291. Hudson v. Palmer, 468 U.S. 517, 528 (1984).

292. *Id.* at 526.

As previously discussed, the state drone statutes currently in effect have probable cause warrant requirements.[293] Indeed, the majority of state statutes were designed to protect individual privacy from violations by law enforcement.[294] Some state legislators supported regulations out of concern that private parties would invade other individuals' privacy.[295] These provisions reflect the privacy concerns of state legislators and their constituents.[296]

While the Court may not explicitly make reference to state drone statutes in its policy considerations, the statutes have a good chance of informing debates and providing a base for policy arguments on either side in light of the innovation of drones and their capabilities.

V. CONCLUSION

Current Fourth Amendment jurisprudence would seem to allow unmanned aerial vehicles operating in legally navigable airspace to observe curtilage and open fields of a home. As drone use proliferates domestically and the FAA regulates drone operation, Fourth Amendment privacy issues are sure to emerge. In response to the increasing use of drones and technological developments, states are regulating drone use. The resulting state drone laws may inform the Court's "reasonable expectation of privacy" analysis, which is used to determine when an unreasonable search in violation of the Fourth Amendment has occurred.

After reviewing Fourth Amendment jurisprudence and providing a survey of existing state laws and their practical effects, this Note addresses how the two may interact and inform the Court's understanding of reasonable expectations of privacy. Ultimately, although the Court may never make reference to state drone statutes and may even expressly decline to give them weight while ruling on privacy issues in drone cases, this Note predicts that the novelty of drones leaves societal expectations susceptible

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293. FLA. STAT. ANN. tit. 47 § 934.50(4)(b) (West 2013); IDAHO CODE ANN. § 21-213(2)(a) (West 2013); 725 ILL. COMP. STAT. ANN. 167/15(2) (West 2013); MONT. CODE ANN. § 46-5-109(1)(a) (West 2013); OR. REV. STAT. ANN. § 837.380 (West 2013); TENN. CODE ANN. § 39-13-609(d)(2) (West 2013); TEX. GOV'T CODE ANN. § 423.002(7) (West 2013); *see also* Bohm, *supra* note 112.

294. *See supra* Part III.B; *supra* note 125.

295. *See supra* Part III.B.2.

296. Bohm, *supra* note 112.

to the influence of state statutes. State statutes can inform social norms with regard to drone use and influence the type of information discoverable by law enforcement and the likelihood that information will be discovered. Furthermore, drone laws provide a notable source of protection for privacy interests outside the Fourth Amendment. Finally, state drone statutes will provide a foundation for policy arguments and inform judges' perceptions of the types of police practices that should be regulated by the Fourth Amendment. Thus, despite the Court's inconsistent approach to determining whether an individual's subjective expectation of privacy is one that society is prepared to recognize as reasonable, state drone statutes will likely influence the Court's interpretations of the reasonable expectation of privacy, whether explicitly or implicitly, as drones and their capabilities develop and are regulated.