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The New Drone State: Suggestions for Legislatures Seeking to Limit Drone Surveillance by Government and Nongovernment Controllers

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THE NEW DRONE STATE: SUGGESTIONS FOR LEGISLATURES SEEKING TO LIMIT DRONE SURVEILLANCE BY GOVERNMENT AND NONGOVERNMENT CONTROLLERS

*Martin McKown**

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“That the individual shall have full protection in person and in property is a principle as old as the common law; but it has been found necessary from time to time to define anew the exact nature and extent of such protection.”¹

I. INTRODUCTION

Unmanned aerial vehicles (UAVs), also known as drones, are pilotless aircraft remotely controlled to perform a wide range of operations including domestic surveillance, environmental monitoring, immigration control, and defense reconnaissance.² UAVs are used by government and nongovernment controllers.³ Government controllers include clandestine personnel using UAVs on behalf of local, state, or federal agencies, as well as defense officials using UAVs to protect the country from actual

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1. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 193 (1890).

2. RICHARD M. THOMPSON II, CONG. RESEARCH SERV., R42701, DRONES IN DOMESTIC SURVEILLANCE OPERATIONS: FOURTH AMENDMENT IMPLICATIONS AND LEGISLATIVE RESPONSES 1 (2013).

3. ALISSA M. DOLAN & RICHARD M. THOMPSON II, CONG. RESEARCH SERV., R42940, INTEGRATION OF DRONES INTO DOMESTIC AIRSPACE: SELECTED LEGAL ISSUES 4 (2013).

or perceived threats.⁴ Nongovernment controllers include private citizens using UAVs for recreational or commercial purposes.⁵ In the United States, UAVs are typically used by government controllers, such as law enforcement officers conducting warranted surveillance or defense officials developing these aircraft for usage overseas.⁶

Many legislators are concerned that domestic UAV usage by government controllers might encumber the individual right to privacy.⁷ After all, government actors may use UAVs to track an individual's movements.⁸ Moreover, as U.S. Supreme Court Justice Sonia Sotomayor opined in *United States v. Jones*, "Awareness that the Government may be watching chills associational and expressive freedoms."⁹ Addressing such concerns, many states have limited government controllers from using UAVs.¹⁰ For example, the Virginia General Assembly issued a moratorium on UAV usage by law enforcement officers pending a study on privacy implications of these aircraft.¹¹

However, restrictions on UAV surveillance cannot be so narrowly tailored.¹² In 2012, President Barack Obama signed legislation into law directing the Federal Aviation Administration (FAA) to allow nongovernment controllers access to national airspace by 2015.¹³ The new federal plan will license private citizens to operate UAVs over American soil.¹⁴ Thus, private actors may also use UAVs to easily "peep" on their neighbors or effortlessly conduct commercial espionage.

4. See generally JEREMIAH GERTLER, CONG. RESEARCH SERV., R42136, U.S. UNMANNED AERIAL SYSTEMS (2012) (providing a detailed history of the military's UAV research efforts).

5. DOLAN & THOMPSON, *supra* note 3, at 4.

6. See THOMPSON, *supra* note 2, at 2.

7. Texas Representative Lance Gooden stated, "[I]t is important that specific safeguards are put into place which govern the purpose and manner in which drones may be used." Karen Brooks Harper, *Ban on Surveillance from Unmanned Drones Gets Texas Lawmakers' Approval*, DALL. MORNING NEWS, May 26, 2013, <http://www.dallasnews.com/news/politics/headlines/20130526-ban-on-surveillance-from-unmanned-drones-gets-texas-lawmakers-approval.ece>.

8. *Rise of the Drones* (PBS television broadcast Jan. 23, 2013). According to Missy Cummings, associate professor of aeronautics and astronautics at the Massachusetts Institute of Technology, "The U.S. Air Force, right now, has the ability to archive every single video that comes off of every single UAV. We're moving to an increasingly electronic society, where our movements are going to be tracked." *Id.*

9. *United States v. Jones*, 132 S. Ct. 945, 956 (2012) (Sotomayor, J., concurring).

10. S.B. 92, 2013 Leg., Reg. Sess. (Fla. 2013); S.B. 196, 63d Leg. (Mont. 2013); S.B. 402, 2013 Sess. (N.C. 2013); H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013); S.B. 796, 108th Gen. Assemb., Reg. Sess. (Tenn. 2013); H.B. 2012, 2013 Sess. (Va. 2013).

11. H.B. 2012, 2013 Sess. (Va. 2013) (placing a moratorium on UAV usage).

12. See generally Neil M. Richards, *The Dangers of Surveillance*, 126 HARV. L. REV. 1934, 1959 (2013).

13. 49 U.S.C. § 40101 (2013); see generally FAA Modernization & Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 73, 73-75 (2012) (codified as amended in scattered sections of Title 49 of the U.S. Code).

14. FAA Modernization & Reform Act of 2012, *supra* note 13.

Regarding usage of that kind, at least three states—Idaho, Illinois, and Texas—have passed legislation prohibiting private controllers from using UAVs to capture images of individuals or their property without permission.¹⁵

Just as Samuel Warren and Louis Brandeis considered whether privacy laws adequately protected individuals from commercial enterprise in the nineteenth century,¹⁶ this Article discusses whether privacy laws adequately protect individuals from UAV surveillance today. Specifically, this Article provides a detailed history of UAV technology and explores state laws addressing UAV surveillance. Next, it analyzes privacy issues associated with UAV usage by both government and nongovernment controllers. Overall, this Article suggests that the Fourth Amendment of the U.S. Constitution adequately protects individuals from UAV surveillance by the government and that states should follow Idaho, Illinois, and Texas's lead by passing legislation prohibiting nongovernment controllers from interfering with privacy.

II. BACKGROUND

The first UAV was conceived during World War I when the U.S. Navy developed an aerial torpedo prototype called the Hewitt-Sperry Automatic Airplane.¹⁷ Building from that design, in 1917, American inventor Charles F. Kettering produced the Kettering Aerial Torpedo,¹⁸ nicknamed the “Bug,” which became the first full-scale powered UAV to take flight.¹⁹ The pilotless Bug launched from a portable track; its wings released after a predetermined length of time in the air, causing its explosive-filled body to fall to earth.²⁰ Although the Bug could detonate approximately 180 pounds of explosives with remarkable accuracy, the U.S. Army Air Service never used this aircraft in combat, and lack of

15. S.B. 1134, 62d Leg., Reg. Sess. (Idaho 2013); S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013); H.B. 912, 2013 Leg., 83d Sess. (Tex. 2013).

16. Warren & Brandeis, *supra* note 1, at 195.

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

18. *Fact Sheet: Kettering Aerial Torpedo “Bug,”* NAT'L MUSEUM OF THE U.S. AIR FORCE, <http://www.nationalmuseum.af.mil/factsheets/factsheet.asp?id=320> (Mar. 25, 2014). Kettering was cofounder of Delco Electronics Corporation, and later became head of research at General Motors Company. *Inventor of the Week: Charles F. Kettering*, MASS. INST. OF TECH. (Jan. 2000), <http://web.mit.edu/invent/iow/kettering.html>. However, “[m]any of the well over 300 US patent applications in his archives extend far beyond the automotive industry.” *Id.*

19. *Fact Sheet: Kettering Aerial Torpedo “Bug,”* *supra* note 18.

20. *Id.*

funding prevented further development.²¹

Nearly three decades later, the Ryan Aeronautical Company (Ryan) developed the Ryan Firebee UAV series for combat reconnaissance in Southeast Asia.²² The original Firebee prototype, labeled the XQ-2 model, was tested in 1951.²³ Powered by a jet engine enabling it to reach speeds exceeding 500 miles per hour, the XQ-2 was a twenty-two foot long aircraft that launched from air or ground.²⁴ Following successful test flights, the U.S. Department of Defense (DOD) ordered the XQ-2 into production.²⁵ As Ryan continued to improve the aircraft, subsequent models featured a reduced radar signal and more powerful engine.²⁶ In the 1960s, Ryan developed an improved second generation of Firebees, many of which are still used today.²⁷

Notably, for Fiscal Year 1987, President Ronald Reagan's budget request included a stark increase in funding to acquire UAV technology.²⁸ Prior to that request, defense officials observed Israeli forces successfully use UAVs during the 1982 Lebanon War.²⁹ After obtaining many UAVs from Israel, the Pioneer short range UAV became the most reliable UAV model by which defense officials gathered intelligence during the Gulf War.³⁰ Specifically, the Pioneer allowed ground controllers to gather tactical information by flying the small, stealthy aircraft from within a 115 mile radius.³¹

After 1990, defense officials conceived the Predator, an advanced UAV, for reconnaissance and observation operations in the Balkan Wars.³² Operated by a ground controller using a joystick, the Predator is 27 feet long, 7 feet tall, and soars best at an altitude of about 12,500 feet.³³ Adding to the Predator's capabilities, defense officials used this aircraft to carry out the first UAV strike missions by eliminating Taliban and Al Qaeda leaders in the early 2000s.³⁴ To highlight the Predator's important

21. *Id.* The Air Service was a precursor to the U.S. Air Force. *Centennial of Army Aviation*, U.S. ARMY, <http://www.army.mil/aviation/aircorps/> (last visited Feb. 23, 2014).

22. GERTLER, *supra* note 4, at 1.

23. *The Ryan Firebee: Grandfather to the Modern UAV*, GIZMODO (Aug. 27, 2012, 11:30 AM), <http://gizmodo.com/the-ryan-firebee-grandfather-to-the-modern-uav-1155938222>.

24. *Id.*

25. *Id.*

26. *See id.*

27. *See id.*

28. *See* ELIZABETH BONE & CHRISTOPHER BOLKCOM, CONG. RESEARCH SERV., RL31872, UNMANNED AERIAL VEHICLES: BACKGROUND AND ISSUES FOR CONGRESS 2 (2003).

29. *Id.*

30. *See id.*

31. *Pioneer RQ-2A UAV*, SMITHSONIAN NAT'L AIR & SPACE MUSEUM, http://airandspace.si.edu/collections/artifact.cfm?object=nasm_A20000794000 (last visited Oct. 15, 2013).

32. GERTLER, *supra* note 4, at 2.

33. *Id.* at 34.

34. *Id.* at 33–34.

purpose in fighting terrorism, President George W. Bush stated, “This unmanned aerial vehicle is able to circle over enemy forces, gather intelligence, transmit information instantly back to commanders, then fire on targets with extreme accuracy.”³⁵

As successor to the Predator, the Reaper is the DOD’s premier UAV model today.³⁶ The Reaper has nearly nine times the horsepower of the Predator and holds more than fifteen times more ammunition.³⁷ Despite the advantages of these cutting-edge aircraft, however, both the Predator and Reaper have tendencies to crash.³⁸ According to a *Los Angeles Times* article, “[t]hirty-eight Predator and Reaper drones have crashed during combat missions in Afghanistan and Iraq, and nine more during training on bases in the United States—with each crash costing between \$3.7 million and \$5 million.”³⁹

While defense officials employ UAVs to protect the country from threats overseas, other public-sector entities use UAVs in the homeland.⁴⁰ The U.S. Department of Homeland Security (DHS) employs UAVs to police the nation’s borders.⁴¹ Furthermore, DHS recently launched a \$3.2 million effort encouraging state and local law enforcement agencies to use UAVs.⁴² In total, 13 law enforcement agencies received federal funding to acquire small surveillance UAVs.⁴³ UAVs allow law enforcement officers to perform serious tasks out of harm’s way.⁴⁴ For instance, law enforcement officers can use UAVs to monitor hostage situations, gather evidence, or pursue fleeing suspects.⁴⁵ Moreover, some law enforcement officers prefer using UAVs in the field because they are easy to maneuver under favorable conditions.⁴⁶

35. President George W. Bush, *President Speaks on War Effort to Citadel Cadets* (Dec. 11, 2001), WHITE HOUSE, available at <http://georgewebush-whitehouse.archives.gov/news/releases/2001/12/20011211-6.html>.

36. See generally ‘Reaper’ Moniker Given to MQ-9 Unmanned Aerial Vehicle, U.S. DEP’T OF DEF., <http://www.defense.gov/transformation/articles/2006-09/ta091406a.html> (last visited Nov. 22, 2013).

37. *Id.*

38. See David Zucchini, *War Zone Drone Crashes Add Up*, L.A. TIMES (July 6, 2010), <http://articles.latimes.com/2010/jul/06/world/la-fg-drone-crashes-20100706>.

39. *Id.* But see GERTLER, *supra* note 4, at 1 (arguing that this monetary loss is outweighed by the value UAVs provide from their inherent usefulness).

40. See THOMPSON, *supra* note 2, at 3.

41. *Id.*

42. Brian Bennett, *Drones Tested as Tools for Police and Firefighters*, L.A. TIMES (Aug. 5, 2012), <http://articles.latimes.com/2012/aug/05/nation/la-na-drones-testing-20120805>.

43. *Id.*

44. See THOMPSON, *supra* note 2, at 3–4.

45. *Id.* at 3.

46. See generally *Grand Forks County Gets Permission to Fly Drones at Night*, WDAZ TELEVISION 8 (Mar. 28, 2014), available at <http://www.wdaz.com/content/grand-forks-county-gets-permission-fly-drones-night-0>. Some UAVs are so easy to maneuver that law enforcement

Soon, private citizens will also have permission to use UAVs in the homeland.⁴⁷ For example, farmers might use UAVs to apply pesticides over their crops, meteorologists might use UAVs to evaluate weather patterns, and ecologists might use UAVs to monitor wildlife from afar.⁴⁸ Indeed, the FAA already allows model aviation enthusiasts to fly radio-controlled model aircraft, which are comparable to UAVs.⁴⁹ UAVs might also be used to transport cargo because they are generally less expensive and consume less energy than other modes of delivery.⁵⁰ Amazon.com, Inc. (Amazon) recently unveiled groundbreaking plans to deliver its products using UAVs.⁵¹ With FAA approval, Amazon will quickly deliver products weighing up to five pounds to customers located within ten miles of one of its UAV delivery centers.⁵²

Given the advantages that UAVs offer various markets, expansion of the UAV industry will stimulate the economy on local, national, and global scales.⁵³ Specifically, aviation experts predict that worldwide expenditures for UAV technology will exceed \$80 billion over the next decade.⁵⁴ In addition, the Association for Unmanned Vehicle Systems International expects the UAV industry to create more than 100,000 jobs in the United States during that period.⁵⁵ As new jobs are created within the UAV industry, those employed will spend additional money at local businesses and, thus, UAV expansion will provide ancillary benefits to local economies.⁵⁶ However, any boost that the UAV industry might provide the nation and local economies depends primarily on federal regulation of UAV flight.⁵⁷

officers can even fly them at night. *Id.* On March 28, 2014, the Grand Forks County Sheriff's Department in North Dakota announced becoming the first law enforcement agency in the country with night-flight approval. On nine previous occasions, the Grand Forks County Sheriff's Department deployed small UAVs for day missions. *Id.*

47. See Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689, 6689 (Feb. 13, 2007) (to be codified at 14 C.F.R. pt. 91).

48. See ELIAS, *supra* note 17, at 2.

49. Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. at 6689. The FAA limits operation of model aircraft to "below 400 feet above the surface to avoid other aircraft in flight."

50. See ELIAS, *supra* note 17, at 2.

51. See *60 Minutes: Amazon Unveils Futuristic Plan: Delivery by Drone* (CBS television broadcast 2013).

52. *Id.*

53. Darryl Jenkins & Bijan Vasigh, *Economic Impact of Unmanned Aircraft Systems Integration in the United States*, ASS'N FOR UNMANNED VEHICLE SYS. INT'L, 2 (Mar. 2013), available at http://higherlogicdownload.s3.amazonaws.com/AUVSI/958c920a-7f9b-4ad2-9807-f9a4e95d1ef1/UploadedImages/New_Economic%20Report%202013%20Full.pdf.

54. *Id.*; see also ELIAS, *supra* note 17, at 2.

55. Jenkins & Vasigh, *supra* note 53, at 2.

56. *Id.* at 10.

57. ELIAS, *supra* note 17, at 2.

In 2003, realizing the functional and economic benefits of domestic UAV integration, Congress required the FAA to assimilate UAVs into the national airspace system.⁵⁸ Specifically, Congress passed the Vision 100—Century of Aviation Reauthorization Act that year to oblige the FAA to “accommodate a wide range of aircraft operations, including airlines, air taxis, helicopters, general aviation, and unmanned aerial vehicles” when developing its Next Generation Air Transportation System (NextGen).⁵⁹ Still, domestic controllers fly their UAVs under very limited circumstances.⁶⁰ In 2007, the FAA declared, “no person may operate a UAS [unmanned aerial system] in the National Airspace System without specific authority.”⁶¹ Thus, the FAA only allows civilians to operate UAVs on a case-by-case basis, and UAV operation is prohibited over densely populated areas.⁶²

However, on February 14, 2012, President Obama signed the FAA Modernization and Reform Act of 2012, which instructed the FAA to safely and efficiently integrate UAVs into the national airspace system by creating six test ranges.⁶³ Nearly one year after that mandate, the FAA solicited test site proposals from public entities across the country. Following the application process, the FAA selected six test ranges to be in Alaska, Nevada, New York, North Dakota, Texas, and Virginia.⁶⁴ The

58. Vision 100—Century of Aviation Reauthorization Act, Pub. L. No. 180108-176, § 709(c)(6), 117 Stat. 2582, 2584 (2003). There is no federal statutory definition for UAV. However, according to a FAA policy notice, “[s]imply stated, an unmanned aircraft is a device that is used, or is intended to be used, for flight in the air with no onboard pilot.” Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689 (Feb. 13, 2007) (to be codified at 14 C.F.R. pt. 91).

59. Vision 100—Century of Aviation Reauthorization Act, *supra* note 58, at 2584. NextGen is an update to the nation’s air traffic control system. *What is NextGen?*, FAA (Nov. 2, 2011), <http://www.faa.gov/nextgen/slides/?slide=1>. According to the FAA, “[f]or close to six decades we have used this World War II era technology to transit the skies. NextGen is an upgrade to satellite-based technology.” *Id.*

60. *Fact Sheet—Unmanned Aircraft Systems (UAS)*, FAA (Jan. 6, 2014), http://www.faa.gov/news/fact_sheets/news_story.cfm?newsId=14153.

61. Unmanned Aircraft Operations in the National Airspace System, *supra* note 58, at 6689.

62. *Fact Sheet—Unmanned Aircraft Systems (UAS)*, *supra* note 60. According to the FAA,

There are currently two ways to get FAA approval to operate a UAS. The first is to obtain an experimental airworthiness certificate for private sector (civil) aircraft to do research and development, training and flight demonstrations. The second is to obtain a Certificate of Waiver or Authorization (COA) for public aircraft.

Id.

63. See FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 73, 99 (2012).

64. Press Release, FAA Announces Request for Proposals for Unmanned Aircraft Systems Research and Test Sites, FAA (Feb. 14, 2013), available at http://www.faa.gov/news/press_

test sites allow the FAA to evaluate how widespread UAV operations will affect mainstream air traffic control.⁶⁵ According to U.S. Secretary of Transportation Ray LaHood, “[t]his research will give us valuable information about how best to ensure the safe introduction of this advanced technology into our nation’s skies.”⁶⁶

Still, the potential for domestic UAV crashes has caused public concern about the safe introduction of UAVs into national airspace.⁶⁷ The FAA predicts that nearly 7500 small commercial UAVs—which are expected to crash more frequently—will operate domestically by 2020.⁶⁸ Malfunctions, collisions, and crashes pose undue risks to citizens on the ground.⁶⁹ Furthermore, terrorists seeking to carry out catastrophic attacks might exploit UAVs.⁷⁰ For instance, federal law enforcement officers arrested would-be terrorist Rezwan Ferdaus on September 28, 2011 in connection with his plot to attack Washington, D.C. using a large remote controlled aircraft filled with C-4 plastic explosives.⁷¹ Subsequently, Ferdaus entered a plea of guilty to charges related to his plot and was sentenced to seventeen years in prison.⁷²

Aside from safety concerns, intrusive UAV surveillance operations

releases/news_story.cfm?newsId=14313; Press Release, FAA Selects Six Sites for Unmanned Aircraft Research, FAA (Dec. 30, 2013), available at <http://www.faa.gov/news/updates/?newsId=75399>.

65. Press Release, FAA Announces Request for Proposals For Unmanned Aircraft Systems Research and Test Sites, FAA (Feb. 14, 2013), available at http://www.faa.gov/news/press_releases/news_story.cfm?newsId=14313.

66. *Id.*

67. See generally CHAD C. HADDAL & JEREMIAH GERTLER, CONG. RESEARCH SERV., RS21698, HOMELAND SECURITY: UNMANNED AERIAL VEHICLES AND BORDER SURVEILLANCE 4–5 (2010) (explaining UAV limitations).

68. FAA, FAA AEROSPACE FORECAST FISCAL YEARS 2013–2033, at 66 (providing statistics); see also ELIAS, *supra* note 17, at 7–11 (discussing safety concerns).

69. See generally ELIAS, *supra* note 17, at 7–11; see also Zucchino, *supra* note 38 (discussing UAV “design and system problems”).

70. Such incidents occur without UAV restrictions. However, UAV accessibility might increase once integration is complete; thus, the risk that terrorists will use UAVs might increase. These risks have caught the public’s attention, with coverage including an episode from the eleventh season of the popular television series *NCIS*, portraying an elusive terrorist using a stolen UAV for a large-scale attack. See *NCIS: Kill Chain* (CBS television broadcast Jan. 7, 2014).

71. Press Release, Fed. Bureau of Investigation, Massachusetts Man Charged with Plotting Attack on Pentagon and U.S. Capitol and Attempting to Provide Material Support to a Foreign Terrorist Organization (Sept. 28, 2011), available at <http://www.fbi.gov/boston/press-releases/2011/massachusetts-man-charged-with-plotting-attack-on-pentagon-and-u.s.-capitol-and-attempting-to-provide-material-support-to-a-foreign-terrorist-organization>.

72. Christa Delcamp, *Massachusetts Man Gets 17 Years for Plot to Bomb Pentagon, Capitol with Model Planes*, NBC NEWS, Nov. 2, 2012, http://usnews.nbcnews.com/_news/2012/11/02/14876075-massachusetts-man-gets-17-years-for-plot-to-bomb-pentagon-capitol-with-model-planes.

raise serious issues regarding the privacy of law-abiding citizens.⁷³ The American Civil Liberties Union (ACLU) outlined these issues in a recent letter to the FAA by stating the following:

[UAVs] can carry facial recognition and license plate scanning software. Small UAVs can be programmed to maneuver through windows, perch and stare, and fly in swarms. Using recently-developed “ubiquitous navigation” technologies, UAVs can accurately navigate inside of homes by incorporating atmospheric pressure sensors, radios, and other weak location indicators, which can provide a more accurate location when used in concert. They can also be outfitted with robotic arms to carry objects into or remove objects from various places.⁷⁴

Of particular relevance, the U.S. Army spurred privacy concerns after announcing it would deploy blimp-like surveillance crafts, known as “aerostats,” approximately forty-five miles northeast of the nation’s capital beginning in October 2014.⁷⁵ The aerostats are similar to aircraft the Army typically deploys over Iraq and Afghanistan to track suspected insurgents.⁷⁶ While the Army intends to use the domestic aerostats to detect incoming cruise missiles or enemy aircraft via radar,⁷⁷ the aerostats may be equipped with high-altitude surveillance technology to monitor private individuals and their vehicles.⁷⁸ However, according to a *Washington Post* article, the Army stated it has “no current plans” to use the aerostats for purposes of that kind and, if it did, would likely not share that information with local, state, and federal law enforcement officers.⁷⁹

Recently, some states addressed privacy concerns accompanying widespread usage of domestic UAVs. Solutions to privacy issues include limiting government agencies, such as state and local law enforcement

73. DOLAN & THOMPSON, *supra* note 3, at 12.

74. Letter from Christopher R. Calabrese, Legislative Counsel, Am. Civil Liberties Union, to Michael Huerta, Adm’r, Fed. Aviation Admin. (Apr. 23, 2013), *available at* https://www.aclu.org/files/assets/comment_to_faa_on_domestic_drone_test_site_privacy.pdf. In that letter, the ACLU also urged the FAA ensure that “test site operators have experience with ethics and privacy issues.” *Id.*

75. Craig Timberg, *Blimplike Surveillance Craft Set to Deploy over Maryland Heighten Privacy Concerns*, WASH. POST (Jan. 22, 2014), *available at* http://www.washingtonpost.com/business/technology/blimplike-surveillance-crafts-set-to-deploy-over-maryland-heighten-privacy-concerns/2014/01/22/71a48796-7ca1-11e3-95c6-0a7aa80874bc_story.html?tid=ts_carousel.

76. *Id.*

77. *Id.* The aerostats “will have radar capable of detecting airborne objects from up to 340 miles away and vehicles on the surface from up to 140 miles away.” *Id.*

78. *Id.*

79. *Id.* The Army did not “conduct a Privacy Impact Assessment, required for some government programs, because it was not going to collect any personally identifiable information” with the aerostats. *Id.*

officers, from using UAVs, as well as regulating nongovernment controllers. On April 3, 2013, Virginia became the first state to enact legislation limiting domestic UAV usage.⁸⁰ Virginia's law prohibits state law enforcement and regulatory agencies from using UAVs until July 1, 2015, except in certain emergency situations.⁸¹ The law also requires the Virginia Department of Criminal Justice Services, in coordination with other state agencies, to develop and report protocols for UAV usage by state law enforcement officers.⁸²

Florida enacted similar legislation on April 22, 2013.⁸³ However, unlike Virginia's position, Florida's law enables a state law enforcement agency to collect evidence and other information using UAVs so long as "the law enforcement agency first obtains a search warrant signed by a judge authorizing the use of a drone."⁸⁴ The law also provides a civil remedy against law enforcement officers who gather evidence using UAVs without a warrant and prohibits evidence of that kind from being used against an individual in court.⁸⁵ Following Florida's lead, both Tennessee⁸⁶ and Illinois,⁸⁷ enacted comparable legislation. Aside from allowing state law enforcement officers to use UAVs with a warrant, all three states allow law enforcement officers to use UAVs to counter terrorist threats as determined by DHS, or under special circumstances, prevent loss of life or serious property damage.⁸⁸ Going one step further, Illinois' law also permits law enforcement officers to use UAVs "solely for crime scene and traffic crash scene photography."⁸⁹

Likewise, Montana's governor signed a one-page bill into law on May

80. Act of Apr. 3, 2013, ch. 755, § 1, Va. Acts of Assemb. 2013 Reconvened Sess. (placing a moratorium on UAV usage).

81. *Id.* Specifically, a UAV "may be deployed before July 1, 2015 . . . when an Amber Alert is activated . . . [.] when a Senior Alert is activated . . . [.] when a Blue Alert is activated . . . [or] for the purpose of a search and rescue operation. . . ." *Id.*

82. *Id.*

83. S.B. 92, 2013 Leg., 115th Reg. Sess. (Fla. 2013).

84. *Id.*

85. *Id.*

86. S.B. 796, 108th Gen. Assemb., Reg. Sess. (Tenn. 2013).

87. S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013).

88. See S.B. 92, 2013 Leg., 115th Reg. Sess. (Fla. 2013) (permitting UAV usage by law enforcement officers "[t]o counter a high risk of a terrorist attack by a specific individual or organization if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is such a risk"); S.B. 1587, 98th Gen. Assemb. (Ill. 2013) (clarifying that "[t]his Act does not prohibit the use of a drone by a law enforcement agency [t]o counter a high risk of a terrorist attack . . . if the United States Secretary of Homeland Security determines that credible intelligence indicates that there is that risk"); S.B. 796, 108th Gen. Assemb., Reg. Sess. (Tenn. 2013) (allowing law enforcement officers to use UAVs "[t]o counter a high risk of a terrorist attack by a specific individual or organization if the United States secretary of homeland security determines that credible intelligence indicates that there is such a risk").

89. S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013).

1, 2013, requiring law enforcement officers to obtain a warrant before gathering evidence using UAVs.⁹⁰ That law defines a UAV as “an aircraft that is operated without direct human intervention from on or within the aircraft,” not including satellites.⁹¹ On July 29, 2013, Oregon also enacted a law allowing UAV usage by law enforcement officers pursuant to a warrant.⁹² Distinct from other states that have enacted UAV restrictions, Oregon’s law requires state and local agencies to register their UAVs and outlaws UAVs equipped with weapons.⁹³ North Carolina prohibits state and local agencies from using UAVs without approval from the North Carolina Department of Transportation.⁹⁴

In contrast to legislatures that have solely limited state agencies from using UAVs, Idaho,⁹⁵ Illinois,⁹⁶ and Texas⁹⁷ have passed laws regulating UAV surveillance by both government and nongovernment controllers. On April 11, 2013, Idaho enacted a law preventing any “person, entity or state agency” from using UAVs to conduct unwarranted surveillance of private property.⁹⁸ While the law is unclear whether “person” refers merely to government controllers, Idaho Senator Chuck Winder, the bill’s primary sponsor, indicated that the law’s prohibition extends to nongovernment controllers as well.⁹⁹ In a media interview, Senator Winder said, “You can do anything you want on your private property[,] but you are restricted from using [UAVs] on your neighbor’s property.”¹⁰⁰

Texas followed suit by enacting a law prohibiting both government and nongovernment UAV controllers from capturing images of individuals or their property without permission.¹⁰¹ Specifically, Texas’s new law prescribes monetary damages of up to \$10,000 if those images are posted on the Internet.¹⁰² In addition, the law classifies UAV usage of that kind as a misdemeanor.¹⁰³ According to the law, “image” is defined

90. S.B. 196, 63d Leg., Reg. Sess. (Mont. 2013).

91. *Id.*

92. H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013).

93. *Id.*

94. S.B. 402, 2013 Gen. Assemb., Reg. Sess. (N.C. 2013).

95. S.B. 1134, 62d Leg., Reg. Sess. (Idaho 2013).

96. S.B. 1587, 98th Gen. Assemb., Reg. Sess. (Ill. 2013).

97. H.B. 912, 2013 Leg., 83d Sess. (Tex. 2013).

98. S.B. 1134, 62d Leg., Reg. Sess. (Idaho 2013). Specifically, Idaho’s law states that “no person, entity or state agency shall use an unmanned aircraft system to photograph an individual, without such individual’s written consent, for the purpose of publishing or otherwise publicly disseminating such photograph.” *Id.*

99. Sean Ellis, *Drone Bill Prevents Spying on Idaho Farmers and Ranchers*, CAPITAL PRESS, May 21, 2013, available at <http://www.capitalpress.com/content/SE-drones-052413>.

100. *Id.*

101. H.B. 912, 2013 Leg., 83d Sess. (Tex. 2013).

102. *Id.*

103. *Id.*

as “any capturing of sound waves, thermal, infrared, ultraviolet, visible light, or other electromagnetic waves, odor, or other conditions existing on or about real property in this state or an individual located on that property.”¹⁰⁴ Yet, Texas’s law lists nineteen lawful UAV uses.¹⁰⁵ For example, the law allows UAVs to be used by “a Texas licensed real estate broker in connection with the marketing, sale, or financing of real property.”¹⁰⁶ Additionally, UAVs may be used “for purposes of professional or scholarly research and development by a person acting on behalf of an institution of higher education.”¹⁰⁷ Energy providers may also use UAVs to inspect, maintain, or repair pipelines.¹⁰⁸ Finally, Texas allows law enforcement officers to capture images with UAVs “pursuant to a valid search or arrest warrant.”¹⁰⁹

Further, in addition to enacting a law requiring law enforcement officers to obtain a warrant before using UAVs to gather evidence, Illinois enacted a separate law prohibiting individuals from using UAVs to interfere with fishermen or hunters.¹¹⁰ Illinois Representative Adam Brown proposed the law after the People for the Ethical Treatment of Animals (PETA) announced plans to fly UAVs over popular hunting grounds and fishing holes.¹¹¹ In a press release, PETA stated that it “aims to collect video footage of . . . hunting tricks that are illegal in some areas but remain common practices among hunters.”¹¹² Representative Brown stated that UAVs “are a new frontier as far as the invasion of our personal rights.”¹¹³

Overall, UAVs have been used by government controllers for almost a century.¹¹⁴ UAVs are commonly used by law enforcement officers conducting warranted surveillance and by defense officials eliminating threats overseas.¹¹⁵ Soon, UAVs will be used over American soil by nongovernment controllers for various purposes, such as aerial surveillance.¹¹⁶ Thus, UAV integration into national airspace poses legal

104. *Id.*

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.*

110. H.B. 1652, 98th Gen. Assemb., Legis. Serv. (Ill. 2013).

111. See Daniel Xu, *PETA Launches Drone Fleet*, OUTDOORHUB (Oct. 25, 2013), <http://www.outdoorhub.com/news/peta-launches-drone-fleet-advocates-hunter-watching/>.

112. Press Release, People for the Ethical Treatment of Animals, PETA to Acquire Drones to Stalk Hunters (Apr. 8, 2013), available at <http://www.peta.org/mediacenter/news-releases/PETA-to-Acquire-Drones-to-Stalk-Hunters.aspx>.

113. See Xu, *supra* note 111.

114. ELIAS, *supra* note 17, at 1.

115. *Id.* at 1–2.

116. See Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689, 6689–90 (Feb. 13, 2007) (to be codified at 14 C.F.R. pt. 91).

and ethical questions concerning individual privacy.¹¹⁷ Through legislation, some states have addressed privacy concerns regarding widespread UAV usage by government controllers, while others have addressed similar concerns with respect to private, nongovernment controllers.¹¹⁸ In any event, the FAA will begin integrating UAVs into the national airspace system by the end of 2015.¹¹⁹

III. ANALYSIS

UAVs present many risks of overreaching and privacy invasion by both government and nongovernment controllers. However, while legislatures have primarily focused on limiting the risk of government intrusion posed by UAV technology, they are neglecting the far more dangerous threats to privacy that come from nongovernment controllers. Understandably, budding UAV usage by local, state, and federal law enforcement officers has spurred concern regarding government intrusion.¹²⁰ These concerns are legitimate¹²¹ because there are many scenarios in which law enforcement officers may exploit UAVs in ways that go beyond traditional usage.¹²² For example, law enforcement officers might equip UAVs with thermal imaging devices allowing controllers to, in effect, “see objects through walls based on relative levels of heat produced by the objects.”¹²³ They might also outfit UAVs with facial and biometric recognition devices to track individuals based on their personal characteristics.¹²⁴ Accordingly, some states have enacted laws requiring law enforcement officers to obtain a warrant before employing UAVs.¹²⁵ Others have outlawed UAV usage by law

117. DOLAN & THOMPSON, *supra* note 3, at 12.

118. Compare Act of Apr. 3, 2013, ch. 755, § 1, Va. Acts of Assemb. 2013 Reconvened Sess. (restricting only government controllers), with S.B. 1134, 62d Leg., Reg. Sess. (Idaho 2013) (restricting also nongovernment controllers).

119. See FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 11, 73–75 (2012).

120. See THOMPSON, *supra* note 2, at 1–2.

121. As President Thomas Jefferson observed, “[t]he natural progress of things is for liberty to yeild [sic], and government to gain ground.” Letter from Thomas Jefferson to Edward Carrington (May 27, 1788), available at <http://founders.archives.gov/documents/Jefferson/01-13-02-0120>.

122. THOMPSON, *supra* note 2, at 3–4.

123. *Id.* at 3 n.22.

124. *Id.* at 3–4.

125. S.B. 92, 2013 Leg., 115th Reg. Sess. (Fla. 2013); S.B. 1134, 62d Leg., Reg. Sess. (Idaho 2013); S.B. 1587, 98th Gen. Assemb., Legis. Serv. (Ill. 2013); S.B. 196, 63d Leg. (Mont. 2013); H.B. 2710, 77th Leg. Assemb., Reg. Sess. (Or. 2013); S.B. 796, 108th Gen. Assemb., Reg. Sess. (Tenn. 2013); H.B. 912, 2013 Leg., 83d Sess. (Tex. 2013). At the federal level, the 113th Congress considered several bills which would require law enforcement officers to obtain a

enforcement officers altogether.¹²⁶

Despite these attempts to limit government intrusion, the Fourth Amendment already protects law-abiding citizens from unreasonable searches by government controllers using intrusive UAV technologies that go beyond visual surveillance.¹²⁷ The Fourth Amendment plainly states:

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.¹²⁸

As early as 1967, the Supreme Court made clear that this text regulates law enforcement officers' usage of "electronic surveillance," which includes forms of aerial surveillance.¹²⁹ In *Katz v. United States*, the Supreme Court considered whether a federal law enforcement officer's usage of an electronic eavesdropping device in a public telephone booth constituted a search under the Fourth Amendment.¹³⁰ The Supreme Court's ruling in *Katz* extended Fourth Amendment protection to warrantless surveillance performed with wiretapping technology by the government.¹³¹ In his concurring opinion, Justice John Marshall Harlan stated "there is a twofold requirement" for Fourth Amendment protection: "first that a person have exhibited an actual (subjective) expectation of privacy and, second, that the expectation be one that society is prepared to recognize as 'reasonable.'"¹³²

In subsequent cases involving warrantless surveillance with manned aircraft, the Supreme Court turned to Justice Harlan's concurrence in *Katz* for guidance.¹³³ In *California v. Ciraolo*, for instance, law

warrant before using UAVs for domestic surveillance. THOMPSON, *supra* note 2, at 18–21 (summarizing those bills). *But see* Margot E. Kaminski, *Drone Federalism: Civilian Drones and the Things They Carry*, 4 CALIF. L. REV. CIRCUIT 57 (2013) (suggesting "a state-based approach to privacy regulation that governs drone use by civilians").

126. *See, e.g.*, Act of Apr. 3, 2013, ch. 755, § 1, Va. Acts of Assemb. 2013 Reconvened Sess.

127. U.S. CONST. amend. IV.

128. *Id.* State and local law enforcement officers are bound by the Fourth Amendment, which is incorporated against the states by the Fourteenth Amendment. U.S. CONST. amend. XIV, § 1. Some state constitutions include provisions that expand the protections of the federal Fourth Amendment. *See, e.g.*, PA. CONST. art. I, § 8.

129. *See Katz v. United States*, 389 U.S. 347, 354 (1967).

130. *Id.* at 348–49.

131. *Id.* at 359.

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

133. *See generally* *Dow Chem. Co. v. United States*, 476 U.S. 227 (1986); *California v.*

enforcement officers used a low-flying airplane to confirm the presence of marijuana plants concealed at ground level by a tall fence.¹³⁴ The Supreme Court held that the visual surveillance at issue in *Ciraolo* was constitutional because, despite the fact that the defendant had a subjective expectation of privacy within the curtilage of his home, it was “unreasonable . . . to expect that his marijuana plants were constitutionally protected from being observed with the naked eye from an altitude of 1,000 feet.”¹³⁵ Following that decision, the Supreme Court has consistently concluded that government officials do not violate the Fourth Amendment by conducting visual surveillance from the skies.¹³⁶ However, the Supreme Court noted in *Ciraolo* that “Justice Harlan’s observations [in *Katz*] about future electronic developments and the potential for electronic interference with private communications . . . were plainly not aimed at simple visual observations from a public place.”¹³⁷

In another case concerning aerial surveillance, the Supreme Court again demonstrated its willingness to limit warrantless surveillance methods that go further than simple visual observation.¹³⁸ In *Dow Chemical Company v. United States*, the Supreme Court held that the U.S. Environmental Protection Agency’s (EPA) “taking of aerial photographs of an industrial plant complex from navigable airspace is not a search prohibited by the Fourth Amendment.”¹³⁹ Unlike the area under surveillance in *Ciraolo*, the industrial plant complex was “not analogous to the ‘curtilage’ of a dwelling” and, thus, did not raise constitutional issues.¹⁴⁰ Furthermore, the Supreme Court noted that the “EPA was not employing some unique sensory device” not available to the public, but rather employed a common camera.¹⁴¹ Thus, the Supreme Court seemed more reluctant to extend Fourth Amendment protection in that case than in *Ciraolo*. Nonetheless, the Supreme Court still noted “that surveillance of private property by using highly sophisticated surveillance equipment not generally available to the public, such as satellite technology, might be constitutionally proscribed absent a warrant.”¹⁴²

When squarely faced with an issue involving warrantless surveillance via highly sophisticated technology, the Supreme Court has extended

Ciraolo, 476 U.S. 207 (1986).

134. *Ciraolo*, 476 U.S. at 209.

135. *Id.* at 211, 215.

136. *See, e.g.*, *Florida v. Riley*, 488 U.S. 445, 450–51 (1989); *Dow Chem. Co.*, 476 U.S. at 239.

137. *Dow Chem. Co.*, 476 U.S. at 214 (citing *Katz*, 389 U.S. at 362).

138. *Id.* at 238.

139. *Id.* at 239.

140. *Id.*

141. *Id.* at 238.

142. *Id.*

Fourth Amendment protection to citizens.¹⁴³ For example, in *Kyllo v. United States*, the Supreme Court considered whether law enforcement officers may use thermal imaging devices to make direct observation of certain activities within an individual's home.¹⁴⁴ Federal law enforcement officers in that case employed a thermal scanner to detect high-intensity lamps used to grow marijuana.¹⁴⁵ Justice Antonin Scalia pronounced, "[i]t would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology."¹⁴⁶ Thus, the Supreme Court ruled usage of thermal imaging devices in that context as unlawful under the Fourth Amendment.¹⁴⁷ The Supreme Court ruled similarly in *United States v. Jones*, where it stated that "the Government's installation of a GPS [global positioning system] device on a target's vehicle, and its use of that device to monitor the vehicle's movements, constitutes a 'search.'"¹⁴⁸ Thus, warrantless usage of UAVs outfitted with highly sophisticated monitoring technology is likely proscribed by the Fourth Amendment, too.¹⁴⁹

Furthermore, Supreme Court precedent suggests that Fourth Amendment protection extends in instances where UAVs are not outfitted with highly sophisticated technology, but instead fly at extremely low altitudes to achieve simple visual observation immediately around an individual's home or curtilage.¹⁵⁰ In *Florida v. Riley*, the Supreme Court considered whether surveillance of a marijuana grower's greenhouse by law enforcement officers flying in a helicopter at 400 feet violated the Fourth Amendment.¹⁵¹ Delivering the Supreme Court's plurality opinion, Justice Byron White stated that the helicopter surveillance did not violate the Fourth Amendment because the FAA permits helicopters to fly below 400 feet, "and any member of the public or the police could legally have observed respondent's greenhouse from that altitude."¹⁵² However, in her concurring opinion, Justice Sandra Day O'Connor suggested the correct inquiry was whether members of the public travel overhead at that same altitude "with sufficient regularity" that the expectation of privacy is not one that society could reasonably

143. *Kyllo v. United States*, 533 U.S. 27, 33–34 (2001).

144. *Id.* at 29.

145. *Id.* at 29–30.

146. *Id.* at 33–34.

147. *Id.* at 40.

148. *United States v. Jones*, 132 S. Ct. 945, 949 (2012).

149. *See id.*; *Kyllo*, 533 U.S. at 40; *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986); *California v. Ciraolo*, 476 U.S. 207, 214 (1986) (citing *Katz v. United States*, 389 U.S. 347, 362 (1967)).

150. *See Florida v. Riley*, 488 U.S. 445, 451–52 (1989).

151. *Id.* at 447–49.

152. *Id.* at 451.

recognize.¹⁵³ Thus, the Supreme Court's decision in *Riley* suggests that a reasonable expectation of privacy does not turn on FAA regulations construing navigable airspace.¹⁵⁴ Although FAA regulations may guide Fourth Amendment analysis to some extent, the Fourth Amendment would prohibit visual UAV surveillance at extremely low altitudes, even when permitted under federal regulations, because a reasonable expectation of privacy exists around an individual's home and curtilage.

In brief, the Supreme Court's decisions in *Katz* and its progeny instruct that warrantless usage of UAVs outfitted with relatively sophisticated devices, such as facial recognition or thermal imaging devices, is unlawful under the Fourth Amendment.¹⁵⁵ Additionally, even extremely low-flying UAVs used to maintain simple observation are proscribed by the Fourth Amendment.¹⁵⁶ Hence, there is no basis for states to pass legislation to the same effect. In fact, state laws that enforce across-the-board moratoriums on UAV usage effectively "handcuff" law enforcement officers who appropriately use UAVs to produce positive outcomes in dangerous situations. To highlight the benefit that law enforcement officers gain by lawfully using UAVs, DHS simulated a "dirty bomb" scenario in June 2010 by hiding a small device that emitted a safe pulse of radiation nearly forty miles north of Los Angeles, California.¹⁵⁷ Using a UAV, DHS officials detected the radiation by toggling a joystick.¹⁵⁸ Thus, under actual life-threatening circumstances, law enforcement officers must face a substantial, but avoidable, risk of harm as a result of moratoriums prohibiting UAV usage.

Rather than prohibiting law enforcement officers from using UAVs for means that promote public safety and welfare within the purview of the Fourth Amendment, states should pass legislation restricting private citizens, who are not bound by the Fourth Amendment, from conducting unreasonable surveillance with UAVs. Private citizens will have widespread UAV access once the FAA integrates UAV technology into national airspace.¹⁵⁹ Moreover, the proliferation of digital technology makes it inexpensive and easy for anyone to record an image that can be instantly communicated worldwide. Thus, because UAVs can be outfitted with digital cameras and other devices, it will be easier than ever for private citizens to spy on, record, and transmit the private lives of

153. *Id.* at 454 (O'Connor, J., concurring).

154. *Id.*

155. See *United States v. Jones*, 132 S. Ct. 945, 949 (2012); *Kyllo v. United States*, 533 U.S. 27, 40 (2001); *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986); *California v. Ciraolo*, 476 U.S. 207, 214 (1986) (citing *Katz v. United States*, 389 U.S. 347, 362 (1967)).

156. See *Riley*, 488 U.S. at 451–52.

157. Bennett, *supra* note 42.

158. *Id.*

159. See FAA Modernization and Reform Act of 2012, Pub. L. No. 112-95, § 332, 126 Stat. 11, 73–75 (2012).

others. Accordingly, states should prohibit private citizens from using UAV technology to monitor other individuals from overhead.

Particularly, legislatures must address the threat that nongovernment UAV controllers pose private individuals because current privacy laws are outdated. Current privacy laws were developed in the nineteenth century to regulate images captured with traditional cameras used by the press,¹⁶⁰ and fail to account for evolving technology like UAVs. To illustrate, an individual making a privacy claim against a nongovernment UAV controller under current privacy laws may bring that claim under the intrusion upon seclusion theory.¹⁶¹ Specifically, the *Restatement (Second) of Torts* provides, “[o]ne who intentionally intrudes, physically or otherwise, upon the solitude or seclusion of another or his private affairs or concerns, is subject to liability to the other for invasion of his privacy, if the intrusion would be highly offensive to a reasonable person.”¹⁶² Importantly, there is “no liability unless the interference with the plaintiff’s seclusion is a substantial one, of a kind that would be highly offensive to the ordinary reasonable man, as the result of conduct to which the reasonable man would strongly object.”¹⁶³ Therefore, in the absence of legislation, a court must determine whether UAV interference meets this threshold and, while courts have condemned persons eavesdropping upon another’s private concerns as early as 1831,¹⁶⁴ actionable damage is difficult to prove today.

To that point, an individual unwillingly photographed or recorded on his or her own property by a nongovernment UAV controller might not have standing to recover because many modern courts have denied recovery to individuals under similar circumstances.¹⁶⁵ In *Aisenson v. American Broadcasting Co.*, for example, a state court judge was videotaped for a news segment walking from his home to his car.¹⁶⁶ The court in that case dismissed the plaintiff-judge’s privacy claim based on “the social interest in allowing videotaped depictions of him, and the fact that appellant was photographed only while in public view.”¹⁶⁷ Further, in *Wehling v. Columbia Broadcasting System*, when a plaintiff brought a privacy claim after a broadcasting company aired a telecast showing the outside of his residence, the court concluded that “no invasion of privacy

160. Warren & Brandeis, *supra* note 1, at 195.

161. See RESTATEMENT (SECOND) OF TORTS § 652B (1977).

162. *Id.*

163. *Id.* cmt. d.

164. Commonwealth v. Lovett, 6 Pa. L.J. Reps. 226, 227 (1831) (“Every man’s house is his castle, where no man has a right to intrude for any purpose whatever. No man has a right to pry into your secrecy in your own house.”).

165. See, e.g., *Wehling v. Columbia Broad. Sys.*, 721 F.2d 506, 509 (5th Cir. 1983); *Aisenson v. Am. Broad. Co.*, 220 Cal. App. 3d 146, 162–63 (Cal. Ct. App. 1990).

166. *Aisenson*, 220 Cal. App. 3d at 152–53.

167. *Id.* at 163.

occurred” because “the broadcast provided the public with nothing more than could have been seen from a public street.”¹⁶⁸ Thus, modern tort law might not protect individuals who are recorded around their home or curtilage by nongovernment UAV controllers.

Beyond intrusions like those at issue in *Aisenson* and *Wehling*, overzealous news reporters and paparazzi might use UAVs for extreme journalistic purposes.¹⁶⁹ Chiefly, UAVs generate a sense of unease for high-profile individuals: “Imagine a camera drone slowly climbing to a 30th-floor hotel window. Now visualise [sic] the face of the targeted celebrity, caught in an indiscrete moment: the million-dollar money shot.”¹⁷⁰ This scenario is all too real for many public figures like Kate Middleton, who was unsuspectingly photographed while topless on vacation at a private estate.¹⁷¹ Moreover, American news reporters have already used UAVs to investigate fatal car accidents.¹⁷² Like news reporters, private investigators might also engage UAVs to conduct surveillance or obtain admissions.¹⁷³ Hence, states should pass legislation prohibiting nongovernment controllers from using invasive UAV technology, while not inhibiting government controllers from using similar technology in necessary situations.

IV. CONCLUSION

Consequences vary for those being watched by UAV controllers but

168. *Wehling*, 721 F.2d at 509 (internal quotation marks omitted).

169. See generally David Goldberg et al., *Remotely Piloted Aircraft Systems & Journalism: Opportunities and Challenges of Drones in News Gathering*, REUTERS INST. FOR THE STUDY OF JOURNALISM (2013).

170. Mark Corcoran, *Drone Journalism Takes Off*, ABC NEWS, Feb. 21, 2012, available at <http://www.abc.net.au/news/2012-02-21/drone-journalism-takes-off/3840616>. Professor Matt Waite, of the University of Nebraska, suggests having a UAV code of conduct for journalists. *Id.* According to Professor Waite, “We’re going to create an ethical framework, a guide on what is and what isn’t good use of a drone. . . . [T]he marketplace will respond and I don’t think the media has so much credibility that they can sacrifice some on bad use of drones.” *Id.*

171. *Kate Middleton Nude Scandal: When Paparazzi Go Too Far*, HUFFINGTON POST, Sept. 27, 2012, available at http://www.huffingtonpost.com/2012/09/28/kate-middleton-nude-scandal-paparazzi-history_n_1904042.html#slide=1553868.

172. Beau Berman, *FAA Investigating Possible Illegal Use of Drone at Hartford Crash Scene*, FOX CT, Feb. 7, 2014, available at <http://foxct.com/2014/02/07/faa-investigating-possible-illegal-use-of-drone-at-hartford-crash-scene/>.

173. Other nongovernment controllers might use UAVs to acquire sensitive information from private businesses. Consequences of this would “include higher prices charged to consumers, as well as a decrease in new technologies, creative inventions, and improvements. Furthermore, the very concept of privacy ‘is threatened when industrial espionage is condoned or is made profitable.’” Thierry Olivier Desmet, *The Economic Espionage Act of 1996: Are We Finally Taking Corporate Spies Seriously?*, 22 HOUS. J. INT’L L. 93, 96 (1999) (internal citations omitted).

might include chilling of free speech, embarrassment, damage to reputation, or loss of proprietary information. The solution proposed in this Article balances these consequences with the potential benefits that UAVs offer both government and nongovernment controllers. Primarily, UAVs benefit society by allowing law enforcement officers to address life-threatening situations out of harm's way. However, while law enforcement officers should be able to use UAVs to combat realistic threats within the homeland, they should do so only to the extent that the Fourth Amendment allows. The Supreme Court's decisions in *Katz* and its progeny suggest that unwarranted and highly intrusive UAV surveillance by government controllers would constitute a search and, thus, violate the Fourth Amendment.¹⁷⁴ However, the Fourth Amendment does not extend to private citizens; thus, current privacy laws might not protect society from surveillance by nongovernment UAV controllers. Accordingly, states must pass legislation prohibiting nongovernment controllers from abusing UAVs to intrude on another's privacy, rather than prohibit government controllers from using that same technology for general welfare.

174. *United States v. Jones*, 132 S. Ct. 945, 949 (2012); *Kyllo v. United States*, 533 U.S. 27, 40 (2001); *Dow Chem. Co. v. United States*, 476 U.S. 227, 239 (1986); *California v. Ciraolo*, 476 U.S. 207, 214 (1986) (citing *Katz v. United States*, 389 U.S. 347, 362 (1967)).