

PLEASE, DON'T LET ME DRONE ON: THE NEED FOR FEDERALLY-LED AND STATE-COLLABORATED ACTION TO PROMOTE SUCCINCT AND EFFICIENT DRONE REGULATIONS

*By Ethan N. Brown**

Throughout history, there have been innovations of such great magnitude that they forever changed the way the world functions. From Henry Ford's first Model T rolling off the assembly line or the Wright brothers' first flight at Kitty Hawk, to the unprecedented boom of the dotcom bubble in the mid-1990's and early 2000's, society has a way of picking up innovations and running with them. With the collective brilliance of the general population, the speed of advancement can be overwhelming, particularly for the legal entities responsible for monitoring and ensuring that these innovations are not abused. Such is currently the case for the new technology commonly referred to as "drones" (also known as "Unmanned Aerial Systems" or any other number of names).

Our nation sits at a crossroads, trying to determine which path will lead to the most efficient development and utilization of drones without sacrificing too much in the way of safety, personal constitutional rights, and other such concerns. This paper explores these options and offers relevant insights.¹ It proposes that while the proper authority lies with the federal government, the rulemaking needs to be carefully monitored and critiqued, with constant input from the industry, and with handing the reins over to the states on certain issues. This collaborative effort will result in the optimal balance between utilizing a new technology and maintaining public rights and safeties. Part I will begin with a brief history of drone development, particularly in the United States. To understand the current haze surrounding the public perception of drones, it is imperative to understand where they came from. Part II will

*J.D. Candidate 2017, University of Kansas School of Law; B.S. (Biology) & B.S. (Environmental Science), Northern State University. I would like to thank my parents, Norman and Lori Brown, for their steadfast support and encouragement. I would like to thank my sister, Christi Gomoll, for her unwavering efforts as my personal editor, proofreader, and human grammar textbook. I would also like to thank Professor Drahozal for his initial comments and the Kansas Journal of Law & Public Policy for their editing efforts.

1. Because drones are not the first subject to raise these regulatory issues, this paper looks at drone regulation through the familiar lens of federalism in an attempt to present the optimal trajectory of future drone regulation.

provide a substantial summary of the relevant federal regulations that have been developed thus far. Specifically, the Federal Aviation Administration's (FAA) role and progress in building the regulatory framework that will, presumably, evolve into a comprehensive system of law that ensures the safe integration of drones into our daily lives. Part III offers a critique of the initial federal regulations, with the posture that these first steps are of utmost importance and thus there can be no room for error. Part IV illuminates several areas in which the public could be better served by switching the governing authority over drones from the FAA at a federal level to the individual states with a federalism approach. Because of their general police power, states already have a system of laws in place, especially in areas like privacy, trespass, and a wide range of torts, which give them a head start on effectively regulating drones.

I. INTRODUCTION, AND A BRIEF HISTORY OF DRONES

The thought of drones is not always a welcome one for the average American citizen. Many of us have been conditioned to think of these new technological wonders as either ethically-questionable weapons of war or insidious surveillance tools used to invade our privacies in ways previously unfathomable. For some of the innovators and entrepreneurs on the leading edge of this rapidly developing field, this presumption can strike a nerve.² They would prefer names like Unmanned Vehicle Systems (UVSs) or Unmanned Aerial Vehicles (UAVs), so that a distinction can be made between the large, hostile, weaponized systems designed for warfare and the advanced, efficient tools designed to make our lives easier.³

This natural suspicion is not entirely unwarranted, however. Like many of the world's greatest innovations and technological advancements, modern drones got their start in military applications.⁴ As early as the Vietnam War, the Pentagon was testing unmanned aerial vehicles for intelligence, surveillance, and reconnaissance (ISR) missions.⁵ Government interest in expanding from these information-gathering missions to armed strikes developed quickly, and by 2000 the Pentagon was authorizing an expansion of the military drone program.⁶ One of the most notorious successes of armed military drones was the 2002 assassination of the leader of Al Qaeda in Yemen, when a Predator drone was used to strike the convoy.⁷ The momentum of military drone development is unlikely to slow down anytime soon, especially as drone utility expands. What started with technology used

2. See Morley Safer, *Drones Over America*, 60 MINUTES (Mar. 16, 2014), <http://www.cbsnews.com/news/drones-over-america-2/> (last visited Aug. 26, 2016).

3. *Id.*

4. Michael Hastings, *The Rise of the Killer Drones: How America Goes to War in Secret*, ROLLING STONE (Apr. 16, 2012), <http://www.rollingstone.com/politics/news/the-rise-of-the-killer-drones-how-america-goes-to-war-in-secret-20120416> (last visited Aug 26, 2016).

5. *Id.*

6. *Id.*

7. *Id.*

for surveillance and ground attacks is now being looked at as a possible improvement to cargo transfers and wounded soldier evacuations.⁸ In fact, the United States military now trains twice as many ground operators for its drones as it does traditional pilots for its military jets.⁹

The developing use of drones has certainly not been limited to international conflicts on distant shores. Since the early 1990s, there have been unmanned aircraft systems operating, albeit limitedly, in the National Airspace System.¹⁰ These limited uses have traditionally supported public safety efforts like military and border security operations, but that narrow scope is swelling.¹¹ When considering domestic drone use today, we can now include activities like aerial photography, surveying land and crops, communications and broadcast, monitoring forest fires and environmental conditions, and protecting critical infrastructures.¹² Additionally, the door is being opened for commercial enterprises and civil operations to make use of drones on an ever-increasing basis.¹³ As this paper will explore later, these lists are far from exhaustive.

II. STATE OF CURRENT FEDERAL REGULATIONS

Although the technology associated with drones is in the midst of a tidal wave of progress, the rules and regulations governing their use has not followed suit. This must be corrected because drones are more prevalent than ever before. As the technology advances, ease-of-access to drones is likewise increasing.¹⁴ In fact, an impressive selection of “hobby” drones is currently on the market and some are as inexpensive as a couple hundred dollars.¹⁵ The learning curve to operate these drones is less steep than ever before, as they can be controlled with an ordinary smartphone.¹⁶ But putting drones in the hands of the average American citizen has not gone smoothly thus far. The United States has already seen “reports of civilian drones crashing into buildings, having hazardously close encounters with helicopters, peeping into

8. Philip E. Ross, *When Will We Have Unmanned Commercial Airlines?*, IEEE: SPECTRUM (Nov. 29, 2011, 15:32 GMT), <http://spectrum.ieee.org/aerospace/aviation/when-will-we-have-unmanned-commercial-airliners/0> (last visited Aug 26, 2016).

9. *Id.*

10. FED. AVIATION ADMIN., U.S. DEPT. OF TRANSP., INTEGRATION OF CIVIL UNMANNED AIRCRAFT SYSTEMS (UAS) IN THE NATIONAL AIRSPACE SYSTEM (NAS) ROADMAP 4 (1st ed. 2013), http://www.faa.gov/uas/media/uas_roadmap_2013.pdf (last visited Aug. 26, 2016). The National Airspace System (NAS) is the common network of U.S. airspace; air navigation facilities, equipment, services, airports, or landing areas; aeronautical charts, information, and services; rules, regulations, and procedures, technical information, and manpower and material. Included are system components shared jointly with the military.

11. *Id.*

12. *Id.*

13. *Id.*

14. Troy A. Rule, *Airspace in an Age of Drones*, 95 B.U. L. REV. 155, 157 (2015).

15. *Id.*

16. *Id.*

residential windows, and being intentionally shot down.”¹⁷

Although there is some debate as to the proper authority for drone regulation, the natural first place to turn is to the FAA. Already, most man-made contraptions that fly are governed by a complex set of rules developed by the FAA.¹⁸ The list of regulated vehicles does not discriminate and covers every conceivable use: commercial Boeing 787s, executive jets, recreational helicopters, electronic news gathering helicopters, emergency medical services, light airplanes, hot air balloons, and blimps are all addressed by the FAA’s policies.¹⁹ Typically, after extensive training to ensure high skill levels and sound judgment, pilots and other operational personnel can apply for and obtain certificates from the FAA allowing them to fly in the National Airspace System.²⁰ Drones have presented a unique challenge for the FAA because the incredible variety of systems available means that they perpetually hover over the line between classifications, never quite making it clear where they should belong.

A. FAA Notice of Policy

In 2007, the FAA took its first step in what would eventually become the herculean task of regulating drones in the National Airspace System by publishing a notice of policy that was intended to outline a then-current regulation of unmanned aircraft operation.²¹ With this notice, the FAA essentially divided drones into three distinct categories.²² The first category covered unmanned aircraft systems operating as public aircraft, which systematically included all the government’s earliest iterations of drones used by the Department of Defense to the Customs and Border Protection.²³ The second category included unmanned aircraft systems (UAS) operating as civil aircraft, which covered the incredibly diverse group of any drone operating for a commercial purpose.²⁴ Finally, in the third category, the FAA recognized the self-explanatory recreational/sport use of model airplanes. Despite the diverse categories, the FAA effectively banned *all* previously unregulated operation of drones in a single sweeping statement:

The current FAA policy for UAS operations is that no person may operate a UAS in the National Airspace System without specific authority. For UAS operating as public aircraft the authority is the [Certificate or Waiver of Authorization], for UAS operating as civil aircraft the authority is special airworthiness certificates, and for

17. *Id.*

18. Henry H. Perritt, Jr. & Eliot O. Sprague, *Law Abiding Drones*, 16 COLUM. SCI. & TECH. L. REV. 385, 395 (2015).

19. *Id.*

20. *Id.*

21. *See generally* Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 29, 6689, 29, 6690 (Feb. 13, 2007).

22. *See generally id.*

23. *Id.*

24. *Id.*

model aircraft the authority is AC 91–57.²⁵

The resulting ban crippled the use of civil aircraft, particularly UAS, as the FAA was only offering special airworthiness certificates in the realm of experimentation.²⁶

This notice of policy has since been attacked for being overly broad, vague, and an example that “the FAA fell victim to the kind of conflation of technologies and uses that so often drives technopanics.”²⁷

B. FAA Modernization and Reform Act of 2012

Congress took note of the FAA notice of policy’s critiques and addressed the use of civil aircrafts in the hefty FAA Modernization and Reform Act of 2012 (FMRA).²⁸ While the FMRA was intended to address a multiplicity of outdated FAA regulations, Congress set a particular mandate that the relevant agencies “shall develop a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems (UAS) into the national airspace system”.²⁹ To ensure this “acceleration”, the FMRA imposed a set of deadlines on the FAA to quickly boost federal drone regulation to an acceptable level of quality and comprehensiveness.³⁰ Of particular note are the three most action-inducing deadlines:

1. Within 270 days of the date of FMRA’s enactment, the creation of a plan to serve as a roadmap for integration.
2. The designation of six special test ranges to be used as part of a testing program, no later than 180 days after the date of enactment of FMRA.
3. The total implementation of the integration plan as soon as practicable, but no later than September 30, 2015.³¹

Perhaps these deadlines imposed on the FAA were too ambitious, because all three of them were soundly missed. But, better late than never, the FAA eventually rolled out the first edition of the Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap (hereinafter “Roadmap”) in November of 2013.³²

C. Integration of Civil Unmanned Aircraft Systems in the National Airspace System Roadmap

The Roadmap represents one of the first times the FAA acknowledged the

25. *Id.*

26. *See id.*

27. Cynthia D. Love et al., *News From Above: First Amendment Implications of the Federal Aviation Administration Ban on Commercial Drones*, 21 B.U. J. SCI. & TECH. L. 22, 27 (2015).

28. FAA Modernization and Reform Act of 2012, 112 Pub. L. 95, § 331.

29. *Id.* § 332.

30. *See generally id.*

31. *See id.*

32. *See generally* FED. AVIATION ADMIN., *supra* note 10.

depth and breadth of the challenge it was tasked with.³³ Based on that challenge and existing FAA policy, the Roadmap focused on five key messages that were considered instrumental in achieving a smooth integration of UASs into the evolving National Airspace System.³⁴

As its first key message, the FAA recognizes that “government-industry collaboration is paramount to success and must focus on process, quality, and timely results”.³⁵ For that reason, the FAA is open to and expects comments from the industry.³⁶ Within the Roadmap, the FAA highlights a list of recommendations from RTCA, Inc., a private not-for-profit corporation that serves as a Federal Advisory Committee by providing consensus-based recommendations regarding navigation, surveillance, and air traffic management system issues.³⁷ RTCA, Inc. submitted the following “guiding principles” for UAS integration as the key concerns from industry leaders:

1. “UAS must operate safely, efficiently, and compatibly [*sic*] with service providers and other users of the NAS so that overall safety is not degraded;
2. UAS will have access to the NAS, provided they have appropriate equipment and the ability to meet the requirements for flying in various classes of airspace;
3. Routine UAS operations will not require the creation of new special use airspace, or modification of existing special use airspace;
4. Except for some special cases, such as small UAS (sUAS) with very limited operational range, all UAS will require design and airworthiness certification to fly civil operations in the NAS;
5. UAS pilots will require certification, though some of the requirements may differ from manned aviation;
6. UAS will comply with ATC instructions, clearances, and procedures when receiving air traffic services;
7. UAS pilots (the pilot-in-command) will always have responsibility for the unmanned aircraft while it is operating;
8. And UAS commercial operations will need to apply the operational control concept as appropriate for the type of operation, but with different functions applicable to UAS operations.”³⁸

Although these recommendations are far from comprehensive, they certainly show that both the FAA and the industry are taking efforts to craft the integration as a feasible mix of existing FAA regulations for aircraft and new rules tailored to the unique nature of drones.

33. *Id.* at 42.

34. *Id.*

35. *Id.*

36. *Id.*

37. FED. AVIATION ADMIN., *supra* note 10 at 11.

38. *Id.*

The Roadmap's second key message echoes this sentiment by saying, "the FAA must remain committed to the development of technical and regulatory standards, policy guidance, and operations procedures on which successful UAS integration depends."³⁹ Here, the FAA acknowledges that in order for its initiatives to be accomplished, they cannot simply rely on the "largely applicable" existing procedures because total integration requires specific attention to new standards.⁴⁰

The third key message broadens the FAA's sources of information and research by saying that "global standards encourage harmonization and yield cost-effective development."⁴¹ While the Roadmap is quick to point out that the FAA is not bound by international policies and standards, it does recognize the value of promoting seamless operations of UASs across international borders.⁴² Specifically, it turns to the International Civil Aviation Organization (ICAO), a special agency of the United Nations designed to advance "the safe and orderly development of international civil aviation throughout the world."⁴³

To help facilitate the beginning of synchronization among Member States, the ICAO published a circular containing guidelines to introduce and integrate drones into airspace in a consistent manner that ensures global interoperability wherever possible.⁴⁴ The FAA focuses on a relevant passage drawn from that circular:

A number of Civil Aviation Authorities (CAA) have adopted the policy that UAS must meet the equivalent levels of safety as manned aircraft. . . In general, UAS should be operated in accordance with the rule governing the flight of manned aircraft and meet equipment requirements applicable to the class of airspace within which they intend to operate. . . To safely integrate UAS in non-segregated airspace, the UAS must act and respond as manned aircraft do. Air Traffic, Airspace and Airport standards should not be significantly changed. The UAS must be able to comply with existing provisions to the greatest extent possible.⁴⁵

The FAA also acknowledges that by coordinating efforts on a global scale, the aviation community will better utilize limited resources.⁴⁶ Just as the Roadmap's first three key messages tie in together, so do the final two messages.

In its fourth key message, the Roadmap clarifies that "the FAA is focused on increased access for UAS without impacting the safety or efficiency of the [National Airspace System], while managing environmental impacts."⁴⁷ The

39. *Id.* at 42.

40. *See id.*

41. *Id.*

42. FED. AVIATION ADMIN., *supra* note 10, at 42.

43. *Id.* at 10.

44. *Id.*

45. *Id.*

46. *Id.* at 43–44.

47. FED. AVIATION ADMIN., *supra* note 10 at 43.

priority is—and probably always will be—safety, but the FAA recognizes the desirable long-term goal to maintain, or even increase the efficiency and the environmental performance of the National Airspace System.⁴⁸

Finally, the fifth portion of the Roadmap concludes with a key message on technology. Specifically, it states that progress “must be made on the development of technology to enable national airspace system access.”⁴⁹ Although the rapidly developing technology is one of the reasons we are in the conundrum of largely unregulated drone usage, the Roadmap insinuates that perhaps the technology has not advanced *enough*. Particularly, the perceptual differences between manned and unmanned flight could cause problems during integration. In manned flight, there is a “see and avoid” component that when combined with radar, visual sighting, separation standards, and other proven technologies and procedures can ensure that a well-trained pilot achieves adequate collision avoidance.⁵⁰ The functional equivalent for drones is the development of “sense and avoid” capabilities that would serve as a replacement for the drones to comply with the “see and avoid” operational rules currently required of manned aircraft.⁵¹ While the development of “sense and avoid” technology is rapidly developing, there remains a question as to whether or not the public will be willing to accept and trust this robotic replacement to a human sense.

Although the Roadmap does an adequate job of incorporating many different authorities, goals, viewpoints, and ideas into the FAA’s plans to integrate drones, it accomplishes very little in the way of action. Noticeably absent from its contents are the locations of the six mandated test sites, which should have been established ninety days before the Roadmap was due. Without these test sites, little can be done in the way of drone research and development. Still, the FAA eventually came around and on December 30th, 2013, it announced six test sites, chosen from twenty-five applicants.⁵² Each new test site represented a particular focus of integration research:

1. The University of Alaska, which has a diverse climate and a variety of test sites, including in Hawaii and Oregon, plans to work on state monitoring, navigation and safety standards.
2. The state of Nevada plans to study standards for operators and certification requirements. Additionally, the state will study how air-traffic control procedures should evolve to handle drones.
3. New York’s Griffiss International Airport, near Utica, plans to research how drones and passenger aircraft will sense and avoid each other, to prevent collisions, particularly in the congested Northeast airspace.
4. North Dakota Department of Commerce plans to develop airworthiness

48. *Id.*

49. *Id.*

50. *Id.* at 19.

51. *Id.*

52. Bart Jansen, *FAA names 6 sites for testing drones*, USA TODAY (Dec. 30, 2013, 4:44 PM), <http://www.usatoday.com/story/news/nation/2013/12/30/drone-test-sites/4248771/>.

data and validate the reliability of links between pilots and unmanned aircraft.

5. Texas A&M University in Corpus Christi, plans to develop safety systems for drones.
6. Virginia Polytechnic Institute and State University, which has test locations in Virginia and New Jersey, plans to test failure modes and technical risks for drones to ensure they land safely if they lose connection with a pilot.⁵³

These test sites do not come a moment too soon, because the FAA delays only a year before their next major step in the plan for integration.

D. Overview of Notice of Proposed Rulemaking for Small UAS

Currently, the most relevant document that the FAA has produced in regards to setting federal regulations for everyday drone use is the Notice of Proposed Rulemaking (NPRM), issued February 23, 2015.⁵⁴ The NPRM specifically targets small UAS and gives several specific examples of the type of UAS operations that could be conducted under the proposed framework: crop monitoring/inspection; research and development; educational/academic uses; power-line/pipeline inspection in hilly or mountainous terrain; antenna inspections; use in certain rescue operation such as locating snow avalanche victims; bridge inspections; aerial photograph; and wildlife nesting area evaluations.⁵⁵ Notably absent from this operations framework are many types of commercial applications, including any kind of delivery service. This is largely because such commercial applications would simply not be feasible under the proposed rules, especially the operational limits.⁵⁶ While the official FAA summary of the NPRM highlights 19 individual operational limits⁵⁷, there are a few limits in particular that have drawn criticism for being unnecessarily restrictive and placing the heaviest burdens on commercial drone operators.⁵⁸ Some of the more notable operational limitations within the NPRM include:

- “Unmanned aircraft must weigh less than 55 lbs. (25 kg).
- Visual line-of-sight (VLOS) only; the unmanned aircraft must remain within VLOS of the operator or visual observer.
- Maximum altitude of 500 feet above ground level.
- Maximum airspeed of 100 mph (87 knots).

53. *Id.*

54. Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. 9543 (proposed Feb. 23, 2015) (to be codified at 14 C.F.R. pts. 21, 43, 45, 47, 61, 91, 101, 107, 183).

55. *Id.* at 9545.

56. *See id.* at 9549.

57. *Id.* at 9546.

58. E.g., Brooks Lindsay, *Drone Drain: How the FAA Can Avoid Draining (and Instead Spur) the American Drone Industry by Adding Nuance to Its Small UAS Rules*, 10 WASH. J.L. TECH. & ARTS 343, 345 (2015).

- Daylight only operations (official sunrise to official sunset, local time).
- Small unmanned aircraft may not operate over any persons not directly involved in the operation.”⁵⁹

One of the greatest concerns over the proposed operational limitations is that they do not fully enable American drone research and commercialization⁶⁰, which is arguably one of the prime motivations behind integrating drones into the National Airspace System. Adopting the line-of-sight requirement alone is enough to cripple the industry, as the majority of commercial and scientific benefits of drone flight will primarily be achieved outside the operator’s direct line of sight.⁶¹ When you consider the fact that technology has certainly advanced enough to provide drone operators with live video feeds that would be virtually identical to the range of vision traditional pilots have in their cockpit⁶², regulations like this are nonsensical. Adopting this, or any of the other overly-burdensome restrictions, without a more substantial safety justification would be an overstep by the FAA which the industry cannot afford.⁶³

E. Unmanned Aircraft Registration Requirement⁶⁴

On October 19, 2015, the U.S. Secretary of Transportation and the FAA Administrator announced that they would create a task force to “develop recommendations for a registration process for Unmanned Aircraft Systems (UAS).”⁶⁵ The task force is now comprised of over two-dozen diverse representatives who have a stake in the outcome, including members of the manned aviation industries.⁶⁶ By requiring registration, the FAA hopes to promote a culture of accountability and responsibility among drone operators, particularly for the many anticipated beginners who will be breaking into the industry for the first time.⁶⁷

The FAA sees this as a paramount importance, considering pilot sightings of potentially unsafe UAS operation have doubled between 2014 and 2015.⁶⁸

59. Operation and Certification of Small Unmanned Aircraft Systems, 80 Fed. Reg. 9545, 9546 (proposed Feb. 23, 2015) (to be codified at 14 C.F.R. pts. 21, 43, 45, 47, 61, 91, 101, 107, 183).

60. Lindsay, *supra* note 58, at 345.

61. *See id.* at 346.

62. *Id.* at 347–48.

63. *Id.*

64. It should be clarified that the actual specifics of the required registration are forthcoming. While the only news released so far concerns the formation of the task force, the membership of the task force, and the goals of the task force, there has been widespread speculation on what the probable action will be. As soon as the information is available, this article will be updated to reflect it.

65. Press Release, Fed. Aviation Admin., U.S. Transp. Sec’y Anthony Foxx Announces Unmanned Aircraft Registration Requirement (Oct. 19, 2015), https://www.faa.gov/news/press_releases/news_story.cfm?newsId=19594.

66. *Id.*

67. *Id.*

68. *Id.*

While it was unclear exactly what classes of drone operations would be required to register, the FAA first indicated that it would probably begin drawing distinctions by exempting “toys” and other small, low-risk UAS.⁶⁹ From the outset, this seemed like an unlikely course of action for the FAA, as FAA Administrator Michael Huerta had specifically criticized hobbyist drone operators for being largely unaware of the fact that they share airspace with others.⁷⁰ This was prompted by incidences where hobby drones have interfered with wildfire fighting efforts in California or have come too close to passenger aircraft on a variety of occasions.⁷¹ Altogether, the registration system is meant to “give the FAA an opportunity to educate users on airspace rules and allows the agency to more easily identify and take enforcement action against those who don’t obey the rules or operate safely.”⁷²

True to its word, the agency issued an interim “final” rule on December 14, 2015.⁷³ The relevant press release claims that the rule incorporates many of the task force recommendations⁷⁴, but even so, it is rife with decisions that can be criticized. The registration rule appears to specifically target a large class of drone hobbyists, because the deciding⁷⁵ factor on if a drone needs to be registered is weight.⁷⁶ If the UAS in question weighs more than 0.55 pounds but less than 55 pounds including payloads, it needs to be registered.⁷⁷ For the first thirty days of the new rule, which conveniently covered the holiday season, registration was free.⁷⁸ Now, drone operators are required to pay a five-dollar fee that will provide registration for up to three years.⁷⁹

Again, the targeted audience is clear. The online registration system does not support registration of anything but small UAS that fall into the aforementioned weight range and that are used for only hobby or recreation, although there is talk that a system supporting registration of UAS used in connection with a business may be forthcoming.⁸⁰ Secretary Foxx reinforced his previous stance by stating, “Make no mistake: unmanned aircraft enthusiasts are aviators, and with that title comes a great deal of responsibility. Registration gives us an opportunity to work with these users to operate their unmanned aircraft safely. I’m excited to welcome these new aviators into the culture of safety and responsibility that defines American innovation.”⁸¹

69. *Id.*

70. *Safety, not Privacy, FAA's Top Priority on Drones*, WASH. INTERNET DAILY (Oct. 29, 2015), <https://advance.lexis.com/api/permalink/fcc334dc-d989-4117-88be-d29ee517614f/?context=1000516>.

71. *Id.*

72. *Id.*

73. Press Release, Fed. Aviation Admin., FAA Announces Small UAS Registration Rule (Dec. 14, 2015), https://www.faa.gov/news/press_releases/news_story.cfm?newsId=19856.

74. *Id.*

75. Or really, the only factor determining registration requirements.

76. Press Release, Fed. Aviation Admin., *supra* note 73.

77. *Id.*

78. *Id.*

79. *Id.*

80. *See id.*

81. *Id.*

Unfortunately for Secretary Foxx, his words and the actions of the FAA appear to be irreconcilable. As of now, there is no substance to the registration other than a gathering of personal information and a fee. While the registration was a success in the sense that over 325,000 drone operators are now registered with the FAA⁸², there is doubt that the public gained anything. The FAA may now be able to prosecute the person who registered a drone that caused an accident with illegal flying, but they have done nothing to proactively improve the safety of the flying public.⁸³ The distinct lack of safety education from the registration process is certainly a missed opportunity.

III. CRITIQUES OF FEDERAL AUTHORITY

One of the most oft heard criticisms of the drone integration process is that the FAA has been too slow to act. With all of the missed deadlines, it would appear that any kind of permanent rules drone operators could rely on will not be forthcoming until, at the earliest, 2017.⁸⁴ This could be especially frustrating because while the current proposed rules are “sensible and encouraging” in some eyes, they are also considered by many to be over-burdensome and stifling in relation to the risks.⁸⁵

Of more paramount importance is the possibility that with these stifling proposed (and currently enforced) rules, the FAA is systematically violating the constitutional rights of drone operators nationwide.⁸⁶ Some legal scholars have been quick to argue that the FAA’s blanket ban on commercial drones, which includes aerial photography and newsgathering, “constitutes an unconstitutional restriction on speech in a public forum.”⁸⁷ These scholars argue that aerial photography with drones, whether commercial in nature or not, is a protected First Amendment activity and although Congress has granted the FAA the power to regulate the integration of drones into the domestic airspace, those regulations must still comply with constitutional mandates.⁸⁸ Where drone restrictions in the name of safety potentially infringe First Amendment protected uses, those restrictions must have narrowly tailored time, place, and manner restrictions rather than the broad, vague restrictions currently in place.⁸⁹

The truly ironic factor here is that the impetus that caused the FAA to implement such broad restrictions that potentially infringe on news and media

82. Michael Mercer, Letter to the Editor, *It's not enough for the FAA to make drone operators register*, WASH. POST (Feb. 11, 2016), https://www.washingtonpost.com/opinions/its-not-enough-for-the-faa-to-make-drone-operators-register/2016/02/11/930d10fe-d016-11e5-90d3-34c2c42653ac_story.html.

83. *Id.*

84. Lindsay, *supra* note 58.

85. *Id.* at 345–46.

86. See Love et al., *supra* note 27, at 28.

87. *Id.*

88. *Id.*

89. *Id.*

personnel's constitutional rights was likely the media themselves.⁹⁰ It is well established that news media plays an integral role in determining which issues are added to the public agenda and, often, how those agenda items are received.⁹¹ In the case of drones, the media has framed the issue as a technological problem in need of a solution, with little distinction between the large militarized drones and the exponentially smaller drones that serve as children's toys.⁹² It is little wonder that the FAA made wide, ill-considered decisions, with public perception of drones being rife with fear and misgivings.⁹³

On the other hand, there is a justifiable fear that the FAA is not strict *enough* with their proposed regulations of drones. In fact, this fear has sparked a lawsuit against the FAA in the District of Columbia Circuit of the United States Court of Appeals.⁹⁴ Leading the charge with the suit is the Electronic Privacy Information (EPIC)⁹⁵, although at least 100 other privacy and civil liberties groups petitioned the FAA in March of 2012 after they felt that the potential ill-effects of drone use on a wide array of privacy and civil liberties had not been fully addressed by the agency.⁹⁶ The core of the petition that EPIC filed with the D.C. Circuit stems from Congress's explicit requirement that the FAA develop a comprehensive plan for drone deployment when they passed the FAA Modernization and Reform Act of 2012⁹⁷. In EPIC's opinion, this plan should include privacy safeguards for citizens that could fall victim to unwanted monitoring and surveillance.⁹⁸

In response, the FAA has claimed that the challenge is premature; the proposed rules governing use of UAS are only meant to give notice of the agency's planned course of action.⁹⁹ The FAA contends that the court can only review final rules.¹⁰⁰ Furthermore, the FAA purports that the claims are

90. *See id.* at 25.

91. *See id.* at 24–25.

92. Love et al., *supra* note 27, at 25.

93. Nicholas Ryan Turza, *Dr. Dronelove: How We Should All Learn to Stop Worrying and Love Commercial Drones*, 15 N.C. J. L. & TECH. ON. 319, 337 (2014).

94. Y. Peter Kang, *Watchdog Group Sues FAA Over Lack Of Drone Privacy Rules*, LAW360 (Mar. 31, 2015), <http://www.law360.com/articles/638050/watchdog-group-sues-faa-over-lack-of-drone-privacy-rules>.

95. Interestingly, the Electronic Privacy Information Center is an independent non-profit research center in Washington, DC that works to protect privacy, freedom of expression, democratic values, and to promote the Public Voice in decisions concerning the future of the Internet. Although they protect freedom of expression and privacy, their main focus in regards to drones would appear to strongly favor privacy. They address concerns such as the “unique threat” and the potential for “increased government surveillance” that drones present. *Domestic Unmanned Aerial Vehicles (UAVSs) and Drones*, Electronic Privacy Information Center, <https://www.epic.org/privacy/drones/> (last visited Sep. 20, 2016).

96. Kang, *supra* note 94.

97. *Id.*

98. *See id.*

99. Dani Meyer, *FAA Says Watchdog's Drone Privacy Suit Is Premature*, LAW360 (May 19, 2015), <http://www.law360.com/articles/657500/faa-says-watchdog-s-drone-privacy-suit-is-premature>.

100. *Id.*

unwarranted because its mission does not involve developing or enforcing privacy policies.¹⁰¹

EPIC, far from being satisfied, compares the lack of accountability on the part of the FAA to the U.S. Environmental Protection Agency's argument that it was not tasked with regulating carbon dioxide or other climate change contributors because they were not presently considered "air pollutants".¹⁰² This claim by the EPA failed before the United States Supreme Court in 2007, and EPIC claims the FAA's assertion should likewise fail on the grounds that it is an arbitrary and capricious decision for which the agency has failed to provide any rational basis.¹⁰³ EPIC goes so far as to contend that privacy is inherently tied to the FAA's primary goal of safety by telling the court, "Protecting individuals from the fear caused by threatening and harassing behavior, like stalking and surveillance, is precisely the type of safety issue that the law seeks to limit".¹⁰⁴

While EPIC is correct that privacy concerns are of serious importance when considering widespread drone use, their attention is misplaced. Ultimately, the tension between privacy concerns and First Amendment rights simply cannot be addressed in one encompassing federal statute.¹⁰⁵ This opens the door for a new authority to step in and check that balance.

IV. WHERE THE STATES COME MARCHING IN

As we have seen, the FAA is largely concerned with safety when it comes to regulating drones. Although safety is the driving factor behind most of its decisions, when convenient, the FAA also mentions privacy concerns as a motivating factor.¹⁰⁶ When taking into account the possible infringement on constitutional rights, it leaves little confidence that the FAA will be capable of striking a balance between the two interests.

For this reason, we should absolutely utilize federalism and turn to the individual states when crafting the rules that will protect our privacy.¹⁰⁷ In fact, drone use would hardly be the first time where privacy concerns were

101. Joe Van Acker, *FAA Drone Rules Must Cover Privacy Concerns*, DC Circ. Told, LAW360 (Sept. 29, 2015), <http://www.law360.com/articles/708663/faa-drone-rules-must-cover-privacy-concerns-dc-circ-told>.

102. *Id.*

103. *Id.*

104. *Id.*

105. Margot E. Kaminski, *Drone Federalism: Civilian Drones and the Things They Carry*, 4 CALIF. L. REV. CIR. 57, 64 (2013).

106. Wells C. Bennett, *Civilian Drones, Privacy, and the Federal-State Balance*, BROOKINGS INST. 9 (Sept. 2014), http://www.brookings.edu/~media/Research/Files/Reports/2014/09/civilian-drones-privacy/civilian_drones_privacy_bennett_NEW.pdf.

107. For an explanation on federalism, see PBS, *Federalism*, PBS, <http://www.pbs.org/tpt/constitution-usa-peter-sagal/federalism/#.WQ3E9wwzBI> (last visited Oct. 16, 2016).

approached from a federal versus federalism approach.¹⁰⁸ In 2006, a wide range of companies wanted Congress to implement a comprehensive federal consumer privacy law that would inevitably preempt state legislation.¹⁰⁹ This prompted leading privacy scholars and legal experts to speak out, defending what they claimed should be the territory of states:

[S]tates in the United States have been especially important laboratories for innovations in information privacy law. . . . State privacy law has started the twenty-first century with renewed activity. The influence of state privacy law has been felt in three ways. First, states have often been the first to identify areas of regulatory significance and to take action. . . . Second, states have provided innovative approaches. . . . Third, states have created an opportunity for simultaneous experiments with different policies.¹¹⁰

Privacy is hardly the only issue that can be conquered by a federalism approach. In fact, federalism has a long history in the United States as a structure for policy experimentation and innovation.¹¹¹ It is an invaluable and inevitable tool that lies at the very core of our constitutional order¹¹² and the only question concerns the best way to utilize that tool most effectively in a time when we desperately need it:

[T]he need to improve federalism's experimental capacity has taken on new relevance in an era marked by unprecedented political gridlock in Washington. When federal inaction creates a policy vacuum, state policy experimentation may be the *only* available solution for solving difficult social problems. Moreover, as political impasse removes the threat of any organized federal response, state governments are steadily expanding their experimental sphere into areas that overlap with federal authority, like immigration and medical marijuana.¹¹³

This sentiment is as equally applicable to drone regulation as it is to the named issues. While a Washington gridlock did not prevent Congress from instigating federal regulation, the FAA's snail-pace has the potential to be similarly devastating. Giving the States room to lead on various particulars of drone regulation could be the boost needed to keep our nation competitive. Experimental federalism in drone regulation will allow states to "simultaneously explore and exploit at the same time, and to seek out the optimal spot on the continuum between rigidity and randomness."¹¹⁴

True to these optimistic opinions on the individual states' abilities to take on the burden of navigating a complex and unknown issue, drone legislation at

108. Kaminski, *supra* note 105, at 64.

109. *Id.*

110. Paul M. Schwartz, *Preemption and Privacy*, 118 YALE L.J. 902, 916–18 (2009).

111. Doni Gewirtzman, *Complex Experimental Federalism*, 63 BUFF. L. REV. 241, 241–42 (2015).

112. *Id.* at 245.

113. *Id.* at 244–45.

114. *Id.* at 295.

the state level has become a common sight.¹¹⁵ In 2015, 45 states have considered over 165 bills relating to drone use.¹¹⁶ Twenty of those states have passed twenty-six pieces of legislation relating to drone use and five more states adopted resolutions relating to drone use.¹¹⁷

It is also worth mentioning that most states already have existing privacy laws that, if applied broadly, could regulate certain drone activities.¹¹⁸ These protections exist in two categories.¹¹⁹ The first category is statutory and common-law protections against non-governmental intrusions. This is the most generic category, where we can draw on precedent from trespass, privacy, stalking, and other areas that contribute to what we think of as social privacy norms.¹²⁰ The second category is the more specialized state dependent/specific legislation that covers things like wiretap laws, anti-voyeurism laws, paparazzi laws, and the like.¹²¹ While there is some debate as to whether these existing laws could practicably be applied to drones, they certainly reinforce the fact that “states have been the historical locus of governance of personal privacy and. . . have also been the locus of recent tensions between privacy and the First Amendment.”¹²² And states should, in fact, continue to serve that role. They are in the best position to determine the exact regulations that represents the balance between their own citizens’ needs for privacy, free speech, and utility of new technology.¹²³

The enterprising states that have already begun to draft legislation concerning drone surveillance are well on their way to finding that balance.¹²⁴ While some address surveillance from law enforcement via use of a drone, many concern a variety of activities carried out by privately owned drones.¹²⁵ This variety provides a snapshot of how each state can have very different concerns:

1. California AB 856 amended invasion of privacy laws and expanded liability for physical invasion of privacy to include a person knowingly entering into the airspace about the land of another person without permission.¹²⁶
2. Louisiana SB 183 is specifically targeted at regulating drones in commercial agricultural operations, by authorizing the Louisiana commissioner of agriculture and forestry to issue permits and adopt

115. See Nat’l Conference of State Legislatures, *Current Unmanned Aircraft State Law Landscape*, <http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx> (last visited Aug. 16, 2016).

116. *Id.*

117. *Id.*

118. Bennett, *supra* note 106, at 4.

119. *Id.*

120. *Id.*

121. *Id.* at 5.

122. Kaminski, *supra* note 105, at 66.

123. *Id.*

124. Bennett, *supra* note 106, at 6.

125. *Id.* at 5.

126. Assemb. B. 856, 2015 Gen. Assemb., Reg. Sess. (Cal. 2015).

rules pertaining to their use.¹²⁷

3. Michigan SB 54 prohibits using drones to interfere with or harass an individual who is hunting while SB 55 prohibits using drones to take game.¹²⁸
4. Texas HB 1481 strictly prohibits the operation of a drone over a critical infrastructure facility, which they define to include such things as petroleum refineries, chemical manufacturing facilities, water treatment facilities, transmission facilities used by federally licensed radio and television stations, high hazard dams, and many others.¹²⁹

These are only a few examples of what states have come up with. The beauty of this simultaneous experimentation is that eventually, state civilian drone laws can converge into a stable foundation upon which other states can build.¹³⁰ As more and more of these state laws pass First Amendment scrutiny in courts, the foundation grows clearer and the balance between the competing interests can be found. As it is, though, we “truly do not have a uniform idea of how to balance privacy against speech rights in gathering information.”¹³¹ If the FAA steps in on behalf of the federal government and blindly attempts to strike that balance, it risks a detrimental impact on implementing cohesive, encompassing drone regulations.

V. CONCLUSION

Whether you prefer to call them drones or Unmanned Aerial Systems, this new technology is a reality in rapidly developing world. Although drones got off to a rough launch and are still surrounded with misgivings and uncertainty, the path is not as winding as it used to be. The FAA has picked up the lead passed to it by Congress to tackle this national issue, but its guidance leaves much to be desired. Particularly, their implementation of small, piecemeal regulations can result in an uncomfortable amount of uncertainty in an industry that can hardly stand more confusion. Nevertheless, the FAA *is* taking slow but sure steps to ensure that drones and all forms of UAS experience a solid, safe integration into the National Airspace System for hobbyists and commercial operators alike. This is the proper approach because it gives the United States the best chance of staying globally competitive in a massive new market by eventually guaranteeing commercial drone operators that they can have a seamless experience not just between states, but potentially across international borders.

When it comes to the more delicate issues such as privacy rights, the FAA

127. S.B. 183, 2015 Leg., Reg. Sess. (La. 2015).

128. S.B. 54, 98th Leg., Reg. Sess. (Mich. 2015); S.B. 55, 98th Leg., Reg. Sess. (Mich. 2015). As with regulating drone use over agricultural operations, many of these hunting regulations are specifically aimed at protecting recreational hunters, fishers, and other gamesmen from harassment and privacy invasions by activists who are opposed to their activities.

129. H.B. 1481, 2015 Leg., 84(R) Sess. (Tex. 2015).

130. Kaminski, *supra* note 105, at 66.

131. *Id.*

should defer to the States for two reasons. First, because many States already have relevant systems in place, such deference will promote efficiency in the judicial systems because States are already prepared to address the inevitable multiplicity of legal issues sure to arrive as drone use becomes more widespread. Second, States are also in a better position to experiment with legislation. Experimental federalism is one of the most powerful tools we have at our disposal, and its interconnected workings of heterogeneity and interdependence could be the key in establishing a system that can survive and thrive in a dynamic and changing world.¹³²

This harmonious approach of combining a skeletal system of national regulations implemented and enforced by the Federal Aviation Administration with an experimental myriad of state legislation to fill in the more delicate essentials is the most logical approach. It is the best way for the legal system to keep pace, rather than lagging on the heels of vital technological and commercial development.

132. Gewirtzman, *supra* note 111, at 254.