POINT

Clearing the Air: ULC Rightfully Rejects Property Rights Advocates' Line in the Sky

By Joshua S. Turner & Sara M. Baxenberg

The proliferation of small unmanned aircraft systems (UAS, or "drones" in the vernacular) in recent years and the extent to which UAS technology stands poised to transform numerous industries may appear to raise novel legal issues for those who are concerned about these aircraft flying overhead and becoming part of daily life. Indeed, as companies continue to innovate, developing UAS applications for package delivery, infrastructure inspection, search and rescue missions, and all manner of groundbreaking operations, the presence of this technology has sparked debates on issues including the boundaries of private property; the role of federal, state, and local governments; and the rights of property owners.

None of these debates, however, is fundamentally new—they emerged and were deliberated and settled more than 50 years ago as "traditional" manned aviation evolved from a revolutionary to a routine way to transport people and property. Although drone operations present new fact patterns, the experience of manned aviation provides a clear route to resolution: a legal paradigm in which property owners' *use of their land* is protected from undue interference, but property owners cannot claim a per se right of exclusion in the airspace *above* their land.

The Aerial Trespass Doctrine Balances Competing Interests and Ensures Airspace Safety

This resolution arises out of the well-established doctrine of "aerial trespass," a hybrid approach that incorporates elements of both nuisance and property law to balance the rights of property owners with the need to safeguard the national common interest in safe and efficient air navigation. The aerial trespass doctrine recognizes that to serve the latter interest, aviators must be able to overfly private property without first needing to negotiate easements or seek individual permissions. Similarly, in granting broad regulatory authority to the Federal Aviation Administration (FAA) in the areas of air navigation and aviation safety, Congress has recognized that to ensure the safety of the national airspace, a sole regulator—rather than 40,000 municipal governments or millions of individual property owners—is essential.

But with the emergence of drones, some advocates are looking to reopen these settled debates and expand the rights of property owners. In the guise of protecting "traditional" property rights, they urge something far more radical—a rejection of decades of precedent and a revival of elements of the defunct *ad coelum* doctrine, which would give property owners an absolute right to exclude from the airspace itself, i.e., it would equate overflight with the historical, land-based tort of trespass. If successful, this wholesale rewrite of aerial trespass law would both threaten the safety of the national airspace system and potentially kill a nascent technology before it can even get off the ground.

This revisionary effort ignores the underlying questions that animate these debates: what does it mean for small, unmanned aircraft to substantially interfere with the use of property on the ground, and is that interference different in kind from the types of interference that have to date been caused by more traditional aircraft? Thoughtful deliberation of these questions will allow aviation, tort, and property law to move forward in a way that coheres with existing law and respects the interests of all stakeholders—property owners, the aviation industry, and regulators alike.

The origins of the aerial trespass doctrine date back to 1946, when the Supreme Court held in *United States v. Causby* that persistent, low-level overflights by U.S. military aircraft using a neighboring airfield constituted a taking of a chicken farmer's property because of the disturbance the flights caused to the farmer's chickens.[1] The *sine qua non* of the Court's ruling was that the flights were "so low and so frequent as to be a direct and immediate interference with the enjoyment and use of the land."[2] The doctrine of aerial trespass developed directly from this precedent, incorporating both the concept of low overflights and their impact on enjoyment and use of land. As set forth in the *Restatement (Second) of Torts*, "[f]light by aircraft in the air space above the land of

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another is a trespass if, but only if: (a) it enters into the immediate reaches of the air space next to the land, *and* (b) it interferes substantially with the other's use and enjoyment of his land."[3] In the decades that followed, courts applied this standard in evaluating trespass claims against aircraft overflights.[4]

Although the *Causby* Court found that a taking had occurred—and thus identified a *limit* on the ability of government aircraft to transit the airspace—it is critical to understand how the decision also significantly limited property rights. Specifically, the Court considered the "ancient" *ad coelum* doctrine—under which "ownership of the land extended to the periphery of the universe"—and found that "that doctrine has no place in the modern world."[5] As a result, while the high volume of low-flying military aircraft at issue and the direct adverse effect they had on the farm's operation resulted in a taking, the Court observed that, as a general matter, "[t]he airplane is part of the modern environment of life, and the inconveniences which it causes are normally not compensable under the Fifth Amendment."[6]

Underlying the Court's express rejection of the *ad coelum* doctrine was the important recognition that property rights can change as technology and the public interest in using that technology evolve. Indeed, by the time the *Causby* Court was writing, the aviation industry and the obvious public benefit of aircraft had developed such that, in the Court's view, "common sense revolts at the idea" that if *ad coelum* property rights were allowed to persist, "every transcontinental flight would subject the operator to countless trespass suits."[7] The Court was able to reach this position in part because of the extent to which the federal government had already occupied the fields of air navigation and aviation safety as of 1946. As the *Causby* Court observed, the Air Commerce Act of 1926 established both "the complete and exclusive national sovereignty in the air space" held by the U.S. government and the "public right of freedom of transit . . . through the navigable airspace of the United States" held by every U.S. citizen.[8] As a result, the Court found, "the airspace is a public highway," and private trespass claims must give way or "private claims to the airspace would clog these highways, seriously interfere with their control and development in the public interest, and transfer into private ownership that to which only the public has a just claim."[9]

Federal primacy in the areas of air navigation and air safety has only grown in the post-*Causby* era. In 1958, in the wake of a series of air disasters caused by poor coordination, the Federal Aviation Act established the FAA (originally called the Federal Aviation Agency) and began transferring the authority of the precursor Civil Aeronautics Authority to the new agency.[10] The FAA was charged with, among other responsibilities, "formulat[ing] policy with respect to the use of the navigable airspace"; "assign[ing] by rule, regulation, or order the use of the navigable airspace"; and, in so doing, ensuring "the safety of aircraft and the efficient utilization of such airspace."[11] As the FAA developed pervasive regulatory frameworks governing nearly every aspect of aircraft operation, the U.S. airspace developed into one of the most crowded and complex in the world—but, critically, also the safest.

Property Rights Advocates Overread Causby and Misunderstand Aviation Law

In the modern debates over ownership of the airspace that have emerged in the age of drones, property rights advocates assert that *Causby* and federal law pertaining to airspace access actually *compel* the conclusion that property owners have a right to exclude drones from the airspace above their property. But there are at least four key points that property rights advocates either overlook or just get wrong.

Causby *Did Not Establish a Property Right in Airspace*

Property rights advocates often assert that *Causby* established a property right in the airspace above a person's real property. In so doing, they pull two quotes from the opinion: first, "the landowner . . . must have exclusive control of the immediate reaches of the enveloping atmosphere"; and, second, "the landowner, as an incident to his ownership, has a claim to [the superadjacent airspace] and . . . invasions of it are in the same category as invasions of the surface."[12]

However, these quotes cannot be divorced from their context or the ultimate holding of the case. The ellipses in the first quote hold an important qualification. The quote in full is: "[I]t is obvious that *if the landowner is to have full enjoyment of the land*, he must have exclusive control of the immediate reaches of the enveloping atmosphere."[13] The full quote makes clear that it is only in the context of enjoyment of the *land* that a property owner has any control over the airspace at all. Similarly, the sentence that directly precedes the second quote is: "The superadjacent airspace at this low altitude is so close to the land that *continuous invasions of it* affect *the use of the surface* of the land itself."[14] Thus, *Causby* makes plain that the only "claim" that a property owner has in regard to airspace occurs when frequent flights within the airspace affect the use of the ground.[15] Read in context, these cherry-picked statements are entirely consistent with the aerial trespass doctrine and do not support the notion that a landowner has a property right in the airspace itself.

Other parts of *Causby* reinforce this, as the Court repeatedly focused on a landowner's ability to make use of the land and nowhere suggested an absolute right to exclude aircraft. For instance, in discussing control of the "immediate reaches," the Court observed that if such control did not exist, "buildings could not be erected, trees could not be planted, and even fences could not be run."[16] If property owners had

an absolute right in the airspace above their land, the impact on the use of the land below would simply be irrelevant to the analysis.

Finally, the holding in *Causby* confirmed that it is the interference with the use of the land—not simply intrusion in the airspace—that constitutes the taking of property. The Court's holding was that the specific flight operations at issue, which involved repeated, low-altitude flights by military aircraft using an airport located less than 2,500 feet from the Causby family's property, effected a taking, specifically because the overflights were "so low and so frequent as to be a direct and immediate interference with the enjoyment and use of the land."[17] Any discussions of what property rights might exist in other circumstances are, at best, dicta.

Causby *Does* Not *Support an Altitude-Based Definition of "Immediate Reaches" of Property*

Property rights advocates are also quick to note the specific altitudes of the flights at issue in *Causby*, and they often suggest that these support designating altitude-based lines in the sky under which a property owner can exclude any aircraft that transits the property. This argument not only makes the analytical misstep of divorcing intrusion into the immediate reaches—the first prong of aerial trespass—from the necessary second prong of interference with the use and enjoyment of the land, but it also injects far more specificity into the "immediate reaches" concept than the Court was willing to establish. Indeed, while the Court noted that the overflights at issue took place 83 feet above ground level and that these flights took place in the "immediate reaches" for purposes of the takings analysis, the Court left open the questions of how low or high the immediate reaches extend and, importantly, whether their boundaries are absolute or they vary depending on the nature of the intruding aircraft or the intrusion it commits.

Federal Sovereignty and Technological Evolution Were Central to the Court's Decision

Property rights advocates often overlook the important role that recognition of technological advances and federal primacy played in the *Causby* decision. These concepts have much to lend to the discussion about airspace rights in the era of drones.

First, just as the advent of manned aviation led the *Causby* Court to reject the *ad coelum* doctrine, the unique capabilities and features of small UAS and the public interest in enabling scalable UAS operations may well similarly require evolutionary thinking about what it means to own a piece of land.

Second, the federal primacy in airspace regulation that the *Causby* Court identified has only intensified in the decades following the decision as the airspace has grown more complex and the regulatory frameworks more robust. This environment underscores the need for federal control of the airspace that cannot, as a matter of law, and should not, as a matter of policy, be eroded by the trespass claims of property owners.

FAA Has Regulatory Authority Over, and Operators Have a Right to Transit, "Navigable Airspace"

In asserting that the law supports a right to exclude UAS, property rights advocates also tend to misconstrue the concept of "navigable airspace." As the *Causby* Court recognized, the right to air navigation adopted by the Air Commerce Act of 1926 extends to "navigable airspace," which is defined today in the U.S. Code as the "airspace above the minimum altitudes of flight prescribed by regulations under [certain portions of Title 49 pertaining to air commerce and safety], including airspace needed to ensure safety in the takeoff and landing of aircraft."[18] Because part 91 of the FAA's rules defines "minimum safe altitudes" for aircraft as 500 or 1,000 feet, depending on whether the area is sparsely or densely populated,[19] and because the regulations governing UAS contain no parallel provisions expressly establishing a "minimum altitude" for drones, property rights advocates argue that the area below 500 feet is not actually navigable airspace, and, accordingly, aircraft do not have a right of transit. As such, property rights advocates contend, landowners and municipalities have a right to exclude.

This hypertechnical argument misunderstands the concept of navigable airspace, the policy objectives it seeks to achieve, and the scope of federal authority. Indeed, by focusing solely on the 500-foot provision in section 91.119, property rights advocates overlook the fact that the FAA defines "minimum altitudes"—using that precise term—in a number of different regulations covering a number of different contexts.[20] Indeed, section 91.119 itself imposes two *different* minimum altitudes—one for sparsely populated areas and one for congested areas. To identify all of the regulations that establish a minimum altitude, pluck out the lowest number, and call that "the" minimum altitude for the purpose of the definition of "navigable airspace" gravely misunderstands the concept of navigable airspace. It is not one immutable thing but rather a dynamic concept that varies depending on the risk posed by a particular operation: navigable airspace for aircraft in congested areas is different from navigable airspace for aircraft using autopilot is different from aircraft operating near the Grand Canyon.[21]

And for good reason: the public interest in air navigation diminishes rapidly if the operations cannot be conducted safely. Thus, the legislative definition of "navigable airspace" is not intended to divide the airspace where operators can fly, and the FAA can regulate from the airspace in which landowners and municipalities can exert control. Indeed, as set forth above, the federal government has exclusive sovereignty over *all* airspace, not just navigable airspace,[22] and the FAA similarly has

authority over the use of all airspace to ensure "the safety of aircraft and the efficient use of airspace."[23] The reason that federal law recognizes navigable airspace at all is not to observe or protect the rights of property owners, but instead to ensure the safety of aircraft operations.

It is thus plain that the airspace in which the FAA permits UAS to fly—the ground to 400 feet for small UAS, subject to the FAA's duly promulgated part 107 regulations—constitutes navigable airspace within the meaning of federal law. The regulations do not prescribe a minimum altitude for small UAS because, unlike typical manned aircraft that weigh hundreds or thousands of times more than a max-55-pound small UAS, there is no altitude in that range at which UAS operations are per se unsafe. It is of no moment that the FAA did not adopt a regulation that sets a "minimum altitude" for small UAS at zero feet: the airspace in which FAA regulation permits UAS operation is, by definition, navigable airspace for UAS.

The ULC Draft UAS Trespass Law Attempted to Maintain the Causby Balance; Eleventh-Hour Efforts by Some Property Rights Advocates Derailed the Process

In 2019, the Uniform Law Commission (ULC)—a national organization that develops proposed state laws in areas that could benefit from uniformity—developed a draft trespass law to apply to UAS overflights. Although the first draft of the model law would have established a 200-foot line in the sky under which UAS flights conducted without permission of the property owner would have constituted a per se trespass, the final proposal hewed much more closely to the existing aerial trespass doctrine.

The first draft of the ULC's proposal[24] drew criticism from a wide range of stakeholders[25]—including the FAA itself[26]—raising concerns about the shift in law that it represented. The committee responsible for drafting the law took these concerns seriously, engaging in thoughtful debate with a variety of stakeholders, including representatives from industry and think tanks.

The committee also wrestled with whether to include separate provisions related to invasions of privacy. As with trespass, the committee's initial instinct was to prescribe rigorous new rules that would have subjected UAS to more exacting standards than existing law applied to similar conduct or technologies. After lengthy discussions, the committee concluded that this technology-specific approach was inappropriate. The committee noted that states take different approaches to safeguarding privacy and that it was better to give states the flexibility to apply these frameworks to drones rather than try to mandate a unique, uniform approach that would upend existing privacy laws.

With respect to trespass, the committee ultimately produced a compromise proposal that would have required that a UAS flight substantially interfere with the use and enjoyment of the property to constitute a trespass and would have provided a multifactor test to help courts determine whether an aerial trespass via drone had occurred.[27] The numerous factors proposed in the "substantial interference" test recognized the possibility that drones could substantially interfere with property use in ways unique to their capabilities, even if they caused significantly less disturbance to the underlying property than that at issue in *Causby*—a recognition that the existing aerial trespass doctrine in no way required. Far from being a giveaway to industry, the end result was a true compromise between the positions of various stakeholders: for instance, the proposal focused entirely on interference with the use and enjoyment of the land, altogether omitting the first prong of the aerial trespass doctrine that requires an intrusion into the immediate reaches of property.

The ULC's proposal offered a promising approach for applying the aerial trespass doctrine to drones. However, shortly before the proposal was to be voted on by the full ULC, a coalition of property rights advocates launched a campaign against the proposal.[28] These advocates sought a complete rewrite of the proposal and fundamental alteration of existing law. For instance, one last-minute commenter asserted that

"[t]here needs to be a zone into which a landowner may prohibit any entry by drones and a means to identify the particular drone operator for any drone operating outside the 'no fly area.'"[29] Another recommended either a return to the per se trespass "line in the sky" approach from the rejected first draft or a presumption of substantial interference when operations are conducted at an altitude below the tallest structure on a given piece of property[30]—a wholly unworkable standard. In support of his assertion that the ULC proposal was a "radical departure from existing law," another commenter even offered that "the adoption of the *Causby* dictum in Section 159(2) of the *Restatement Second of Torts* is not to be taken literally[.]"[31]

Ultimately, this last-minute campaign, coupled with the significant changes the committee made to the initial "line in the sky" draft presented the year before, caused the ULC to withdraw the proposal before it was called for a vote at the Commission's annual meeting.

Rewriting Property Law May Have Grave Consequences for the Future of Aviation Safety and Technological Innovation

The failure of the ULC process will not be the end of the story. Property rights advocates have continued their attempts to rewrite the law to enable landowners to exclude drones from the airspace above their property.

If successful, these proposals will erode federal primacy in the airspace, introducing millions of new de facto air traffic controllers in the form of individual property owners, and pave the way for a patchwork of local airspace regulation, jeopardizing aviation safety. Such actions also will thwart the ability to conduct scalable UAS operations, threatening the future of the UAS

industry and the numerous public benefits it would provide—the value of which are particularly evident as the nation grapples with a global pandemic.

Ironically, to the extent that these efforts to protect property rights are actually motivated by concerns about privacy, drawing lines in the sky is a blunt and ineffective tool to address those issues. A drone operating at 201 feet can take the same pictures as a drone at 199 feet.

The best outcome for all stakeholders is one that seeks to thoughtfully apply the existing aerial trespass doctrine to the novel issues presented by drones, rather than upending decades of law and starting from scratch. This approach requires introspection on all sides of the debate, including careful consideration of the nature of property rights in light of this new technology, the unique ways in which drones can affect the use and enjoyment of property, and the ways in which the exercise of property rights affects the federal system of air navigation. Otherwise, we may well end up with laws that leave drones grounded entirely; in this new technological era, "common sense revolts at the idea."[32]

Endnotes

1. 328 U.S. 256 (1946).

2. *Id.* at 267.

3. Restatement (Second) of Torts § 159(2) (1965) (emphasis added).

4. *See, e.g.*, Pueblo of Sandia *ex rel.* Chaves v. Smith, 497 F.2d 1043, 1044–45 (10th Cir. 1974) (granting summary judgment against plaintiff suing airport for trespass regarding airplanes regularly crossing over plaintiff's land "at heights of 150 feet or less" because plaintiff failed to show "substantial interference with the actual use of [plaintiff]'s land"); Bevers v. Gaylord Broad. Co., L.P., No. 05-01-00895-CV, 2002 WL 1582286, at *6 (Tex. App. July 18, 2002) (reversing grant of summary judgment for trespass claim against helicopter operator because "evidence of a single ten-minute hover over her property at 300 to 400 feet does not, as a matter of law, rise to the level of 'substantial interference' with the use and enjoyment of the underlying land").

5. *Causby*, 328 U.S. at 260–61.

6. *Id.* at 266.

7. *Id.* at 261.

8. *Id.* at 260 (citing 49 U.S.C. §§ 176(a), 403). (These concepts have since been recodified in slightly different language at 49 U.S.C. § 40103(a).)

9. *Id.* at 261.

10. Federal Aviation Act of 1958, Pub. L. No. 85-726, 72 Stat. 731, 744, § 301.

11. *Id.* at 749, § 307.

12. *Causby*, 328 U.S. at 264–65.

13. *Id.* at 264 (emphasis added).

14. *Id.* at 265 (emphasis added).

15. *Id.*

16. *Id.* at 264.

17. *Id.* at 267.

18. 49 U.S.C. § 40102(32).

19. 14 C.F.R. § 91.119(b), (c),

20. *See, e.g.*, *id.* §§ 91.177 (establishing minimum altitudes for aircraft operating under instrument flight rules), 93.307 (aircraft operating near Grand Canyon National Park), 121.579 (aircraft using autopilot).

21. *Id.* §§ 91.77; 121.579; and 93.307.

22. 49 U.S.C. § 40103(a)(1).

23. *Id.* § 40103(b)(1).

24. Nat'l Conference of Comm'rs on Uniform State Laws, Tort Law Relating to Drones Act (Mar. 9–11) (2018 Drafting Committee Meeting), https://www.uniformlaws.org/viewdocument/march-2018-committee-meeting-draf-1?CommunityKey=2cb85e0d-0a32-4182-adee-ee15c7e1eb20&tab=librarydocuments.

25. *See, e.g.*, Letter from Associations and Companies Representing Unmanned Aircraft Industries to Anita Ramasastry, Uniform Law Comm'n (July 5, 2018), https://www.uniformlaws.org/viewdocument/comments-associations-and-compani?CommunityKey=2cb85e0d-0a32-4182-adee-ee15c7e1eb20&tab=librarydocuments.

26. Letter from Steven Bradbury, Gen. Counsel, Dep't of Transp., and Charles Trippe Jr., Chief Counsel, Fed. Aviation Admin., to Paul Kurtz & Mark Glaser, Chair & Vice Chair, Respectively, Tort Law Relating to Drones Comm., Nat'l Conference of Comm'rs (July 11, 2018), https://www.uniformlaws.org/viewdocument/comments-s-bradbury-dept-of-tr?CommunityKey=2cb85e0d-0a32-4182-adee-ee15c7e1eb20&tab=librarydocuments.

27. *Id.*

28. *See, e.g.*, Letter from the Joint Editorial Bd. for Uniform Real Property Acts to Comm'rs, Uniform Law Conference (June 5, 2019) [hereinafter JEBURPA Letter], https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=a22024a3-ad6c-5f2d-a96c-1e6981b32cba&forceDialog=0; Letter from Henry E. Smith, Fessenden Professor of Law & Reporter, Am. Law Inst.'s Restatement Fourth of the Law, Property, to Nat'l Conference of Comm'rs on Uniform State Laws (June 20, 2019) [hereinafter Smith Letter], https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=44cb6696-a733-81f8-c9da-fb5c47852d59&forceDialog=0; Letter from Jo-Ann Marzullo, Section Chair-Elect, Real Prop., Trust & Estate Law Section, Am. Bar Ass'n, to Comm'rs, Uniform Law Conference (June 27, 2019) [hereinafter RPTE Letter], https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=1f86816b-aff6-2b3a-5a3c-baf2f1a9146a&forceDialog=0; Letter from Am. Coll. of Real Estate Lawyers to Comm'rs, Uniform Law Comm'n (July 3, 2019), https://www.uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=170e1617-b926-16f6-1bb8-e6a222c375cf&forceDialog=0.

29. RPTE Letter, *supra* note 28, at 2.

30. JEBURPA Letter, *supra* note 28 at 2–4.

31. Smith Letter, *supra* note 28, at 1, 4.

32. United States v. Causby, 328 U.S. 256, 261 (1946).