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Book Review

Who Owns the Sky? The Struggle to Control Airspace from the Wright Brothers On

By Stuart Banner
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Who owns the sky?

For most of history, people never actually visited the sky, but the common law nonetheless had an answer: "*cujus est solum ejus est usque ad coelum*"—he who owns the soil owns up to the sky. This rule worked well enough for centuries because it only came up when, say, someone built a structure or owned a tree that overhung someone else's land, or when someone provocatively held his arm over his neighbor's fence.

With the dawn of flight, though, the old rule became problematic. Was every aviator a trespasser unless he got permission from everyone whose land he flew over? If the government permitted aviators to fly regardless of this possible trespass, was this a taking

requiring compensation? Does sovereignty even extend that far off the ground?

In *Who Owns the Sky? The Struggle to Control Airspace from the Wright Brothers On*, UCLA law professor Stuart Banner examines how the United States moved from the *ad coelum* rule to the current regime, under which landowners have no right to the sky above them, anyone (with government permission) can fly most anywhere, and governments assume the right to limit access to the air however they see fit.

One might reasonably expect such a book to entail a tedious slog through case law, and in some scholars' hands it might. But the first and foremost thing to say about *Who Owns the Sky?* is that it is unusually dynamic, engaging, and accessible. It turns what would seem like a highly academic subject into a fascinating story about people—lawyers, judges, scholars, legislators, and aviators—trying to figure out how to adapt to revolutionary new technology.

THE OBSOLETE *AD COELUM* RULE

Despite the book's subtitle, its history actually begins long before the Wright Brothers. After the first hot-air balloon flight in 1783, people began to realize that *ad coelum* could lead to absurd results. Jurists occasionally invoked aerial balloon trespass as an example of a trivial injury for which the law wouldn't provide redress, and it appears that no one ever sued a balloonist just for flying over. As Banner puts it, even if the balloonists' flights were technically illegal, "the law was out of step with the expectations of the parties, in that neither landowners nor balloonists thought there was anything wrong with overflights" (p. 27).

Although everyone tolerated balloons, the invention of the airplane forced the legal world to seriously rethink the aerial-trespass problem. Most everyone found the old rule undesirable, but people disagreed on how it could be discarded. Adherents of the common-law view that judges "found" the law (in the people's customs or through reason) had to argue either that earlier courts erred in adopting the principle from Roman law (i.e., they argued that this wasn't actually the Romans' rule), or that the earlier rule was narrower in scope than its wording suggested. Legal positivists

had an easier argument: if judges just "make" law, then they could now make it one way instead of another. And legal realists could simply predict that judges would modify the law because the facts of cases would persuade them to do so.

LEGISLATION AND CONSTITUTIONAL PROBLEMS

As the *ad coelum* debate continued well into the twentieth century, legislatures also attempted to address the problem. Legislators were concerned, however, that if they passed laws permitting overflights, this would constitute a taking of the landowners' airspace for which the government would owe compensation.

Beginning in the 1920s, many states adopted a "Uniform State Law for Aeronautics," which attempted to solve this problem by declaring a *pre-existing* right of flight. That is, the legislation acknowledged that landowners *did* own the airspace above them, but also stated that aviators had a right to pass through. Because the aviators' right supposedly pre-dated the legislation, there would be no need for compensation.

The uniform laws did not create uniformity in all aspects of aviation law, however, so aviators and the airline industry began to ask for federal regulation as well, to reduce confusion over different jurisdictions' requirements for such things as pilot licensing, aircraft registration, and air-traffic control, and to overcome the public's safety concerns about air travel.

Today's legislators would probably find it quaint that many in Congress were troubled by the question of whether the Constitution authorized them to pass such legislation. The American Bar Association's Aviation Committee believed that Congress did not possess such authority and advocated a constitutional amendment. Unsurprisingly, though, Congress ultimately decided that it did have the authority to regulate the skies nationwide. The Air Commerce Act of 1926 directed the Department of Commerce to create air traffic rules and a registration and rating system for pilots.

Banner notes in passing (p. 146) that many industries have sought regulation for anti-competitive purposes, but he does not consider whether the aviation industry could have had such motives. The regulations the industry initially sought were not especially

burdensome, so perhaps it did not. On the other hand, federal control in these areas socialized costs that the aviation industry might have borne in the absence of government. For example, but for government, aviators would have had to devise their own system of determining rights to air routes, just as pioneers of the "wild west" had to make their own rules for establishing and enforcing property rights (Anderson and Hill, 2004), or as those involved in maritime travel in earlier centuries had to provide many so-called "public goods" for themselves (Sechrest, 2004). Also, but for government, the aviation industry would have had to expend its own resources to convince consumers that air travel was safe, as sellers of most other products do.

In fact, of course, the industry's choice was not between private and federal regimes, but between a patchwork of state rules and a single set of federal ones. Given the interstate nature of air travel, federal regulation may seem preferable to minimize compliance costs. And just as the U.S. Constitution is least offensive (to those who favor economic liberty and political decentralization) where it assures freedom of trade and travel between the states, so this type of federal regulation—which arguably serves to "make regular" within the original meaning of the Commerce Clause (see Barnett, 2001) —may seem relatively benign and preferable to the likely alternative.

But things are not so simple. The federal government's initial, seemingly harmless intervention opened the door to many much greater interventions, including cartelization of the airline industry through federal control of entry, routes, prices, and much more, which enriched a handful of companies at consumers' great expense. Although the 1978 Airline Deregulation Act abolished much of the worst regulation—and, as a result, consumers' choices have increased while prices have plummeted—the Federal Aviation Administration continues to limit competition to the detriment of consumers and would-be competitors in the airline industry.[1] Also, by deciding that it had the authority to regulate aviation, Congress further eroded the ostensible limits on its power under the Commerce Clause, which it now invokes to justify regulation of practically anything.

[1] For an overview of history and failures of federal air regulation, see, for example, Smith and Cox (2008), Cleveland and Price (2003), and Poole and Butler (1999).

Banner does not consider these costs, let alone weigh them against the benefits of federal regulation, but instead apparently assumes that all has worked out for the best. But given the decades of economic harm the federal government caused before deregulation and the ongoing harm it causes today, it is not obvious that we would have been much worse off with state-level regulation (which, incidentally, did not destroy automobile travel).

THE END OF *AD COELUM*

Those state and federal laws satisfied the aviation industry, but they upset many landowners who did not want to endure the noise and other damage that low-flying planes could cause. The landowners could not defeat the legislation (for the usual public-choice reasons), but they could and did sue when they suffered individual harm.

The ultimate demise of *ad coelum* came through one such lawsuit, when the U.S. Supreme Court decided *United States v. Causby* in 1946. In that case, low-flying military planes caused the plaintiffs' chickens to "jump up against the side of the chicken house and the walls and burst themselves open and die" (p. 229). The plaintiffs sued the government, arguing that they were entitled to compensation under the Takings Clause of the Fifth Amendment.

The Court's decision, authored by Justice William O. Douglas, could have resolved the case on a narrow ground by simply holding that there was a taking *of land* because the government's flights affected the land. Justice Douglas did reach that conclusion, but then he went much further and opined on what airspace landowners do and do not own. He wrote 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. Otherwise buildings could not be erected, trees could not be planted, and even fences could not be run" (p. 253). Thus, a landowner "owns at least as much of the space above the ground as he can occupy or use in connection with the land," and invasions of that airspace "are in the same category as invasions of the surface" (p. 253).

Interestingly, Banner introduces *Causby* by contrasting the views of utilitarian Jeremy Bentham and proto-Austrolibertarian Frédéric

Bastiat. The Benthamite view is that "[p]roperty and law are born and must die together. Before laws, there was no property: take away the laws, all property ceases" (p. 244). The Bastiat view, in contrast, is that "[p]roperty does not exist because there are laws, but laws exist because there is property" (p. 244).

The Supreme Court effectively embraced the latter view, but not through a rigorous theoretical analysis of natural law or property rights, let alone a citation of Bastiat.[2] Rather, the famously non-rigorous Douglas simply followed his own ideas about common sense. As Banner notes, "After decades of debate, in which many participants had spent years thinking about the question, it had been resolved by one powerful man… who was likely considering it for the very first time" (p. 260).

SOVEREIGNTY

Another question early aviation-law thinkers had to resolve was whether governments had jurisdiction over the skies at all.

Among those who argued that governments lacked any right to the skies was French international-law scholar Paul Fauchille, who argued that airspace by its nature could not be owned because there was no way to occupy it. And, he held, even if there were some way to remain stationary in the sky, a person or government could only own the space actually occupied, nothing more. Fauchille argued that, because of this, the air should be open to aviators of all nations, just as the seas are open to ships of all nations.

Many considered that view to be too "theoretical" and believed that denying governments sovereignty over the skies would be impractical because of "the law of gravity" and because government authority is necessary "to prevent accidents" (p. 57). Banner seems to accept these criticisms, but it is not obvious that the critics are correct. If a plane crashes in a given country, then courts there would have no problem exercising jurisdiction over the pilot. If a plane remains in the air, however, why would a government need to concern itself? Is not the pilot's interest in

[2] An American court has cited Bastiat only once: when an Ohio trial court cited his explanation of subjective valuation in *Harmonies of Political Economy* to conclude that a dog can be something "of value." *State v. Yates* (Ohio C.P. 1887).

preserving his own life as likely to keep him from crashing as any laws? Overflights create some challenging issues—for example, what to do about planes that drop bombs or other objects—but extending government sovereignty upward is surely not the only means of addressing them, and may not have been the best means. It appears that Fauchille's work has not been examined by Austrians or libertarians; scholars interested in exploring these issues further may want to do so.

A related concern around the turn of the twentieth century was the use of the skies for warfare. Treaties in 1899 and 1907 banned the dropping of weapons from balloons because the very notion of bombing was considered inhuman and unacceptable. As U.S. Army Judge Advocate General George B. Davis put it:

> The launching of projectiles from balloons belongs in the same class of undertakings as the proposition to subject coast cities to ransom at the demand of a powerful fleet. That is, both have been proposed, but neither has been seriously considered by a responsible belligerent; indeed, neither practice has any existence in fact, but both have been regarded as constituting a sufficiently serious menace to humanity to warrant an international conference in formulating prohibitory declarations with a view to prevent their occurrence. (p. 45)

That thinking fell out of favor during World War I, when nations began bombing each other and defending their skies. Banner treats this military need as proof that governments must have authority over the skies, including the power to bar foreign aircraft. But he does not consider the possibility of allowing governments or privateers to use the skies to defend the land without actually exercising sovereignty more generally over them. After all, the U.S. military flies over and sails the oceans, yet does not claim sovereignty over them.

LAW AND ECONOMICS

Banner concludes his book by invoking Ronald Coase to briefly argue that the history of air law played out as it did because of transaction costs. In the absence of transaction costs, Banner says (p. 291), "giving landowners the right to exclude aircraft would not have affected the quantity of aviation," because pilots would have paid whatever small price landowners would have charged, and

the common-law rule would have survived. Because of high transactions costs, however, this did not happen. Assertion of national sovereignty was therefore necessary to achieve a similar result:

> If markets could operate costlessly, the new balance of gains and losses brought about by technological change could be accommodated entirely through private transactions. There would be no need for the law ever to change in response to technological change. It is the costliness of transacting that prevents people from purchasing the ability to do what new technology permits, which in turn impels them to seek a change in the law transferring that ability to them. The early aviation writers knew this well, even if they did not express it in precisely this way. (p. 293)

In this discussion, Banner considers the relative gains and losses of landowners and aviators and why the current law creates an optimal result. But this analysis ignores the problem of comparing subjective valuations, and it ignores questions of justice. It also fails to provide much guidance for the future—for example, in outer space, which is the subject of another of the book's chapters. How is a Coasean judge to know what would occur in a no-transaction-costs world, and why should we assume that result to be proper? One way to overcome this problem is through the Austrian understanding of subjective valuation and a Lockean-libertarian theory of property rights—which, incidentally, also leads to rejection of the *ad coelum* rule (Rothbard, 1982, pp. 84–87). Under such an analysis, future legal scholars would not need to grope blindly for answers to problems of new technology, as thinkers did for decades regarding aviation, nor would they need to be expert central planners trying to mimic an imaginary world without transaction costs.

But we can hardly blame Banner for not getting into any of that; they are matters for Austrian and libertarian scholars to take up when they write in this field. As they do, Banner's book will be an invaluable resource.

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