

1932

Adjusting the Conflicting Interests of Landowner and Aviator in Anglo-American Law

Edward C. Sweeney

Recommended Citation

Edward C. Sweeney, *Adjusting the Conflicting Interests of Landowner and Aviator in Anglo-American Law*, 3 J. AIR L. & COM. 329 (1932)
<https://scholar.smu.edu/jalc/vol3/iss3/1>

This Article is brought to you for free and open access by the Law Journals at SMU Scholar. It has been accepted for inclusion in Journal of Air Law and Commerce by an authorized administrator of SMU Scholar. For more information, please visit <http://digitalrepository.smu.edu>.

THE JOURNAL OF AIR LAW

Volume III

JULY, 1932

Number 3

ADJUSTING THE CONFLICTING INTERESTS OF LANDOWNER AND AVIATOR IN ANGLO-AMERICAN LAW

EDWARD C. SWEENEY*

I. THE PROBLEM

Aviation has developed to a point where it now assumes a considerable economic, social and military importance. But, in establishing itself, it has given rise to important legal problems associated with the conflicting interests of landowner and aviator. The question is no longer: shall the aviator be permitted to fly above the land of another, but is, instead: how shall flying activities be conducted so as to be least harmful, if harmful at all, to the owner of the land.

At the outset, it is necessary to state and clarify the problems involved in this conflict of interest. While the settlement of the various questions concerned with trespass, nuisance, liability, etc., can be settled only by the courts, still, it is important that there be a clear understanding of the interests involved and the extent to which they should be protected. An explanation of the different situations in which the aviator's and the landowner's interests come into conflict shows the variety in, and the complexity of, the problems confronting the courts. Every situation involves distinct

*Member of the Illinois Bar, Research Associate at the Air Law Institute.

The writer wishes to acknowledge the very great assistance which he has received from the members of the faculty of Northwestern University School of Law whose suggestions have been invaluable. Particularly, he would mention Dean John H. Wigmore and Professor Robert W. Millar for help in the historical material, Dean Leon Green, Professor Albert Kocourek and Professor Charles T. McCormick for assistance on the trespass-nuisance subject matter, and Professor Fred D. Fagg, Jr., Managing Director of the Air Law Institute.

demands of each party and must be treated separately by the courts if a socially desirable compromise is to be reached. The individual situations may be grouped into the following five classes: (1) flights of aircraft over private property, apart from taking-off and landing; (2) flights of aircraft in taking-off and landing; (3) operation of an airport apart from flying; (4) contact made by an aircraft or its contents with the tangible property of the landowner; and (5) obstructions to aviation caused by the erection of structures or obstructions caused by other activities of the landowner. The first four classes involve interference by aviation with the use and enjoyment of the land surface. The last involves the reverse, namely, the interference of the landowner with aviation. An examination of each of these classes, free from legal verbiage and the technical issues raised, reveals a variety of specific clashes of interest. Suggestions upon the proper manner of dealing with these conflicts will be offered in the final division of this paper.

(1) *Flight of Aircraft Apart from Taking-off and Landing.*

Airways have been established between the important cities of the country and practically all commercial air travel takes place over these airways. Theoretically, an airway is a direct line between two cities, but in practice is more like an ocean ship route than a land highway. However, by the aid of federal air beacons, markers, compasses, and radio-direction-indicators¹ aircraft are able to follow relatively definite lanes and thus fly repeatedly over the same land. The redress afforded landowners located below commercial airways should be greater than that afforded other landowners whose use and enjoyment is only intermittently disturbed by the flight of a cross-country flyer or the aircraft which occasionally wanders off an established airway.²

1. *General Airway Information*, Airway Bulletin No. 1, Sept. 1, 1931 (Washington, Gov. Printing Office, 1931), Radio Aids to Air Navigation, pp. 69-80. For a description of the Aural and Visual type of radio range beacon systems, see pages 70 and 73.

2. A writer in 1910 vividly describes the annoyances that repeated flights may create: "Such machines are now very few in number, and are quite welcome to go where their owners will, but in time they may become numerous and develop unsuspected dangers. One a year flying over a man's house might be a negligible menace, but forty or fifty a day, with ropes dangling, ballast falling, anchors hanging, motors in danger of exploding, and the whole machine liable to drop and set fire to or smash crops or dwellings,—would be an entirely different matter." "Law of the Air; Should the Rights of Aviation Be Defined by Statute," 16 Case and Com. 216 (1910).

If the flight of aircraft causes disturbance to a landowner, the degree of disturbance will vary materially according to the particular use to which the land is put. It is well known by aviators that certain domestic animals are more easily frightened than others by low-flying aircraft. While an aircraft flying at 500 feet might cause no disturbances at all to grazing cattle or to horses,³ it might seriously interfere with the conduct of a chicken ranch or fox farm. Several instances of injury to animals caused by the normal flight of airplanes have been reported.

"I am a poultry raiser keeping about 2,500 Leghorns", wrote the proprietor of the Cackle Corner Poultry Farm at Garrettsville, Ohio, to the Postmaster General. "About once in two or three weeks an airplane, sometimes it is a U. S. mail plane, flies over my place so low that the hens become so frightened that they pile up, thus injuring each other and my egg yield drops one or two hundred eggs per day, and by the time I get them back to normal along comes another low flying machine and sends my egg yield down again. I dare say a small flock would not be harmed as much as the larger flocks, but the loss to me is so great that I fear it may put me out of business and I wondered if the planes could not be requested to fly higher." In this instance the Postmaster General requested the National Air Transport, Inc., operating the United States mail planes between New York and Chicago, to order its pilots to ascend a little higher when they reached Garrettsville.⁴

3. "A plane landing in a field near Wrexhamb, Devonshire, frightened a black horse and it bolted with fright. Four days later its mane had turned pure white and there were streaks of gray in its tail." I. N. S., London, May 9, 1932. The Aeronautical News for May 30, 1932 reports this incident and states that the place was Denhighshire, England, and that the horse belonged to Sir Alfred McAlpine.

4. Postoffice Dept. Press Release, Domestic Air News, Jan. 31, 1928, cited in *Jome*, "Property in the Air as Affected by the Airplane and Radio," 4 Jour. Land & Publ. Util. 257, 265 (1928), 62 Am. L. Rev. 887 (1928).

In *Neiswonger v. Goodyear Tire & Rubber Co.*, 35 F. (2d) 761 (N. D. Ohio 1929), the flight of a Goodyear blimp, while flying over plaintiff's farm at an altitude between 150 and 200 feet caused the plaintiff's team of horses to run away with the wagon which he was loading and physically injure the plaintiff. Demurrer was overruled and presumably the airship company compensated the plaintiff for his injury.

"An Iowa man last year filed a claim against the Government because U. S. airplane No. 1646 caused his horses to run away, with resulting damage." *Woodhouse*, "Who Dropped the Monkey Wrench on your Head?" 9 Flying 38, 40 (1920).

In *Glatt v. Page* (Dist. Ct., 3d Jud. Dist. of Neb., Docket 93-115, 1928), the plaintiff alleged that airplanes disturbed his livestock and prevented his poultry from laying. The District Court granted an injunction and gave nominal damages. Possibly livestock will eventually become accustomed to airplanes, in the same manner in which they have become accustomed to the automobile.

"There was a farmer near Kansas City who obtained an injunction against an aeroplane company, restricting it from flying aeroplanes over his land." *Woodhouse*, *supra*, p. 38.

"When horses on the farm of Mr. C. C. Wedding were being fed they

"A fox farm has been damaged last year in excess of \$100,000," stated the Director of Aeronautics of Ohio in his annual report for 1929, "because of the circling of airplanes low over the fox farm. The female foxes which are highly excitable at all times in their efforts to protect their pups from the supposed danger either smothered them or choked them to death in carrying them too far by the neck."⁶

Numerous instances may be mentioned where the special use of land may make the ordinary flights of aircraft a peculiar annoyance. A hospital or sanitarium is best located where it is free from disturbing noises. The same applies to schools of all kinds,⁶ also to land used for decoying water-fowl. Country estates are usually located in secluded spots to secure privacy and freedom from city noises and the operation of a commercial airway overhead can easily defeat this purpose. It is reported that certain country estates north of Chicago which are situated within several

were frightened by an aeroplane which flew low over the property. They had not recovered from their fright when placed in the reaper-thresher, and bolted. The machine, which cost £200 recently, was badly damaged, Mr. Wedding injured his leg, and his horses received cuts." Incident at Owen, South Africa; 2 Wings 29 (Australia, 1932).

"In England, a member of the Royal Flying Corps was arrested and sentenced to be discharged from the service for flying at a low altitude, thereby damaging telegraph wires and endangering the public. The sentence was commuted to twenty-eight days' detention and loss of two months' pay." *Woodhouse*, supra, p. 39.

In *Bertrand, Brinquant, Mauge, c. Sté Farman*, 3 Rev. Jurid. de la Locomotion Aérienne 282 (1912), the "Civil Tribunal of the Seine has held that aeroplanes flying from defendant's aerodrome over plaintiff's land at a height of from five to fifteen meters, frightening domestic animals and game, attracting spectators, and thus injuring crops and generally inconveniencing the plaintiff, render the defendant liable to a judgment for damages." *Zollmann*, Law of the Air (Milwaukee: Bruce Pub. Co., 1927), p. 26; *Valentine*, "Aerial Trespass," 24 Jurid. Rev. 321 (1913).

5. *Tuttle and Bennett*, "Extent of Power of Congress over Aviation," 5 U. of Cinc. L. Rev. 261, 262 (1931).

6. "In Trenton, New Jersey, the Board of Education of Wayne Township has sought to enjoin the construction of an airport near one of the public schools. The claims made in the complaint are: the establishment of the airport will involve the flying of the aircraft over the school grounds at low altitudes and the presence of aircraft will distract the faculty and the pupils, so that the business of education will be interfered with." *Wenneman*, Municipal Airports (Cleveland: Flying Rev. Pub. Co., 1931) p. 277.

"It appears that in England the Roedean School, Ltd., has sought an injunction to restrain the Cornwall Aviation Co., Ltd., from flying or permitting the flight of aircraft over or near plaintiff's school so as to constitute a nuisance to plaintiff, its teachers, and pupils." *Times*, July 3, 1926, cited in *Zollmann*, Law of the Air, p. 28.

Woodhouse reports an unusual complaint: "The pastor of the Presbyterian Church in Cranbury, New Jersey, caused the arrest of an aviator on the charge of flying near the church on Sundays, disturbing the services and keeping people away. It seems that many persons stayed outside to watch the aeroplane instead of joining the congregation inside, according to their usual custom." *Woodhouse*, supra, p. 40.

miles of the airways between Chicago and Milwaukee, and Chicago and Madison, have become less desirable and have decreased in value due to the airway.⁷ City dwellers also have at times complained of aircraft flying over their property.⁸ Low flying is annoying and of great potential danger when over large crowds of people, such as over football games⁹ and races.¹⁰

7. Lecture of Gen. MacChesney at The Summer Institute of The Air Law Institute, 1930.

In speaking before the American Bar Association in 1931, Gen. MacChesney criticized the *Smith* case for substantially holding "that the people who owned this country estate in question had bred themselves into a state of highly nervous organization whereby noises affected them that did not affect the ordinary man, so that the flight of these airplanes in landing and in flying and taking off from it annoyed them 'although the noise was no greater than that of the ordinary truck upon a city street.'" General MacChesney then said: "Now I submit to you that in the first place the man who ordinarily is in position to buy a country estate when he lives in the city, does not have to put up with the noise of a truck upon a city street alongside his home, and that the very purpose of acquiring a country estate or a substantial number of acres, is to get away from the annoyance of a noise no greater than that of a truck upon the city streets. The fact of the case is, what gives value to large areas of land in the country adjacent to our great cities is the opportunity of getting away from a noise no greater than that of a truck upon the city streets." 56 A. B. A. Rep. 87 (1931).

In *Auto Act. Ges. v. Schr.*, "Defendant established a flying school and sent aeroplanes at a low altitude over the plaintiff's adjoining land, making a great noise. The value of plaintiff's land was so affected by the defendant's actions that on a sale he was able to obtain considerably less for it than would otherwise have been the case. It was held that he was entitled to recover the difference." 47 Entscheidungen des Reichsgerichts in Zivilsachen (Neue Folge) 25 (1919), from *Zollmann*, Law of the Air, p. 27.

8. In *Johnson v. Curtiss Northwest Airplane Co.* (Dist. Ct., 2d Jud. Dist. Minn. 1923) the defendant owned property in the city of St. Paul upon the lawn of which one of defendant's planes crashed. Plaintiff sought damages and an injunction against all further flying over his premises. The court followed the Minnesota statute, enjoined all acrobatic flying over plaintiff's premises and all other flying under 2,000 feet, and presumably granted the plaintiff compensation for injury to the land from the falling of the airplane.

"It is currently reported in the press that in a New York village an injunction is being sought by property owners against the flying of airplanes over their residence, in which they allege inter alia that last February a plane fell on their house doing damage to the extent of over \$2,000, which they had to bear, the pilot and his employer being without fault and the injury being merely one of the inevitable casualties of a form of transportation not yet perfected." The editor of Law Notes informs us that this arose in Nassau County, probably the village of Hicksville, Mineola or Hempstead, but that no further action in court was ever reported. "Aviation or Airport as Nuisance," 34 Law Notes 141 (1930).

9. By the federal air traffic rules, flying over "open-air assemblies of persons" is required to be above 1,000 feet. Air Commerce Regulations, Aero. Bull. No. 7, Chap. 7, Sec. 71 (4), in effect Jan. 1, 1932.

10. In *Rex v. Henderson* (Berks magistrates at Windsor Guildhall, Aug 6, 1927), the magistrates found that an aviator had been "flying low to the danger of the public" during the Ascot Heath races, and was dealt

The type of flying, as well as the kind of craft and number of motors, will affect the degree of annoyance and the attitude with which the courts must consider complaints made by landowners. Stunt flying should undoubtedly be placed in a separate category from ordinary flying because of the increased danger of accidents.¹¹ Flying, which is pursued for the express purpose of annoying persons or animals on the ground, should be separately considered.¹² In the same category is the type of flying known as "hedge-hopping," that is, flying so near the ground that it is necessary to zoom upwards to clear the tops of trees and buildings. Hunting from an airplane may at times disturb the landowner, especially when he is using his own land for decoying waterfowl and the like.¹³ Sight-seeing excursions over country estates raise the question of privacy in a particularly forceful manner. Aerial photography raises the same problem.¹⁴

By the use of slow-moving airships, blimps, or even autogiros,

with under the Probation of Offenders' Act. The Times, 8th Aug. 1927; "Dangerous Flying Charge," 91 Justice of Peace 662 (1927).

11. Special restrictions are placed on stunt flying by the federal air traffic rules. Air Commerce Regulations, Aero. Bull. No. 7, Sec. 72, in effect Jan. 1, 1932.

In *Glatt v. Page*, above referred to in note 4, the court enjoined all "stunt flying and flying in circles above plaintiff's house and buildings" irrespective of altitude.

12. An amusing incident of this type of flying occurred in 1911: "A fledgling birdman on October 16th last, giving heed to the impulse of the hour, trundled his aeroplane out of its hangar and mounted skyward. He gleefully skimmed the neighboring field, circled a building of the Young Women's Christian Association, just to show off to the occupants, and looked about for other earthly beings on whom he might make an impression. On he went until finally he found himself over a gentleman's country estate. Below stretched fields and woodland and the owner's golf course. On one of the greens he perceived a horse, which was being employed to cut the grass. What happened next is told by a newspaper of the day as follows: He 'made the horse a target. He swooped down. Just before the machine reached the ground the horse looked around. All horses have been nervous for the last ten years. First the automobile and then the flying machine contributed to bring about this condition. This horse had the heart of any other horse. He neighed loudly, leaped into the air, and fell dead. A veterinarian said afterwards that the horse was literally scared to death.'" "Liability of the Aviator," 15 Law Notes 169 (1911).

13. But it is to be noted that, in most states, hunting from an aircraft is prohibited by statute. Uniform State Law for Aeronautics, Sec. 10; see *Fagg*, "A Survey of State Aeronautical Legislation," 1 JOURNAL OF AIR LAW 452, 471, note 64 (1930).

14. "In this country the right of privacy is usually well preserved by one's roof, but in climates where the intimate details of domestic life are carried on in an open, but privately surrounded, patio or courtyard, the point is well taken." *Logan*, Aircraft Law—Made Plain (St. Louis, 1928), 22.

the craft may hover over property in a manner impossible for the ordinary airplane which must maintain a relatively high speed in order to remain in the air. Lighter-than-air craft have so many characteristics not found in heavier-than-air craft that it may become necessary to treat them independently. The airship might be safer in that it is not as likely to fall upon the landowner. Its ability to hover, as above referred to, constitutes a potential annoyance peculiar to the airship and autogiro. The giant rigid airships, such as the "Akron" and "Graf Zeppelin", usually create a tremendous roar at an altitude at which the ordinary single-motored airplane could hardly be an annoyance to those on the ground.¹⁵

Industrial flying is rapidly increasing and raises distinct problems. At the present time airplanes are used to dust cotton, spray fruit trees, plant wheat, prevent the settling of frost, and the like.¹⁶ Each of these operations must be performed at extremely low altitudes and the airplane is compelled to fly over adjoining property at a very low height before zooming up in the process of turning at the end of the orchard or field. An express exception for industrial flying was originally provided in the minimum altitude regulation of the federal air traffic rules.¹⁷ Such low flying may not occur more than once a year but conceivably can cause considerable injury depending on the use to which the neighboring land is put. Very likely the owner of a house or poultry farm situated on property adjacent to a citrus fruit orchard would find the spraying by airplane very objectionable.

(2) *Flight of Aircraft in Taking-off and Landing.*

In taking-off and in landing, aircraft may create the same type of annoyances that they do in normal flight but the annoyances are greater due to the forced proximity of the aircraft to the surface. From the point of view of the landowners, such flying should be treated separately from ordinary flying for several reasons. First, flying immediately following taking-off and preceding landing must, of necessity, occur close to the ground, and this cannot be altered as long as the present type of airplane is in use. The average airplane gains altitude at a ratio of 1 to 7, i. e., climbs one foot vertically for every seven feet traveled horizontally. With the

15. *Neiswonger v. Goodyear Tire & Rubber Co.*, discussed in note 4, involved a Goodyear blimp.

16. See "The Farmer takes to the Air," *Travel*, March, 1932.

17. See Air Commerce Regulations, Aero. Bull. No. 7, Sec. 74 (G) (2), effective Jan. 1, 1929. The clause "except where indispensable for industrial flying" has now been eliminated.

development and popularization of the autogiro or some similar type, the angle of climb may be increased and the unusual annoyance and danger attendant to taking-off and landing may be eliminated.¹⁸ Second, taking-off and landing is the most dangerous part of flying. Motor trouble, now relatively rare, more generally occurs when the engines are "opened wide" for the take-off. The proximity to the ground often affords the aviator neither time nor room to make a safe emergency landing. Again, the perfection of some type of aircraft such as the autogiro will minimize this danger. Third, the annoyances created by taking-off and landing are not only concentrated on the property adjoining the airport, but on such of that property as is located in the direction of the prevailing wind.¹⁹ This is because the federal air traffic rules require all take-offs and landing to be made upwind "when practicable."²⁰

The character of the neighborhood in which the airport is located will undoubtedly have an important bearing upon the attitude of the courts in handling the annoyances created thereby. A dilemma confronts the airport operator in that if the proposed airport be located in a built-up neighborhood, it will add to the already existing city annoyances and may itself disturb and endanger the lives of countless people who inhabit the immediate vicinity. On the other hand, if the airport be located in the country, the lone resident who, perchance, lives next to the proposed airport may properly demand a freedom from noise and other disturbances which would not be considered objectionable in the city. However, as airports are an indispensable part of aviation, their location near the center of large cities is commercially desirable.²¹ Thus, a distinction can be made between commercial

18. It is reported that, from a dead start and climbing at an angle of 34 degrees, an autogiro with full load can easily clear a 330 foot gas tank while flying a horizontal distance of 675 feet. See *Aero Digest*, May 1932, p. 100, advertisement of Kellett Autogiro.

19. In an address before the American Bar Association in 1929, Logan said: "The greatest bugaboo, of course, is the noise. How long the aircraft will continue to be accompanied by such overwhelming and overpowering noise, is a matter which only the engineers and their patron saint, St. Patrick, can answer. * * * While airplanes were new and novel, the question of noise was one of slight importance. They were entertaining. But when the novelty wears off and when night flying with its departure and arrival of planes at all hours, as at our union stations, has become an accomplished fact, the householder whose home adjoins the airport is going to find that his days are hideous and his nights are sleepless." 54 A. B. A. Rep. 869, 876-7; 2 Air Law Rev. 94.

20. Air Commerce Reg., Aero. Bull. No. 7, Sec. 75A.

21. "The West Chester Airport Company, which operates an airport in Armonk, New York, has been indicted by the Grand Jury of West

airports used for passenger transportation and fields devoted to student instruction.

Several types of flying ordinarily take place only in the vicinity of airports. Students making solo practice flights are required by the federal Air Commerce Regulations to keep within a safe gliding distance of the field from which they are receiving instruction.²² Moreover, the greater part of student instruction consists in practicing take-offs and landings.²³ The federal regulations require acrobatic flying to take place at not less than 1,000 feet horizontally from the edge of the airport.²⁴ This automatically places acrobatic flying, which is recognizedly dangerous, over adjoining or other property.²⁵ Air races and flying exhibitions usually take place over and near airports. Closed-course air races consist of flying at very low altitudes around pylons, at least one of which is located on the airport. Waivers of the minimum safe altitude regulation are issued for such races at the discretion of the Department of Commerce.²⁶ Frequently the racers, in circling the pylons, are forced by their high speed to fly over adjoining private property at an extremely low altitude, thus endangering lives and property.

Already several law suits have involved aircraft take-off and landing operations. A concrete example of injury caused by an airplane in selecting a field for an emergency landing was presented to the Comptroller General in 1923:

"An army aviator, flying about dusk, intended to land on X's enclosed field, descended to about 50 feet from the ground, when cattle loomed up before him. He promptly increased his altitude and landed in the next

Chester County for maintaining of a public nuisance. Nothing is charged against the management of the airport, save the dust and noise of taking off and landing." *Wenneman*, *Municipal Airports*, p. 277. The suit came to trial in the spring of 1931 and ended in a hung jury 9 to 3, in favor of the airport. No further action has been taken. *People v. Smith*, 206 App. Div. 642 and 726, 198 N. Y. S. 940 and 199 N. Y. S. 942 (1923) reversed 119 Misc. 294, 196 N. Y. S. 241 (1922), held that a hydroplane operating from Lake George without a muffler violated a New York Penal Statute requiring certain "floating structures" to have mufflers. The lower court, although reversed by the above holding, stated "This form of commercialization of the planes on a small body of water may well constitute a nuisance, which it is within the power of the Legislature to abate."

22. Air Commerce Reg., Aero. Bull. No. 7, Chap. 5, Sec. 46(e). Student instruction over plaintiff's land was objected to in *Glatt v. Page and Swetland v. Curtiss Airports Corp.*

23. See *Swetland v. Curtiss Airports Corp.*, 55 F. (2d) 201, 203.

24. Air Commerce Reg., Aero. Bull., No. 7, Chap. 7 (2)(B).

25. See note 11 *supra*, for example of special restrictions placed on acrobatic flying by courts.

26. Air Commerce Reg., Aero. Bull. No. 7, Chap. 8, Sec. 82.

field, while the frightened cattle broke through the fence. X sought compensation for the expense incurred in rounding up the cattle and repairing the fence, and damages for the shrinkage in the weight of the cattle, caused by fright and loss of feed." The claim was disallowed by the Comptroller General on the ground that there was no negligence shown in the manner of selecting the landing field.²⁷

In this case the aviator was a military pilot who was forced to land. The injury was entirely accidental and the airplane did not come in contact with the plaintiff's land. The farmer, conversely, suffered specific damage in that his fence was broken and his cattle lost weight. In *Commonwealth v. Nevin and Smith*,²⁸ a Pennsylvania Quarter Sessions case of 1922, a farmer objected to the noise of airplanes operated by "gypsy" flyers who had rented the adjoining tract as a landing field and who flew over his property in taking-off. A prosecution was brought under the Pennsylvania game-laws of 1905 for "wilfully to enter upon land," and the suit was dismissed. The most important decisions involving objections of property owners to the taking-off and landing of airplanes over their property are the *Smith v. New England Aircraft Co.*,²⁹ and *Swetland v. Curtiss Airports Corp.*³⁰ In each of these cases, airports were located beside improved country estates and the property owners sought injunctions against the airports and against the flying over their land. In the former case, the injunction was denied, and in the latter case an injunction was granted against the entire operation of the airport. This difference can largely be explained by the differences in the two situations and will be discussed subsequently.³¹

The mooring mast now coming into use as a terminal for large airships, such as found on the Empire State Building in New York City, raises problems peculiarly its own. It is not entirely analogous to the airport because, if the mooring mast is sufficiently high, the airship need never travel through the lower

27. 3 Comp. Gen. 234, 1928 U. S. Av. R. 46. From *Pickett*, "The Empire State Building Mooring Mast," 2 Air. L. Rev. 130, 136 (1931), and New York Times, Mar. 1, 1931.

28. Not officially reported—see 1928 U. S. Av. R. 39.

29. 270 Mass. 511, 170 N. E. 385 (1930).

30. District Court: 47 F. (2d) 929 (N. D., Ohio 1930). Decision of Circuit Court of Appeals: 55 F. (2d) 201 (C. C. A. 6th, 1931).

31. *Rex v. Cameron* (Arundel County Bench, Oct. 7, 1929), is an English case involving low flying in landing. There an aviator was summoned for flying "so low over gardens, roads and houses, that it was dangerous to the public." In defense, it was shown that low flying took place in landing upon a licensed field in the prescribed manner, and that the altitude was reasonable under the conditions of wind and weather that day. The prosecution was dismissed. 93 Justice of the Peace 661 (1929).

airspace of adjoining landowners as the present aircraft do in landing and taking-off from an airport. However, the modern airship is so long and bulky that unless the proprietor of the mast owns considerable land about his mast the stern end of the aircraft will swing out over neighboring land. A moored airship is distinguishable from an airship in normal flight in that the moored ship is a permanent encroachment in certain senses. The nose of the ship would be affixed to the mast and the remainder of the giant body allowed to swing with the wind. Unless the wind shifts, the ship would be comparatively stationary during the time in which it is discharging and taking on freight and passengers. The moored airship perhaps partakes of some of the characteristics of the flagpole or swinging shutter that overhangs adjoining land. At least while moored the airship will probably not be found objectionable because of the noise, but the constant noisy approach and casting off from the mast may form the basis of complaint by adjoining owners. Unusual danger of objects falling on neighboring land while making fast can probably be eliminated, and any objections to the shadows cast by the airship would seem to be entirely too fanciful.³²

(3) *Operation of Airport Apart from Flying.*

Neither in practice nor in the attitude of the courts can the "on surface" activities of an airport be considered separately from the flying that takes place therefrom. These activities, however, may in themselves constitute a substantial annoyance to the adjoining residents who are accustomed to a quiet neighborhood. The airport is at best a noisy place. Aircraft engines must be warmed-up before taking-off, which process takes as long as twenty minutes in the case of commercial planes using large motors. Unless the field has a hard surface, or is sodded, cindered, oiled or is otherwise treated, great quantities of dust are blown up in dry seasons by the aircraft in warming-up the motor and in taking-off. Besides hangars for storage, a machine and general repair shop is an essential part of a fully equipped airport. For night flying the field must be equipped with a rotating beacon, green and yellow border lights, and red obstruction lights on the top of structures in the immediate vicinity, such as telegraph poles. Aside from these lights, modern airports are equipped with immense floodlights which illuminate the landing area to aid aircraft in landing. There

32. See *Pickett*, supra.

are usually found a garage, filling station, parking space, and restaurant at airports. Airports expect and provide for handling large crowds during exhibitions and air races.

Several instances of legal action against the operations of airports are reported. *Swetland v. Curtiss Airports Corp.* is the most conspicuous example. Objections were made to the noise and dust in warming up the motors, the proposed flood-lights, the attraction of crowds, and the congestion on the highways leading to the airport.³³

(4) *Contact by the Aircraft or Any of Its Contents with the Tangible Property of the Landowner.*

Some crashes will inevitably occur due to a variety of causes—weather conditions, incompetency of pilot, errors of personnel, faulty construction, or improper inspection of aircraft or motor.³⁴ Accidents are decreasing, but it is not likely that they will ever be entirely eliminated. Occasionally objects fall or are thrown from aircraft which damage the unprotected landowner beneath. A recent crash illustrates some of the difficulties involved in adjusting the liability of the aviator for damage to property and persons on the ground:

On Saturday afternoon of April 30, 1932, two reserve officers on inactive duty took up a national guard plane from the Chicago Municipal Airport. For undetermined reasons, a forced landing was attempted "down-wind" on a vacant lot within the city limits on the south side. The plane broke through a trolley wire and telephone post, crashed against a brick house and exploded. The pilots were killed and the house almost completely

33. Other instances may be mentioned: N. Y. Herald Tribune, Aug. 22, 1929, at 2, reports, "A hearing before a Justice of the Peace in Westchester County, New York, against an airport owner on the charge of conducting a nuisance." Newman, "Damage Liability in Aircraft Cases," 29 Col. L. Rev. 1039 (1929); cf. Murphy, "The Legal Problems of Aviation," 64 U. S. L. Rev. 524, 525 (1930).

In *Bosworth-Smith v. Gwynnes, Ltd.*, 89 L. J. Ch. (n. s.) 368 (Ch. Div., 1919), "an engineering company was enjoined from testing airplane engines in 'an exceptionally quiet residential place.' The noises created were greater than those of other industrial enterprises in the neighborhood." *Pickett*, supra, p. 143.

In *Glatt v. Page*, referred to in note 4, the landing and taking-off of airplanes were found particularly annoying.

The annual report for 1929 of the Director of Aeronautics of Ohio states "In the northern part of the state an airport has been placed next to a private game preserve. Aircraft flying low over the marshes frightens away all the game. Either the airport or the game preserve must be abandoned." Tuttle and Bennett, "Extent of Power of Congress over Aviation," 5 Univ. of Cinc. L. Rev. 261, 262 (1931).

34. Frequently the complete demolition of the plane and occupants prevents determining the precise cause of the crash.

burned, due to the explosion of gasoline and high wind. People in the house barely had time to escape uninjured. The trouble is said to have been brought about by the failure to correct the altitude adjustment of the carburetor. Low flying over the city and inexperience of the pilot in handling the plane in the strong wind, undoubtedly contributed to bringing about the crash. Open country lay a half mile south of where the landing was attempted. The airplane belonged to the Government. Both flyers are dead and were at the time in Government service. The piloting of the plane was in charge of one of the men and it is doubtful whether negligence can be proved. In this case what redress is available to the landowner?³⁵

In *Swetland v. Curtiss Airports Corp.*, an objection was raised to the dropping of circulars from airplanes in such a manner as to fall upon and litter up the plaintiffs' lawn. A complaint was filed in 1929 against a parachute jumper who landed in the plaintiff's tree.³⁶ Many suits have been threatened or brought as a result of an airplane falling upon the property of a landowner.³⁷ Crim-

35. Chicago Tribune, May 1, 1932, Chicago Daily News, May 2, 1932.

36. "The summer of 1929 has witnessed the filing of a complaint in a New Jersey Recorder's Court arising from a parachute drop ending in an oak tree on complainant's farm." New York Herald-Tribune, June 4, 1929, at 4, cited in *Newman*, supra, and *Murphy*, supra.

37. "In an English case (unreported), a British Aeronaut found a field into which he was descending, occupied by a cow, and apparently the cow resented the interference and made a hostile demonstration. Honest endeavors to avoid a collision were fruitless, for the bovine plunged below the aeroplane just as it reached the ground. The results were disastrous to the animal and disagreeable to the airman, for the owner recovered damages for her loss." *Murphy*, supra, p. 531.

In *Sysack v. DeLisser Air Service Corp.* (Sup. Ct., Nassau Co. N. Y. 1931), 1931 U. S. Av. R. 7, a suit was brought against an airplane company for damages resulting from striking plaintiff's house, and an injunction was sought against all further flying over plaintiff's property. The town of Hempstead was joined in the action "on the theory that they have invited such airplanes to invade plaintiff's superjacent rights without taking such by condemnation and are thus participating in a continuous trespass on his close." Motion to dismiss complaint was granted.

In Chicago, during the summer of 1919, a "dirigible balloon fell into a bank, wrecked the place, and killed more than a dozen persons. . . . In the case of the Chicago bank, the owners of the dirigible voluntarily paid for the losses caused." *Woodhouse*, "Who Dropped the Monkey Wrench on Your Head?" 9 Flying 38-9 (1920).

Cf. *Johnson v. Curtiss Northwest Airplane Co.* and New York case discussed in Law Notes (see note 8) where injunctions against flying were sought after crashes had occurred.

Examples of damage resulting from early accidents are reported by Gov. Baldwin in 1910: "In June, 1910, an aeroplane which was flying around an agricultural show at Worcester, in England, as one of the attractions of the exhibition, became unmanageable and fell upon a crowd of spectators. One of them was killed, and others injured. On the same day at an aviation meet at Budapest a German aviator lost control of his biplane, and it dashed into the Grandstand. Six persons were injured, and two very seriously. A few days later, a young man employed at an amusement park near Newark, New Jersey, to make daily ascents in a dirigible airship of the Zeppelin order, flew into the heart of New York City, ran

inal prosecutions have followed accidents in several instances.⁸⁸

Although a crash or other forced landing may cause little damage to the landowner's property, he may dispute the aviator's right of access to the plane for the purpose of inspection or removal, because it amounts to trespass on his land. In addition the landowner may claim the right to hold the plane until he exacts a price or recovers compensation for the injury caused not only by the landing of the plane itself but also by third parties attracted to his property as a result of the wreck.⁸⁹

against a chimney of the Hall of Records in the City Hall Park, swung thence over to Brooklyn, and finally landed in the top of a tree on one of its streets." *Baldwin*, "Rules for Aerial Navigation," 35 Am. Bar Assn. Rep. 898, 903 (1910). For similar balloon accidents, see the following cases: *Platt v. Erie County Agricultural Society*, 149 N. Y. S. 520, 164 App. Div. 99 (1914); *Morrison v. MacLean*, 160 Wis. 621, 152 N. W. 475; *Smith v. Cumberland Co. Agr. Soc.*, 163 N. C. 346 (1913); *Roper v. Ulster County Agricultural Society*, 136 App. Div. 95, 120 N. Y. S. 644 (1909); *Canney v. Rochester Agricultural and Mechanical Assn.*, 76 N. H. 60, 79 Atl. 517 (1911); *Richmond & March Railway Co. v. Moore's Adm.*, 94 Va. 493, 27 S. E. 70 (1897); *Smith v. Benick*, 89 Md. 610, 41 Atl. 56 (1898); *Bernier v. Woodstock Agr. Soc.*, 88 Conn. 558, 92, Atl. 160 (1914); *Burns v. Herman*, 48 Colo. 359, 113 Pac. 310 (1910). Most of these cases are reported in 1928 U. S. Av. Report.

38. Some time before 1920, an "aviator who landed in a grass plot in Van Cortlandt Park, New York, was arrested, charged with 'unlawfully disturbing the grass in a grass plot in Van Cortlandt Park by landing there with an aeroplane without a permit from the proper authorities.'" *Woodhouse*, Textbook of Aerial Laws (Frederick A. Stokes Co., New York, 1920), 7.

In *People v. Crossan* (Dist. Ct. of App., 2nd Dist. of Cal., 1927) 261 Pac. 531, 1928 U. S. Av. R. 77, an aviator was convicted of manslaughter for negligently killing two bathers, in making a forced landing in the surf at Venice, California. On appeal, the case was reversed and remanded for a new trial.

In *Rex v. Henderson*, an aviator was found to have been flying low to the danger of the public over the Ascot races. See note 10. See also *Rex v. Cameron*, in which a prosecution for low flying was dismissed. See note 31. Cf. English case where members of the Royal Flying Corps were arrested for low flying and cutting telegraph wires. See note 4.

39. In the Shenandoah disaster in 1925, the claim of the farmers, on whose land the dirigible fell, for damages was resisted on the ground that some had charged the public admission for the privilege of entering their land. "The dirigible 'Shenandoah,' while passing over Eastern Ohio was torn to pieces by a storm through no fault of the officers in charge, the parts falling on the lands of certain farmers. Curiosity seekers gathered from all parts of the country, trampling down the vegetation and destroying fences. Some of the farmers applied to the United States Government for damages. It developed that in certain instances the farmers had charged admission for the privilege of entering upon their land." *Jome*, "Property in the Air as Affected by the Airplane and Radio," 4 Jour. Land & Pub. Util. 257 266 (1928).

In *Guille v. Swan* (N. Y. Sup. Ct.) 19 Johns. 381 (1822), a balloonist was held liable for the damages to the plaintiff's turnip patch, committed by some 200 curiosity seekers, as well as for the damage due to his balloon.

"In the New York Sun, June 28, 1914, it is said that a landowner in France, who sued three aeroplane firms whose machines continually passed

The extent of the aviator's liability for injury to third persons on the ground, as a result of direct contact, is a distinct problem and will not be considered in this paper other than as it bears on the right of flight itself.

(5) *Obstructions to Aviation by Structures on the Ground.*

On March 8, 1932, a tri-motored plane of the Century Airlines crashed into an abandoned windmill 30 feet high and 300 feet from the Curtiss-Steinberg airport at East St. Louis, Illinois, where the plane was practicing night landings, with the result that two of the six pilots in the plane were killed. The transport company knew the windmill was a menace to the use of the airport, and had unsuccessfully sought permission to remove, light or mark the windmill. It is reported that the transport company had even offered to purchase the field at a price it considered reasonable, but that the farmer who owned the windmill was endeavoring to secure an exorbitant purchase price.⁴⁰

Instances of structures on the ground interfering with aviation have been numerous but have seldom reached the courts. They, however, promise to become more serious in and around airports unless the angle of climb is radically changed by perfection of the autogiro or some new type of craft. In dealing with these obstructions, the courts will find that the same formula will not satisfactorily handle all structures in all places. For instance, obstructions which interfere with taking-off or landing from airports, cannot be classed with structures which interfere with ordinary flying. Normally, instances of the latter type will be relatively rare. It is reported, however, that high tension electric lines have interfered with the carriage of mail between Cleveland and Chicago during severe weather when the mail planes were forced to fly close to the ground. Buildings which are much taller than neighboring structures may prove a hazard to aviation. If the landowner is to retain his ancient freedom of building upon his land as high as he pleases without regard to the character and height of buildings in the neighborhood or to the interests of aviation, then provision for lighting unusually tall structures becomes desirable in order to prevent collision in inclement weather. In such a situation, must the landowner permit the Department of

over his property, has been awarded three hundred dollars damages. The court considered that the air can not by its very nature be privately owned and that it is absolutely free, but it awarded damages in respect of the too frequent landings of defendants' airmen on plaintiff's property." 2 C. J. 304, n. 40a. Cited in *Woodhouse*, Textbook of Aerial Laws (New York: Frederick A. Stokes Co., 1920), p. 7; *Jome*, supra, p. 267.

40. Chicago Daily News, Mar. 8, 1932.

Commerce or aviation interests to light his building, or must he go further and maintain the lights at his own expense?

Many types of structures near airports may be dangerous to aircraft in taking-off and landing.⁴¹ Numerous accidents have occurred in landing because the pilot misjudged the height of trees and power lines at the edge of an airport, with the result that he collided with such obstructions or "over-shot" the airport, i. e., failed to land and stop rolling before reaching the far end of the field. Again, planes have failed to clear obstructions bordering an airport because the plane failed—due to wind or field conditions—to take-off and climb as usual. Without malicious motive, the adjoining landowner may erect a tall building or put up towers for the suspension of a wireless antennae which would interfere with the taking-off from and landing on the airport. Attempts are now being made, by the use of zoning ordinances, to restrict the height of buildings and structures to as low as 35 feet in the immediate vicinity of municipal airports.⁴² Captive balloons are coming into use for the suspension of advertisements which, if permitted near airports, may interfere with flying as high as 500 feet.

The old problem of the "spite fence" arises when structures are erected for the express and sole purpose of preventing aircraft from flying over land at low altitudes. The following instance is reported:

"A threat by a Long Island golf club to erect a fence, 125 feet in height, at the boundary line between club and flying field, because low flying, in taking-off and landing, prevented peaceful enjoyment of the club's facilities. . . ." ⁴³

41. "In general it has been found that the aviator needs protection from obstacles such as these in leaving and approaching an airport of reasonable size according to present standards, for a distance of about 1500 feet in all directions from the outer boundaries of the port." *Hubbard, McClintock & Williams, Airports, Their Location, Administration and Legal Basis* (I, Harv. City Planning Studies, 1930) p. 126.

42. "Report of Committee on Airport Zoning and Eminent Domain," 2 *Air Commerce Bulletin*, No. 13, p. 325 (Jan. 2, 1931).

43. *New York Times*, June 20, 1929; cited in *Newman*, "Damage Liability in Aircraft Cases," 29 *Col. L. Rev.* 1039 (1929).

In *Glatt v. Page*, the Nebraska case referred to in note 4, it is reported that before Mr. Glatt brought suit and after the aviators had refused to desist from flying over his property, he "employed a man to assist him at digging post holes along his property line adjoining the flying field. The holes had all been made and a number of wooden forms built to form a fence high enough to keep the planes from landing or taking off in the direction of his farm, when an alarmed delegation from the Lincoln Chamber of Commerce sought him out and persuaded him to desist, temporarily

In treating these instances, the court will not find the old type of spite fence entirely analogous to the aviation spite fence because in the former the purpose was to prevent light and air from passing from the fence-owner's land on to his neighbor's property. The purpose of the aviation spite fence is to prevent aircraft from flying over the fence-owner's land at altitudes lower than the height of the fence. A single cable suspended between two towers would be sufficient to prevent the intrusion by aircraft and would not interfere with the normal passage of air and light.⁴⁴ If airplanes are thought to be dangerous instrumentalities and the extreme interpretation of the maxim, *cujus est solum ejus est usque ad coelum*, is accepted, the landowner may consider that he is acting within his exclusive property rights in preventing aircraft from flying overhead. If he is conceded exclusive control of the lower airspace, the landowner's spite fence would not seem to be such an unreasonable method of protecting his property as would be his shooting at low flying aircraft.⁴⁵

at least." *Lowell*, "Who Is Owner of Air Above the Land?" *Aircraft*, Oct. 1929, p. 22.

M. Coquerel erected in 1913 or shortly before "a wooden fence, more than 30 feet high, surmounted with iron spikes, on his land facing the Clement-Bayard hangar at Trosly-Breuil, the object being to prevent the dirigibles from flying over M. Coquerel's land. The courts held that M. Coquerel's action was an abuse of his rights of property and ordered him to remove the obstruction." *R. J. L. A.* 1913, pp. 83, 336. *Spaight*, *Aircraft in Peace and the Law* (London: MacMillan & Co., 1919) p. 59.

44. See illustration of "balloon 'apron' or nets, which were suspended at great heights in England as an obstacle to German air raiders." See *Woodhouse*, *Textbook of Aerial Laws*, opp. p. 3.

45. In *Glatt v. Page*, the Nebraska case referred to in note 4, it is reported that after the airport proprietor had refused to cease flying over Mr. Glatt's farm, "the matter developed into a miniature feud. Mr. Glatt alleged that the planes flew over his farm more than was necessary. The flyers declared that the farmer carried a shotgun with him at his work in the fields and brandished it whenever a low-flying plane appeared over the place. They were not to be so easily bluffed, they said. Mr. Glatt's first offensive measure was to erect an elevated target on his land and invite his neighbors over for target practice at that time of day when air traffic at the airport was heaviest. This move brought no harm to the aviators, but they insisted it was through no lack of intent and attempt on the part of Mr. Glatt." *Lowell*, *supra*, p. 22.

In *Rex v. Reed* (Dorset Assizes, May 26, 1927), a gentleman farmer was "indicted for attempting maliciously to wound the pilot, for a common assault on the pilot (by shooting at him with a gun) and for wilful damage to the aeroplane which, as a fact, had a number of shot holes in it. The grand jury found a true bill only on the last count, and the trial jury acquitted the accused even upon that." (At p. 544.) It was admitted that the pilot flew over the defendant's farm at an altitude of 50 feet, clearing tree tops by about 3 feet, and that he annoyed defendant, frightened his mother, and disturbed his cattle and horses. The farmer had complained to the police of previous low flying but no action was taken other than to advise him to write to the Secretary of the Aero Club. *The Times*, April

The adjustment of the foregoing conflicting claims must take into consideration many factors other than the bare legitimate demands of each interest. The factor of judicial administration is of great importance. The adjustment of disputes should be handled speedily and without undue cost, and each interest should know in advance the relative extent of its rights. To prove a nuisance, several witnesses must be present and various kinds of evidence offered. In the clearest case, this would involve considerable expense, in some cases the expense becoming prohibitive. An administrative body of experts might well be established to settle individual disputes, for aviation cases almost universally involve so many technical questions that the problems can be much better handled by a specialized commission with an informal and relatively flexible procedure. Testimony of lay witnesses will be unsatisfactory in almost any case, but this testimony can be made more definite and can be far better evaluated by a commission composed of persons experienced in aviation matters than by the present judicial process involving a jury of citizens who understand little or nothing of flying and a court that is usually quite unfamiliar with these technical questions.

The airspace is almost boundless and aviators can now fly at great heights, but to require that all flying be carried on at a height at which it would never conflict with the interest of the landowner would be to make aviation in the immediate future commercially impossible. Today, much commercial flying occurs at about 500 feet, because wind and visibility are frequently most favorable at that altitude—particularly when traveling against the wind—and because more time and fuel are necessary in climbing to higher altitudes. These relatively higher altitudes are maintained when traveling with the wind although at such height the air may be more bumpy and cause inconvenience to the passengers. While it is true that flying in the stratosphere would be more rapid—due to a prevailing west-to-east wind of over 400 miles an hour—as yet no quick and economic means has been invented to reach such height. All of these factors indicate the difficulties presented in adjusting the interests of the landowner and the aviator, and

27th, and May 27th, 1927; "Low-Flying Aircraft," 91 *Justice of the Peace* 543-4 (1927).

Baldwin states: "There have already been instances of shooting at balloons in mere wantonness." "Law of the Airship—Possible Methods and Scope of Regulation," 4 *Am. J. Int. Law* 95, 105 (1910).

During the late war, Holland asserted her national sovereignty by firing upon armed German zeppelins which flew over her territory. *Spaight, Aircraft in Peace and the Law*, p. 205 and p. 214.

question the propriety of burdening the ordinary courts with these technical questions.

II. ATTEMPTED SOLUTION

Turning, now, to the legal side of the above conflict of interests, any compromise to be advanced must be predicated upon the viewpoint adopted toward the legal status of airspace. The ancient maxim "*cujus est solum ejus est usque ad coelum*," usually translated, "He who owns the land owns up to the sky", forms the starting point of this inquiry. Next, attention must be directed to the application of the maxim in adjudicated cases, because, after all, the actions that are allowed—whether trespass, nuisance, or ejectment—and the relief granted thereunder are what actually show the extent of the rights of the two parties. Remedial relief becomes the criterion of substantive rights. And, lastly, new public policy must be formed which will weigh the economic interests and bridge the gaps in precedent due to the novelty of aircraft and the situations created by their use.

From a study of the origin, history and cases applying the maxim, legal writers have advanced opinions as to the legal status of airspace. These conclusions vary widely but may be roughly classified into the following four theories of airspace ownership:⁴⁶ (1) The landowner has unrestricted ownership of airspace *ad coelum*. This is the most inclusive and extreme interpretation of the maxim. (2) There is no ownership at all of unenclosed airspace. This theory is the extreme counterpart of the first theory. (3) There is unrestricted ownership, but the airspace is subject to an easement of aerial transit at reasonable altitudes. This theory offers a compromise to the interests of the two parties. (4) There is unrestricted ownership up to a certain altitude at which height ownership ceases. This is the so-called "zone theory" of ownership and is likewise a compromise theory. The

46. The following authors have classified the theories of airspace ownership, one of which contains as many as fourteen theories: *Hazeltine*, *The Law of the Air* (1911) pp. 54-60; *Tuttle and Bennett*, "Extent of Power of Congress over Aviation," 5 *Univ. of Cinc. L. Rev.* 261, 282-7 (1931); *Ball*, "The Vertical Extent of Ownership in Land," 76 *Univ. of Penn. L. Rev.* 631, 640-3 (1928); *Jome*, "Property in the Air as Affected by the Airplane and Radio," 4 *Jour. Land & Pub. Util.* 257 (1928); *Comment*, 32 *Harv. L. Rev.* 569, 571-2 (1919); *Falkin*, *Comment*, 16 *Corn. L. Quart.* 119, 121-2 (1930); *Smith*, *Comment*, 6 *Wis. L. Rev.* 47, 47-9 (1930); *Hise*, "Ownership and Sovereignty of the Air or Airspace above Land-Owner's Premises with Special Reference to Aviation," 16 *Ia. L. Rev.* 169, 192 (1931); *Simpson*, *Comment*, 1 *Air L. Rev.* 272, 273-4 (1930); *Marvin*, *Comment*, 10 *Boston Univ. L. Rev.* 382, 384-5 (1930).

extent of the zone is designated by such phrases as "lower stratum", "effective possession", "actual user", and the like.

Each of these theories indicates a different and distinct attitude towards aviation and leads to a different solution of the economic conflict mentioned. Each sanctions the use of diverse legal remedies. The task for the jurist is to determine whether or not precedent compels the adoption of any one theory, whether the adoption of any of the theories would do violence to precedent, and lastly to select the theory which will promote the most equitable and fair settlement of the greatest number of problems described in Part I.

Before entering into a study of legal precedent, a brief critical examination of these four theories of airspace ownership may be made for the purpose of showing the legal and practical merits and limitations of each theory.

(1) *Unrestricted Ownership of Airspace by the Landowner.*

This first theory is supposedly based upon a literal interpretation of the maxim, *cujus est solum ejus est usque ad coelum*. It attempts to grant the landowner the same remedial rights in the upper airspace as he has in the land or groundspace itself. Every unauthorized flight of aircraft over private property would be a technical trespass, *quare clausum fregit*, irrespective of the altitude or the annoyances created by the aircraft. This means that for every flight, which a landowner can prove in court took place over his property, he can recover at least nominal damages and, generally, court costs. Such slight reward for trouble and expense would probably discourage all litigation except where the purpose was to annoy and harass. An injunction would frequently be granted for repeated trespasses where they might culminate in an easement or servitude.⁴⁷

The theory has the advantage of giving the landowner a maximum of protection for any substantial interference with the use, enjoyment and value of his property because it permits an unrestricted use of the action of trespass. The disastrous effects on aviation occasioned by the adoption of this theory cannot be foretold.⁴⁸ The courts probably would not allow trespass actions

47. The idea that repeated flights will ever lead to an "easement" does not follow from the mere adoption of this theory of airspace ownership. That question must be settled independently. See Part VI for a fuller discussion of this point.

48. Prof. Zollmann summarizes an article by E. H. A. in 19 Green Bag, 707-17 (1907) which attempts to look into the future and ascertain

to interfere greatly with flying activities, if only nominal damages were sought. It is clear that courts can control the awarding of costs and thus discourage the bringing of actions for nominal damages.⁴⁹ The most unsatisfactory part of the theory is that it classifies all flying as *illegal* and leaves practically no rights to the aviator.

From the strictly legal viewpoint it is not believed that precedent requires the adoption of this theory because the origin, history and cases adopting the maxim do not indicate that there is unrestricted private ownership of airspace to all heights. Private ownership is here distinguished from sovereignty.

This was the prevailing concept of airspace ownership among legal scholars prior to the development of aviation,⁵⁰ but, in justice to these scholars, it must be recognized that aviation to them was an unrealized dream. Since the advent of modern flying, a few legal writers have grudgingly accepted the theory as the orthodox common law formula.⁵¹ But at the same time, they have recognized its inability to handle satisfactorily the problems growing out of aviation and have advocated statutory or constitutional changes.⁵² At the present time this view is no longer seriously advocated.⁵³

the calamitous consequences of a literal adherence to the maxim. *Law of the Air*, p. 11-12.

49. See Part VI.

50. *Coke* on Littleton, p. 4a; *Sheppard's Touchstone of Common Assurances*, p. 90; *Blackstone*, Commentaries, p. 18.

51. *Platt*, "The Airship as a Trespasser," 7 Ohio L. Rev. 402 (1909); *Meyer*, "Trespass by Aeroplane," 36 Law Magazine & Rev. 20 (1911); *Williams*, "Law of the Air," 131 Law Times 403, 18 Case & Com. 131 (1911); *Richards*, "Sovereignty over the Air" (Oxford: Clarendon Press, 1912), at p. 13; Editorial, "Aerial Navigation," 19 Va. L. Reg. 550 (1913); New York moot case, see 19 Case & Com. 681 (1913) and 42 A. L. R. 945, 951; *Carthew*, "Aviation, Its Future and Legal Problems," 63 Sol. J. 418, 419 (1919); *Senator Sherman*, Bill 2593, Jan. 23, 1919, see *Bogert*, "Problems in Aviation Law," 6 Corn. L. Quart. 271, 291 (1921); *Johnson*, "Legal Questions Affecting Federal Control of the Air," 2 Air Information Circular, No. 181 (1921); Report of the A. B. A. Committee on the Law of Aviation, 46 A. B. A. Rep. 498 (1921); Plan of *Judge Lamb*, see *MacCracken*, "Air Law," 57 Am. L. Rev. 97, 99 (1923); *Hackett*, "Rights in Air Space and Lord Ellenborough's Dictum," 10 Va. L. Reg. 312, 316 (1924); Annotation, 42 A. L. R. 945, 946 (1926); *Couture*, "The Michigan Statute Regulating Aerial Navigation is Void Insofar as it is in Derogation of Vested Rights," 11 Univ. of Detroit Bi-Monthly Law Rev. 159 (1928); *Bingham*, "Program of the National Aeronautic Association as Related to Uniformity in Aeronautic Legislation and Regulation" (address, proceedings of Natl. Conf. on Unif. Aero. Regulatory Laws, Dec. 16-7, 1930 (Monograph, Govt. Printing Off.) p. 24, at p. 24 & 29; *Hise*, see note 46, p. 193-4.

52. *Williams*, see note 51; Editorial, "Aerial Navigation," 19 Va. L. Reg. 550 (1913); *Carthew*, see note 51; Annotation, 42 A. L. R. 945 (1926); *Bingham*, see note 51; *Hise*, see note 46.

53. However, see the discussion now going on in England on the question as to whether "sky writing" by means of a search light constitutes a

(2) *No Ownership of Unenclosed Airspace.*

This theory denies the right to bring trespass unless there is contact with a physical object on the land—including buildings, trees, and other objects attached to the soil. The action of nuisance would be the only remedy for low, dangerous, or annoying flights of aircraft which do not actually touch something on the plaintiff's land. Thus, if an airplane should fly over a field at an altitude of one yard, over a garden at one foot, or clear the top of a house by one inch, or miss the side of a skyscraper by the fraction of an inch, there would be no right to bring trespass *quare clausum fregit*. Unless damages or danger could be shown there would be no redress. An action on the case for nuisance, however, would lie if the flights were repeated and caused provable damages.

Such an extreme position infringes the "property rights" that the ordinary man and the average judge concede to the landowner. The position appears to be inconsistent with the cases allowing trespass against shooting through the lower airspace without contact, and is inconsistent with the dicta of many cases. Standing alone, the theory appears to be entirely inadequate to protect the landowner from single dangerous flights unless the action of nuisance is expanded to cover such annoyances, and unless an injunction is allowed to prevent a number of aviators from making single dangerous flights over the property of the same landowner.

The advocates of the view do not assert that it alone affords adequate protection to the landowner. They contemplate police regulations, fixing the minimum altitudes of flight, in the interests of the safety of both the landowner and aviator. Low, dangerous flying would thus be prevented by criminal prosecutions instituted by the state upon complaint of landowners or special state officers. This procedure would relieve the landowner from the responsibility and expense of maintaining a suit in which only nominal damages may be recovered.

The doctrine that there is no ownership of unenclosed airspace is now advocated by the American Bar Association Committee on Aeronautical Law which suggests a modification of the old Uniform State Law for Aeronautics of 1922 in favor of a provision which will leave the courts free to adopt this second

trespass. 24 Flight 420 (May 13, 1932), and *Sweeney*, "Rights of Neighboring Landowners," 3 JOURNAL OF AIR LAW 393, 396, n. 8 (1932).

position.⁵⁴ The theory has had many advocates among the recent writers who have given serious attention to the problem,⁵⁵ but on the other hand, has been subject to severe criticism.⁵⁶

Certainly legislatures, and the administrative officers who work under them, as contrasted with the courts, would be given maximum freedom to adjust the conflict of the two interests. A settlement could be made according to the opinion of what was socially desirable. This result follows because a denial of ownership takes airspace out of the category of "property" protected by the "due process" clause of the federal constitution. Abundant protection, however, can be afforded every interest of the landowner, through the police power. The extent to which the courts, under this theory, would allow the legislatures by statutes to take away their rights to determine to what extent the landowner's use and enjoyment should be protected, is doubtful.

(3) *Ownership of Airspace Subject to an Easement for Aerial Transit.*

The third theory begins like the first by asserting that airspace is owned by the landowner to an unlimited height. The ownership is burdened, however, by a public easement for aerial transit. Aerial transit is considered a privileged entry of the airspace at such height, presumably, as does not unreasonably interfere with the possessor's enjoyment of the surface. All other flying is non-privileged against which an action of trespass will lie, regardless of the height. Before the development of aviation, the easement was considered to have been dormant, but, as it ran in favor of the public, the prescriptive limitation did not operate.⁵⁷ The public right of passage through airspace is thought to be analogous to both the easement of navigation which the common law

54. Report of the Standing Committee on Aeronautical Law of the American Bar Association, Sept. 1931; see 2 JOURNAL OF AIR LAW 545 (1931). This theory was urged upon the federal Circuit Court of Appeals in *Swetland v. Curtiss Airports Corp.* in the brief filed for the defendants. The theory was also suggested by Salmond in his work on Torts (7th ed.) 237.

55. *McNair*, "The Beginnings and the Growth of Aeronautical Law," 1 JOURNAL OF AIR LAW 383 388 (1930); *Simpson*, Comment, 1 Air L. Rev. 272 (1930); *Logan*, "Aviation and the Maxim Cujus Est Solum," 16 St. Louis L. Rev. 303. (1931); *Tuttle and Bennett*, see note 46; Comment, 15 Minn. L. Rev. 318, 326 (1931); *Willebrandt*, *Brief Amicus Curiae*, in C. C. A. 6, *Swetland v. Curtiss Airports Corp.*

56. *Hayden*, "Objections to the New Uniform Aeronautical Code," 18 A. B. A. Jour. 121 (1932); *MacChesney*, Remarks Before Am. Bar Assn., 56 A. B. A. Rep. 86 (1931).

57. *Zollmann*, "Law of the Air," p. 10-11.

gave over navigable streams where the stream beds were privately owned,⁵⁸ and also to the easement to use a public highway where the sub-soil was private property.⁵⁹ Many have challenged the value of these analogies.⁶⁰

Such an easement does not permit every kind of flying over private property. Instead, it is limited to aerial transit. Thus, hovering over private property by an airship or autogiro or circular flying will be a non-privileged entry against which an action of trespass would lie. In the same class would come all types of stunt flying and student instruction. If the easement were limited strictly to commerce, even greater difficulty would result. This is the theory that apparently underlies the old Uniform State Law of Aeronautics⁶¹ and the federal Air Commerce Act of 1926. Between 1920 and 1926 this appears to have been the prevailing theory among legal scholars who seriously treated the present problem.⁶² Since 1926 the theory has found few advocates⁶³ and many critics.⁶⁴ It was again advanced in 1931 by the committee of the American Law Institute on the restatement of the law of torts.⁶⁵

Legally, there is an absence of direct precedent showing an easement of aerial transit. Technically, an easement implies that there is property and ownership in the space in which the easement is a limitation. The same lack of precedent to show that airspace is owned without limit upwards, in support of the first

58. *Lee*, "Civil Aeronautics—Legislative History of the Air Commerce Act of 1926" (Washington: corrected to Aug. 1, 1928); *Mollica*, "The Extent of the Right of the Private Owner of Land to the Space Above," 11 Univ. of Detroit Bi-Monthly L. Rev. 13 (1926).

59. Report of the Am. Bar Ass'n Committee on the Law of Aviation, 46 A. B. A. Rep. 498 (1921).

60. *Marshall*, "Some Legal Problems of the Aeronaut," 6 Ill. L. Quart. 50 (1923); *Logan*, Reply to General MacChesney, 56 A. B. A. Rep. 89, 90 (1931); *Newman*, "Aviation Law and the Constitution," 39 Yale L. Jour. 1113, 1128-9 (1930); *Tuttle & Bennett*, see note 46.

61. The brief filed by counsel for the Aeronautical Chamber of Commerce of America, as Amicus Curiae in *Swetland v. Curtiss Airports Corp.*, apparently approved this theory by contending that the navigable water analogy was applicable. As the right of the public to travel on navigable streams is superior to the right of the private riparian or stream-bed owner, the brief gives the theory a very pro-aviation turn by asserting that the landowner cannot complain if his enjoyment is cut down by proper air transit.

62. *Hazeltine*, see note 46, p. 77; *Dauids*, Law of Motor Vehicles, p. 292; *Bogert*, see note 51; *Lee*, see note 58; *Mollica*, see note 58, pp. 138, 146.

63. *MacChesney*, see note 56.

64. See note 60.

65. Tentative Draft No. 7, see Reporter's explanatory note appended to section 1002; 1931 U. S. Av. R. 280, 286.

theory, exists here. Transferring the easement concept to a new situation, where it lacks the historical meaning that has grown up about the term, has been thought to court undue confusion and difficulty. The theory leaves the right of the aviator in an extremely nebulous state.

(4) *Ownership Up to a Certain Height Only.*

The fourth theory asserts that there is private ownership of airspace up to a certain altitude, which may vary according to the particular circumstances, and that above this altitude airspace belongs to no one (*res nullius*) or is community property (*res communis*). Airspace is divided, accordingly, into two zones—upper and lower. The ordinary incidents of ownership exist in the lower stratum. Any entry into that space, not privileged, constitutes a technical trespass just as much as if it had been upon the surface.⁶⁶ Moreover, there is no general privilege existing in favor of the public for purposes of aerial transit in the lower stratum, but flying in the upper stratum is unrestricted unless it constitutes a nuisance in the same manner that flying over neighboring land might create a nuisance.

The actual location of the dividing line between the upper and lower strata is indefinite and may fluctuate with the use to which the surface is put. Generally speaking, the lower stratum would be that zone in which repeated flights of aircraft would constitute a legal nuisance to the use then being made of the surface. Various phrases have been employed to designate this area—"lower stratum", "possible effective possession", "effective user", "actual user". Each phrase is indefinite and allows a court to declare any flight to come within or without the lower stratum as the particular circumstances demand. It is possible that a single height might be fixed for all land but this would appear to be

66. While the allowance of an action of trespass is the distinctive legal characteristic of the lower stratum, it is believed by some advocates of the zone theory that this does not necessarily require the recognition of full rights of ownership in such airspace. Compare the views of the following authors: *Kuhn*, "The Beginnings of an Aerial Law," 4 *Am. J. Intern. Law* 109, 127 (1910); *Valentine*, "The Air—a Realm of Law," 22 *Jurid. Rev.* 85, 88 (1911); "Aviation and Wireless Telegraphy as Respects the Maxims and Principles of the Common Law," 71 *Cent. L. Jour.* 1, 2 (1910); *Wigmore*, II *Select Cases on the Law of Torts* (Boston, 1912) Appen. A, p. 855-6; *Mollica*, see note 58, pp. 142, 146; *Zollmann*, see note 57, pp. 13-14; *Hotchkiss*, A *Treatise on Aviation Law* (New York, 1928) p. 25; *McNair*, see note 55; *Comment*, 15 *Minn. Law Rev.* 318, 326-7 (1931); *Willebrandt*, see note 55.

entirely arbitrary and would destroy the desirable flexibility of the theory.

The extent of the lower stratum may vary with the countless uses to which land may be put although, for most uses, a given height will afford the owner adequate protection. The decision in each case must be made by a court, or other administrative body, upon full presentation of the facts. But this decision need only indicate that certain flying occurs above or below the hypothetical dividing lines. The chief objection to the fourth view is the impossibility of determining the dividing line, in advance of a litigated case. Few courts may render opinions until a case actually arises, and this fact gives rise to an additional reason for having these questions dealt with by a special commission. Such an administrative body, unhampered by seemingly rigid procedural rules, might, upon the basis of expert knowledge and experience, prescribe workable regulations to govern flying altitudes over the various areas—according to the use to which the land is put—and thus avoid the necessity, trouble and expense of litigation.⁶⁷ While courts act only after a problem arises, an expert commission could anticipate it in advance and thus save both interests the burden of numerous test cases.

Until the recent aviation cases, no court intimated that the rights of a landowner were to be bounded by any concept of "lower stratum". But, of course, a determination of "ownership" by the criterion of "possession" would imply some degree of limitation,⁶⁸ and there is abundant dicta in the early cases to the effect that the *cujus est solum* maxim would not be employed without some qualification.⁶⁹ *Smith v. New England Aircraft Co.*, and *Swetland v. Curtiss Airports Corp.*, each appear to have adopted slightly varying interpretations of the zone theory.⁷⁰ These cases,

67. It is recognized, of course, that the real difficulty will come, not in prescribing the altitude regulations, but in the pilot's ability to identify the various land uses and so conform his conduct to the regulations by flying at the proper altitude above the different areas.

68. See Part V.

69. See Part IV.

70. Judge Rugg in the *Smith* case stated that flying at 100 feet over woodland constituted a trespass but that flying above 500 feet, even over the plaintiff's residence, did not constitute a trespass or create a nuisance. Judge Hahn in rendering the opinion of the District Court in the *Swetland* case, spoke of "effective possession" as fixing the extent of the plaintiffs' exclusive property rights and indicates that under the circumstances it should be located at 500 feet. In the Circuit Court of Appeals, Judge Moorman divided airspace into an upper and lower stratum and inferred that trespass would lie in the lower stratum but stated that the lower stratum was not invaded by the flying in that case.

and possibly the early aviation cases,⁷¹ are authority for the zone theory, but it is believed that there was practically no precedent compelling these courts to adopt this theory. A few nineteenth century legal writers suggested the zone concept⁷² and at the present time it is advocated by a considerable number of jurists.⁷³

Before finally selecting one of the above theories and suggesting the manner in which it may be used to adjust the conflicting interest of landowner and aviator, a more detailed examination of legal precedent will be undertaken in order that the limitations confronting such a selection may be more fully appreciated.

III. AUTHORITY OF PRECEDENT: THE MAXIM—HISTORY THEREOF.

Reference to the maxim, *cujus est solum, ejus est usque ad coelum*, in English law, was first made in *Bury v. Pope*, decided in the 29-30 year of Elizabeth (1586). The case involved a prescription of light and at the end of the opinion the following was appended:

"NOTE. *Cujus est solum, ejus est summitas usque ad coelum*. Temp. Ed. I."⁷⁴

The note is interpreted by Hazeltine to mean that Croke, the reporter, is stating that "from Edward I's time onward, it had always been a maxim of the English courts,"⁷⁵ and Edward I reigned

71. *Commonwealth v. Nevin and Smith* (Ct. of Quarter Sessions, Jefferson Co., Pa. 1922); *Johnson v. Curtiss Northwest Airplane Co.* (Dist. Ct., 2d Jud. Dist. of Minn., 1923); *Glatt v. Page* (Dist. Ct., 3d Jud. Dist. of Neb. 1928). These cases are discussed more fully in Part IV.

72. *Pollock*, Torts (13th ed.) p. 362; *Burdick*, Law of Torts (4th ed.) p. 406.

73. *Kuhn*, see note 66, p. 127; *Baldwin*, "Law of the Airship—Possible Methods and Scope of Regulation", 4 Am. Jour. Intern. L. 95, 97 (1910); "Aviation and Wireless Telegraphy as Respects the Maxims and Principles of the Common Law," 71 Cent. L. Jour. 1 (1910); *Sperl*, "Legal Side of Aviation," 23 Green Bag 398, 400 (1911); *Paul Matter*, La Revue Bleue, in *Spurr*, "Let the Air Remain Free," 18 Case & Com. 119, 123 (1911); *Spaight*, Aircraft in Peace and the Law (New York, 1919) p. 55-6; *Webb*, "Can I Fly over your Land?" 48 Wash. Law Rep. 673, 674 (1920); *Trabue*, "The Law of Aviation," 9 A. B. A. Jour. 777, 789 (1923); *Zollmann*, see note 57, pp. 22, 24; *Hotchkiss*, see note 66, p. 25; *Jome*, see note 46, p. 265; *McCormick*, Comment, 1 Rocky Mtn. L. Rev. 241 (1929); *Newman*, see note 60; *Strawn*, "New Problems for the Lawyers," 43 U. S. Law Rev. 389, 396 (1929); *Bouve*, "The Private Ownership of Airspace," 1 Air Law Rev. 376, 379 (1930); *Marvin*, Comment, 10 Boston Univ. L. Rev. 382, 386 (1930); Annotation, 69 A. L. R. 316 (1930); *Falkin*, see note 46, pp. 124-5; *Wenneman*, Municipal Airports (Cleveland, 1931), p. 278; *Hayden*, see note 56; *Fagg*, "Airspace Ownership and the Right of Flight," 3 JOURNAL OF AIR LAW 400 (1932).

74. 1 Cro. Eliz. 118, 78 Eng. Repr. 375.

75. *Hazeltine*, The Law of the Air (London: Univ. of London Press, 1911) p. 62.

from 1272 to 1307. De Montmorency calls this the reporter's daring addition.⁷⁶ The second mention of the maxim is found in *Baten's Case*, 8 James (1611),⁷⁷ where it is quoted parenthetically in the middle of the opinion. The case involved a house "newly built" which overhung the plaintiff's house. An action *quod permittat* was allowed, which roughly corresponds to the present action of nuisance.

Lord Coke in his Commentary upon Littleton, written about 1628, mentions the maxim, and his quotation is usually looked upon as the source of the maxim in English law. "Land" was of predominant economic importance in Coke's time, and because it was "the habitation of man" he calls it the "preferred" element of the earth.⁷⁸ In describing "its legall signification," Coke adds as a final gesture:

"And lastly, the earth hath in law a great extent upwards, not only of water, as hath been said, but of ayre and all other things even up to heaven; for *cujus est solum ejus est usque ad coelum*, as is holden 14. H. 8. fo. 12. 22. Hen. 6. 59. 10. E. 4. 14. *Registr. origin.* and in other bookes."⁷⁹

It is to be noted that, in support of the above passage, Coke makes three references to the Year Books, and also mentions "*Registr. origin.*, and in other bookes." None of these three cases mentions the maxim. The earliest case, 22 *Henry VI*, fo. 59, (pl. 11), involved a dispute between landlord and tenant under a lease as to the ownership of six young goshawks roosting in the trees on the leased land. The second case, 10 *Edward IV*, fo. 14,⁸⁰ related to the theft of muniments of title in which the case of the goshawks is referred to. The latest case 14 *Henry VIII*, fo. 12, was an action against a tenant for waste in cutting trees, and the question was whether the lease was from year to year and had expired.

76. De Montmorency, "The Control of Air Spaces," 3 Transactions of the Grotius Society 61, 66 (1918). "A careful search has failed to reveal the maxim in the Year Books, but I think that the word *summitas* is some evidence that it was a mediaeval gloss."

77. 9 Coke's Rep. 53b, 77 Repr. 810.

78. "This element of the earth is preferred before the other elements: first and principally, because it is for the habitation and resting-place of man; for man cannot rest in any of the other elements, neither in the water, ayre, or fire." Coke on Littleton (London, 1629) Lib. 1, sec. 1, p. 4a.

79. Ibid.

80. Also cited as 49 *H. VI*, pl. 9. This case is given both in Norman French and in English in *Year Books of Edward IV*, Vol. 47 Publications of the Selden Society (London, 1931) p. 124.

These courts apparently assumed that the owner of land had an interest in birds that nested in trees growing on his soil, because, if he owned the land which enfolded the roots of the trees, he owned the branches that were in the airspace above and in which the birds had their nests. The real dispute, in the two cases involving leases, was over the construction to be placed upon the lease.

A case appearing in *14 Henry VIII, fo. 1 (pl. 1)* discussed the right of the Bishop of London, as landlord, to certain herons and shovelers nesting in trees on land which the Bishop had leased, and probably is the case Coke intended to cite in the place of *Henry VIII, fo. 12*.⁸¹ In this case reference is made to "*iesque al firmament*" which corresponds to the Latin "*usque ad coelum*" and if Coke had meant to cite it, would offer some reason for his doing so:

"Fitzh. . . . e per exception del arbre, chose deins le circuit del arbre iesque al firmament est except, e donq il ne poit medler oue ceo,
Brooke, Iustice al contrarie,
 e le lessor auera le terre sur q l'arbre cressoit, car l'arbre ad son estre per le terre sur q il cressoit in profunditie, e tout le aire que luy nourish in altitude, pertaint a cesty a que l'arbre pertaine, e tous les profits que beignent del arbre:" ⁸²

"Fitzherbert: . . . and by the exception of the trees things within the area of the tree and up to the sky (firmament) are also excepted and therefore he cannot meddle with them. . . . *Brook, J.* (to the contrary): . . . And the lessor will have the land in which the tree grows, for the tree has its being through the earth and air, and therefore all the earth in which it grows in depth, and the air it needs in height belong to him to whom the tree belongs, as do all the profits of the tree. . . . " ⁸³

Coke's carelessness in citing the Year Books is well known.⁸⁴ The notation, "Registr. origin.", probably refers to Register of Original

81. The folio pages in the early editions of the Year Books differ somewhat, but in reference to these citations Holdsworth said: "Coke's references to the Year Books there cited are incorrect." *7 History of English Law* (Boston: Little, Brown & Co., 1926), p. 485.

82. From the folio edition printed by Richard Tottill, some time before 1591.

83. Translation by E. R. James, Harvard Law School.

84. "I think there has been a growing suspicion of recent years that Coke's knowledge of the Year Books was practically confined to what he found in the Abridgements." *Bolland, A Manual of Year Book Studies* (Cambridge Studies in English Legal History, 1925) p. 85.

"The best estimate of his importance as a legal authority is that of C. J. Best—"The fact is that Lord Coke had no authority for what he states, but I am afraid we should get rid of a great deal of what is considered law in Westminster Hall if what Lord Coke says without authority is not law * * *." *5 Encyclopedia Britannica* (14th ed., 1929) p. 981.

Writs. The note in *Bury v. Pope* to "Temp. Ed. I" and Coke's four citations are considerable indication that the maxim had been used still earlier in English law. No previous mention has been discovered in other studies. The Abridgements to the Year Books were well known to Coke. The case in 22 *Henry VI*, fo. 59, is reported in both Fitzherbert's⁸⁵ and Brooke's Abridgements, and 14 *Henry VIII*, fo. 1, in Brooke's Abridgement.⁸⁶ These digests merely summarize the contents found in the Year Books and could no more mislead Coke than could the texts of the Year Books themselves.

The maxim is not found among the maxims collected by Sir Francis Bacon,⁸⁷ Edmund Wingate,⁸⁸ or William Noy.⁸⁹ The maxim is accepted in Sheppard's Touch-Stone of Common Assurances:

"By the grant of the land, or ground it selfe, all that is *supra*, as houses, trees, and the like is granted, for *Cujus est solum ejus est usque ad coelum*, also all that is *infra*, as Mines, earth, clay, quarres, and the like."⁹⁰

Thomas Branch listed the maxim in his collection of "Principia Legis et Aequitatis" published in 1753.⁹¹

Blackstone quoted the maxim with approval in his Commentaries, first published in 1766, in discussing the meaning and extent of land in its legal significance—particularly with regard to conveyances:

"Land hath also, in its legal signification, an indefinite extent, upwards as well as downwards. *Cujus est solum, ejus est usque ad coelum*, is the maxim of the law; upwards, therefore no man may erect any building, or the like to overhang another's land . . . the word 'land' includes not only the face of the earth, but every thing under it, or over it. . . . by

85. *Fitzherbert*, La Graunde Abridgement, part 2 (published by Richardi Tottelli in 1577), title, Trespass, pl. 64, fo. 207.

86. *Brooke*, La Graunde Abridgement, part 2 (published by Richardi Tottell in 1549), title, Trespass, pl. 162, fo. 286 (22 *Hen. VI*, 59); pl. 167, fo. 291-2 (14 *Hen. VIII*, 1).

87. *Bacon*, "Maxims of the Law"—The Works of Francis Bacon (Boston: Brown & Taggard, 1861), Vol. 14, p. 163-277.

88. *Wingate*, Maxims of Reason: or the Reason of the Common Law of England (London, 1658).

89. *Noy*, The Ground and Maxims of English Laws (London, 1642, & Middleton, Conn., 1808 from 7th London ed.).

90. *Sheppard's Touch-stone of Common Assurances* (London, 1648) p. 90. On the margin of this passage is cited: 14 H. 8.1., Co. Lit. 4.

91. *Branch*, "Principia Legis et Aequitatis" (London, 1753) p. 15. In the 5th London edition, the maxim is translated: "The owner of the soil is owner of every thing upon and above it, up to the clouds." (p. 32).

the name of land, which is *nomen generalissimum*, every thing terrestrial will pass."⁹²

In defining land, Kent made a similar use of the maxim in his "Commentaries on American Law," first published in 1826-30, but without employing the latin phraseology.⁹³ Provisions similar to the maxim are found in the Code Napoleon, Article 552, and numerous modern European codes.⁹⁴ It has been embodied in the statutes of several American States.⁹⁵ In the last one hundred years, the maxim has been quoted in some form or other in over 26 English and Canadian cases and in at least 80 cases arising in the United States.

Coke, the sponsor of this maxim, held maxims generally in the highest esteem. In discussing the principle that "inheritance may lineally descend, but not ascend" he expresses the opinion:

"*Maxime*, i. e. a sure foundation or ground of art, and a conclusion of reason, so called *quia maxima est ejus dignitas et certissima autoritas, atque quod maxime omnibus probetur*, so sure and uncontrollable as that they ought not to be questioned."⁹⁶

The reverence which Coke manifests for legal maxims was customary among early writers,⁹⁷ but can hardly be accepted today. A

92. *Blackstone*, Commentaries (Chicago: Callaghan & Co., 1872, Cooley's 2nd ed.), Vol. II, Ch. 2, p. 18.

93. Kent cited both Coke and Blackstone and said: "Land * * * has an indefinite extent, upwards as well as downwards, so as to include everything terrestrial, under or over it." 3 Comm. (Holmes, 12th ed., 1884), p. 401.

94. *Lycklama à Nijeholt*, Air Sovereignty (The Hague, 1910), Appendix B, part 4.

95. Calif. Civil Code (1923), sec. 829: "The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it." However, in California, land is defined as "the solid material of the earth" and thus does not include airspace: Calif. Civil Code, sec. 659. See also Mont. Civil Code, (Choate 1921) sec. 6770; S. D. Comp. Laws Ann. (1929), sec. 358; N. D. Comp. Laws Ann. (1913), sec. 5351. See also *Gas Products Co. v. Rankin*, 63 Mont. 372, 389.

96. Coke on Littleton, Lib. 1, sec. 3, p. 10b-11a. Reference is here made to "Pl. Com. 27. (3. Co. 40)."

Again in speaking of the maxim that "He which hath an estate but for terme of life, shall neither doe homage or take homage," Coke says: "A maxime is a proposition, to be of all men confessed and granted without prooffe, argument, or discourse. *Contra negantem principia non est disputandum*." Ibid, Lib. 2, sec. 90, p. 67a. The above passages are quoted approvingly in *Chrisman v. Linderman et al.*, 202 Mo. 605, 614, 100 S. W. 1090 (1907); and *Felver v. Central Electric R. Co.*, 216 Mo. 195, 208, 115 S. W. 980 (1908).

97. "The attitude of early English commentators towards the maxims of the law was one of unmingled adulation," 15 Encyclopedia Britannica (14th ed.), title, Maxims, p. 117.

"At the time of Lord Coke jurists had a high opinion of maxims." *Falkin*, Comment, 16 Corn. L. Quart. 119 (1930).

See also preface to *Bacon's "Maxims of the Law,"* cit. supra note 87;

maxim has been described as a "substitute for thought" which is a "dangerous short cut" and "apt to operate in the same way in law as a slogan in public affairs".⁹⁸ At best, maxims only summarize a general policy which must be interpreted and applied in the light of circumstances.⁹⁹ Blackstone, who himself repeated the maxim and to whose credit is due its popularization in the United States, said:

"The authority of these maxims rests entirely upon general reception and usage: and the only method of proving, that this or that maxim is a rule of the common law, is by shewing that it hath been always the custom to observe it, . . . how are these maxims and customs to be known, and by whom is their validity to be determined? The answer is, by the judges in the several courts of justice. . . . Judicial decisions are the principal and most authoritative evidence, that can be given, of the existence of such a custom as shall form a part of the common law."¹⁰⁰

Maxims cannot be used to decide actual litigation and it is doubtful if such use was ever generally attempted.¹⁰¹

Bouvier, Law Dictionary, tit., Maxims; *Vinogradoff*, "Les Maximes dans l'Ancien Droit Commun Anglais," *Revue Historique de droit Français et Étranger*, 1923; *Collected Papers* (Oxford, 1928) Vol. 2, p. 239; and *M. J. Williams*, "Latin Maxims in English Law," 20 *Law Mag. & Rev.* (4th series, 1895).

98. *McNair*, "The Beginnings and the Growth of Aeronautical Law," 1 *JOURNAL OF AIR LAW* 383 (1930).

99. Apparently the Romans were under no misapprehension of the proper use of maxims, see *Paulus*, in *Justinian's Digest*, L, 17, 1.

"Regula est, quae rem quae est breviter enarrat. Non ex regula ius sumatur sed ex iure quod est regula fiat." (Mommson's ed. of *Corpus Juris Civilis*.)

A maxim (principle) is whatever explains a thing concisely. The law is not taken from the maxim, but the maxim is made from what the law is.

Lord Esher in *Yarmouth v. France*, 19 Q. B. D. 647, 653, 17 E. R. C. 217, said: "I hardly need repeat that I detest the attempt to fetter the law by maxims. They are almost invariably misleading; they are for the most part so large and general in their language that they always include something which really is not intended to be included in them." See *Svendson v. Wallace Bros.*, 55 L. J. Q. B. 65, 66 (1885), and *Blackburn, Low and Co. v. Vigors*, 55 L. J. Q. B. 347, 348 (1886). See also, *Salmond*, *Jurisprudence* (London: Stevens & Haynes, 3d ed. 1910), App. 3, p. 481; *Jeremiah Smith*, "The Use of Maxims in Jurisprudence," 9 *Harv. L. Rev.* 13 (1895); *Townshend*, *Slander and Libel* (4th ed.), sec. 88, p. 71, note 1; *Stephen*, *History of the Criminal Law of England* (1883 ed.), Vol. 2, p. 94, note 1; *E. Q. Keasbey*, 3 N. J. L. Jour. 160.

100. 1 *Blackstone*, *Commentaries*, Intro., sec. 3, p. 68-9.

101. "A maxim * * * is a symbol or vehicle of the law, so far as it goes; it is not the law itself, still less the whole of the law, even on its own ground. One of the commonest mistakes of beginners and laymen is to take a maxim for an authentic and complete expression of the law." *Pollock*, *A First Book of Jurisprudence* (London: MacMillan & Co., 1918), pp. 235-6.

The latin phraseology of the maxim has varied somewhat, but the most common form is the above-quoted, *cujus est solum ejus est usque ad coelum et ad inferos*.¹⁰² The use of latin has given rise to many misunderstandings as to the legal meaning of the maxim. A literal translation of the phrase would read: "Whose is the ground, his it is even to the sky and down to the depths." Bacon stated that he expressed maxims in latin because he regarded that language "as the briefest to contrive the rules compendiously".¹⁰³ It would seem that, in regard to this maxim, latin has not prevented misunderstanding among modern jurists who are not so thoroughly schooled in the classics.¹⁰⁴ One group interprets the maxim to mean: "He who *owns* the land, *owns* up to the sky."¹⁰⁵ Accordingly, the maxim is made the criterion of legal *ownership*. Space is here accepted as capable of ownership. A second group interprets the maxim to mean: "He who *possesses*

102. The following are some of the various forms the maxim has assumed: "*Cujus est solum, ejus est summitas usque ad coelum*," *Bury v. Pope*, see note 53; "*Ab orco usque ad coelum*," *Penn. Coal Co. v. Mahon*, 260 U. S. 393, 419, 43 S. Ct. 158 (1922); "*Ad coelo usque ad centrum*," *Hobbs v. Esquimalt & Nanaimo Ry. Co.* (Canadian) p. 231. For the citation of this case and the following cases, see note 145; "*A centro usque ad coelum*," *Central London Ry. Co. v. London Tax Com'rs.* (English), p. 479; "*A centro usque ad coelum*" and "*Ad coelum et ad inferos*," *Central London Ry. Co. v. London Tax Com'rs.* (English), p. 486; "*Usque ad coelum et ad inferos*," *Raymond Land & Investment Co. v. Knight Sugar Co., Ltd.* (Canadian), p. 163; "*Ab imo usque ad coelum*," *Barnett v. Johnson*, p. 489; "*Cujus est solum*," *Corbett v. Hill* (English); "*Usque ad coelum*," *Hannabalsen v. Sessions*; "*Cujus solum*," *Chase v. Silverstone*, p. 183; *Smith Canal or Ditch Co. v. The Colorado Ice & Storage Co.* See also "Qui dominus soli dominus est coeli et inferorum," *Tuttle & Bennett*, "Extent of Power of Congress over Aviation," 5 *Univ. of Cinc. L. Rev.* 261 (1931); *Colegrove*, *International Control of Aviation* (Boston: World Peace Foundation, 1930) p. 5; *Henry Coüannier*, *Éléments Créateurs du Droit Aérien* (Paris, 1929) p. 104; *BasileSCO*, *La Propriété de l'Espace Aérien* (Paris, 1920), p. 45-6. "*Ad coelo ad centrum*," *Stair*, ii, 3, 60; *Ersk.*, ii, 6 1; *Bell's Prin.* 940—quoted in *Valentine* "The Air—a Realm of Law," 22 *Jurid. Rev.* 85, 89 (1910); "*Ad coelo usque ad centrum*" and "*Inter coelum et inferos*," *Scots L. Times* 1930, p. 170; "*Cujus est solum ejus est a coelo usque ad centrum*" (or "*usque ad inferos*"), *Lord Mackenzie*, *Roman Law*, p. 170; *Dart*, *Vendors and Purchasers*, p. 129, from *Goudy*, "Two Ancient Brocards," *Essays in Legal History* (Oxford Univ. Press, 1913), p. 215-30; "*A coelo usque ad centrum*," *Traynor*, *Latin Phrases and Maxims* (Edinburgh: Wm. Paterson, 1861), pp. 1, 58.

103. *The Works of Francis Bacon* (Boston: Brown and Taggard, 1861), Vol. 14, p. 183.

104. *Smith*, "The Use of Maxims in Jurisprudence," 9 *Harv. L. Rev.* 13 (1895).

105. *Bouvier's Law Dictionary*; *Black's Law Dictionary*; *Zollmann*, *Law of the Air*, p. 6; *Logan*, *Aircraft Law—Made Plain*, p. 14; *Haas*, "Law of the Air," 2 *Marquette Law Rev.* 109, 111 (1918); *Wenneman*, *Municipal Airports* (Cleveland, 1931) p. 241.

land, *possesses* also that which is above it."¹⁰⁶ This last interpretation does not necessarily imply that the maxim permits the same legal remedies as are permitted where ownership is made the central idea. *Possession* is here made the focal point of the maxim, but such an interpretation does not of itself imply that *space* is capable of legal possession, since the scope of the maxim may be restricted, instead, to *objects* in airspace. It is to be noted that the early English authors all associated the maxim with the definition of land and when their full passages containing the maxim are examined, it is clear that none of them committed themselves to a theory that *space per se* was either owned or possessed. A third group has contended that the maxim had nothing to do with either *ownership* or *possession* but was a mere *rule of construction* to raise a presumption as to what passed by a conveyance of "land."¹⁰⁷ The early authors admit such an interpretation but not as exclusive. Valentine stressed the point that several early authors had associated the maxim with the extent of the King's grant.¹⁰⁸ Under feudal law the feoffee did not receive an allodial tenure of the land but took it subject to services, some of which permitted the overlord to pass over and upon the land granted. Some recent authors have advanced the suggestion that if aircraft had been known in those days the overlord would have retained the right to fly over the land.¹⁰⁹ Some of these authors then concluded that such a right must have been impliedly retained and that the modern state has succeeded to this right and now holds it in favor of the public.

All groups gloss over the difficulty found in the phrase *usque ad coelum*—up to but not including the *coelum*. Literally trans-

106. *Broom's Legal Maxims* (London: Sweet & Maxwell, 1924), p. 260; *Hotchkiss*, *Aviation Law*, p. 13.

107. *Spurr*, "Let the Air Remain Free," 18 *Case and Com.* 119, 121-2 (1911).

108. "It is of some importance to observe that these writers [Craig and Stair], other than Blackstone and Bell, make it clear that they are dealing with the extent to be attributed to the grant made to his vassal by the King. Their proposition comes to this, that there is nothing below heaven that the King may give by general grant that he is not to be held to include in his grant of lands. It will be noticed that this does not close the question, for it remains to be determined what rights in the air may the King give." *Valentine*, "The Air—A Realm of Law," 22 *Jurid. Rev.* 85, 90 (1910). See *Stair*, *Institutions of the Law of Scotland* (Edinburgh, 1882), Bk. 2, Tit. 3, sec. 60 (p. 334).

109. *Valentine*, see note 108. *Zollmann*, *Law of the Air*, p. 6. *Hise*, "Ownership and Sovereignty of the Air or Airspace above Land-Owner's Premises with Special Reference to Aviation," 16 *Ia. Law Rev.* 169, 176 (1931). *Davis*, "Legal Aspect of Federal Air Legislation," 11 *Aviation* 627 (1921).

lated, *coelum* means "the sky", "heavens", or "vault of heaven", but it also has numerous figurative uses as does our word "sky".¹¹⁰ Jome has pointed out that *coelum*, in the sense of sky, referred to the region a little above "the highest tree-tops or buildings":

"Virgil refers to a '*machina aequata caelo*'—a derrick equal in height to the *caelum*. The machine of which he sings stood on top of a wall. The entire distance probably did not exceed 100 feet."¹¹¹

If this interpretation were literally adhered to, ownership or possession would extend only up to the lowest height of that region which is probably below the space commonly used by airplanes. However, it may well be that this use would be comparable to our figurative use of the term "sky-scraper". There is no doubt that this restriction found in the phrase *usque ad coelum* was not consciously conceived of by Anglo-American courts until the last decade, although their actual decisions, if not their dicta, accord with such limitation perfectly.

Origin of the Cujus Est Solum Maxim.

In two senses, the maxim is said to be of Roman origin: first, that the maxim was taken directly from Roman sources and, second, that although not found in the sources it is consistent with the principles and usages of Roman law. All attempts to trace the exact language of the maxim to the Corpus Juris have failed. The phraseology is now believed to have originated in a gloss or marginal note upon several passages of Justinian's Digest which remotely suggests the maxim. Accursius is now generally recognized as the originator of the maxim and the author of this gloss.¹¹²

110. See 2 *Forcellini*, *Totius Latinitatis Lexicon* (Prati: 1861), tit., *Caelum*, p. 17; *Andrews*, *Latin-English Lexicon* (New York: Harper & Brothers) tit., *Coelus*, p. 295, 2nd definition: "The aerial region over the earth, the air, sky, atmosphere, temperature, whether (very freq.)." Figurative uses: "*Aliquod caeli signum*," constellation; "*de caelo tactae*," to be struck by lightning; "*albente coelo*," at break of dawn; "*de caelo servare*," to observe the signs of heaven; "*delabi caelo*," to drop from the sky (of a sudden good fortune); "*caelum ac terras miscere*," to throw everything into confusion; "*Caesar fertur in caelum*," praised to the skies; "*collegam de caelo detraxisti*," deprived of his position; "*in caelo sum*," I am in heaven, i. e. very happy; "*omnia, quae tu in caelum ferebas*," extolled.

111. Jome, "Property in the Air as Affected by the Airplane and Radio," 4 Jour. Land & Pub. Util. 257, 62 Am. L. Rev. 882 (1928).

112. This explanation of the origin of the maxim has been accepted by: *Eugene Sauze*, "De l'Abus du Droit dans les Applications à la Locomotion Aérienne," *Revue des Idées* (Aug. 15, 1910): "When we trace the maxim back to its origin, the germ of it is found in a gloss by Accursius, of a date corresponding more or less to the year 1200."

Henry Guibé, *Essai sur la Navigation Aérienne en Droit Interne et en Droit International*, (Paris, 1912).

Spaight, *Aircraft in Peace and the Law* (London: MacMillan & Co.,

He lived from about 1184 to 1263 and was one of the glossators of the Bolognese school whose aim was to revive and popularize Roman law.¹¹³ He himself made many extensive glosses upon the Digest, Code and Institutes—one author credits him with “a round hundred thousand”.¹¹⁴ He arranged, with his own comments, the almost innumerable glosses, then existing, into what has become known as the “*Glossa ordinaria*”.¹¹⁵ A few modern writers have attributed the gloss to Cinus (Gino) of Pistoia who was of the same school and lived between 1270 and 1366,¹¹⁶ and others merely

1919), p. 54; M. Guibe “found a gloss with the sign ‘Acc.’ in the margin of an edition of the Digest printed in Paris in 1519, at the law *Si Intercedit*, and thus tracked the famous maxim to its author, the glossator Accursius.”

Bouvé, “The Private Ownership of Airspace,” 1 Air L. Rev. 232, 247 (1930); “There seems, on the whole, little doubt that the origin of the maxim is the Accursian gloss.”

113. “The critical examination of the state of the text was one of the chief preoccupations of the Bolognese scholars. The next was literal interpretation * * *. Their glosses could not well remain between the lines as explanations of single words or short remarks. They naturally spread out on the margin, where there was more room for notes, that were not merely transliterations. With Azo and Accursius they grew to be consecutive commentaries. * * * With the Bolognese they assumed a more distinct character as statements of juridical rules, and were nicknamed *Brocardica*.” Vinogradoff, *Roman Law in Medieval Europe* (2d ed., 1929), p. 58.

114. On the life of Accursius, see a note by F. de Z., in 46 Law Quart. Rev. 148-150 (1930); this note refers to several continental authors who have made extensive biographical studies. See also, *De Colquhoun*, A Summary of Roman Civil Law (London: Stevens & Sons, 1851), pp. 167-8; and 1 Encyclopaedia Britannica (14th ed.) p. 114.

115. Carlo Calisse said: “The most famous among the Glossators is Accursius. Whether by his merits or by his cleverness, his name came to embody all that the school stood for. * * * This gloss, distinguished from all others by the name ‘Accursiana’ or ‘ordinaria’, was a comprehensive collection of all preceding glosses, summaries, and other works. * * * It supplanted all that had gone before. The extraordinary repute of Accursius went on increasing after his death. * * * In the courts his gloss was as good as law; and the saying was in vogue “*Quidquid non agnoscit glossa nec agnoscit curia*.” In the schools, his gloss was the only text studied; for the other jurists, and even the books of Justinian, were laid aside. This great work of Accursius was of course not without its defects. He had not in all instances preserved the best nor excluded the poorest of his predecessors’ glosses. He did not always abridge correctly. * * * Yet it is hardly right to attempt to pass judgment in these matters upon Accursius’ work as we have it. For one thing, it would require a complete acquaintance with the sources abridged by him; and most of them either are long perished or repose still in manuscript. Moreover, in the course of repeated copyings, so many errors have occurred, in omitting or exchanging the signs-manual which serve to identify the passages of the other authors and of Accursius himself, that it is now unsafe to base conclusions upon the authorship of particular passages.” I Continental Legal History Series (Boston: Little, Brown & Co., 1912) p. 139-140.

116. *Miraglia*, Comparative Legal Philosophy (Translated 1912), sec. 292, p. 474-5: “Many invoke the authority of the Roman Law, according to which the scholastics say that the owner of the soil is the owner of a column of air to heaven and of a column of earth to ‘infernus,’

assert that the maxim is derived from Roman sources generally, or was the product of some medieval "black letter lawyer."¹¹⁷

The gloss most generally referred to for the origin of the maxim appears as a marginal note to a passage by Paulus in Justinian's Digest, VIII, 2, 1, which describes the limitations on the acquisition of servitudes when a public way intervenes between the dominant and servient estate because "the air ought to be free".¹¹⁸ In the Pandectum Vetus published at Venice in 1541 "with notes by Accursius and many others, especially Antonio Persio", appears the following gloss upon the above passage:

<p>"Cujus est solum, ejus debet esse usque ad coelum, ut hic, & infra 'Quod vi aut clam'. 1 fi. §. pen."¹¹⁹</p>	<p>Whose is the soil, his it ought to be up to the sky; as here & below see XLIII, 24, 22, 4.</p>
--	---

While the name Accursius is not appended to this gloss, it is found

but such statements are a hyperbole invented by Gino da Pistoia and have no foundation in the sources of Roman law, which teaches different limitations of the property right in regard to what is above and below the soil." See also *Brissaud*, History of French Private Law (Tr. 1912), p. 283. Ball accepts the explanation of Brissaud and Miraglia. *Stuart Ball*, "Jural Nature of Land," 23 Ill. L. Rev. 49 (1928).

117. *Hazeltine*, The Law of the Air, p. 58. "This doctrine is based upon the ancient maxim derived from the Roman system of law that whoever owns the land owns all below the surface and all above."

Baldwin, "The Law of the Airship," 4 Am. J. Int. L. 97 (1910). "This maxim was not derived from the nation whose language is used for its statement and, as we have seen, is foreign to the conceptions of the Roman Law as to what is the common property of all. It is the production of some black-letter lawyer, and, like every short definition of a complex right, must be taken with limitations."

See also: *Goudy*, "Two Ancient Brocards," Essays in Legal History, p. 230; *Sir H. Erle Richards*, "Sovereignty over the Air" (Clarendon Press, Oxford, 1912), p. 11; *Kuhn*, "The Beginnings of an Aerial Law," 4 Am. J. Int. L. 123 (1910); *De Montmorency*, "The Control of Air Space," 3 Trans. of Grotius Society (1917), p. 66; *MacCracken*, "Air Law," 57 Am. L. Rev. 97 (1923); *Wenneman*, Municipal Airports, p. 241.

118. "Si intercedat solum publicum vel via publica, neque itineris acusve neque altius tollendi servitutes impedit: sed immitendi protegendi prohibendi, item fluminum et stillicidiorum servitutem impedit, quia caelum, quod supra id solum intercedit, liberum esse debet. (From *Momm-sens* ed. of 1911).

"If public ground or a public road comes in the way, this does not hinder the servitude of a *via* or an *actus* or a right to raise the height of a building, but it hinders a right to insert a beam, or to have an overhanging roof or other projecting structure, also one to the discharge of a flow or drip of rain-water, because the sky over the ground referred to ought to be unobscured." (*Monro's* Translation of the Digest [Cambridge: University Press, 1909] Vol. 2, p. 68.)

119. The abbreviations found in the above edition have been expanded. In some editions this passage is found at VIII, 1, 21.

at the end of the last note on the above page. Similar glosses are found in subsequent editions of the Digest.¹²⁰ The cross-reference refers to a passage in the Digest concerning the keeping of burial-lots free from over-hanging trees.¹²¹ In the 1541 edition of the Digest, above mentioned, the gloss appended to this section consists merely of a reference back to the above-quoted passage.¹²² Several other passages from the Digest remotely suggest the maxim.¹²³

In the Code of Justinian, III, 34, 8, is a passage stating that a proprietor is free to build upon his land when not under a servitude.¹²⁴ In an edition of the Code, printed at Nuremberg in 1488, by Koberger, appears the following gloss:

120. Leyden: Hugonem a Porta, 1549, 1552, 1557; Amsterdam, 1548, 1563.

121. Quod Vi Aut Clam, (XLIII, 24, 22, 4).

"Si quis projectum aut stillicidium in sepulchrum immiserit, etiamsi ipsum monumentum non tangeret, recte cum eo agi, quod in sepulchro vi aut clam factum sit, quia sepulchri sit non solum is locus, qui recipiat humationem, sed omne etiam supra id caelum: eoque nomine etiam sepulchri violati agi posse." (From *Mommsen's* ed. of 1911)

If anyone causes a projection to hang over, or water from a roof to drop upon a burial place, even though it does not touch the tomb itself, there is a rightful claim against him because an injury was done to the tomb "vi aut clam," since that is not only the place of the tomb which receives the interment, but also all the sky above it: and on this ground an action is possible against him for violating a tomb.

122. Similar glosses are found in the following editions: Leyden: Antonium Vincentium, 1512, Hugonem a Porta, 1550; Venetiis, 1591; Leydon: Hugonem a Porta, 1569, 1602. In some editions this passage is found at XLIII, 23, 21, 4.

123. Digest VIII, 2, 9 Ulpian:

"Cum eo, qui tollendo obscurat vicini aedes, quibus non serviat, nulla competit actio." (From *Mommsen's* ed. 1911)

"Where a man by raising the height of his own house cuts off the flow of light to that of his neighbour, but is not subject to a servitude in respect of the latter, there is no right of action against him." (*Monro's* trans., p. 70)

Upon this passage the following gloss is found in the 1541 edition:

"Si habeo domum, possum eam exaltare usque ad coelum, si non debeo alii servitutem. Viuii."

If I own a house, I can raise it even to the sky, if I owe no servitude to anyone.

124. "Altius quidem aedificia, tollere, si domus servitutem non debeat, dominus eius minime prohibetur." (From *Mommsen's* ed. of 1911)

One is in no wise prevented from constructing his building higher provided his building acknowledges no servitude.

"Videtur ergo quod quodlibet praedium praesumitur liberum nisi probetur contrarium est enim cuiuslibet usus usque ad celum . . ." ¹²⁵

It was adjudged, therefore, that every property is presumed free unless there is a contrary restriction, for everyone's enjoyment extends to the sky above.

Similar glosses appear in subsequent editions of the Code.¹²⁶ No other passages from the Corpus Juris Civilis have been found or referred to which employ language suggesting the maxim *cujus est solum*. It is to be noted that all of the above passages refer to public or sacred land and that rights in such land do not need to be the same as those over private land.¹²⁷ From the above sources, it is clear that there is nothing in the original Roman texts which directly supports the maxim. It would seem even to be doubtful whether the gloss attributed to Accursius directly supports the maxim because of the word *debet*—ought to be—and not *habet*.

Much consideration has been given to the question as to whether the maxim is consistent with the spirit of Roman law, although not literally found therein, and upon this question modern legal writers are divided.¹²⁸ The air (*aer*) was considered *res communis* in Roman law in the same manner as the sea and the seashore. Many passages from the Corpus Juris are cited to

125. The abbreviations found in the above edition have been expanded, following *Capelli's* Dizionario di Abbreviature Latine ed Italiane (Milan, 1912).

126. Amsterdam, 1663. Two variations of this gloss have been found in the following editions:

"Videtur ergo, quod quodlibet praedium praesumitur liberum nisi probetur contrarium est enim cuiuslibet solum usque ad celum." Leyden, Antonio Vincentio, 1512.

"Videtur ergo, quod quodlibet praedium praesumitur liberum, nisi probetur contrarium est enim eius usque ad coelum, cuius est solum." Leyden, 1553, 1569, 1591; Paris, 1566.

127. "Both these passages refer to the space above land that is not private property, but they appear to lay down with respect to public or sacred lands the general principle as stated by Dr. Roby (Roman Private Law, Vol. 1, p. 414)." *De Montmorency*, "The Control of Air Spaces," 3 Trans. Grotius Soc. (1918), p. 61-65.

"Whatever belonged to the Roman people lay outside the pale of private law." *Sohm's* Institutes of Roman Law (Oxford: Clarendon Press, 1907), p. 303. See also *Sanders*, Justinian (Chicago: Callaghan & Co., 1876), p. 160, Inst. II, 1, 8 & 9.

"It was only from the point of view of vicinage and servitude that the Romans had occasion to consider the *coelum* in this sense and it was the same with the mediaevalists." *Goudy*, "Two Ancient Brocards," Essays in Legal History, Chap. 11, p. 215, 231.

128. "Our present brocard, though it appears nowhere in the Roman texts, is consistent with the Roman law, and would not have sounded strange to the classical jurisconsults." *Goudy*, "Two Ancient Brocards," Essays in Legal History, p. 230.

show this.¹²⁹ Today we distinguish air, a floating element, from airspace, the geometric concept, and recognize that the element air is like the sea. Any part of the air may be appropriated by and as long as it is enclosed, but otherwise it is *res communis*.¹³⁰ No direct evidence has been shown that the Romans made this distinction between air and airspace, and opinions differ as to whether the Romans intended to include airspace as well as air in referring to the air as *res communis*.¹³¹ For airspace, the Romans had the

129. *Paulus* in Justinian's Institutes, II, 1, 1:

"* * * naturali iure communia sunt omnium haec: aer et aqua profluens et mare * * *"

"The following things are by natural law common to all: the air, running water, the sea."

Marcianus in Digest I, 8, 2, 1:

"* * * naturali iure omnium communia sunt illa: aer, aqua profluens, et mare * * *"

"* * By natural law, the following things are common to all: air, flowing water, the sea."

Celsus in Digest, XLIII, 8, 3, 1:

"* * * Maris communem usum omnibus hominibus, ut aeris * * *"

"* * The use of the sea is common to all, and that of the air."

Ulpian in Digest, XLVII, 10, 13, 7:

"* * et * * mare commune omnium est et litora, sicuti aer * *"

"The sea and the seashore is common to all, as is also the air." From *Lardone*, "Airspace Rights in Roman Law," 2 Air L. Rev. 455, 461 (1931).

See *Bracton*, De Legibus et Consuetudinibus Anglae, Bk. I, Ch. XII (leaf 7b) 5, p. 56-7 (f8):

"Naturali vero iure communia sunt omnium haec: aqua profluens, aer et mare et litora maris, quasi mari accessoria. Nemo igitur ad litus maris accedere prohibetur, dum tamen villis et aedificiis absteineat, quia, litora non sunt iure gentium communia sicut et mare." *Bracton* and *Azo*, Vol. 8, Selden Society Publications (London, 1895).

By natural law certainly all these things are common: flowing water, air and sea, and the shores of the sea, as being as it were approaches to the sea. For no one is prohibited from approaching to the sea shore provided he abstains from the villas and buildings, for the shores are not by the right of nations common, such as the sea.

Prof. Maitland in the above book comments on the "strange blunder" that *Bracton* made in taking this text from *Azo's Summa*, "the introduction of *litora* as a subject for *nois sunt* makes nonsense of the whole passage. * * * He has just said that the *litora maris* are *naturali iure communia omnium*. He now says *litora non sunt de iure gentium communia*." (p. 93).

130. "The stars and the clouds, the open sea, as well as flowing water and the great currents of air, are not in themselves subject to private ownership. They are viewed as *res communes omnium*, and as open to the general use of mankind. Nevertheless, parts or portions of such objects of nature can be the object of proprietary right, if they are severed and brought within the actual control of man, as, for instance, water and air confined within proper receptacles." *Hazeltine*, The Law of the Air, pp. 54-5. See also *Marcianus* in Digest I, 8, 6, concerning a building on the sea shore.

131. "Weighing against the maxim is the old and well-known statement by common-law writers that there are certain properties which no man

expression "*aeris spatium*" and the word "*spatium*".¹³² The following passage from Ulpian in the Digest, XLIII, 27, 1, 8 & 9, outlining the right to cut back trees overhanging city and farm property is thought to be significant:

"Quod ait praetor, et lex duodecim tabularum efficere voluit, ut quindecim pedes altius rami arboris circumcidantur: et hoc idcirco effectum est, ne umbra arboris vicino praedio noceret.

"Differentia duorum capitum interdicti haec est: si quidem arbor aedibus impendeat, succidi, eam praecipitur, si vero agro impendeat, tantum usque ad quindecim pedes a terra coerceri."¹³³

The praetor also says this, and the law of the twelve tables is to the same effect, that tree branches are to be cut back up to 15 feet and this is to be carried out lest the shade of the trees harm the neighboring farm.

The difference between the two headings of the interdict is this; if any tree overhangs a building, it is prescribed that it be cut down, but if it overhangs a field, that it merely be trimmed to a height of fifteen feet from the ground.

may own, among them the air and the high seas. It is only fair to say that these early writers, no more than Coke himself, had in mind *air space*. They were probably referring to the element of air. But air space, now that it has become navigable, at least is clearly analogous to the navigable seas; just as the navigable seas belong to all nations and all men, so does the navigable air space." Logan, "Aviation and the Maxim Cujus Est Solum," 16 St. Louis Law Rev. 303, 309 (1931). A similar opinion was advanced in the brief filed by Mrs. Mable Walker Willebrandt in the Circuit Court of Appeals, 6th Circuit, in *Sweetland v. Curtiss Airports Corp.*, p. 25, 29.

Professors Goudy and Lardone are of the opinion that the Romans did not hold that airspace was *res communis*. "The assertion of some recent writers that because the air, like the sea, is *res communis* and free to all, the circulation of air-craft would not have been prevented by Roman Law, is, to my mind, based on an erroneous assumption. It is assumed that *aer* and *coelum* mean the same thing. But though no formal distinction was made between them by the Roman jurists, and though the terms are sometimes used as equivalents, a distinction none the less existed. It was the *aer*—the omnipresent medium never at rest and incapable of appropriation—that was *res communis*. It was so because necessary for the life and health of all. But in contrast with it the *coelum* was *res soli* and capable more or less of appropriation by the owner of the soil. In this sense it was not so much *aer* as *spatium* (or *regio*) *aeris* and it is only in this sense that it can be understood in the two passages above cited. The common user of *aer* is indeed asserted by many passages in the Digest, but private ownership of the *coelum* is also asserted. There is no inconsistency." Goudy, "Two Ancient Brocards," Essays in Legal History, pp. 231-2. See Lardone, "Airspace Rights in Roman Law," 2 Air L. Rev. 455, 461 (1931).

132. The former is found in the Code, VIII, 10, 11, Pr. and the latter in Digest VIII, 2, 14. "Coelum" is found in Digest, VII, 1, 13, 6; VIII 2, 1, Pr.: VIII, 2, 28; XLIII, 24, 21, 2; XLIII, 24, 22, 4. "The word 'air' in the sense of 'airspace' has been found but once: 'Ex eo quo avibus ex aere cecidisset * * * (Something which fell from the bird through the air).' [Dig. XVIII, 1, 40, 3] First, however, it should be noted that this is a case of doubtful writing in the manuscripts. Some manuscripts instead of 'ex aere (from the air)' have 'ex ore (from the the mouth of the bird).'

Lardone, "Airspace Rights in Roman Law," p. 461.

133. From Mommsen's ed. of 1911, p. 751-2.

From the above passage, principally, de Montmorency draws the conclusion that:

"An owner received from the State such a height of airspace as enabled him to make use of his land: Fifteen feet in the case of agricultural or garden land, and such height as he originally selected in the case of a building. That height became for his neighbors the vertical measure of the proprietary right that the householder possessed, and henceforward anything else that he got he got by way of servitude. * * * Anything in the nature of air space other than the air space contained, as above, in the original grant from the State, remained the property of the State in Roman Law."¹³⁴

Lardone has reached a contrary conclusion:

"This text does not take away the right of ownership of the air column above fifteen feet. It simply states that such occupation of the non-owner causes no damage; and so must not be disturbed, but on the contrary tolerated. In other words, this is but another example of the fair use of property required by the Justinian Law. * * * The conclusion can be briefly summarized: Roman Law accepts private control of airspace above private property, because it considers it inherent in the ownership of the land itself; and does not limit such control to low altitudes."¹³⁵

Plausibility is lent to the assertion that it was through Accursius that the maxim was introduced into English law because he had a son, Franciscus, who spent several years in England.

134. *De Montmorency*, "The Control of Air Spaces," 3 Trans. of Grotius Soc. (1918) p. 61, 64.

"The air, the sea, and the water of rivers have been said to be for the common use of all men, but to belong to none. This statement is, however, so far at any rate as it relates to air, by no means incontrovertible. The passage in the Digest to the effect that '*naturali iure sunt omnium communia illa: aer, et aqua profluens, et mare, et per hoc litora maris*' (Dig. I, 8, 2), must be compared with other passages, which seem to connect *spaces of air* with the subjacent land, so suggesting the old maxim of English law."—Citing Dig. VIII, 2, 1, pr., XLIII, 24, 22, 4. In reference to the above-quoted passage from the Digest, Holland says that "*Puchta* would apply these words to air rather than to the space occupied by it. Inst. II, p. 525, n. Cf. Ovid, *Metam.* I, 135, VI 349." *Holland*, *Jurisprudence* (Oxford Univ. Press, 1917), p. 190.

"The Roman traditions of ownership in the aerial space was revived in the later Middle Ages and came down to Blackstone through Coke upon Littleton".—Citing *Julliot*, *De la Propriete du Domaine Aerien*, p. 7; *Hershey*, *Essentials of International Public Law* (New York: Macmillan Co., 1921), p. 233. See also *Haseltine*, *The Law of the Air*, quoted in note 117.

135. *Lardone*, "Airspace Rights in Roman Law," 2 *Air L. Rev.*, p. 467.

"Neither the Romans nor the mediaevalists had to consider the important questions of overhead rights that we moderns have to consider. * * * I venture to think that the right of property in the *coelum* would have sufficed to prevent air-transit over a man's ground and interdicts to prevent it would have been granted had damage been caused or threatened." *Goudy*, "Two Ancient Brocards," *Essays in Legal History* (1913), p. 231. See also *Baldwin*, "The Law of the Air-Ship," 4 *Am. J. Int. L.* 95 (1910).

Franciscus Accursius lived from 1225 to 1298 and was himself an eminent legal scholar. It is said that Edward I of England, on his return from the Holy Land in 1272, passed through Bologna and arranged to have Franciscus Accursius accompany him to England and become among other things, a lecturer at Oxford.¹³⁶ It is to be noted that it was to Edward I's time that reference was made in the case of *Bury v. Pope*.

It has recently been pointed out in a law note that the maxim was familiar in principle to early Jewish conveyancing law and that the maxim may have been introduced "into English law through Jewish influence and usage".¹³⁷ The author of this note suggested that the Jewish use of the phrase more closely paralleled the English use of the maxim than the Roman,¹³⁸ and ventured to say that "the Jews were more likely to influence English law" in the 12th and 13th centuries because "they were constantly in touch with it through the Exchequer and were accustomed in their fines to employ their own customs and phraseology."¹³⁹ Hebrew conveyancers used two phrases to indicate the vertical extent of land ownership, "depth and height" and "from the abyss below to the sky above".¹⁴⁰ As Palestine was a very dry land, these phrases were of particular importance in determining whether wells and cisterns passed by a conveyance. The Mishna, or ancient law, is not explicit, and the commentators in the Gamara disagreed on what was included by their use.¹⁴¹ Apparently, when a sale of a house mentioned only the "depth and the height", neither a roof more than ten hands high nor a dug cistern passed, but they

136. "His (Accursius') eldest son, Franciscus (1225-03), who also filled the chair of law at Bologna, was invited to Oxford by King Edward I., and in 1275 or 1276 lectured on law in the university." 1 *Encyclopedia Britannica*. See also *De Colquhoun*, *A Summary of Roman Civil Law*, Vol. I, p. 168.

137. See note by F. A. L., 47 *Law Quart. Rev.* 14 (1931).

138. The Romans were concerned with praedial servitudes. For a discussion of servitudes, see: *Sanders*, *Institutes of Justinian*, p. 187 et seq.; *Buckland*, *A Manual of Roman Private Law* (Cambridge: Univ. Press, 1925) Chap. VII, p. 153; *Declareuil*, *Rome the Law-Giver* (New York: Alfred A. Knopf, 1926) p. 182 et seq.

139. 47 *Law Quart. Rev.* 14 at p. 16.

140. The Jewish Encyclopedia, Vol. X, tit. Sale, p. 648: "He who sells a house ('bayit') does not sell the separate wainscot walls, nor a moveable interior closet, nor a roof with a railing more than ten hands in height, nor a dug cistern, nor a walled cistern. In order to include these, the words 'from the abyss below to the sky above' are necessary, 'depth and height' not being sufficient."

141. Babylonian Talmud, Baba Bathra, 64A (Mishna IV, 2) (New York: New Talmud Publg. Co., 1902) Vol. V. (XIII), p. 146.

did pass if the phrase "from the abyss below to the sky above" was used.¹⁴² The Jews clearly conveyed land in horizontal strata but there is nothing in this usage to indicate that ownership could not be had in the upper airspace if the appropriate conveyance was drawn. However, it has been said that the latin maxim *cujus est solum* was not applied in Jewish law to the sale of houses:

"It was so usual for the ownership of houses to be divided (mostly among coheirs), one son owning the rooms on the ground floor and another the upper story, that the maximum of the Roman law '*cujus est solum, ejus est usque ad coelum*' was not applied to buildings."¹⁴³

The origin of the maxim is still shrouded in considerable obscurity, but at the present time the Accursian gloss appears to be the most reasonable explanation of its origin, even if in principle it may have been familiar to classical Roman jurists, though not put into their written laws. Whether it originated in Roman law or as a mediaeval gloss, the maxim grew up at a time when air

142. Rabbi Dimi of Nahardea said: "If one sells a house with the intention of giving title to all its contents, although the bill of sale states from the bottom to the top, title is not acquired in wells, etc. (if such there were), unless he writes: 'You shall acquire title from the depth of the earth to the height of the sky.' And it is not sufficient to state: 'From the depth to the height of this house is sold to you'; and the reason is because the last expression gives title only to that which is beneath the house, like a cellar, basement, etc., and also to the roof and the attic, but it does not suffice for the well and its stone walls, which are not included in the same. However, the expression, 'from the depth of the earth to the height of the sky,' includes them also, and other caves which may be found beneath the house, and also above the roof, if there is an attic that measures more than ten spans in height and width." Gamara; Baba Bathra, Ch. 4, p. 1; Vol. supra, p. 153.

Rabbi Akiba apparently contended that all rights in a well passed by a conveyance from the depths to the heights: "Title is not given to a well, or to the stone wall thereof (if this was not plainly mentioned in the bill of sale of the house), although there is mentioned that he sold him the depth and the height; however, the seller must buy a way to the well from the new owner of the house. So is the decree of R. Aquiba. The sages, however, maintain that it is not necessary." Mishna, Baba Bathra, Ch. 4, p. 2; Vol. supra, p. 154. Accord, Le Talmud de Jerusalem, Baba Bathra, IV, 1 & 2 (Paris 1888) p. 184. However, the Jewish Encyclopedia, supra, states: "According to the prevailing opinion of R. Akiba, the purchaser, if the cistern is included, has the exclusive right of way to it * * *."

143. The Jewish Encyclopedia, supra, p. 647-8. To support the position that the English usage of the maxim was a familiar principle of Jewish law, the author of the note in 47 L. Quart. Rev. cites the following as possible references: Isaiah, VII, ii, and Deuteronomy, XXX, 11-14, which do not appear to be in point. The phrase is stated to appear in a Starr or Jewish contract dated 1285, made between Rabbi Ursell of Norwich and Gilam the Norman (No. 1199 British Museum), and also in "Cologne Starra (contemporary with No. 1199) in the Judenschreibsbuch, p. 64, No. 181, and in a number of Barcelona Starrs of earlier date reproduced in Gulak's collection."

transportation was practically undreamed of. Flying, except by birds, was purely legendary. The world was still thought to be flat. Heaven was an actual location a short distance above the surface, and Hades a still more definite place underneath. The Eiffel Tower and the Empire State Building had not been conceived of. The use to which land was put, or could be put, was relatively limited to the space near the surface. Not until 1782 was the first balloon ascent made.

Undoubtedly, the maxim was invoked by Coke and the judges who employed it to protect the uses then being made of land. At that time, invasion of the airspace could only be effected by a projection from a neighbor's land or by throwing or shooting something over or onto the land, and until very recently no object could be shot very high into the air. Few of these encroachments were noisy, some were dangerous (shooting), and others might develop into easements. Their treatment was peculiar to their nature, and distinguishable from invasions by airplanes. In the words of Dr. McNair, the maxim seems to have "slipped almost inadvertently into the English common law",¹⁴⁴ in a form susceptible of interpretation which extends far beyond the application intended by Coke and Blackstone and the judges who gave homage to it.

(To be continued)

144. *McNair*, "The Beginnings and the Growth of Aeronautical Law,"
1 JOURNAL OF AIR LAW 383, 387 (1930).