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# Airspace Rights and Liabilities As Affected by Aircraft Operation

Adolph C. Hugin

# AIRSPACE RIGHTS AND LIABILITIES AS AFFECTED BY AIRCRAFT OPERATION†

"I cannot exercise my rights in such a way as to infringe the law or the rights of others." *Markby.*

Both the occupant of land and the aviator have rights to the use of the earth's superjacent airspace, and it is the problem of adjusting these rights that besieges modern law. The resolution of the conflicting claims by these two interests is present-day law in the making, but it may be based on established and fundamental concepts if one accepts the theory that the right to the peaceful use of land is accorded every land-owner as an "average" man, without unusual sensitivities or nervousness, and who does not use his land to the deliberate harm or annoyance of others or contrary to the law. Similarly, an aviator has a right to peaceful use of airspace so long as he does not infringe upon the rights of landowners or violate the law.

Airspace rights—and liabilities resulting from an invasion of them—arise only under legal systems which recognize proprietary rights in immovables. However, a large part of the law which recognizes airspace rights can be also based on the rights of freedom from invasion of the person or personal property as protected by tort actions.[1] Refinements of legal rights and social interests, however, cannot be based completely on personal grounds, so that a theory of the ownership of airspace has developed which generally attaches to the property interests in the surface of the land.

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†This is the first of two installments of this article. The second, which will discuss Rights and Liabilities Respecting Aircraft Flight Other Than Landing and Taking Off; Airspace Rights as Affected by Proximity to Airports; and Government Control and Regulation of Certain Airspace Rights, will appear in the Fall Issue of Volume XXVII of the *Notre Dame Lawyer.* [Editor's note.]

1 These actions normally would be based on trespass to the person or trespass to personalty.

Unenclosed air, of course, is too shifting and uncontrollable to be deemed specific property so it naturally came to be conceived of as the common property of all men as soon as the law was faced with conflicting interests in airspace.[2] It is noteworthy that the law of elementary civilizations, such as the Code of Hammurabi and the Visogothic Code, made no reference either to air or airspace property rights.

In order to understand the various rights in airspace, the term must be defined. For purposes of this discussion it is the volume of space above a given land surface, bounded by the land as a base of an inverted truncated pyramid, with the side boundaries limited by radii from the center of the earth along the peripheral area of the land surface and extending indefinitely outwardly above the land. Generally, this may be thought of as the volume of space extending skyward above a specific area of land. Since this space is necessarily a volume which requires a tangible reference unit, it is conveniently given a reference in relation to the land base. From the land base concept various definitions and maxims of "land" in its legal scope have been devised. Early definitions declare that property rights in land are indefinite and extend to the center of the earth and to infinity in the external space above it.[3] It is evident that such an elementary delimitation of property in the land surface owner was not developed by a realistic appraisal of past and prospective human endeavor; it neither takes into account the fact that theretofore activities were not conducted either far above

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2 Bouve, *Private Ownership of Airspace,* 1 AIR L. REV. 232 (1930); Lardone, *Airspace Rights in Roman Law,* 2 AIR L. REV. 455 (1931); Sweeney, *Adjusting the Conflicting Interests of Landowner and Aviator in Anglo-American Law,* 3 J. AIR L. 329 (1932).

Bouve, *supra* at 235, interprets Blackstone as holding that property in air is common ". . . unless and until it is occupied by someone, when a usufructuary property approximating complete ownership during the time of occupancy results. . . . But, where abandoned, such airtracts are said to return to the 'common stock.'"

3 In Isham v. Morgan, 9 Conn. 374, 377 (1832), the court said: "The word *land* . . . in its legal signification . . . also has an indefinite extent upwards, as well as downwards. . . ."

or below the surface of the earth, and at the same time it unduly inhibits future activities at any distance from the surface.

Various rules of law were evolved with the increased use of airspace, both in the higher and lower strata. These rules had to be subordinated to and in aid of the basic principle of all creation, as contained in natural law and divinely revealed: [4]

> Let us make man to our image and likeness: and let him have dominion over . . . the whole earth, . . .
>
> And God created man to His own image. . . .
>
> And God blessed them, saying: . . . fill the earth, and subdue it. . . .

In subduing and obtaining dominion over the whole earth, man has delved into its interior and probed surrounding space. Neither of these penetrations has been too great by actual physical human traverse, but technological advances through the ages have given man progressively more dominion over the earth. The law has adapted itself to the changing circumstances, and the penetrations of subjacent landspace by wells, pits, and mines, and of superjacent airspace by a variety of stationary and movable structures, objects, forces, and disturbances have resulted in ever new facets of legal rules applicable to these changed conditions.

Similarly, the questions of sovereignty in airspace are relatively new and are being determined by international conventions, treaties, and declarations of national and state policies. Many attempts have been made to simulate the rights of sovereignty in airspace to those of the sea, but these latter refer to a relatively simple subject having, until recently, only a two dimensional quality for purposes of traverse, as compared to the three dimensional use of airspace. The development of a separate law for aeronautics is now

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[4] *Genesis*, 1:26, 27, 28.

admitted as desirable,[5] with the application, as far as possible, of the accepted basic rules of contract, tort, and crime to it.

The infringement of airspace rights is of two general types, actual physical penetration into the space by a tangible object, and penetration by a form of energy or by a force generated or set in motion external to the area invaded. The former may be either relatively permanent or transient. It may be an appropriation of a portion of the space by a relatively permanent volumetric displacement or enclosure of it, as by tree branches, part of a building, wires or other fixtures secured to the land, which are continuing invasions of the airspace. Or, it may be but a transitory "use" which causes the displacement of the airspace, such as by the flight of goshawks, the passing of projectiles from guns or other sources of projection, the passage of dust, sand, or smoke, the release and transit of fetid atmosphere or noisome gases, germicides, or insecticides, or the flight of aircraft. The second type of infringement is the penetration of the airspace by invisible forces or energy,[6] such as sound vibrations or concussion, thermic variations, electromagnetic disturbances, and light. The comparatively rapid dissipation of these latter types of invasion usually precludes recovery by the airspace "owner" unless the invasion is unreasonable or carelessly propagated, or unless its recurrence tends to make it unreasonable in its continuity or effects. Both types of airspace trespass-nuisance situations had been litigated long before the excursions of man into the atmosphere. The flight of aircraft and the effects of forces and energy propa-

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[5] Evidence of the fact that a distinct air law is desirable can be found in the numerous international conventions which have been held to frame, if possible, an international aviation law. In this country, aviation law is generally regarded as a matter for state jurisdiction, although a limited area of federal regulation has been defined by the Air Commerce Act of 1926, 44 STAT. 568 *et seq.* (1926), as amended, 49 U. S. C. §§ 171 *et seq.* (1946), 49 U. S. C. §§ 175 *et seq.* (Supp. 1950), and the Civil Aeronautics Act of 1938, 52 STAT. 977 *et seq.* (1938), as amended, 49 U. S. C. §§ 401 *et seq.* (1946), 49 U. S. C. §§ 401 *et seq.* (Supp. 1950).

[6] Sweeney, *The Airport as a Nuisance*, 4 J. AIR L. 330, 338 (1933).

gated by it in operation have, however, accentuated certain aspects of the already existent problems.

It is, therefore, important to distinguish rules of law from general maxims which are not law, but which by force of repetition have been raised to the stature of rebuttable presumptions.[7] Legal problems arise from the operation of aircraft in four general types of situations: (1) flights of aircraft other than taking-off and landing; (2) taking-off and landing of aircraft; (3) invasions of airspace by airport operation apart from specific flights by aircraft; and (4) obstructions to aviation by projections into airspace by landowners.[8] Remedies relevant are trespass, ejectment, and nuisance, the application of which can best be understood by a brief resume of the historical development of the law of airspace rights prior to the era of air navigation.

## I.

### *Early Historical Development of Airspace Rights*

To present an adequate picture of the present state of the law of airspace, its evolution must be thoroughly traced.[9] The purpose for the historical study is twofold. It promotes an understanding of contemporary law [10] and it eliminates

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7 LUPTON, CIVIL AVIATION LAW §§ 37-46 (1935).

8 This problem is discussed by Sweeney, *Adjusting the Conflicting Interests of Landowner and Aviator in Anglo-American Law*, 3 J. AIR L. 329 (1932), where he classifies five situations, which are slightly different from these and include other than airspace rights.

9 POUND, INTERPRETATIONS OF LEGAL HISTORY 19 (1923), gives an excellent reason for reflection in the use of such material. He says in part: "For when we look at the rules or the decisions or the texts of the past, through a rationalized medium of legal analysis and system, in a different setting from that in which they took form and were applied, we look at them for the purposes of present problems and with the ideas and the setting of the present before us. It by no means follows that what we see thus through the spectacles of the present is anything that was applied actually to the decision of causes anywhere or at any time. It is more likely to be an idealized reflection upon the legal problems of the present in terms of the texts of the past."

10 *Id.* at 7, where Pound quotes GAIUS, LAW OF THE TWELVE TABLES 1, Digest 1,2, 1: "In setting out to expound the ancient laws, it has seemed right as of course to go back to the founding of the city for my account of the law of the Roman people, not because I would write needlessly verbose commentar-

the need to reconsider problems that have already been adequately solved.

The Roman law, it appears, was the first to recognize rights in airspace. Landowners were given control of the area over their land at low altitudes as shown by "rustic servitudes," which permitted them to remove branches overhanging cultivated land to a height of fifteen feet.[11] This was the law as expressed by Ulpian,[12] and it shows a landowner's right in airspace, as well as a limitation thereof. A reason advanced for this limitation of fifteen feet over cultivated fields is that the fruitful use of the ground requires sunshine for growing crops which might otherwise be harmfully shaded by low branches.[13] Another example of airspace rights of landowners is to be found in "urban servitudes," which is the right of a landowner to have all branches of a tree growing on neighboring land removed which overhang his house.[14] This servitude would even allow the tree to be felled. No express reason for the difference in the two situations has been given, but it is submitted that these were not two unrelated rules, but rather two applications of the single principle that a landowner has the right of freedom from interference by others with his lawful enjoyment of his land for the use to which the land has been put. Clearly this is the reason for the cultivated land servitude. Experience demonstrates the inadvisability of tree branches overhanging a house or extending near it, because of the danger to the house from severe storms, winds, and lightning, as well as the deleterious effects on the roof resulting from the

ies but because I notice that in all that matters a thing is perfect only when it is complete in all its parts, and certainly the beginning is the most essential part of anything. Moreover, if it is monstrous, as it were, for one who is arguing a cause in the forum to lay out his case to the judge without some preliminary statement, how much more is it unsuitable for one who expounds to disregard the beginning and omit historical causes and take up the subject matter to be expounded, if one may say so, at once with unwashed hands."

11 Lardone, *supra* note 2.

12 Bouve, *supra* note 2.

13 Lardone, *supra* note 2.

14 *Ibid.*

accumulation and decay of branches, leaves, or needles on it. These reasons might have seemed so obvious to the Romans as not to warrant expression or recordation, while the more specific limitation of a fifteen foot rustic servitude required an explanation. However, differences between the two rules have been suggested, and the urban servitude has been thought to be the source of the maxim *Cujus est solum, ejus est usque ad coelum et ad inferos.* Whose ground it is, his it is to the sky and to the depths.[15]

Was this maxim a part of the Roman law? The authorities do not think so. Pufendorf believed that the Roman law held that a landowner had no property in air over which he did not exercise dominion, that is, such space as he had not occupied or confined.[16] Bouvé concludes that in the Roman law the essence of ownership was occupancy which was dominion over the *res.* This involved the conception of dimensions which would preclude ownership of the air itself although it would allow the occupancy and consequent ownership of a volume of air.[17] Sweeney has cited several glosses, the Digest VIII of Ulpian, and the Code of Justinian III, as showing that the airspace of the *Cujus est solum* maxim was understood to be the height of a building or other terrestrial structure.[18] Lardone has suggested that if the maxim actually was Roman law, and air navigation had existed at that time, the law could have provided for the use of a special air channel or even provided the right ". . . to cross a private air column, when it was not used by the landowner himself, and provided such a crossing did not cause injury or damage to persons or to property." [19] Actually, rights to airspace at higher altitudes were not tested because of its early non-use, so that no comparison can be made ex-

15 *Ibid.*

16 Bouve, *supra* note 2.

17 *Ibid.* This conclusion is developed in the article.

18 Sweeney, *supra* note 8, at 385.

19 Lardone, *supra* note 2, at 467.

cept as to trees, eaves, or possibly the traverse of projectiles or the flight of birds, which all are at low altitudes.

There is much speculation regarding the origin and actual application of the maxim. But it seems to have been accepted by English judges as far back as the time of Edward I.[20] Most modern publicists agree that it was not in the *Corpus Juris,* and that it originated with a glossator on Justinian's *Digest* named Accursius, whose son went from Bologna to England to teach law at Oxford at the request of Edward I. It is contended that the English judges adopted the father's theory because of the son's favored position with the king. Sohm set the date of the gloss at about 1250,[21] while Lupton estimates it to be around 1200.[22] Montmorency states that a careful research from the Twelve Tables to the Basilica disclosed no reference to such a law.[23]

According to Lupton the maxim was a part of the common law—a landowner could "exercise dominion over his freehold to the skies above and to the center of the earth below." [24] This apparently is based on Blackstone's statement that: [25]

> Land hath also, in its legal signification, an indefinite extent, upwards as well as downwards. *Cujus est solum, ejus est usque ad coelum* . . . so that the word "land" includes not only the face of the earth, but everything under it, or over it.

Lupton further states that: [26] "Blackstone infers that injury to the air above one's land would give rise to a cause of action as surely as if the injury were to the land itself." But Blackstone was not always careful in citing his annotations or in stating principles of law according to his citations.

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20 See Bury v. Pope, 1 Cro. Eliz. 118, 78 Eng. Rep. 375 (1588).

21 See Bouve, *supra* note 2, at 247.

22 See LUPTON, *op. cit. supra* note 7, § 40.

23 See Bouve, *supra* note 2, at 243.

24 LUPTON, *op. cit. supra* note 7, § 37.

25 2 BL. COMM. *18.

26 LUPTON, *op. cit. supra* note 7, § 41.

As authority for his statement of the common law above, he cited Lord Coke (circa 1628) on Littleton where it was said: [27]

> And lastly, the earth hath in law a great extent upwards, . . . but of air and all other things even up to heaven; for *cujus est* . . . as is holden 14 H. 8 fo. 12.22 H. 6.59. 10 E. 4.14.

Yet none of the cases cited refer to the maxim, although the case at 22 Hen. VI Fol. 59 is interesting, as it concerned the use of goshawks which can be compared to hunting from planes which now generally is barred by statute.

The maxim first appeared in an English case in 1588,[28] again in 1597,[29] and in 1610.[30] An interesting decision in which the court resorted to it is *Ellis v. Loftus Iron Co.*[31] There a stallion bit and kicked a mare on the other side of a boundary fence. A trespass was found even though the evidence showed that the attacking horse had not touched the ground across the line. This case, however, is readily distinguishable from air flight "trespasses."

The maxim was not fully accepted by continental law, even before the time of air travel. Bouvé states that "Von Ihering limits private rights in the supervening airspace to boundaries necessary to the full enjoyment of the uses to which the land is put"; and that Pompaloni holds that "Property in airspace . . . extends to the point which the interests of the owner demand. . . ." [32] On the other hand, article 522 of the French Civil Code [33] seems to embrace the maxim, but this article became law before the origins of air travel; consequently it is believed that it cannot be accepted without qualification for modern conditions.[34]

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27 2 Co. INST. *198.
28 Bury v. Pope, 1 Cro. Eliz. 118, 78 Eng. Rep. 375 (1588).
29 Penruddock's Case, 5 Co. Rep. 100b, 77 Eng. Rep. 210 (1598).
30 Baten's Case, 9 Co. Rep. 53b, 77 Eng. Rep. 810 (1610).
31 L. R. 10 C. P. 10 (1874).
32 Bouve, *supra* note 2, at 386, 387.
33 As cited in *id.* at 383.
34 *Id.* at 385.

The maxim should not be accepted as law today, even if it were the law at the time of the Accursian gloss, for law must adapt itself to the times, as to matters which are neither contrary to nor demanded by the natural law. As to these indifferent situations, the predominating social interests of the time must be used to provide a living rule which will not be the will of the dead who know not the present times.[35] More recent non-air travel decisions may indicate a sound basis for deciding problems of air flight. These decisions will have to be resorted to until such time as an adequate body of air flight law has arisen, or until the questions are answered by legislation.

## II.

### *Relatively Recent Non-Aviation Airspace Rights*

### *A. Physical Penetrations of Airspace:*

Relatively recent decisions involving airspace rights prior to the general use of aircraft reveal a respect for the rights of the surface owner in the use and enjoyment of the superjacent space.

*Relatively Permanent or Stationary Airspace Invasions.*— Space displacement by relatively stationary invasions of the airspace above the land of another is illustrated by *Corbett v. Hill*,[36] where a first floor window overhanging the neighbor's land was held to be a trespass. The more recent case of *Gifford v. Dent* [37] has sustained the right to normal use and enjoyment of the superjacent airspace by the surface occupant. In this case, it was held that a second floor hanging sign was a trespass on the rights of the occupants of the first floor.

Rhyne has concluded that the American non-aviation cases accept the *cujus est solum* maxim and characterize the

35 POUND, *op. cit. supra* note 9, at 13.
36 L. R. 9 Eq. 671 (1870).
37 71 SOL. J. 83 (1926).

airspace invasions as trespasses.[38] A review of these cases has caused this writer to doubt whether they fully sustain this conclusion. They more correctly may be said to maintain the rights of the surface owner to the normal use and peaceful enjoyment of the surface by protecting it from superjacent invasions; this partakes of a nuisance rather than a trespass theory.

A common type of permanent displacement is illustrated by the overhanging branch cases. Among these is *Countryman v. Lighthill,*[39] in which it was held that although overhanging branches of a non-poisonous, non-noxious tree are not a nuisance *per se,* they may be trimmed back to the property line, especially where the tree owner has been asked to do so and has either refused or failed to comply with the request. A clarification and amplification of this rule is given in *Grandona v. Lovdal,* in which the court quoting Wood, *Nuisances* § 112 stated: [40] " 'Trees whose branches extend over the land of another are not nuisances, except to the extent to which the branches overhang the adjoining land. To that extent they *are* nuisances. . . .' " and may be cut off or damages had, but the tree cannot be cut down. Likewise, protruding roots may be abated. This rule manifests that the court was more inclined to protect the surface owner against infringement of the enjoyment and use of his land by abatement of a nuisance than by absolute protection against trespass.

The trespass theory is sustained by some cases, such as in *Hooper v. Herald,*[41] where a fence placed on another's land which deprived the owner of the use of the space above the

38 RHYNE, AIRPORTS AND THE COURTS 98 (1944). Rhyne lists a number of cases involving projections across another's land, thereby disturbing the owner's peaceful enjoyment: thrusting arm in a belligerent manner over neighbor's land; telephone wires, 30 feet in air over another's land; telephone pole crossarms over private land; projecting eaves and cornices; bay window over adjacent lot; and projection of dividing wall.

39 24 Hun 405 (N. Y. 1881).

40 70 Cal. 161, 11 Pac. 623, 624 (1886).

41 154 Mich. 529, 118 N. W. 3 (1908).

land was held to be a trespass. This, however, must be recognized as also a direct invasion of the land. A slight variation of this was deemed a trespass in *Public Service Co. of Northern Illinois v. McCloskey,*[42] in which a power line was erected on poles unintentionally placed on property without the owner's consent. The owner was held to have the right to prevent entrance of repairmen to repair a broken wire. But here again the trespass was the poles on the land itself. In *Puroto v. Chieppa,*[43] it was also held that the projection of a flash board one inch over a boundary line was a trespass which entitled the landowner to nominal damages.

*Relatively Transitory or Temporary Airspace Displacements.*—Similar reasoning as to existence of the right to peaceful enjoyment of the land generally may be found in cases involving the infringement of the landowner's rights by transitory or temporary displacement of space above his land. In *Prewitt v. Clayton,* the court stated:[44]

> A personal bodily entry upon the land is not necessary to constitute a trespass *quare clausum fregit.* One who stands upon his own land, and with force and arms, by throwing stones and clubs, breaks his neighbor's house, is guilty of trespass *quare clusum* [sic] *fregit.*

Here again, the passage of the brickbats was a displacement of the airspace, but the actual damage, other than nominal amounts for the displacement, was to the enjoyment of the real property, the landowner's house.

A clearer case is *Munro v. Williams,*[45] where boys against protests, persisted in firing air rifles onto another's land until one of the shots put out a caretaker's eye. The court said in part: [46] "Though standing on adjacent land the boys, in shooting onto the respondent's land, were trespassers. . . ." Similarly, in *Whittaker v. Stangvick,*[47] and in *Herrin v. Suth-*

42 235 Ill. App. 387 (1925).
43 78 Conn. 401, 62 Atl. 664 (1905).
44 21 Ky. (5 T. B. Mon. 4) 9, 10 (1827).
45 94 Conn. 377, 109 Atl. 129 (1920).
46 *Ibid.*
47 100 Minn. 386, 111 N. W. 295 (1907).

*erland,*[48] the shooting of wild fowl in a manner that caused the shot or fowl to fall on another's land was held to be a trespass. In *Joos v. Illinois National Guard,*[49] the court held that shooting across land so as to render its use dangerous, even though the passage of the shots was the unintentional result of target practice on adjacent land, was an invasion of the rights of the occupant of the land and would be enjoined.

The previously mentioned case of the trespass by the bellicose horse [50] expresses the law in England regarding the transitory displacement of airspace, and it is supported by a similar decision concerning the same type of invasion. In *Clifton v. Bury,*[51] shooting across land in a manner which makes the customary use of the land dangerous was actionable, although the shooting was not a technical trespass.

At the turn of the century, some support was given the maxim in *Hannabalson v. Sessions,* but it seems the court adverted to the maxim for the purpose of admonishing the parties and not as a basis for its decision, the determination actually being founded on the right of the landowner to prevent disturbances by his neighbor of his rightful use. The court declared: [52]

> It is one of the oldest rules of property known to the law that the title of the owner of the soil extends, not only downward to the center of the earth, but upward *usque ad coelum,* although it is, perhaps, doubtful whether owners as quarrelsome as the parties in this case will ever enjoy the usufruct of their property in the latter direction. . . . It was enough that she thrust her hand or arm across the boundary to technically authorize the defendant to demand that she cease the intrusion, and to justify him in using reasonable and necessary force required for the expulsion of so much of her person as he found upon his side of the line. . . .

48 74 Mont. 587, 241 Pac. 328 (1925).

49 257 Ill. 138, 100 N. E. 505 (1913).

50 Ellis v. Loftus Iron Co., L. R. 10 C. P. 10 (1874). See text at note 31 *supra.*

51 4 T. L. R. 8 (1887).

52 116 Iowa 457, 90 N. W. 93, 95 (1902).

The plaintiff had reached over a boundary fence to remove a ladder the defendant had hung from a peg on his side of the fence. The court found that the plaintiff had been guilty of trespass when she reached over it.

An interesting case of a temporary invasion arose from the operation of a threshing machine so near a residence as to cause dust, smoke, and chaff to be blown into the house. An actionable nuisance was found and damages were awarded for the pollution of the atmosphere.[53] This decision clearly is an effort to secure the land occupant in his right to the undisturbed use and enjoyment of his premises. It is particularly important as indicative of rules which are logically applicable to the spraying or dusting of crops, and the sowing of seed by plane; and dust, smoke, and exhaust fumes which may exist in the vicinity of an airport.

*McCarty v. Natural Carbonic Gas Co.*[54] provides further evidence of the attitude of the courts to restrict lawful occupations to practices which will not cause harm to others. In this case the court held that the question of whether the use of property to carry on a lawful business which creates smoke or noxious gases in excessive quantities amounts to a nuisance depends upon the facts of each case. The general locality, the priority of occupation, and whether the injury is occasional or continuous must all be considered. Also, if the business can be conducted without the nuisance, it will be abated, even if the necessary changes result in greater expense. In the *McCarty* case, the emission of dense smoke which blackened clothes hung out to dry was held a nuisance, especially since the industry was established after the private residence.

A more emphatic protection from this type of transitory penetration of airspace is exhibited by *Metropoulos v. MacPherson,*[55] in which a factory annex was built after a resi-

53 78 Ill. App. 417 (1898).
54 189 N. Y. 40, 81 N. E. 549 (1907).
55 Winters v. Winters, 241 Mass. 491, 135 N. E. 693 (1922).

dence with its wall within a few inches of the house. Windows in the factory faced the residence and noxious gases and fumes were emitted toward the house, causing living to become uncomfortable and the paint on the house to discolor. Damages for trespass were awarded and the continued emission of odors enjoined, even though a revised ventilation system for the factory might be extremely expensive. This case also involved the second general type of airspace displacement by the propagation of noise and vibration by machinery. At times, the windows, dishes, and tableware would rattle, and even the furniture would vibrate in the house. This, the court held to be an invasion of the right to normal use and peaceful enjoyment of the property, which would be abated as an unwarranted nuisance, even though the business was of a lawful nature and although relocation of the factory machinery would be expensive.

Thus, even invisible penetrations of the airspace may be actionable nuisances. *Seacord v. People* [56] illustrates this type of invasion by a transitory condition, which, while invisible, was an actual physical displacement of air. In this instance, the conduct of a lawful business, that of operating a rendering plant was held not a nuisance *per se,* but the operation of the enterprise was found to pollute needlessly the neighboring atmosphere. Fetid breezes caused by the outdoor storage of putrefying carcasses were found to amount to a criminal nuisance.

### *B. Atmospheric Disturbances and Energy Penetrations of Airspace:*

The problem of the second type of airspace penetration is more difficult to resolve, for it involves no actual physical entrance, yet it may just as certainly deprive the surface owner of the normal and peaceful use and enjoyment of

[56] 121 Ill. 623, 13 N. E. 194 (1887).

his property. Noise, concussions, and vibrations are the chief sources of nuisances of this type.

There are many cases on the injuries that have resulted from blasting operations. Without considering the liability for the hurling of debris upon another's land, the general rule is that blasting on one's own land, if necessary for its improvement, and not negligently done, does not make one liable for consequential damages from vibration.[57] Nevertheless, it has been said that if an excavation could have been made without blasting or with a less violent explosive than the one used, liability would attach for consequential damages from concussions and vibrations, on the ground that the actual performance amounted to negligence.[58] This rule has been applied to one otherwise blasting with due care on his own soil, where the explosion broke windows, loosened walls, and damaged furniture. The concussion was held to be an actionable nuisance.[59] The general rule has been well expressed in *Sullivan v. Dunham* [60] as follows:

> When the injury is not direct, but consequential, such as is caused by concussion, which . . . injures property, there is no liability, in the absence of negligence. . . . "One cannot confine the vibration of the earth or air within enclosed limits, and hence it must follow that if, in any given case, they are rightfully caused, their extension to their ultimate and natural limits cannot be unlawful, and the consequential injury, if any, must be remediless."

A similar conclusion was reached in *New York Steam Co. v. Foundation Co.* although the case was reversed on appeal.[61]

The attempt to determine the scope of "due care" presents difficulty in all vibration cases. In *McKeon v. See,*[62]

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57 Stancourt Laundry Co. v. Lamura, 147 N. Y. Supp. 895 (N. Y. City Ct. 1914).

58 Booth v. Rome, W. & O. T. R.R., 140 N. Y. 267, 35 N. E. 592 (1893).

59 Morgan et al. v. Bowes et al., 62 Hun 623, 17 N. Y. Supp. 22 (Sup. Ct. 1891).

60 161 N. Y. 290, 55 N. E. 923, 925 (1900).

61 123 App. Div. 254, 108 N. Y. Supp. 84 (1st Dep't 1908), *rev'd,* 195 N. Y. 43, 87 N. E. 765 (1909).

62 27 Super. (4 Rob.) 449 (1867), *aff'd,* 51 N. Y. 300 (1873).

not involving blasting, it was held that the operation of steampower on adjoining property, which caused injury to the neighbor's house by continuous jarring and vibration would be enjoined as a nuisance. Similarly, carrying on a lawful trade in a manner which causes tremendous vibrations, shaking dishes and walls, and also the emission of dense smoke polluting the atmosphere has been held to be an actionable nuisance, even without a showing of negligence in the operation of the business.[63] In *Forbell v. City of New York,* the court said: [64] "No doubt trespass may be committed by the projection of force beyond the boundary of the lot where the projecting instrument is operated." It should be noted however, that it has been decided that a person cannot recover for annoyance caused by noise and vibration from the public use of a street by ordinary traffic or from the operation of a street railway by a public service company.[65] This was explained in *Stevens v. Rockport Granite Co.,*[66] where the court said: [67]

> In order that a noise may amount to a nuisance, it must be harmful to the health or comfort of ordinary people. It is not enough that a person of peculiar temperament, unusual sensibilities or weakened physical condition, may be affected. . . . The pertinent inquiry is whether the noise materially interferes with the physical comfort of existence, not according to exceptionally refined, uncommon, or luxurious habits of living, but according to the simple tastes and unaffected notions generally prevailing among plain people.

This does not mean that unnecessary or particularly disturbing noises are allowed, even in the performance of a lawful business. The loading of dairy trucks between three and four o'clock in the morning and the running of an ice

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63 Hurlbut v. McKone et al., 55 Conn. 31, 10 Atl. 164 (1887).

64 164 N. Y. 522, 58 N. E. 644, 646 (1900).

65 State *ex rel.* Howard v. Hartford Street Ry., 76 Conn. 174, 56 Atl. 506 (1903).

66 216 Mass. 486, 104 N. E. 371 (1914).

67 *Id.,* 104 N. E. at 373.

crusher at night may be of such "character and volume as to constitute a private nuisance when occurring during the hours usually devoted to sleep, even though the same or more distracting ones would not be so held at other times. . . ." [68] This is a practical illustration of a general principle of law, that one's own property must be used so as not to injure the property of another or the reasonable enjoyment of it. It has been held that "a trade or business which creates distressing noises or vibrations," as by the operation of ice machinery, "rendering the occupation of property in the vicinity unsafe and uncomfortable is a nuisance, for which the person whose property is damaged may maintain an action and recover compensation for any injury." [69] In like manner, the making of unnecessary and disturbing loud noises, which injure health and business, constitutes a trespass.[70] Thus, the inherent noise-producing property of modern aircraft has various aspects depending upon the operations, such as the altitude of flight, the location of hangars, possibly the layout of the airfield, the schedule or custom of take-offs and landings, the possibility of using mufflers of various types, and similar aspects which bear upon the reasonableness of the aircraft operations.

A problem related to intangible invasions of airspace is freedom from violation of the right to privacy. This right, which is given substantial protection in the United States, can be affected by the use of slow flying and hovering aircraft. Whether an infringement on the right to privacy also amounts to a trespass is answered by the rule: ". . . that the eye cannot be a trespasser . . . unless the person looking . . . is, at the time of the . . . seeing, a trespasser." [71] One writer

68 Roukovina v. Island Farm Creamery Co., 160 Minn. 335, 200 N. W. 350, 352 (1924).

69 Cunningham et al. v. Wilmington Ice Mfg. Co. et al., 2 Harr. 229, 121 Atl. 654 (Del. 1923).

70 Shellabarger v. Morris, 115 Mo. App. 566, 91 S. W. 1005 (1905).

71 Goode v. State, 158 Miss. 616, 131 So. 106, 108 (1930).

has envisioned more problems arising out of this situation in warmer climates.[72]

Light energy becomes a problem where landing lights at an airport create such an invasion of adjoining airspace as to become a nuisance.[73] A non-aeronautical case of space penetration by a form of energy concerned the operation of an icehouse with a wall only a few inches from an adjoining house. In this case, the business was lawful and otherwise exercised with all possible care. The infringement was that the melting ice necessarily absorbed heat energy from adjoining space and created a very uncomfortable condition of chill in the neighbor's house. The court held that the operator "either permits its injurious incidents and consequences to invade the plaintiffs' property, or cannot prevent them. She is liable for this injury." [74] This holding is significant in that it may indicate a path of reasoning which future decisions may follow in deciding issues of invasions by energy, as for example, by excessive artificial lighting from airports.

Early aircraft and related problems were usually given special leniency by the courts in order not to stifle a new and promising activity, but now, with the establishment of aeronautics as a part of modern life, one can expect a more strict application of the customary rules of law to it. What shall now be examined is how the courts have applied the rules of airspace trespass and nuisance to this new branch of the law, and to consider the statutory measures that have been adopted to aid in an equitable determination of the conflicting rights involved.

(To be concluded)

*Adolph C. Hugin**

72 LOGAN, AIRCRAFT LAW: MADE PLAIN 22 (1928), states: "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."

73 Antonik et al. v. Chamberlain et al., 81 Ohio App. 465, 78 N. E. (2d) 752 (1947).

74 Barrick et al. v. Schifferdicker, 48 Hun 355, 1 N. Y. Supp. 21, 23 (Sup. Ct. 1888).

*Attorney at law, Washington, D. C.; Lecturer in Law, Catholic University of America. B.S. in E.E., 1928, George Washington University; M.S. in E.E., 1930, Massachusetts Institute of Technology; LL.B., 1934, Georgetown University School of Law; LL.M., 1947, Harvard Law School; S.J.D., 1949, Catholic University of America Law School. Examiner, U. S. Patent Office, 1928; Test and Development Engineer, 1928-30, Patent Investigator, 1930-34, Patent Attorney, 1934-46, General Electric Company. Member, American Patent Law Association; American Bar Association; Delta Theta Phi (Legal Fraternity). Editor, Bulletin of American Patent Law Association. Author, Private International Trade Regulatory Arrangements and the Antitrust Laws. Contributor, Bulletin of American Patent Law Association; Journal of Patent Office Society; Oklahoma Law Review.