NOTES

Canadian Law and Aircraft Noise Disturbance: A Comparative Study of American, British, and Canadian Law

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The considerable attention given to legal aspects of aviation noise in Great Britain and the United States has not been duplicated in Canada.[1] This survey will illustrate a common law approach to the problems of aviation noise disturbance, which will be useful not only to common law practitioners, but to Quebec attorneys as well. The British and American approaches will be compared as a prelude to an examination of the law of Canada and of Quebec law in particular. It will be considered whether the Civil Code of Quebec effectively resolves conflicts centering about aviation noise disturbance.

Aviation noise may arise from the operation of several classes of aircraft.[2] For present purposes domestic civil aircraft, foreign civil aircraft, and domestic military aircraft are considered of primary importance. Note further that the emergence of supersonic aircraft compels a determination of whether "sonic boom" is part of the overall noise problem or requires separate analysis. This queestion can best be answered after an evaluation of the analytical tools which presently exist. Therefore, examination of the sonic boom question will follow comparison of American, British and Canadian law. That comparison will consider *all aircraft noise disturbance, including sonic boom,* to be subject to uniform analysis.

The American Experience

Recent American case law evolved from litigation involving military aircraft. Since that litigation took place prior to the enactment of

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1 However, the Canadian Bar Association has considered the problem at several annual meetings. Reference will be made hereinafter to papers presented to those meetings.

2 Although this study centers about aircraft operators, note that liability may attach to airport operators as well.

the *Federal Tort Claims Act*,[3] ordinary tort doctrines were not available to the plaintiff. Instead, the plaintiff in *Causby* v. *United States*[4] argued that the government had effected a partial taking of his land by continuous overflights which unreasonably interfered with the use and enjoyment of his land. Plaintiff alleged violation of the fifth amendment of the United States Constitution[5] and sued under the *Tucker Act*,[6] which renders the government liable for its contracts, both express and implied.

Despite the fact that the offending overflights had complied with pertinent federal regulations, the Court found an unreasonable interference with use and enjoyment, and awarded compensation for the diminution in value of the plaintiff's property.[7] In 1958 a county airport authority was held liable under the *Causby doctrine*.[8] In that case the Supreme Court conclusively indicated that compliance with federal regulations[9] does not insulate a defendant from liability to landowners.

Of paramount significance is the fact that these cases employ language peculiar to traditional nuisance analysis in order to grant recovery. This has led to serious conceptual difficulties. In 1962, *Batten* v. *United States*,[10] a decision of the 10th Circuit Court of Appeals, held that there could be no recovery for taking by unreasonable noise in the absence of a direct overflight of a plaintiff's land. Stated otherwise, without overflight, disturbance however severe is non-compensable "consequential damage" from authorized aviation activities. It is submitted that this decision misconstrued the evolution of the doctrine of eminent domain in American law.[11] Further-

[3] Federal Tort Claims Act, 60 Stat. 842, 28 U.S.C. 1346 (1946). See generally *Aviation Noise Under the Federal Tort Claims Act*, 24 Fed. Bar J. 165 (1964).

[4] 328 U.S. 256 (1946) (Regular overflights below the minimum safe altitudes, but within a Civil Aeronautics Authority-approved safe landing glide angle).

[5] U.S. CONST. amend. V, "... nor shall private property be taken for public use without just compensation."

[6] 28 U.S.C. s. 1346(a) (2) (1952).

[7] *Causby*, *supra* note 4 at 263, "The fact that the path of glide ... was approved by the Civil Aeronautics Authority does not [prevent the occurrence of a taking]."

[8] *Griggs* v. *County of Alleghany*, 369 U.S. 84 (1962).

[9] 72 Stat. 739, 49 U.S.C. s. 1301(24) (1958); 14 C.F.R. s. 60.17.

[10] 306 F. 2d 580 (2d Cir. 1962), *cert. denied*, 371 U.S. 955 (1963) (noise from ground testing of engines).

[11] Arguments denying the necessity of physical entry to a finding of taking begin with *Eaton* v. *B.C. & M. R.R. Co.*, 51 N.H. 504 (Sup. Jud. Ct. N.H. 1872) and *Thompson* v. *Androscoggin River Improvement Co.*, 54 N.H. 545, 552 (Sup. Jud. Ct. N.H. 1872). Doubt was cast on the theories of these cases by *Trans-*

more, the Supreme Court in its 1963 decision, *Dugan* v. *Rank*,[12] clearly indicated physical entry was not indispensable to a finding of a "taking". It did so, in fact, upon the same authority that *Batten* had relied on for its contrary decision.[13]

Another currently unresolved issue in American law is the extent to which a municipality may regulate aircraft noise. It has been held that a municipality may not pass ordinances directly conflicting with federal flight rules.[14] However, where the local ordinance deals with noise, per se, which is not expressly regulated by federal statute, it is uncertain that local regulation is precluded. This question is currently being litigated in the case of *American Air Lines et al* v. *Town of Hampstead*.[15] The outcome of this case is critical not only to the landowner-air transport conflict, but also to the evolution of the federal-state power scheme in American constitutional law.

The following principles emerge from the American treatment of aviation noise:

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portation Co. v. *Chicago*, 99 U.S. 635, 642 (1878). In *Richards* v. *Washington Terminal Co.*, 233 U.S. 546, 551 (1914) the Court stated that the "... legislature may legalize what would otherwise be a *public* nuisance, but it may not confer immunity from action for a *private nuisance* of such a character as to amount in *effect* to a taking." (Emphasis supplied). Thus, *Transportation Co.* v. *Chicago* was limited to the public nuisance aspects of the acts in question by *Richards* v. *Washington Terminal*. The broad theory of "taking" was followed in *United States* v. *General Motors Corp.*, 323 U.S. 373 (1945). The following year *Causby*, *supra* note 4 at p. 262 f.n. 7 indicated that the broad doctrine of *General Motors* was approved, but that since *Causby* did, in fact involve physical entry, the broader doctrine was unnecessary to the decision. The fact that *Eaton*, *Causby*, and *Griggs* did involve physical entry has led to the erroneous conclusion that their decisions are limited to similar facts. Such interpretation of those cases does not follow from their language which speaks to a broader field. An expression of this view is found in *Thornburg* v. *Port of Portland*, 376 P. 2d 100 (Ore. 1962). See 4 Nichols on *Eminent Domain* 338 (rev. 3d ed. 1962). See generally Lewis, *Eminent Domain* (2d ed. 1909).

[12] 372 U.S. 609, 625 (1963). [T]he riparian right is a part and parcel of the land in a legal sense, yet it is ... [an] *intangible right* inhering therein and neither a partial nor a complete taking produces a disfigurement of the physical property ... A seizure of water rights *need not* necessarily be a physical invasion of the land. It *may occur upstream* as here. Interference with or partial taking of water rights in the manner it was accomplished here might be analogized to *interference or partial taking of airspace* over land. (Emphasis supplied). See also *United States* v. *Brondon*, 262 F. 2d 642, 644 (9th Cir. 1959).

[13] *Causby*, *supra* note 4; *Griggs*, *supra* note 8; *Portsmouth Harbor Land & Hotel Co.* v. *United States*, 260 U.S. 327 (1922). See Nichols, *supra* note 11 at 260.

[14] *Alleghany Airlines* v. *Village of Cedarhurst*, 238 F. 2d 812 (2d Cir. 1956).

[15] Civil Action File No. 63 C 1316; 63-1280 (E.D. N.Y. 1964).

1. The rights of landowners have been considered in terms of use and enjoyment of land.
2. Recovery has been predicated upon the degree of interference, with no controlling significance attributed to the presence of material damage.
3. The doctrine of trespass has been rejected in resolving aircraft disturbance cases.[16]
4. No federal legislation directly treats aircraft noise disturbance liability.
5. Compliance with federally promulgated flight regulations does not obviate the aircraft operator's potential liability to the landowner. The effect of existing regulation upon the right of a municipality to regulate aircraft disturbance is undetermined.
6. Although the status of nuisance doctrine as a basis of liability is uncertain, its use as a method of analysis is accepted.

For present purposes no distinction need be made between liability attaching to domestic civil aircraft and to foreign civil aircraft in American law. As to domestic military aircraft, *Causby* illustrates the constitutional attack. Perhaps the enactment of the Federal Tort Claims Act has provided additional approaches, but detailed examination of that act is beyond the scope of the present study.[17]

The British Experience

As early as 1920, Great Britain had legislated trespass and nuisance out of existence as regards aircraft noise.[18] In 1949 additional legislation legitimized noise and vibration created by aircraft

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[16] See *Causby, supra* note 4 at 261. *Compare Smith* v. *New England Airport Co.*, 270 Mass. 311, 170 N.E. 385, 389 (Sup. Jud. Ct. Mass. 1930) *with Burnham* v. *Beverly Airways Inc.*, 311 Mass. 628, 42 N.E. 2d 575 (Sup. Jud. Ct. Mass. 1942). The comparison illustrates the shortcomings of trespass theory as applied to aviation activities. *Compare* Billyou, *Air Law* 9 (1963) *with* Pogue & Bell, *The Legal Framework of Airport Operations*, 19 J. Air L. & Com. 253, 266-268 (1952) *and* Rhyne, *Airports and the Courts* 154 (1944).

[17] See *Dahlstrom* v. *United States*, 288 F. 2d 819 (8th Cir. 1956). Note that negligence was the basis of recovery and recall that the conduct examined in this study is "intentional". See generally Gottlieb, *Governmental Tort Liability of the Operation of Airports*, 26 J. Air L. & Com. 173 (1959); Comment, 31 So. Cal. L. Rev. 259, 275 *et seq.*; Note, 22 Geo. Wash. L. Rev. 496 (1954).

[18] *The Air Navigation Act*, 1920; (10 & 11 Geo. V, c. 30) s. 9 Now *Civil Aviation Act*, 1949; (12, 13 & 14 Geo. VI, c. 67) s. 40(1) which reads, "No action shall lie in respect of trespass or nuisance, by reason only of the flight of an aircraft over any property at a height above the ground, which, having regard to wind, weather, and all the circumstances of the case is reasonable, or the ordinary incidents of such flight so long as the provisions of part II and this part of the Act and any Order in Council or order made under Part II or this Part of this Act are duly complied with."

on aerodromes.[19] The protection of these enactments is conditional upon compliance with pertinent flight regulations.

In contrast, however, British legislation imposes absolute liability where material damage occurs.[20]

> "Where material loss or damage is caused to any person or property... by, or by a person in, or an article falling from, an aircraft while in flight, taking off or landing,... damages shall be recoverable without proof of negligence or intention or other cause of action, as if the loss or damage had been caused by the wilful act, neglect, or default of the owner of the aircraft."

The meaning of "material loss or damage" in this provision has never been considered judicially, nor have the other noise provisions of the British act. Notwithstanding, there is no reason to suppose that material loss or damage may not be occasioned by aircraft noise.

The provision pertaining to noise on aerodromes applies to both civil and military aircraft. The provisions precluding nuisance and trespass and imposing strict liability for material damage do not apply to military aircraft. Regarding the latter, the *Crown Proceedings Act* of 1947 [21] raises the question of whether any liability whatever may attach to such aircraft. As will be seen later, the Canadian *Crown Liability Act* contains similar language.

No distinction need be drawn in British law between foreign and domestic civil aircraft. Of significance, however, is the British choice of material loss or damage as the essential element of landowner's recovery. From that point the following comparisons may be made:

1. Compliance with air-traffic regulations does not afford the American aircraft operator the protection enjoyed by his British counterpart.
2. Where the American landowner has recovered for disturbance unaccompanied by material damage, the British landowner is denied a cause of action.
3. Recovery for material loss or damage must be sought under traditional theories in America, while in Britain strict liability is imposed.
4. America has entrusted aircraft disturbance to common law analysis and judicial resolution, whereas Britain has rejected common law entirely in cases of aircraft disturbance.

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[19] *Civil Aviation Act*, 1949; (12, 13 & 14 Geo. VI, c. 67) s. 41(1); Air Navigation (General) Regulations, 1949, S.I. 1949 No. 374, reg. 230. See generally Richards and Kaplan, *The Control of Aircraft Noise Perceived at Ground Level*, 68 Jo. Royal Aer. So. 45 (1964).

[20] *Civil Aviation Act*, 1949, *supra* note 19, s. 40(2). See Note, 102 Sol. Jo. 537, 538.

[21] 10 & 11 Geo. VI C. 4, s. 11(1), 11(2). See Kaplan, H., *The Sound Barrier: Aircraft Noise and Insurers*, 53 J.C.I.I. 13, 28 (1956).

Some Preliminary Questions

In light of the almost polar approaches seen above, several questions should be posed:

1. Is the interest of the aviation group so superior as to preclude its liability entirely?
2. If not, should the existence of material loss or damage be indispensable to recovery?
3. Has the application of common law analysis satisfactorily resolved conflicts of interest in America?
4. If not, is the failure due to inherent inadequacies in common law analysis, or rather, because the American constitutional framework has demanded an unnatural application of common law techniques?

These questions serve as guides in considering the present state of the law in Canada and in suggesting modifications which may seem desirable. In Canada, treatment of the problem of aircraft noise disturbance is unhampered by factors which have shaped American law. In addition, Canadian lawyers are afforded a direct comparison between common law and civil law techniques. Considering for purposes of discussion that traditional nuisance doctrines apply in common law provinces in the absence of specific Dominion or provincial legislation, comparison may be drawn with the Civil Code of Quebec.

The Law of Canada and the Quebec Civil Law

As mentioned above, noise disturbance may arise from three basic classes of aircraft. Canadian law will be examined as it may apply to each of these classes. *This study will concern itself only with operations conducted in compliance with applicable flight regulations,* thereby posing directly the problem of damage from authorized activity.

1. Disturbance Caused by Domestic Civil Aviation Operations:

The Canadian Aeronautics Act,[22] unlike the British Act, does not deal with aircraft noise, so provincial law must provide applicable principles. Likewise, no Dominion case law directly treating noise disturbance exists. Nonetheless, two cases should be noted. The first is *Nova Mink Farms* v. *Trans Canada Airlines,*[23] a decision of the Nova Scotia Supreme Court. There, the court held in dictum that compliance with pertinent flight regulations does not lessen the

[22] R.S.C. 1952, Vol. 1, c. 2.

[23] (1951) 2 D.L.R. 241.

common law duties of the aircraft operator to parties on the surface. Even so, that court took a dim view of recovery for mere noise in the absence of unusual circumstances known to the defendant.

A second case is *Lacroix* v. *R.*[24] in which the Exchequer Court denied plaintiff recovery for the alleged taking of an easement over his property. In so holding, the court expressly rejected the claim that section 414 of the Quebec Civil Code entitles the owner of land to ownership of superadjacent airspace. Though it could have ended at that point, the court went on gratuitously to underscore the landowner's right to full enjoyment of his land. Despite this, the court stated that aircraft operations which comply with regulations would not give rise to liability. Two things must be kept in mind about *Lacroix*. First, its force goes only to ownership of airspace since the other issues treated were beyond the scope of the plaintiff's claim. Secondly, the expression in dictum of the court's opinion disregarded the Civil Code of Quebec, looking even to the United States for authority. Since it is provincial law which is to be applied under the Exchequer Court Act,[25] the propriety of this is questionable. Nonetheless, the dictum in *Lacroix* indicates the direction the Exchequer Court may take in deciding potential disturbance cases to which the Crown is a party and which arise in a common law province.

Whether the defendant in a disturbance case involving civil aviation operations is the Dominion or a private party, the law of the province where the offending conduct took place applies. Therefore, the Civil Code of Quebec should be examined as a means of resolving landowner-air transport disputes. Attention is directed to sections 1053 and 1054 dealing with extra-contractual responsibility. Article 1053 states that

> "Every person capable of discerning right from wrong is responsible for the damage caused by his fault to another, whether by positive act, imprudence, neglect or want of skill."

Not only is the person responsible for his own fault, but his responsibility extends "also for the damage caused... by things he has under his care." under article 1054.

Recovery under 1053 turns upon plaintiff's proving fault.[26] Note that the right to conduct aviation operations is specifically regulated.

[24] [1954] Ex. Ct. Rep. 69. See Dohan, *Airspace and Article 414*, (1956) 2 McGill L.J. 114; Richardson, J., *Private Property Rights In the Airspace at Common Law*, 31 Can. Bar Rev. 117 (1953).

[25] 1875 (38 Vict., c. 11); R.S.C. 1927, c. 34; See Jamieson, *Proceedings By and Against The Crown in Canada*, (1948) 26 Can. Bar Rev. 373.

[26] See Crépeau, *Liability For Damage Caused By Things From the Civil Law Point of View*, (1962) Can. Bar Rev. 222.

It is the manner in which that right is exercised, not the harm suffered by landowners that is central to determination of fault questions under 1053. Thus, so long as aviation operations comply with pertinent regulations, a finding of fault is unlikely in the absence of malice.[27]

The possibility remains of claiming under 1054, which raises a rebuttable presumption of fault. In order to recover under that article a plaintiff must prove two things: 1) that an autonomous act of the thing caused the damage and 2) that defendant had the "garde juridique" of that thing.[28] The first requirement might be answered by arguing that aircraft noise disturbance emanates not from the fault of the operator, but rather from the nature of the aircraft itself. Thus, the autonomous act requirement is met. The other requirement, "garde juridique", is met since the defendant is exercising control over the aircraft for his own benefit.

Even if this argument were acceptable, the exculpatory clause of paragraph six of article 1054 would likely protect the defendant:

> "The responsibility attaches in the above cases only when the person subject to it fails to establish that he was unable [by reasonable means] to prevent the act which has caused the damage."

In the overwhelming majority of cases, airlines can show that they have taken all reasonable steps to prevent unreasonable noise disturbance.

These inadequacies of the Civil Code are relevant not only to domestic civil aviation operations in Quebec, but to certain foreign operations as well.

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[27] See Capitant, *Vocabulaire Juridique*, Vol. 1, p. 17; Josserand, *L'Abus des Droits* 58 (1905); Planiol, *Traité Elémentaire de Droit Civil*, Vol. II, part 1, Nos 870-872(b) (Eng. Translation 1939). *Cf.*, *Brodeur* v. *Choinière*, [1945] S.C. 334, commented on in Nadeau, *Abuse of Rights*, [1947] Can. Bar Rev. 512, 514. *But cf.*, *Air Rimouski Ltée* v. *Gagnon*, [1952] S.C. 149, 152, "...even the most absolute of [proprietary rights] must... be subjected to certain restrictions subordinating the exercise of ownership to the *rights of neighboring proprietors.*" (Emphasis supplied) See also Comment, 8 McGill L.J. 150 151-153 (1961-62); Papers presented to the Annual Meeting of the Canadian Bar Ass'n. (1957) at 268 *et seq.*; Khadr, *Réparation des dommages causés par les aéronefs du simple fait du survol des propriétés privées*, 1 Rev. Gen. de l'Air 10 (1964). See generally Lamont, 1958 Papers presented to the Annual Meeting of the Canadian Bar Ass'n. pp. 38, 40; Mankiewicz, *Some Aspects of Civil Law Regarding Nuisance and Damage Caused by Aircraft*, 25 Jo. Air L. & Com. 44 (1958); Mazeaud and Tunc, Vol. 1 pp. 622-675 (5th ed. 1957).

[28] See Crépeau, *supra* note 26 at 230-236.

2. Foreign Civil Aviation Operations

In the absence of specific Dominion legislation, provincial law applies to the conduct of foreign air carriers within provincial territory. However, specific legislation does apply to carriers of states which are party to the 1952 Rome Convention. Enacted in Canada in 1955, that convention imposes absolute, but limited liability on foreign civil aircraft causing damage to third parties on the surface.[29]

Here, as in the case of the British Civil Aviation Act, the meaning of "damage" is unclear. Noise disturbance from types of aircraft known in 1952 was not intended to be included within the coverage of the convention.[30] However, the subsequent development of large jet aircraft has made real the threat of damage due to noise. It is therefore argued that the Rome Convention extends to cases of material damage caused by aircraft noise.

Employing this interpretation of the Rome Convention, aircraft of non-member states would presumably be governed by provincial law. Since only fourteen states are parties to the Rome Convention, provincial law is predominant, and several difficulties emerge. If provincial law affords no recovery for damage caused by aircraft operated in compliance with flight regulations, non-member states' carriers would be subject to no liability, whereas those of member states would be subject to absolute but limited liability in cases of material damage. Contrarily, in provinces whose law affords recovery, non-member states' carriers would be subject to unlimited liability for material damage, whereas member states' carriers would be subject to "Rome Convention liability".

This diversity of laws could be rectified by making the provisions of the Rome Convention applicable to all foreign aircraft entering Canadian airspace. Such action might be strongly objected to, notably

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[29] *Foreign Aircraft Third Party Damage Act*, 3-4 Eliz. II, c. 15 (1955). c. 1, art. 1: "Any person who suffers damage on the surface shall upon proof only that the damage was caused by an aircraft in flight or by any person or thing falling therefrom, be entitled to compensation as provided by this Convention. Nevertheless, there shall be no right to compensation if the damage is not a direct consequence of the incident giving rise thereto, or if the damage results from the mere fact of passage of the aircraft through the airspace in conformity with the existing air traffic regulations. See R.S.C. 1952, Vol. 1 c. 2, Part II, s. 18.

[30] I.C.A.O. Doc. 7379, LC/34 pp. 16, 17, 23, 398. See Khadr, *supra* note 27 at 44-49; Rinck, *Damage Caused by Foreign Aircraft to Third Parties*, 28 Jo. Air L. & Com. 405, 408 (1961-1962); Lee, R., *The Legal Problem of Supersonic Aircraft*, unpublished study, McGill Institute of Air & Space Law (1963) at p. 12.

by the United States, which opposes strict liability.[31] Nonetheless, this action is within the sovereign rights of Canada over her airspace.[32]

Notwithstanding this suggestion, the present state of the law of Quebec would apply the law of that province to cases of aviation disturbance arising therein which did not involve material damage. Where material damage occurs, Quebec law would apply to non-member states' carriers, and the Rome Convention would apply to carrier of member states.

3. Canadian Military Aviation Operations

As mentioned above, certain aspects of the law of governmental liability in tort are common to Canada and Great Britain. Notably, the Canadian Aeronautics Act does not appear to apply to military aircraft. Rather, they are under the control of the Minister of Defense.[33] In addition, the *Crown Liability Act*, article 3 section 6, "... does not make[s] the Crown liable in respect of anything done or omitted in the exercise of any power or authority exercisable by the Crown, whether in time of peace or war, for the purpose of the defence of Canada or of training, or maintaining the efficiency of, any of the naval, army, or air forces of Canada." [34]

There has been no judicial construction of the above provision, so its effect upon liability of military aviation operations is uncertain. However, actions have been taken successfully against the Crown for acts of its military personnel.[35]

In any case, the law of the province in which the conduct complained of arises controls any liability the Crown may have. However, it is the provincial law as it existed in 1947, the date of the enactment of

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[31] See Rinck, *supra* note 30 at 405.

[32] See *Johannsen et al* v. *Rural Municipality of St. Paul,* [1952] 1 S.C.R. 292. See also *Spanish Law of Air Navigation,* art. 120 (20 July 1960).

[33] *Aeronautics Act, R.S.C.* 1952 Vol. 1, c. 2, Part II, s. 6(2); s. 8(1), 8(2).

[34] 1-2 Eliz. II, c. 30 (1953). 1952-3 Debates House of Commons, Vol. III p. 3284: In reply to Mr. Diefenbaker's question whether the postal and military were to be exempted from the proposed Crown Liability Act, Mr. Garson answered, "...clauses in the Defense Act and in the Aeronautics Act, in the Employees' Compensation Act and in the various other federal statutes [have] composite effect to relieve the Crown from the claims of which he speaks." p. 3285. See Kaplan, *supra* note 21 at p. 28.

[35] *E.g. Darowany* v. *R.,* [1957] Ex. Ct. R. 340; *Lindsay* v. *R.,* [1956] Ex. Ct. R. 186, 191.

the Crown Liability Act.[36] It is anomalous that the Crown, with its tremendous power to inflict harm through governmental activities, should be judged by law not subject to change.[37] Aviation activities are but one example of technological evolution demanding contemporary legal treatment. The development of necessary concepts is rendered impossible by the present construction of the Crown Liability Act.

Towards A Canadian Policy

Reviewing briefly, provincial law will apply in nearly all cases of aviation noise whether caused by military or civil aircraft. The exception is where material damage is caused by aircraft having the nationality of a state party to the 1952 Rome Convention. Further, the Civil Code of Quebec appears to consider only the defendant's conduct, not the quantum of harm which flows therefrom. The seeming inadequacies of the law of Quebec make necessary a consideration of the preliminary questions posed earlier in this study. Those questions raise alternate means of resolving the conflict between groups interested in air transport and landowner groups. Note that the landowner as a member of the public shares an interest in aviation, thereby assuming a dual role.

In answer to the first preliminary question, it is urged that there are circumstances in which aviation operations, though conducted in compliance with flight regulations, should be actionable. Secondly, material damage should not be a prerequisite to recovery. In extreme circumstances frequent noise and vibration unaccompanied by material damage are not dismissable as mere neighborhood inconvenience.

Management of the air transport-landowner conflict centers, then, about two inquiries. First, what is the extent of the landowner's burden as a member of the public interested in aviation? At what

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[36] *Schwella* v. *R.*, [1957] Ex. Ct. R. 226, 230; *Gaetz* v. *R.*, [1955] Ex. Ct. R. 133, 135-136. See generally Binnie, *Attitudes Towards State Liability in Tort: A Comparative Study*, 22 U. Toronto Faculty L. Rev. 188 (1964); Comment, 22 Can. Bar Rev. 269 (1944); Comment, 6 Ch. L.J. 77 (Mar. 1956).

[37] In describing American practice Edmond Cahn, in *Predicament of Democratic Man*, 69 (1962) notes that, "The typical American statute provides that the government shall be liable for injuries 'in the same manner and to the same extent as a private individual under like circumstances'. With this sort of legislation, the government's collosal capacity to inflict injury grossly exceeds its legal responsibility." See generally, Harper & James, *The Law of Torts* s. 29.15 (1956); Schwartz, *Public Tort Liability in France*, 29 N.Y.U.L. Rev. 2432 (1959).

point or points along the scale of conduct should liability attach? Secondly, of what elements should that liability consist?

The landowner's role as a member of the public does not warrant that he suffer material damage to his property. Rather, strict liability should be imposed on mere proof of causation.[38]

In contrast, mere aircraft noise becomes unreasonable only in extreme circumstances. The question is one of degree, unlike the certainty that material damage has occurred. The choice is one of recovery *vel non.* If recovery is to be granted in the absence of material damage a judicially manageable means of identifying actionable circumstances is required. This raises the third and fourth preliminary questions, which deal with the result of common law analysis of aviation noise disturbance in America. The American treatment has not been entirely satisfactory, but this is due to the requirements of American constitutional law coupled with the pre-1946 governmental tort immunity. The existence of these factors in American constitutional law has made necessary the employment of the "taking" doctrine, whereas pure nuisance concepts are available in Canada.

An added problem in American law is that a respectable body of authority insists that where the public suffers a nuisance, an individual can recover on his own account only if he has suffered damage differing in *kind* from that suffered by the public at large.[39] Plaintiffs seeking recovery for material damage could overcome this argument, but those suffering mere disturbance would be denied reecovery under the abovementioned view. However, this view does not prevail in Canadian common law provinces. An individual must show that he has suffered harm "above and beyond that suffered by the public" in order to recover on his own account in a public nuisance situation.[40] Pure nuisance theory seems, therefore, both appropriate and available to the resolution of aircraft noise disputes in Canada's common law provinces.

One final alternative must be considered, that of promulgating an empirical test couched in terms of maximum allowable noise levels. Although such a test would afford certainty, it could only be a com-

[38] This proof is, however, difficult to establish. See Varner, *Legal Aspects Of The Sonic Boom,* 23 Ala. Lawyer 342, 345 (1962). *Cf., City of Newark* v. *Eastern Airlines,* 159 F. Supp. 750 (D. N.J. 1958).

[39] See Prosser, *Law of Torts* 404 note 59, *but see* note 64, p. 405.

[40] See Paterson, A. R., *When Is an Aircraft a Nuisance in the Eyes of the Law ?,* 1957 Can. Aer. J. 336, 337 (Dec. 1957); Fleming, *The Law of Torts* 357-358 (2d ed. 1961) and cases cited therein.

promise. As such, it could leave certain plaintiffs without recourse in unusual circumstances. Thus, an ad hoc approach employing nuisance analysis is preferable.

In light of the above, the following twofold scheme is submitted as a satisfactory resolution of aviation-landowner conflicts:

1. Physical damage to property is not to be tolerated by landowners as part of their role as members of the public. If causation of material damage is considered indispensable to development of air transport, the resultant costs should be borne by aviation enterprises and connected groups.
2. In the absence of material damages there are, nonetheless, certain extreme circumstances which will give rise to liability. Identification of such circumstances is to be on an ad hoc basis.

Adoption of "1" above makes uniform the treatment of material damage cases, regardless of whether the defendant is a domestic or foreign carrier. Adoption of "2" raises two questions. First, are the carriers of Rome Convention states amenable to provincial law treatment of mere disturbance since the convention did not intend to cover mere noise? Secondly, note that the law of Quebec seems to offer no recovery to landowners, no matter how severe the harm from air transport operations conducted in compliance with pertinent regulations. Ostensibly, the Rome Convention serves only to impose responsibility for damage, not to provide immunity from liability for conduct not covered by the convention. Thus, the first question may be answered affirmatively. The second problem illustrates patently the need to assess the propriety of the Quebec law in light of existing technology. Discussion thus far has assumed that sonic boom requires no departure from the proffered scheme of analysis. A brief examination of the nature of sonic boom justifies that assumption.

Sonic Boom

Sonic boom may be described as a cone of high pressure air consisting of closely grouped sound waves accompanied by a loud cracking noise. Its intensity is a function of the size, weight, altitude, geometry, and flight attitude of the aircraft. In addition, atmospheric conditions exert considerable influence on sonic boom intensity.[41] The destructive potential of these supersonic overpressures is conjectural, but present purposes are served by noting that sonic booms

[41] See generally, Preliminary Data Oklahoma City Sonic Boom Study, Fed. Av. Agency, August 3, 1964; Hopkins and McIntosh, *Is Sonic Boom an Explosion ?*, 1957 Ins. L.J. 15.

have accounted for damage ranging from minor glass breakage to the 1959 incident at Uplands Air Force Base near Ottawa, in which a low supersonic overflight caused structural damage in excess of $500,000 to the newly erected terminal building.[42] If man deems it indispensable to travel at supersonic speeds,[43] the resultant material damage is presumably no more the burden of the subjacent landowner than is damage caused by a falling aircraft.

A more difficult question is presented by sonic booms which cause no material damage. Their noise is sudden; trailing the path of the aircraft, they could affect wide portions of the populace unfamiliar with aircraft disturbance. Furthermore, the frequency of sonic boom over a given area may be dependant on a multiplicity of factors, some of which are uncontrollable. Nonetheless, in final analysis, sonic boom is merely noise.[44] As such, it becomes unreasonable under extreme circumstances. Ad hoc recognition of such situations renders sonic boom amenable to the suggested scheme even though actionable facts may differ from those where subsonic operations are in question.

Conclusions

A legislative approach thus appears to be the most equitable solution to aviation noise problems. These issues should be treated with a view to the just distribution of the burden of air transport operations beetween the industry, its consumers, the public, and finally, the landowner group. This can best be accomplished by preventing legal formalism from eclipsing the interests of the groups involved, as it has done to a large extent in the United States.

Several policy factors may be noted in conclusion. First, it is arguable that the air transport interests are better able to bear the cost of offending operations than is the landowner group. Further, these costs may be passed on to users of aviation services and products. Secondly, as regards material damage, it is not anticipated that prolific litigation would flow from adoption of the suggested scheme due to the high cost of litigation and the involvement of

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[42] See Varner, *supra* note 38.

[43] The future of commercial supersonic transportation is in large part dependent on resolution of the sonic boom problem. See Av. Wk. & Sp. Tech., Aug. 3, 1964 at p. 38; Astr. & Aer., Sept. 1964 at pp. 16, 70, 77.

[44] See Hamman, *An Old and a New Legal Problem: Defining "Explosion" and "Sonic Boom"*, 45 A.B.A.J. 696 (1959).

insurance companies which tend to settle out of court wherever possible.[45]

Canadian recognition of aviation disturbance as a present problem is desirable, indeed necessary. This is particularly applicable to Quebec. The inattention of the law of that province to the quantum of damage occasioned by authorized operations may have been justified in the past. However, the ability of air transport participants to inflict immense harm upon surface interests requires reassessment of basic concepts. Without indicating the form this process may take, it is clear that an imbalance in the law presently exists between air transport and surface interests in the province of Quebec.

[45] Some Canadian insurers have expressly included sonic boom damage in homeowners' policies, thereby avoiding disputes over whether sonic boom is within aviation risk clauses, etc.