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COMPULSORY AIRPLANE INSURANCE*

GEORGE W. BALL†

I. THE NATURE OF AIR RISKS

Examples:

When, in 1919, a blimp fell through the roof of a La Salle Street bank it seemed prophetic. Aviation was just beginning to feel the stimulus of wartime invention when it was vividly demonstrated that there was danger, grave danger, to men and their property on the ground. And, although the fact that there have been no similar catastrophes of so tragic a consequence has somewhat restored the placidity of the property owner, yet in the aviation industry the fear persists that some night a flaming plane may burn up a city as completely as did Mrs. O'Leary's lantern (although it is doubtful that a modern city with its steel construction would be combustible). If that occurs the airplane operator will be bound hand and foot by restrictive legislation and the growth of air transportation will be stunted.

Not that this is the operator's only perturbation. Today he is alarmed also by the magnitude of the verdicts that are being awarded to passengers injured in air disasters. A lay jury is admittedly an enigmatic body and there is little predicting its decisions, especially in personal injury actions. Nevertheless, one may not recall too phlegmatically verdicts that totalled \$89,000 which were returned against the Colonial Western Airways when a trimotored plane crashed, killing fourteen people.¹ Nor is this case unique. Two months later a plane owned by the Northwest Airways fell and injured five passengers. A jury gave one of the passengers \$35,000 and another \$25,000.² Other claims arising from this accident were settled out of court for an estimated

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1. *Hagymasi v. Colonial Western Airways*, 1931 U. S. Av. R. 73 (Supreme Ct., Essex County, Apr. 10, 1931). On appeal to the N. J. Supreme Ct. there was a remittitur of \$15,000 on the \$46,000 verdict given for the death of William Steever (232 C. C. H. 2089. Decided Oct. 10, 1932).

2. *Foot v. Northwest Airways*, 1931 U. S. Av. R. 66 (U. S. D. C., Dist. of Minn., 3d Div., Apr., 1930).

\$32,000.³ In June of 1932 a verdict of \$25,000 was found against the Curtis-Wright Flying Service for the death of a passenger killed by the propellor of the plane from which he had just alighted.⁴ No transport company is large enough or strongly rooted enough to bear these liabilities lightly.⁵

Obviously, with the increasing safety of flying, such accidents will become relatively less frequent. While in 1927 the passenger death rate in scheduled flying was .12 per thousand flights, by 1931 it had shrunk to .05, and in that time there was an increase of from 8,679 to 522,345 passengers carried.⁶ But the distressing effect of individual accidents both upon the public and upon aviation must continue. And, although flying will become more accepted by the casual passenger, yet the danger to persons and property on the ground will increase with the increase in the number of airplanes.

The Causes of Air Risks:

Since this discussion is concerned mainly with (1) the risk to the property owner, and (2) the risk to the air passenger, it seems well to examine the causes of accidents from those separate points of view.

(1) *As Affecting the Property Owner*—It is apparent that the danger to the property owner may not be easily computed, since every plane that passes over his head is a possible hazard to him. For an accurate estimate, all accidents should be investigated, whether they involve the huge airliners of the transport companies

3. "Recent Ruling Affect Passenger Liability Insurance," 2 *Skylines* 19, 22 (May, 1931).

4. *Williamson v. Curtiss-Wright Flying Service*, 1932 U. S. Av. R. 133 Tex. Dist. Ct., 14th Jud. Dist.).

5. "If an airplane falls—an all too frequent occurrence—and damages either a thing or person transported or destroys a thing or person on the ground, the responsibility of the proprietor or operator will sometimes be so immense that even the largest enterprise is ruined because of a single accident." *Ambrosini*, "Caratteristiche fondamentali della responsabilità aeronautica," 1928 *Il Diritto Aeronautico* 296, 306.

6. 1927—.12 per thousand flights.
1928—.30
1929—.10
1930—.06
1931—.05

These statistics are based on Department of Commerce figures. The death rate for passengers carried for hire in non-scheduled commercial flying has been somewhat higher; thus:

1929 (last six months)—.03
1930 (entire year)—.30
1931 (entire year)—.25

Deaths of passengers in pleasure flying were:

1929 (last six months)—.35
1930 (entire year)—.30
1931 (entire year)—.25

See *Accident Statistics*—Fourth Report of the Committee on Aviation of the Actuarial Society of America, September, 1932 (N. Y.).

or the smaller planes of private flyers.⁷ Since 1928 aviation accidents have been reviewed by the Department of Commerce, whose statistics for miscellaneous flying (all civil aviation except scheduled air transport) reveal that personal fallibility probably accounts for one-half or more of all such accidents.⁸ This is significant then, since there is reason to believe that miscellaneous flying is a far greater threat to the man on the ground than scheduled air transport.⁹ It supplies, at least, a working hypothesis.

(2) *As Affecting the Air Passenger*—The term air passenger is here used to refer only to those who make use of scheduled air transport. Of four hundred and forty accidents on scheduled air lines, which occurred throughout the United States from January, 1928, to December, 1931, the Department of Commerce has so analyzed the causes:¹⁰

	%
(1) Pilot's error in judgment ¹¹	8.55
(2) Poor technique and disobedience of orders	6.79

7. Or army or navy planes. However, this discussion is confined to problems of civil aviation, to those liabilities which arise as a result of an accident injuring the person or property of a party on the ground, or injuring the person of a passenger. It does not consider the liability of an air line to its employees, nor liabilities arising from the collision of two airplanes, nor any liabilities resulting from the operation of lighter-than-air craft nor the liability of a transport company as the carrier of goods or baggage. These matters will be reviewed in a later and larger study.

8. See 2 Air Commerce Bulletin 555, and 3 Air Commerce Bulletin 220 and 467. It is impossible to give an accurate determination of the risk to persons and property on the ground; since so much of what is termed miscellaneous flying, especially student and experimental flying, is done over an airport, so that a reported accident does not necessarily mean that any third party was endangered.

For continental analyses of the risks see *Blum*, *Assurances Aériennes*, p. 76 (Paris, 1930), and *Prochasson*, *Le Risque de L'Air* (Paris, 1931), p. 36. For a comparison of the air risks with the other risks, see *Prochasson*, p. 41 and note. For an analysis of various airplane risks, see *Sweeney*, *The Nature and Development of Aviation Insurance* (Philadelphia, 1927), pp. 41-53.

9. Obviously this is true because there are more private and non-scheduled commercial planes than there are scheduled air transports, and these planes have a much higher accident rate.

Yet it should be remembered that although the personal factor may be more important in those accidents which affect third parties on the ground, that does not necessarily indicate that negligence is present in those cases. In determining negligence the courts are accustomed to take into consideration the training and ability of a pilot. Thus a pilot holding a private license would not be subjected to the same standard of care as a pilot holding a transport license. See *Greunke v. North American Airways*, 201 Wis. 565, 230 N. W. 618 (1930), and cases cited.

10. These statistics were compiled from several tables published by the Department of Commerce, 2 Air Commerce Bulletin 286 and 3 Air Commerce Bulletin 140, 406. These statistics are for all accidents, minor and important, so that they should not be taken too seriously in the present study. Certain of the causes listed may be responsible for many minor accidents, rarely for major ones. Nor would there likely be any agreement as to what constituted negligence between the Department of Commerce and the courts. These statistics were gathered independently of the verdicts in the cases arising from the accidents; probably there is considerable discrepancy between the results found by courts and juries and those which the Department of Commerce reports. This possible disagreement would, however, merely substantiate the proposition that the courts are not competent to establish the cause of airplane accidents with any degree of accuracy.

11. An honest error in judgment is not negligence at law. This was specifically pointed out by *Lawrence*, Ct. J., in his instructions to the jury in *Conklin v. Curtiss Flying Service* (N. J. S. C., 1930), 1930 U. S. Av. R. 192.

	%
(3) Pilot's carelessness	5.86
(4) Supervisory errors	2.17
(5) Airport terrain and other causes	12.73
(6) Handling qualities, instruments and miscellaneous causes	6.94
(7) Weather and darkness	27.63
(8) Power plant and structural failure	25.14
(9) Undetermined causes	4.19
	<hr/> %100.00

The first five of these causes would probably be considered negligence at law. The sixth cause, since it concerns the design of the plane, might mean that the manufacturer would be held liable.¹² The seventh cause, which is responsible for one-fourth of the accidents, by definition, "includes all accidents resulting from conditions . . . which could not reasonably have been foreseen and avoided."¹³ The eighth cause, motor and structural failure, responsible for another one-fourth, may or may not result from negligence, but negligence in such a case is practically impossible of proof or disproof.

II. THE BEARING OF AIR RISKS

By Whom Should These Risks Be Borne?—Diverse Theories:

(1) *By the Landowner*—Although the landowner may now insure himself against the air risk no one has yet had the temerity to suggest that he alone should bear the expense of any damage to himself or his property from airplanes. He is subjected to a novel risk by aviation which he has done nothing to incur. In fact, several writers have suggested that the flight of an airplane across his property is a trespass.¹⁴ It has however been frequently and vigorously asserted that the aviator should be held responsible only for that damage which is the result of his negligent act.¹⁵ Whether or not the tactical advantage of *res ipsa loquitur* should

12. On the doctrine of *McPherson v. Buick Motor Co.*, 217 N. Y. 382, 11 N. E. 1050 (1916).

13. 3 Air Commerce Bulletin 404 (1932).

14. See *Zollmann*, "Air Space Rights," 53 Am. Law Rev. 711 (1919); "Trespass by Airplane," 32 Harv. Law Rev. 569 (1919); *Mathys*, "Trespass in the Air," 2 Wis. Law Rev. 58 (1922).

15. *Cooper*, "Aircraft Liability to Persons and Property on the Ground," 17 A. B. A. Jour. 435 (1931); *Davis*, "Liability of Aircraft Carriers, Owners and Operators of Aircraft," 18 Georgetown Law Jour. 241 (1930); "Aerial Navigation," 15 Law Notes 86 (1911); *Hotchkiss*, *Aviation Law*, pp. 39-43 (N. Y.: Baker Voorhis & Co., 1928); *Shearman and Redfield*, *Negligence* (6th ed., 1913), Sec. 653(f); *Schneider*, "Negligence in the Law of Aviation," 12 Boston Univ. Law Rev. 17 (1932); *Stites*, "Negligence in the Operation of Aircraft," 18 Ky. Law Jour. 141 (1930).

be given the property owner is a question upon which there is little agreement.¹⁶

(2) *By the Passenger*—The question of whether the passenger should be compelled to assume the entire risk of flight is contingent upon the ability of the operator legally to contract away his liability. If the scheduled air transport is considered a private carrier then to a certain extent he may do so, but it seems very unlikely that it will escape the classification of common carrier.¹⁷ And a common carrier is held to the highest degree of care for the safety of passengers carried.

(3) *By the Plane Operator*—In contrast to those jurists who would place all the risks of airplane activity upon the non-participant are those who would hold the aviator and transport company alone responsible.¹⁸ These theorists would have it that he who engages in aviation should do so at his peril, that he should not subject innocent parties to the hazards of an enterprise upon which he voluntarily embarks and from which he alone profits. The aviator is better able to predict damage to parties on the ground than are those parties, and certainly, they maintain, he should provide compensation for injuries to passengers when he undertakes to carry those passengers safely.

The Allocation of the Risks by the Existing Law:

This whole range of theory is exemplified in present statutes and court law, a survey of which may at least reveal the need for international uniformity.

(1) *Foreign Jurisprudence*—

(a) *As to Third Parties*—An examination of European legislation and decisions shows a consistent opinion that the airplane owner should be absolutely liable for what damage he causes

16. *Schneider*, supra note 15; *Knauth*, "Limitation of Aircraft Owners' Liability," 3 *Air Law Rev.* 134 (1932); and see note 37.

17. *Edmunds*, "Aircraft Passenger Ticket Contracts," 1 *JOURNAL OF AIR LAW* 321 (1930); *Pitel*, "The Law of Aviation" (Albany, 1927), Chap. XI, p. 84; *Greer*, "The Civil Liability of an Aviator as a Carrier of Goods and Passengers," 1 *JOURNAL OF AIR LAW* 241 (1930); *Hotchkiss*, supra, note 15, Chap. 8, p. 51; *Rosenbaum*, "Regulation of Aircraft as Common Carriers," 3 *JOURNAL OF AIR LAW* 194 (1932).

18. *Bogert*, "Problems in Aviation Law," 6 *Corn. Law Quart.* 271, 302 (1921); *Hazeltine*, *The Law of the Air* (London, 1911), p. 86; *Logan*, *Aircraft Law—Made Plain* (St. Louis, 1928); *Spaight*, *Aircraft in Peace and the Law* (London, 1919), p. 78; *Swift*, "Present and Proposed Aerial Legislation," 18 *Case and Comment* 134 (1911); *McCracken*, "Air Law," 57 *Am. Law Rev.* 97 (1923); *Newman*, "Damage Liability in Aircraft Cases," 29 *Columbia Law Rev.* 1039 (1929); *Kuhn*, "The Beginnings of an Aerial Law," 4 *Am. Jour. of Int. Law* 109; *Zollmann*, "Liability of Aircraft," 53 *Am. Law Rev.* 879 (1919). A qualified liability based on the doctrine expressed in *Wilson v. Phoenix Powder Co.*, 40 W. Va. 413, 21 S. E. 1035 (1895), was proposed by Mr. Julian Hearne in "The Liability of an Aviator for Damage to Persons and Property on the Ground," 37 *W. Va. Law Quart.* 269 (1931).

to persons and property on the surface of the ground.¹⁹ Differences exist as to the persons responsible, whether the owner alone, the owner and the operator together, or the operator alone (if he uses the plane unknown to the owner). The Hungarian law specifies that *force majeure* does not exempt the owner or operator from liability, while the Italian law states definitely that it does, and the English, Danish and French laws, although expressly admitting contributory negligence as an exonerating condition, yet suggest by their silence that *force majeure* is not similarly regarded. The German law has established definite maximum limits of responsibility, while Spain holds such liability unlimited and Italy permits the owner to leave the plane as payment for what damage it has caused in those instances where the damage is not the fault of the owner.

(b) *As to Passengers*—Continental definitions of passenger liability are, however, less consistent. In France, while asserting that the liability is contractual, the courts, by permitting all but liability for negligence to be bargained away, have in effect restricted it to the confines of a tort formula.²⁰ Similarly in Poland there can be no contracting away of responsibility for negligence; neither can there be recovery for more than 20,000 slotys.²¹ In England clauses of full exoneration are held valid,²² as they also are in Austria and Hungary. These latter countries, however, require a formal acceptance by the passenger of these conditions.²³ German legislators, by the Act of August 1, 1922, created absolute liability, mollified by a statutory limitation of damages. Under this provision German air transport companies have made good use of non-responsibility clauses.²⁴ Italy has borrowed a device from maritime law and, while declaring clauses restricting liability to be void, has provided that, unless the fault of the operator be demonstrated, he will be responsible only to the value of the plane.²⁵ Switzerland, likewise frowning upon attempts of the operator to restrict his liability by contract, has approached strict liability; yet, by the Swiss law, there is retained in the judge

19. See *Blum*, op. cit. note 8, on pp. 320-322; and *Prochasson*, op. cit. note 8, pp. 117-149.

20. *Kaftal*, *La Reparation des Dommages Causes aux Voyageurs dans les Transports Aériens* (Paris, 1930), p. 3 et seq.

21. *Prochasson*, op. cit. note 8, p. 120 et seq.

22. *McCawley v. Furness Ry. Co.*, 8 Q. B. 57 (1872); and see *Nokes and Bridges*, *The Law of Aviation* (London, 1930), p. 106.

23. *Prochasson*, op. cit. note 8, p. 120 et seq.

24. *L. v. Aero Lloyd A. G. und H.*, 56 *Juristische Wochenschrift* 2210 (translated in 1 *JOURNAL OF AIR LAW* 223); and *Z. v. S.*, 1 *Zeitschrift für das Gesamte Luftrecht* 196 (translated in 1 *JOURNAL OF AIR LAW* 220).

25. *Prochasson*, op. cit. note 8, p. 131. This law has not been universally liked. For discussions and criticisms of it see *Cortesariex*, *La Responsabilità nel Diritto Aereo* (Torino, 1929) p. 65; *Ambrosini*, "Caratteristiche Fondamentali della Responsabilità Aeronautica," 5 *Il Diritto Aeronautico* 296 (1928).

the power to grant exoneration.²⁶ Russia alone of all the European nations has established absolute liability, and that has not been done unequivocally. There the clear statement of absolute liability in Article 22 of the decree of the Counsel of Commissaires of the People (January 17, 1921) was modified by the Civil Code of January 1, 1923 (Article 404), to declare *force majeure* and grave contributory negligence factors of exoneration. What is here meant by *force majeure* is not entirely clear,²⁷ but certainly the liability seems severe until one remembers that the transport companies are all creations of the state.

(2) *American Jurisprudence—*

(a) *As to Third Parties*—In the United States, Section Five of the Uniform Aeronautics Act provided for absolute liability upon the owner of aircraft for injuries to persons and property on the land unless the injury was caused in whole or in part by the negligence of the person injured. This was approximately the law established by the British Air Navigation Act of 1920 and recommended in the Code Internationale Navigation Aérienne of 1919. Section five was adopted by seventeen of the twenty-one states which adopted the Uniform Aeronautics Act.²⁸ Arizona, however, preferred to place liability upon a negligence basis,²⁹

26. *Prochasson*, op. cit. note 8, p. 135.

27. *Force majeure* in the French law is not synonymous with "Act of God," for it may mean an act of a third party as well. Thus in an English case where these words were questioned, Ballache, J., said: "I have had the evidence of a Belgian lawyer as to their meaning, and he said the words are understood on the Continent to mean 'causes which you cannot prevent and for which you are not responsible.'" *Matsoukis v. Priestman and Co.*, 1 K. B. 681, 686 (1915). See also *Lebeaupin v. Crispin*, 2 K. B. 714 (1920), and *Hackney Borough Council v. Dore*, 1 K. B. 431 (1922). For the distinction between *vis major* and "Act of God," see *Nugent v. Smith*, 1 C. P. Div. 423, 429 (1876).

Discussing the application of the words *force majeure* to airplane cases, Prof. Ripert has said: "The law does not give any definition of the words. If one means them in a large sense, the responsibility of the transporter is attenuated until in a very great number of cases, it is only necessary to establish that the accident resulted from a risk which he could not foresee. If, on the other hand, one gives a restrictive sense to the expression, the transporter will be nearly always responsible, for he will not be able to prove the existence of an exonerating fact": *Ripert*, "La Force Majeure dans les Transports Aériens," 12 *Rev. Juridique de la Locomotion Aérienne* 1 (1928). Prof. Ripert suggested that atmospheric conditions and defects in the apparatus should not be considered by the French law as cases of *force majeure* to free the transporter from liability to passengers, nor, he insisted, should his responsibility towards third persons be at all alleviated by *force majeure*. Apparently there is much to be said for Professor Hirschberg's identification of *force majeure* with the Anglo-American "proximate cause": *Hirschberg*, "The Liability of the Aviator to Third Persons," 2 *So. Cal. Law Rev.* 409 (1929).

If, then, the French idea of *force majeure* was intended here it will be seen that the code did little to modify the previous decree. It is possible, however, that in Russia the phrase may be given a more extended significance. In any event the liability is severe and the explanation of this severity is that the transport companies are creations of the state.

28. Idaho in 1931 repealed the Uniform Act and adopted a provision copying the Pennsylvania law.

29. L. 1929, Ch. 38, Sec. 11. Arizona also by a regulation of its Corporation Commission, has provided compulsory insurance for aircraft common carriers; *Ariz. Corp. Comm.*, Gen. Order 113L, Nov. 10, 1928. For similar action in New Mexico, see New Mexico Aircraft Common Carrier Regulations, 1930, Mar. 17, 1930, cited in *Kremlick*, "A Survey of Aviation Insurance Law," 2 *JOURNAL OF AIR LAW* 529 (1931).

Pennsylvania provided that usual tort law should govern,³⁰ and Connecticut passed legislation worded like that of Arizona.³¹ A Louisiana law, passed in 1926, provides that "it shall be the duty of every person, firm, or corporation engaged in the business of operating aeroplanes, whether as owner, lessee or otherwise, for the purpose of carrying passengers for hire in this State to procure and execute an indemnity bond . . . with a good and solvent surety company . . . with the obligation running in favor of any person who may be injured in person or property" by an aeroplane.³² For the first plane the bond is to be fifteen thousand dollars and for each additional plane one thousand dollars. Similarly, a regulation of the State Corporation Commission of Virginia forbids any "operator of commercial aircraft used for intrastate flights" to "engage in commercial aviation in Virginia without having first obtained liability and property damage insurance."³³

(b) *As to Passengers*—American legislation has not shown so much interest in the passenger risk. In most states it is tacitly assumed that the ordinary rule of negligence which applies to accidents on the ground applies quite as efficaciously in the air. The opinion of the early writers³⁴ that the airplane was a "dangerous instrumentality" under the rule of *Rylands v. Fletcher*³⁵ is now given little approbation.³⁶ Courts worry constantly over the application of *res ipsa loquitur*.³⁷ And, meanwhile, the passenger is blithely unaware of his rights; for only Arizona and Connecticut have given legislative acknowledgement to this common law liability,³⁸ and only Louisiana and Virginia have expressly altered the common law.³⁹

Absolute Liability:

(1) *The Necessity for Absolute Liability*—The law, confronted with unusual obstacles, all too often chooses the course of least resistance. Stated less figuratively, judges and legislators

30. L. 1929, Act 317, Sec. 6.

31. Pub. Acts, 1929, Chap. 253, Sec. 32.

32. L. 1926, Act No. 52.

33. Cited in Fagg, "Survey of State Aeronautical Legislation," 1 JOURNAL OF AIR LAW 475 (1930).

34. Hazeltine, op. cit., p. 85; Spaight, op. cit., p. 76.

35. *Rylands v. Fletcher*, L. R. 3 H. L. 330 (1868).

36. Hotchkiss, op. cit., p. 40; Zollmann, Law of the Air (Milwaukee, 1927) p. 77.

37. See *Allison v. Standard Air Lines* (No. 3516, U. S. D. C., S. D. Cal., Cent. Div., Sept. 19, 1930); *Seaman v. Curtiss Flying Serv.*, 231 App. Div. 867, 247 N. Y. Supp. 251 (1930); *Wilson v. Colonial Air Transport*, 180 N. E. 212 (1932). See also Allen, "Transportation by Air and Doctrine of Res Ipsa Loquitur," 16 A. B. A. Jour. 455 (1930); and Harper, "Res Ipsa Loquitur in Air Law," 1 Air Law Rev. 478 (1930).

38. See supra, notes 29 and 31.

39. See supra, notes 32 and 33.

have a penchant for interpreting novel situations in the light of old precepts. And so, although the airplane is unique and the legal problems which it raises are extraordinary, there has been no calm and realistic consideration of a new law. Rather, jurists have been content to apply awkward analogies and to decide air problems by trial and error. By such means the legal tailors will eventually clothe aviation, but these handed-down garments will never fit very gracefully or comfortably.

Fault liability, or, more especially, liability for negligence, is founded upon two or three presuppositions. It is necessary to assume, for example, that negligence, if it exist, can be proved by the injured party. But suppose that a transport plane catches fire in the air and crashes dismally into a farm house. The passengers and pilot are killed, the plane is destroyed, the farmhouse is burned to the ground.⁴⁰ First, an action is begun by the farmer for the loss of his property. With recovery posited upon a negligence basis, what are his chances? The pilot is dead, the machine is destroyed, and who is to say with any degree of certainty just what circumstance or combination of circumstances precipitated the crash? If any of the passengers survive, their testimony is muddled and of little value because they are usually quite ignorant of the workings of airplanes. Likewise any observer on the ground may give only a garbled and half-credible account of the behavior of the plane in the air before and during the crash. Expert witnesses are called in, so many by each side. Detailed hypothetical questions are put to them, constructed from the testimony of eye-witnesses and of those who examined the wreckage. The jury is left to decide the relative plausibilities of the speculations of the experts. The resultant justice cannot be of a very high quality.

But suppose it is the representative of a deceased passenger who brings the action. Is he in any better position than the farmer? Certainly the situation is not helped greatly by the application of *res ipsa loquitur*, since even in such a case the transport company may bring in experts and technical arguments to befuddle an already hopelessly perplexed jury into believing that no element of negligence could have existed. Expensive litigation, imperfect conjecture, and little protection to the public will assuredly not be banished by the muttering of a Latin phrase.

40. Not that such accidents often occur. A plane even with a dead motor may usually be piloted to the ground with safety. But it is believed that the increase in the number of planes will more than keep pace with the increase in airplane safety, and that this kind of accident must become more common. The law may well be prepared for such occurrences.

A writer in a law journal, himself the head of an air transport company, details his experiences with two cases in which the fact situations were apparently identical. In one case the jury found negligence and assessed heavy damages; the other case the judge dismissed because obviously no negligence was present. One comes of necessity to recognize the fact that the courts as they are now constituted are quite unequipped to handle questions which require such specialized information as the technical cause of an airplane catastrophe. *Ex post facto* guesses make pleasant enough reading in detective stories, but they are very makeshift bases for justice. Add the confusing detail of a lay jury and there is no wonder that the results are palpably inconsistent.⁴¹

This is taking for granted that negligence is the cause of most airplane disasters. In the early part of this discussion, the Department of Commerce statistics as to the causes of accidents were reviewed, and it was shown in what a large percentage of cases the Department had found no negligence. Who then is to pay for the damage in such cases? Assuming what is obviously impossible, that juries could determine negligence quite as accurately as could the unprejudiced examination of a body of experts, assuming, in other words, that the negligence liability could be almost perfectly administered, yet what comfort would it be to a farmer left homeless by the fall of an airplane or to a family left without support by the same crash, to know that the operator of the plane had not been careless? It can certainly not be said of the farmer that he has assumed the air risk, for he has done no affirmative act which might be so construed, neither does he profit by aviation. Nor should it be said of the passenger that he has assumed *le risque de l'air*, as a contemporary French writer⁴² has denominated the accident causes not ascribable to negligence. The airplane differs from every other carrier in the extent to which it is endangered by purely external phenomena, by fog⁴³ or wind overtaking the

41. When considerable time elapses between the accident and the trial, there is the danger that the jury will view the accident in the light of contemporary standards. Accidents today which seem unavoidable may, because of the progress of aviation technique, seem tomorrow to be gross negligence. On the difficulties of proof in airplane accidents, see *Imbrecq*, "Garanties Nécessaires," 10 *Rev. Juridique de la Locomotion Aérienne* 275 (1926).

42. *Prochasson*, op. cit. note 8.

43. On importance of foginess, see *Scheduled Aviation Mortality According to Foginess of Terrain*:

Period—1929-1931	Number of Foggy Days per Year			
	Under 5	5-10	10-20	Over 20
Passenger Miles (thousands)	42,297	72,635	66,327	49,943
Fatal Accidents	2	5	6	5
Fatal Accident Rate per 100,000 Passengers Miles	4.7	6.9	9.0	10.

In *Aviation Statistics*—4th Report of Committee on Aviation of the Actuarial Society of America, Sept., 1932 (N. Y.), p. 9.

pilot in flight, or by the advent of sudden darkness. To hold that the passenger has assumed the risk of such conditions is to make an air journey a truly dangerous undertaking.

The concept of fault liability is not so fundamental to the law as has been assumed,⁴⁴ and modern legal philosophy has accepted the fact that in the present day it is not always adequate.⁴⁵ With civilization becoming increasingly complex, there must inevitably be more accidents of a quite unavoidable nature.⁴⁶ In these days of corporate activity, it should not be heresy to suggest that in certain situations parties should be held to pay for damage even though they have not themselves caused that damage.⁴⁷ A French school of philosophy has given this modern idea of liability an intelligent doctrinal foundation.⁴⁸ Nowhere is it more applicable than in the case of the airplane.⁴⁹

(2) *The Constitutionality of Absolute Liability*—The event-

44. *Wigmore*, *Select Essays in Anglo-American Legal History* (Boston, 1909), Vol. 3, p. 474.

45. "There is a strong and growing tendency, where there is no blame on either side, to ask, in view of the exigencies of social justice who can best bear the loss, and hence to shift the loss by creating liability where there is no fault": *Pound*, "The End of the Law," 27 *Harv. Law Rev.* 233 (1914).

"Strict liability is not out of place as a prevailing judicial policy when perceived as an antidote for the new hazards of life in twentieth century America. As the problems of public order multiply, would we not establish a social policy more conducive to the protection and promotion of the best interests of modern society if our rules of liability required every actor who causes injury to justify his conduct?" *Harris*, "Liability Without Fault," 6 *Tulane Law Rev.* 337 (1932).

"It is to be asked if this principle (liability without fault), new and fair for forty centuries, has not served its time, and if today, in a very different cultural and economic scene, it would not be the time to abandon it": *Kaftal*, *op. cit.* note 20, p. 40.

46. "As civilization advances and society becomes more complex, the points of contact between man and man multiply at an exceedingly rapid pace. An almost infinite number of novel situations arise in which the activities of a person or groups must be regulated to insure the proper protection of others": *Harris*, *op. cit.*, p. 343.

"Certain classes of undertakings are always attended with an unavoidable damage. Such an unavoidable damage may be minimized by extraordinary care, but can never be entirely prevented. . . . The basis of liability seems to be chiefly economic. It is mainly in this class of expectable yet unavoidable, harms that the device of imposing a higher degree of care is inadequate." *Takayanagi*, "Liability Without Fault in the Modern Civil and Common Law," 16 *Ill. Law Rev.* 163, 173 (1921).

47. "Fault is always personal—it is that of an engineer, of a motor-man, of an inspector—but the money that goes in these cases to make good the fault is the money of the stockholders who constitute the company. . . . Under the present rules the conduct of one man or set of men is elaborately investigated in order to determine and fix the liability of another man or set of men." *Ballantine*, "A Compensation Plan for Railway Accident Claims," 29 *Harv. Law Rev.* 705 (1916).

48. *Duguit*, *Les Transformations Générales du Droit Privé* (Paris, 1912). For a succinct statement of this theory see an article, "Fault, Risk, and Apportionment of Loss," by *Prof. Demogue* in 13 *Ill. Law Rev.* 155 (1918). While this is strictly no rationalization for absolute liability, yet it does furnish a basis for the sort of collective responsibility here recommended in aviation cases. Thus, since the public demands an enterprise and participates in it, it should bear part of the risk. Taking account of insurance the risk may legally be placed on the aviator up to a certain fixed maximum because the aviator is better able to insure than the public. This effects a division of the risk in accord with the economic actualities of today.

49. For a discussion of the sociological foundation of an absolute liability to persons on the ground, see *Hirschberg*, "The Liability of the Aviator to Third Persons," 2 *So. Cal. Law Rev.* 405 (1929).

ful history of Section Five of the Uniform Aeronautics Act⁵⁰ illustrates that persistent doubt as to constitutionality which has opposed all absolute liability legislation that has been enacted in this country. The cases most frequently cited to support an assertion of unconstitutionality are two decisions of Mr. Justice Butler, *Manley v. Georgia*⁵¹ and *Western & Atlantic Railroad Company v. Henderson*.⁵² In the first of these cases, the Supreme Court held invalid a Georgia statute which provided that every insolvency of a bank should be presumed fraudulent in the absence of any showing to the contrary by the defendant directors. The Court was of the opinion that the statute created a presumption which was arbitrary and, hence, violative of the Fourteenth Amendment. In the second case, another Georgia statute, establishing a presumption for the plaintiff in any action for injuries done to persons or property by a railroad, was also held unconstitutional in that such a presumption, having no rational basis, was contrary to fact and in conflict with the Fourteenth Amendment.

But analysis will reveal the fact that cases involving statutory presumptions, especially those involving rebuttable presumptions,⁵³ are not authorities for the illegality of absolute liability. The presumption of the *Western & Atlantic Railroad Case*, for instance, was devised to assist the railroad passenger in proving negligence; it had the effect of creating an inference which was given the "effect of evidence."⁵⁴ But specifically, it did not abrogate negligence; it was merely an attempt to substitute "legislative fiat" for "fact." The purpose of the court in invalidating the statute was to keep its theory intact and not to confuse the functions of the legislature and the judiciary.

Another objection made to Section Five was that the imposition of a money judgment based upon its violation would be taking property without due process of law, inasmuch as it denied to the defendant operator such common law defenses as Act of God and absence of negligence.⁵⁵ Mr. Chief Justice Waite in *Munn v. Illinois*⁵⁶ observed that

50. The absolute liability provision of Section Five has been finally retained in the Uniform Aeronautical Code with the re-definition of the word "owner." See Advance Program of the American Bar Association 1931, p. 47, and "Report of the Standing Committee on Aeronautical Law of the American Bar Association," 3 JOURNAL OF AIR LAW 632, 633, 644 (1932).

51. 279 U. S. 1; 49 S. Ct. 215 (1929).

52. 279 U. S. 639; 49 S. Ct. 445 (1929).

53. A conclusive presumption is really a rule of substantive law, "the effect of which is to render immaterial to the issue the 'presumed' fact." The rebuttable presumptions of these two cases are quite different: *Brosman*, "The Statutory Presumption," 5 Tulane Law Rev. 178, 209 (1931).

54. On p. 644.

55. *Osterhout*, "The Doctrine of Res Ipsa Loquitur as Applied to Aviation," 2 Air Law Rev. 9 (1931).

56. 94 U. S. 113, 24 L. Ed. 77. (1876).

"A person has no property, no vested interest, in any rule of the common law. That is only one of the forms of municipal law, and is no more sacred than any other. Rights of property which have been created by the common law cannot be taken away without due process; but the law itself, as a rule of conduct, may be changed at the will . . . of the legislature, unless prevented by Constitutional limitations. Indeed, the great office of statutes is to remedy defects in the common law as they are developed, and to adapt it to the changes of time and circumstances."⁵⁷

This statement was cited by Mr. Justice Van Devanter in *Mondou v. N. Y., N. H., and H. Ry. Co.*⁵⁸ in answer to the contention that the restriction of contributory negligence and assumption of risk and the abrogation of the fellow-servant rule by the Employer's Liability Act were violations of the Fifth Amendment.

Absolute liability, unambiguously stated, has been upheld on numerous occasions by state courts and by the Supreme Court of the United States. The historic example is that of the railroad fire cases. In *St. Louis & S. F. Ry. Co. v. Matthews*,⁵⁹ the Supreme Court, after a full discussion of the questions involved, held constitutional a Missouri statute which imposed absolute liability upon railroads for damage to property owners along the right of way from fire caused by sparks from locomotives. In *Mo. Pac. Ry. Co. v. Humes*,⁶⁰ the same court had previously held valid a statute requiring railroad companies to fence off their lines and making them liable for all damage to cattle from failure to comply. Owners have been made responsible for damage done by their dogs to sheep even when there was no *scienter*,⁶¹ and the absolute liability of common carriers for damage to goods has been firmly rooted in the law since the early eighteenth century.⁶² The Supreme Court in the case of *Chicago Rock Island and Pacific Railroad Co. v. Zerneck*⁶³ upheld a statute providing that railroads should be strictly accountable for injuries to passengers, for the reason that the railroad had accepted the statute as a condition of incorporation; and in 1928 the California court held a company engaged

57. On p. 134.

58. 223 U. S. 1; 32 S. Ct. 169 (1912).

59. 165 U. S. 1, 17 S. Ct. Rep. 243 (1896). Similar statutes were passed in Maine, Connecticut, Arkansas, Colorado, Indiana, Iowa, Missouri, Ohio, Oklahoma, Rhode Island, South Carolina, and South Dakota. See *Isaacs*, "Fault and Liability," 31 Harv. Law Rev. 954, 961 (1918). For other railroad fire cases, see *Freund*, *The Police Power* (Chicago, 1904), p. 653, note 46.

60. 115 U. S. 512 (1885).

61. *Holmes v. Murray*, 207 Mo. 413, 105 S. W. 1085 (1907). And see a recent California statute (Stats. 1931, Ch. 503, p. 1095) which definitely provides for absolute liability on the owner of the dog. This statute is discussed in *Wood and Palucci*, "Some Recent Statutory Changes in California Rules of Civil Liability," 18 A. B. A. Jour. 782 (1932).

62. See *Holmes*, *Common Law*, p. 180 et seq. on *Coggs v. Bernard*, 2 Lord Ray. 909, 918 (1702). See also *Goddard*, "The Liability of the Common Carrier as Determined by Recent Decisions of the United States Supreme Court," 15 Col. Law Rev. 399 (1915).

63. 183 U. S. 582 (1902).

in drilling an oil well fully responsible for damage to adjoining property resulting from the "blowing out" of the well, although the company was guilty of no negligence.⁶⁴

Familiar cases involving an absolute liability are those cases in which the employer is now held as an insurer for a limited class of injuries caused to others which have resulted from no fault of his.⁶⁵ That the old rationalization of *respondeat superior*, based upon the carelessness of the employer in selecting his workers, no longer has any real existence is revealed in the fact that the care exercised never becomes an issue in the case.⁶⁶

But by far the most conspicuous examples of absolute liability in the modern American law are the various Workmen's Compensation Acts⁶⁷ and the Federal Employer's Liability Acts.⁶⁸ The objection that such legislation is based upon the employer-employee relation has been anticipated by the Supreme Court with the assertion that it is the effect and not the source of the injury which is the "criterion of Congressional power."⁶⁹

These cases evidence only a few of the points at which objective liability has encroached upon the negligence doctrine.⁷⁰ But they are at least sufficient to demonstrate that fault liability no longer—nor ever really did have—a sacrosanct position in the law. Absolute liability is not the thesis of impractical theorists; it is not even merely a possibility; but it has an important existence in the law of today. And it is the idea "which seems to be in accord with modern social sentiment."⁷¹

64. *Green v. Gen. Petroleum Corp.*, 205 Cal. 323, 270 Pac. 952 (1928).

65. Mr. Arthur Ballantine has pointed out that an employer is now held as an insurer for a limited class of injuries caused to others. Without fault of his own he is required to pay. "A quasi insurer's liability, absolute liability, or liability without fault it is, and liability of this character may, without doing violations to the body of principles of the common law of which this principle forms a part, be extended to cover harm occurring in the carrying on of the employer's enterprise through causes other than the single mischance of provable negligence." *Ballantine*, op. cit. note 47, p. 714.

66. Originally the master had the option of surrendering a delinquent slave or of paying damages to appease the vengeance of the injured person. With the master ceasing to have a property interest in the slave the doctrine took its present form on the basis of social expediency. See *Wigmore*, "Responsibility for Tortious Acts: Its History," 7 *Harvard Law Review* 330-337, 333, 405 (1894); *Laski*, "The Basis of Vicarious Liability," 26 *Yale L. J.* 105 (1916). For the modern extension of vicarious liability to family automobile cases see *Heyting*, "Automobiles and Vicarious Liability," 16 *A. B. A. J.* 225 (1930).

67. For a case where liability was imposed upon the employer although no one was at fault, see *N. Y. Central Ry. Co. v. White*, 243 U. S. 188, 37 S. Ct. 247 (1917); for a case where liability was imposed for the fault of someone other than the employer, see *Middleton v. Texas Power & Light Co.*, 249 U. S. 152 (1919).

68. See *Mondou v. N. Y., N. H. & H. Ry. Co.*, 223 U. S. 1, 32 Sup. Ct. 169 (1912).

69. *Ibid.*, p. 51.

70. For other cases of absolute liability, see *The Report by the Committee to Study Compensation for Automobile Accidents* (Philadelphia, 1932), Chap. X.

71. "The principle that inevitable loss should be borne not by the person on whom it may happen to fall, but by the person who profits by the dangerous business to which the loss is incident, embodies a very intelligible

III. THE DELEGATION OF AIR RISKS—COMPULSORY INSURANCE

Compulsory Insurance as a Substitute for Liability:

(1) *Relation of Insurance to Absolute Liability*—The objection, often made, that any system of absolute liability must place a prohibitive burden upon the party held responsible would have much greater force were it not for the existence of insurance. As life grows more complex and men become increasingly interdependent the need for certain enterprises is felt by society. To place all the risks of these enterprises upon those who professionally participate in them is to make the cost to society unduly high and to cut down the effective use of the enterprises themselves. Insurance offers itself as a practical solution. By requiring all who make use of an enterprise to pay a scientifically determined amount in sharing a portion of the risks of that enterprise, insurance so diffuses the expenses of carrying the risks that the burden is almost imperceptible upon any one party.

Thus absolute liability is the answer to the liability problem raised by the airplane, and insurance is the answer to the risk-bearing problem created by absolute liability. Let us refer to our example of the air transport plane which crashed into the farmhouse. Suppose that at that time legislation was in effect enunciating absolute liability towards persons on the ground and towards passengers. Suppose also that the transport company had been required to contract insurance indemnifying it for all liability suffered by reason of injury either to persons on the ground or to passengers. Now our hypothetical farmer, instead of wasting time and money in a pathetic effort to prove negligence on the part of the transport company, would have but to show the extent of his damage and he would be compensated. Similarly, the representative of the deceased passenger would be required only to prove that death was a result of the accident. In place of expensive, slow, and uncertain court litigation there would be a quick and efficient recompense.

The justice of imposing an obligation to insure upon the aviator is founded, in the case of the man on the ground, on the circumstance that the aviator voluntarily engages in an activity which is dangerous to third parties and from which he alone profits. In the case of the passenger it is certainly no hardship for the transport to carry insurance, since it is the passenger himself who ulti-

idea of justice, and which seems to be in accord with modern social sentiment." *Freund, Police Power* (Chicago, 1904), p. 658.

mately pays for it.⁷² In either instance, the result is that the injured party is given remuneration for his loss and that the transport company is freed of obligation; in other words, insurance has been substituted for liability.

(2) *Compulsory Insurance as a Guarantee of Financial Capability*—Compulsory insurance does more than merely make possible the maintenance of absolute liability; it guarantees that liability. Let us assume that our hypothetical farmer was given a judgment against the transport company whose plane destroyed his house; yet without a system of compulsory insurance, is there any certainty that the judgment would have real value?⁷³ Let us assume what is still more probable,⁷⁴ that the plane was not a transport plane but the plane of a private, relatively inexperienced flyer. The aviator, himself killed in the crash, leaves no estate but the blown ashes of his second-hand airplane. At such a time, absolute liability must be a phrase of little comfort unless it is coupled with obligatory insurance. Likewise, of what value would a judgment for the estate of the air passenger be if that judgment were uncollectable? Compulsory insurance suggests itself as a necessary guarantee of solvency in an industry which is still in an adolescent state.

72. Loss for normal damage caused by operation is clearly to be classed as an operating expense. Courts have taken solemn notice of the realities of the liability imposed upon carriers. Thus it has been said that there is no hardship in such a liability because "the price of transportation will include a reasonable premium for this kind of liability." *Moses v. Boston & Maine R. R.*, 24 N. H. 71, 85 (1854). "The pay of carriers is graduated upon such liability." *Thomas v. Boston & Providence R. R. Corp.*, 10 Metc. 472, 476 (Mass., 1845).

73. "New operating companies are being organized and financed weekly. Not all of them have the high standards referred to. Some of them are stock selling enterprises. The leaders of some have had no experience and possess no accurate knowledge of costs or of the business or technical side of air transportation. Many of them are, or in the event of serious accident loss would prove to be, potentially or actually insolvent. Many are commencing to operate wastefully in competition with established and experienced carriers, possibly as a nuisance value maneuver. The industry cannot fairly ask for regulation to protect its interests in this regard and at the same time object to regulation to protect the interests of the public. Times and conditions have changed." *O'Ryan, Limitation of Aircraft Liability*, 3 Air Law Review 27 (1932).

The need for some system of compulsory insurance in airplane cases was felt very early. In 1910 the International Congress to settle Rules for Airship Voyages, meeting in Paris, recommended some form of security. That same year, in the United States, Governor Baldwin was suggesting an act which would provide for a bond of at least \$1000 made payable to the United States to be deposited with the Collector of Internal Revenue. This scheme was referred to the American Bar Association's Committee on Jurisprudence and Law Reform. See *Baldwin*, "Liability for Accidents in Aerial Navigation," 9 Mich. Law Rev. 20 (1910) and 36 A. B. A. Rep. 380. In 1911 a German, Hans Sperl, suggested that registration be made a prerequisite of flight and that registration be accompanied by entrance of the applicant into an aviators' organization, dues of which should go into damage and insurance funds to be deposited in an international central office. Proof of loss then would alone be necessary in order that a victim of an air accident might be indemnified. This loss would be paid by the local society of aviators who would locate the offending airplane and collect from the local society of which the operator was a member. *Sperl*, "The Legal Side of Aviation" (from the German) 23 Green Bag 398 (1911). For a somewhat later plan see *Myers*, "The Air and the Earth Beneath," 26 Green Bag 363 (1914).

74. See *supra*, note 9.

The Nature of Compulsory Insurance:(1) *The Form of Compulsory Insurance—Necessary Conditions—*

(a) *Limitation of Liability*—In the early pages of this article, attention was called to the excessive verdicts courts were now handing down against air transport companies in passenger injury cases. The significance of these verdicts was that they indicated the unpredictability of juries. Yet, if insurance is to be substituted for liability, it is necessary that there be some preconceived measure, or, at least, limit, of damages. In order that insurance may be placed upon a safe and practical basis, it is suggested, then, that there be fixed maximum limits of responsibility in cases involving injury to third parties and to passengers.⁷⁵ Thus, in the case of injury to third parties the limit might well be placed at \$100,000 an accident.⁷⁶ In the case of injury to passengers the

75. This idea is not new. Consider the Italian rule of the abandon, Workmen's Compensation Statutes in the United States where injuries are valued on a fixed scale, and finally the limitations contained in the death by wrongful act statutes of some states. That a definite delimiting of possible damages is desirable in order that insurance may be contracted at a reasonable rate is obvious. One insurance company, interrogated by the author, believed that "insurance against unlimited liability would be quite practicable with proper cooperation on behalf of all aircraft markets." Another company replied: "We doubt very much that insurance against all legal liability for injuries to passengers and third parties in an unlimited amount is practical, or in fact, possible under insurance laws of certain states. In some states, in certain lines of casualty insurance, which we think would include aircraft, an insurance company may not issue a policy in an amount which exceeds 10% of its capital and surplus. The question of unlimited insurance in connection with automobile business has arisen from time to time and, entirely apart from the question of desirability, has not been found practical or possible."

The desirability for a uniform limitation of liability is also indisputable. A writer in an aviation magazine has put the case of a plane flying from Boston to Los Angeles which crashes and kills ten passengers. "If the crash occurs in Massachusetts or Connecticut the liability would be limited by law to \$10,000 per passenger or \$100,000 for all. In New York there is no limit and a \$50,000 verdict on the part of a jury for each passenger would not be excessive, making a possible total liability of \$500,000 on one machine. If the crash occurred in New Jersey, Pennsylvania or Ohio, there is no limit in law as to the amount of liability for each death. However, the verdicts possibly would be lower than those in and around New York City. If they crash in Indiana, Illinois, Missouri, or Kansas, the limit of liability is \$10,000 per person. In Colorado the limit is \$5,000 per person or \$50,000 for the ten. Here we find a possible difference between the crash in Colorado and the crash in New York, of \$450,000. New Mexico, Arizona and California, again, are unlimited. If on the other hand, the plane became lost in fog and crashed just beyond the Mexican border, there would be absolutely no liability even if the whole ten passengers were killed." *Moray, "Insurance and Aviation,"* 14 Aero Dig. 82 (1929).

The limitations proposed by the CITEJA at its Budapest meeting in October, 1930, are worthy of note. It was decided that the operator should be liable to third persons only to the value of the aircraft at the time it was first put in service. An amount equal to one-half of this value should be set aside for the payment of damages for injury caused to persons and the other half for payment of damages caused to property. In any case, the limit of liability should not be less than 2,500,000 francs for each category of damage, and if the amount set aside for damages to property is not entirely exhausted the balance should be employed for the payment of damages to persons. See *Ambrosini, "Liability for Damages Caused by Aircraft on the Ground; a Proposed International Code,"* 3 Air Law Rev. 1 (1932).

See also, for the discussion of limitations at the CITEJA meeting, *Compte Rendu de la Cinquième Session*, pp. 5-23, and, for the full code proposed, *Annexe E*, p. 99.

76. This is high enough considering the fact that the landowner, if he is fearful, may get coverage on his property against the air risk very cheaply. Nor would the cost of such insurance be excessive. A prominent aviation

limit might be \$10,000 a passenger.⁷⁷ This, it will be noticed is as high as the usual maximum in the death by wrongful act statutes, and it seems better that the passenger should be assured of protection up to \$10,000 for injuries received than that he should have merely a possibility (usually only theoretical) of recovering \$50,000.

(b) *The Third party Contract*—Compulsory insurance against injury to persons or property on the ground should be required of all who desire to use the air whether for pleasure or for commerce. The difficulty with all existing insurance legislation is that it applies merely to carriers for hire; it does not attempt to reach those independent and irresponsible flyers who create the greatest menace. The small plane flown by the inexperienced flyer will do quite as much damage if it falls into a crowd of shoppers as the scheduled air liner; and, since it does not fly on a chartered route where landing fields are plentiful, the danger from forced landings is considerably greater.

Of course, compulsory insurance is not the only method of guaranteeing financial responsibility. The Swiss law⁷⁸ permits this guarantee in the form of an insurance policy, a deposit, or the posting of a bond, the guarantee to be a condition precedent to the issuance of a permit of navigation. This statute has been echoed in Germany⁷⁹ and in Denmark.⁸⁰ A french writer suggests as an alternative the creation of an autonomous fund, like that which assures the payment of workmen's pensions, to be maintained by the contributions of the state and of the owners of air-

insurance broker, writing in a textbook of the aviation industry, has said of present day public liability and property damage insurance: "The rates on this insurance (public liability) are very reasonable due to the fact that very few claims are made and that almost every operator realizes this is a form of insurance which he must carry for his own protection; for he cannot tell when an accident may occur and when he will be faced with a law suit involving large sums. . . . This form of insurance is on a firm foundation today with rates progressively reducing. . . . Rates on Property Damage (which also covers damage from one airplane colliding with another) are also very low at the present time. Claims have not been substantial and the insurance companies as a whole have made money not only on this form, but on Public Liability as well." Mr. J. Brooks Parker in *Black, Transport Aviation* (New York, 1929), p. 311.

It is not possible to quote any present rates on this form of insurance because of the extreme flexibility insurance companies have given to their aviation rates. There is as yet so little uniformity and so many factors to be considered in determining a rate—one underwriter has estimated that there are four hundred distinct factors—that rates must be adapted to the individual operator. With absolute liability for the third party risk at present in force in sixteen or seventeen states it is almost certain that under a compulsory system, with a consequent spreading of the risks and with a simplified cheaper legal procedure, the rates would be considerably lower.

77. During three years, 1928, 1929 and 1930, "the average fatality or injury case involved an expenditure of about \$10,000 per passenger killed or injured." "Recent Rulings Affect Passenger Liability Insurance," 2 *Skylines* 19, 23 (1931).

78. Law of January 27, 1920 (Art. 29).

79. Law of August 1, 1922 (Art. 29).

80. May 1, 1923 (Article 39).

planes, state assistance to be withdrawn as aviation becomes more established.⁸¹ This plan was devised by its author because the compulsory insurance idea has not found full favor in France, but it is quite unlikely that any scheme so paternalistic could attain much popularity at the present time in the United States.

Essentially there would be little difference so far as third party responsibility went in an insurance policy or a bond.⁸² It is only important that there be some guarantee of financial ability to parties on the ground, and legislation might well permit the posting of a bond or the deposit of a sum of money as meeting the insurance requirement; provided, of course, that the bond or deposit were sufficiently large to fulfill the purpose for which compulsory insurance was designed. However, insurance would probably be the most attractive to the aviator.

(c) *The Passenger Contract*—The various proposals for passenger insurance have also been not entirely in agreement. Generally they may be placed in two categories: (1) those which suggest that the transport companies be required to carry liability insurance which will indemnify them for any loss they may be required to pay for injury to a passenger, (2) those which recommend that a policy on the life of the passenger be attached to the transport ticket, so that in buying a ticket he automatically purchases a policy of insurance payable to him in event he is injured, or to his estate in case he is killed, as a result of an accident occurring on that particular trip. It is this second proposal which has been the more favored and for good reason.⁸³ At the present time, liability insurance is usually written per passenger seat. Thus, when a transport company is enjoying capacity business it reaps the full benefit of its insurance, but when business is slack and

81. *Imbrecq*, op. cit. note 41, p. 273.

82. This alternative is permitted in the Louisiana law. Note also the compulsory automobile insurance law of England, discussed in *Deak*, "Automobile Accidents: A Comparative Study of the Law of Liability in Europe," 79 *Univ. of Pa. Law Rev.* 271 (1931).

83. *Kaftal*, "Le Régime des Assurances dans les Transports Aériens Internationaux," 15 *Droit Aérien* 589 (1931), and see *Loniewski*, *Assurance et Responsabilité en Matière de Transport* (Paris, 1926).

Mr. W. Jefferson Davis has suggested in this country a similar plan. "If it is deemed necessary to hold the carrier liable even for unavoidable accidents, that its liability should be limited to, say, \$5,000 for injury to any one person and \$100,000 for any one accident, providing further that each passenger may, at his option, pay an additional sum for further protection. . . . This compromise would protect the public exceedingly well and would also enable the carrier to operate." Davis, *Aeronautical Law* (Los Angeles, 1930), p. 314.

In Spain, by the decree of August 11, 1928, a consortium of all Spanish insurance companies was created, each of which was required to make a deposit of not less than 300,000 pesetas for reserves. Article 10 of the decree instituted compulsory insurance for the minimum sum of 30,000 pesetas the passenger to be given full opportunity to subscribe for more. See 214 *Boletín de la Revista General de Legislación y Jurisprudencia* 581 (Madrid, 1928); *Report of the Huitième Congrès International de l'Aviation* (Paris, 1928) p. 169; Blum op. cit., p. 339.

each plane is only partly filled with passengers it pays for insurance from which it derives no benefit.

By means of individual policies of accident insurance the risk could be much more accurately determined, for it would be based upon the temporal length of the trip.⁸⁴ This feature would probably outweigh the objection that such insurance would cost more to administer. Furthermore, by such insurance, the injured party would have a direct right against the insurance company. Also, at the time, of purchasing his ticket, the passenger would have his attention called to the limitations of the insurance. Then, if he wished, he would have an opportunity to place what value he desired upon his life by subscribing to additional, optional insurance. One European writer has suggested that this would ultimately have a beneficial effect upon insurance business, for it would habituate the public to insurance;⁸⁵ and as this education progressed the compulsion to insure might be withdrawn.⁸⁶ But whether one takes such a sanguine view of the effect upon the public of such an insurance plan, yet there are obvious advantages in so administering it.

(d) *Proof of Loss—The Establishment of an Accident Commission*—The creation of Industrial Boards to hear causes arising under the various Workmen's Compensation Acts has suggested a similar device for the administration of compulsory insurance. In case of doubt as to the extent of the injuries suffered the victim would have to submit himself to the examination of the Board and abide by their decisions. Such decisions would be made in accord with a fixed schedule of damages. In this way all cases involving personal injuries to passengers and to parties on the ground could be settled without going into court. It is inevitable that the creation of such a board of experts would not

84. Such policies would be similar to those which are now offered to railroad passengers. If the air trip for which the passenger purchased his ticket would be completed within the day the insurance would have a coincident duration. Basing the cost of the insurance on the actual length of the trip, although more precise, would perhaps be impracticable.

85. *Kaftal*, op. cit. note 83, at p. 612.

86. *Kaftal*, op. cit. note 20, p. 44. M. Kaftal's plan would have two purposes: (1) to guard against the carelessness of the travelers who do not bother to contract insurance on short and popular lines where accidents are rare; (2) to serve as advertising for air transportation. He would have the amount of the insurance vary inversely with the dangers of the trip. The explanation of this seemingly paradoxical view lies in the fact that the traveler is more likely to decline insurance when the flight contemplated is short than when it is long and dangerous. For M. Kaftal does not recommend that compulsory insurance be permanently established, but that it be maintained until such a time as the public becomes educated to insurance.

Under such a system as he proposes, proof of liability would involve only (1) proof of the contract and of the sum of the insurance, and (2) proof of catastrophe to the airplane on which the insured was a passenger. The passenger would be indemnified to the limit of the policy even though he were only slightly hurt.

only save court costs but would result in a much finer brand of justice.

(e) *The Compulsory Nature of Airplane Insurance*—Gen. John F. O’Ryan, the President of the Colonial Airway System, has suggested the passage of a federal act, providing that every interstate and foreign airplane company which would secure from a certified insurance company a policy guaranteeing to the next of kin of every passenger killed \$5,000 and to each passenger injured indemnity not to exceed \$4,000 in accordance with a prepared table of injuries—that every such company would be exempt from liability.⁸⁷ This proposal is significant as an answer to the assertion, often heard, that the transport companies fear compulsory insurance because it would tend to raise transportation costs. The only criticism of the act which he suggests is that it should not be merely a device by means of which the transport companies might avoid liability if they chose, but that it should be a condition to plane registration, or to the grant of some federal certificate of convenience and necessity to be developed in the future. Primarily the purpose of such a law should be to guarantee to the passenger certain indemnity for his injuries and security to his next of kin, and this would only be effectively done if it were made mandatory; for it is the small irresponsible transport companies, the “stock selling enterprises”⁸⁸ of which Gen. O’Ryan has spoken, that are the greatest danger to the passengers. They operate perhaps with inferior equipment and inferior personnel. They would be the last voluntarily to adopt such a scheme as Gen. O’Ryan has suggested, yet they are the most likely to be insolvent and unable to pay damages assessed against them. It is the irresponsible companies and the irresponsible private pilots at whom any insurance plan must be directed, and with such the insurance must be obligatory if it is to provide security.

(2) *The Constitutionality of Compulsory Insurance*—We have discussed already the constitutionality of assessing liability upon a purely causal basis. The question may now be raised as to whether the limitation of damages to a fixed maximum sum could be upheld. Constitutional provisions against limiting damages for death or injury exist in Arizona,⁸⁹ Arkansas,⁹⁰ Kentucky,⁹¹ Pennsylvania,⁹² and Wyoming,⁹³ and against limiting damages for death

87. O’Ryan, “Limitation of Aircraft Liability,” 3 Air Law Rev. 27 (1932).

88. See note 73.

89. Article II, Sec. 31.

90. Article B, Sec. 32.

91. Section 54.

92. Article III, Sec. 21.

93. Article X, Sec. 4.

alone in New York,⁹⁴ Ohio,⁹⁵ Oklahoma,⁹⁶ and Utah.⁹⁷ In these states amendments were required to make 'possible Workmen's Compensation Acts.⁹⁸ One comes regretfully to the decision that other amendments would be necessary to permit the limitation of damages in airplane cases by state legislation.

But it would be no good objection to the plan that it required insurance of airplane liability without placing a similar obligation on proprietors of automobiles or railroad companies.⁹⁹ Nor would it be a violation of the due process clause to require the public to accept such a law.¹⁰⁰ Nor, finally, would the substitution of a commission for a jury be an invalid act.¹⁰¹

Arguments of Policy Against Compulsory Insurance:

(1) *The Compulsory Automobile Insurance Analogy*—Compulsory insurance has been too often dismissed with the observation that it was a failure when applied to automobiles. Only one

94. Article I, Sec. 18.

95. Article I, Sec. 19a.

96. Article XXIII, Sec. 7.

97. Article XVI, Sec. 5.

98. Arizona, Article XVIII, Sec. 8 (1925); New York, Article I, Sec. 19 (1913); Ohio, Article II, Sec. 35 (1923); Pennsylvania, Article III, Sec. 21 (1915); and Wyoming, Article X, Sec. 4 (1914).

99. In *Missouri Pacific Ry. Co. v. Mackey*, 127 U. S. 205 (1888), Mr. Justice Field said, in upholding a Kansas statute which held railroad companies liable for damage to employees done by the negligence of agents of the company: "When legislation applies to particular bodies or associations, imposing upon them additional liabilities, it is not open to the objection that it denies to them the equal protection of the laws, if all persons brought under its influence are treated alike under the same conditions."

In 1915 Mr. Justice Hughes, in holding valid a California statute which prohibited the employment of women in hotels for more than eight hours a day, asserted: "The legislature is not debarred from classifying according to general considerations and with regard to prevailing conditions; otherwise, there could be no legislative power to classify. *Miller v. Wilson*, 236 U. S. 373, 382, 35 Sup. Ct. 342 (1915)."

In discussing a proposed compulsory insurance law for automobiles the Massachusetts court has said: "We understand the inquiry presented by the second question to mean, whether the selection of owners of motor vehicles as alone required to provide security for injuries caused by such property violates the Constitution. The proposed statute omits from such requirement the owners of horse drawn vehicles and of electric railways and steam railroads and the operators of motor vehicles who are not also owners. Reasonable classification in the selection of subjects for legislation is always permissible to the lawmaking power." *In re Opinion of the Justices*, 251 Mass. 569, at p. 600, 147 N. E. 681 (1925).

In *Silver v. Silver*, 280 U. S. 117, 50 Sup. Ct. 57 (1929), it was held that a Connecticut statute which provided that no gratuitous guest in an automobile could recover from the owner or operator for injuries caused by negligent operation was not violative of equal protection, although it made a distinction between automobile passengers and those in other kinds of vehicles.

100. "So long as a substantial and efficient remedy remains or is provided due process is not denied by a legislative change." *Crane v. Hahlo*, 258 U. S. 142, 147, 42 Sup. Ct. 214 (1922). See also *Middletown v. Texas Power & Light Co.*, 249 U. S. 152, 39 Sup. Ct. 227 (1919), where it was held that an employee be deprived of his common law action and remitted to his claim under the compensation plan.

101. It was generally found in the case of the Workmen's Compensation Acts that where the act was elective as to the employee as well as the employer there was no difficulty: *Foster v. Morse*, 132 Mass. 354 (1882). Sustaining compulsory acts under police power courts held that the right to establish the plan necessarily carried with it the right to require the employees to accept it. *State v. Clausen*, 65 Wash. 156, 117 Pac. 1101 (1911); *State v. Mountain Timber Co.*, 75 Wash. 581, 135 Pac. 645 (1913).

state has experimented with true compulsory insurance¹⁰² and the evidence is not conclusive that the experiment has failed.¹⁰³ But the experience of Massachusetts is here quite beside the point for the criticisms which have been leveled at that legislation clearly do not apply to the proposed plan for compulsory airplane insurance.

The main objections made to the Massachusetts plan are three: (1) that it has encouraged recklessness; (2) that it has denied to the insurance companies the prerogative of choosing their risks; (3) that it has resulted in a rise rather than in a decrease in rates.

Concerning the first charge it is quite enough to say that the knowledge that he has insurance will hardly inspire an aviator to be indifferent to innocent parties on the ground or to passengers. Even the most irresponsible airman is unlikely to risk his own life merely because he feels himself exempt from financial responsibility. Furthermore, negligence, although it lose its civil significance, will yet remain a penal offense. With increased efficiency in the administration of state and federal regulations this will become a serious deterrent to recklessness.

Neither will the transport companies relax in their insistence upon care. The cost of insurance will be computed partly upon the past character of the company for care. A large number of accidents will result in a costly insurance, the effect being either to check the negligence of the transport companies or to drive them out of competition. And it is obvious that no transport company

102. Liability insurance is required for every motor vehicle driven on English highways (20021 Geo. V, Ch. 43). It is required also in Finland (Suomen Asetus Kokoeima 1925, 557, No. 148), in Norway (Stat. of Feb. 20, 1926; Lovom Motor-Voguer), in Denmark (Stat. of Mar. 20, 1918, as amended June 30, 1921), and in several of the cantons of Switzerland. See *Blum*, op. cit. note 8, p. 337, and *Report of the Committee to Study Compensation for Automobile Accidents*, p. 212. In 1928 the Interstate Commerce Commission reported that forty states then required motor vehicles which are common carriers of passengers to insure: Report No. 18,300 of Apr. 10, 1928. And see *Packard v. Banton*, 264 U. S. 140, 44 Sup. Ct. 257 (1923) for the opinion sustaining the New York Statute.

103. The arguments against the Massachusetts plan may all be found in the following list of books and pamphlets: *Towle*, *Compulsory Automobile Liability Insurance* (Philadelphia, 1929), p. 4; *Foster*, *Some Problems Arising out of Automobile Safety Responsibility Laws* (Toronto, 1930), p. 6; *Interim Report on Compulsory Insurance and Safety Responsibility Laws* by Royal Commission on Automobile Insurance Premium Rates (Toronto, 1930), p. 14; *Stone*, *Massachusetts: Unfair Motor Law* (pamphlet reprint from Aug. 1929 issue of *Federation News*); *Compulsory Automobile Insurance* (published by Chamber of Commerce, Washington, 1926); *Compulsory Automobile Insurance* (pamphlet issued by Association of Casualty and Surety Executives); *Lott*, "Financial Responsibility of Automobile Drivers," 14 *Proceedings of Casualty Actuarial Society* (May 25, 1928); *Report of Committee of Nine on Financial Responsibility for Automobile Accidents* (F. Robertson Jones, N. Y. City, 1926).

In reply to the assertion that compulsory insurance in Massachusetts has encouraged recklessness, note the following language from the *Report of the Committee to Study Compensation for Automobile Accidents*: "The Committee after a careful study of the available figures from Massachusetts and from other states, can find no satisfactory evidence that compulsory liability insurance has affected highway safety in either direction" (p. 211).

will encourage conduct that must result in the destruction of its own equipment. Nor will any transport company wish to incur a bad reputation for safety, since with the wide newspaper publicity given to air crashes, it is incumbent upon transport companies to be as cautious as possible.

Finally, it must be remembered that aviators have to have licenses, and that air lines have to conform to certain standards of equipment and safety in order to obtain certificates of convenience and necessity. The air transport company and the private plane owner are in a very different position from the proprietor of a private automobile, who may drive any kind of car so long as it runs and who is generally held to no standard of ability.¹⁰⁴

Despite the fact that experience with insurance has produced no increase in carelessness on the part of the insured¹⁰⁵ the proponents of compulsory airplane insurance schemes have shown considerable ingenuity in devising deterrents to negligence. One writer has proposed that the airplane operator pay part of the cost of every accident. For that part the insurance company would have a secondary liability, so that the injured party would be protected no matter what the condition of the transport company.¹⁰⁶ This is approximately the plan in force in the Canton of Vaud in Switzerland in administering automobile insurance.¹⁰⁷ Another has proposed that when the injury has occurred through some negligence on the part of the transport company the passenger may sue that company to recover for his injury above the amount of the insurance policy.¹⁰⁸ The difficulty with this system is, of course, that it does not dispense with a court investigation of the accident, and the impracticability of shifting evidence of negligence from the ashes of a wrecked plane remains.

As for compulsory insurance robbing the insurance companies of their right to choose their risks, that is a criticism only of the plan as developed in Massachusetts.¹⁰⁹ There a state board decides whether the company is obliged to accept a certain risk, and the decrees of that board are enforced under penalty of excluding the

104. Except, of course, in those states which require driver's licenses. Even so the ability required to obtain an automobile driver's license may not be compared with the ability which must be manifested by the aviator before he is permitted to fly away from the airport.

105. In *Mondou v. N. Y., N. H. and H. Ry Co.*, 223 U. S. 1, 51, 32 Sup. Ct. 169 (1912), there is judicial recognition of the fact that absolute liability of employers to employees tends to cut down accidents.

106. *Loniewski*, op. cit. note 83, pp. 100, 101.

107. *Towle*, op. cit. note 103, p. 8.

108. *Prochasson*, op. cit. note 8.

109. This is apparently the greatest fear of the insurance companies. In correspondence with the author they have expressed an adamant insistence that the privilege of selection should never be waived.

company from the state.¹¹⁰ But manifestly it is possible to establish a system which permits to insurance companies an alternative higher rate for proven bad risks, a system wherein history may be a decisive factor in determining the amount of the premium. And Federal licenses both for aircraft and aviators—enforced with state assistance¹¹¹—promise a degree of uniformity in physical equipment and skill of manipulation. The companies insuring airplane risks will never be required to accept patronage indiscriminately as the automobile insurance companies have been in Massachusetts, where anyone who passes a perfunctory test may drive a car.

In Massachusetts admittedly there has been an increase in insurance rates since the inauguration of compulsory insurance. The reasons assigned for this increase are: first, that the loss cost per car is higher since the insurance companies are not permitted to reject poor drivers; and, second, that the known existence of insurance has suggested innumerable unreasonable and false claims. The first of these conditions is the necessary consequence of a system which does not admit the record of the insured as a factor in determining the premium rate. With an increased rate provided for all aviators who had had previous accidents the loss cost would be better apportioned, so that no general increase in rate would result over the rate for optional insurance. Nor could false and unreasonable claims be made so easily by third parties and passengers as they could by victims of automobile accidents. In the case of injury to property (not provided for under the Massachusetts statute) that damage would remain accessible to the scrutiny of the underwriters; for the property on the ground which a falling airplane is most likely to destroy is usually, unlike automobiles, of an immobile nature. Furthermore, the very fact that airplane accidents generally have serious consequences makes false personal injury claims less possible. Parties are more often killed than injured in airplane crashes, and such accidents are, as yet, of such infrequent occurrence as to permit immediate examination by the insurance companies, and proof before a commission of experts is something quite different from proof before a credulous emotional jury.

110. The Committee to Study Compensation reports that: "In the first four years under the law, of approximately 1,100 complaints filed, less than 300 were decided against companies after hearing or on default. During this period more than 800,000 motor vehicles were registered annually." But the Committee is quick in suggesting that probably the companies accepted risks in the first place which they would have rejected had there been no Board of Appeal. *Report of Committee*, p. 210.

111. Twenty-four states now require Federal licenses for all aircraft and airmen.

Different from the Massachusetts law are the so-called financial responsibility plans.¹¹² Perhaps the most successful of these, the Stone Plan, in force in New Hampshire since 1927, provides that, if an automobile owner is sued, the court will immediately inquire into his financial ability, and, if he gives no security for the payment of the damage, his license is forthwith suspended, to be revoked if the final judgment goes against him, unless and until he satisfies that judgment. Somewhat similar in spirit, the Connecticut law, which was adopted in 1926, provides that, when any automobile driver is involved in any accident causing death or injury or property damage exceeding fifty dollars, he may be required by the Commissioner of Motor Vehicles to prove his ability to pay damages in any future accident either by insurance or by a surety bond or by a deposit with the State Treasurer of securities or cash in an amount satisfactory to the Commissioner. After that person has maintained a clean record for three years he may be reinstated.

One sees easily that the purpose of such legislation as this differs materially from that of any of the contemplated airplane insurance schemes. The intent of the financial security laws is to rule off the road the irresponsible driver who has already caused a wreck and to encourage voluntary subscribing for insurance. Such a plan applied to aviation would effectively lock the stable only after the horse had been stolen. Airplane accidents result often in the death of the operator, and, if the man on the ground and the passenger are to be safeguarded, they must be assured remuneration for the first disaster. The airplane should not, like the dog, be permitted one bite.

(2) *Other Arguments of Policy*¹¹³—In Europe, where dis-

112. Also there is the compensation plan in its several manifestations, the Marx plan, the Cuvillier Bill, and the Jones Bill. Perhaps the most comprehensive study of the compensation idea is contained in *The Report by the Committee to Study Compensation for Automobile Accidents* (Philadelphia, 1932). Considerable material from that source has been used in the present article. See also, for detailed criticism of the Marx Plan: *Sherman, A Criticism of Proposals for Compulsory Motor Vehicle Compensation Insurance* (N. Y., 1929); *Sherman, Compensation for Automobile Accidents* (N. Y., 1928); and *Ives, Compulsory Liability Insurance with Particular Reference to Automobile Insurance* (Chicago, 1924).

113. Examples of the frivolous arguments that have been made against compulsory passenger insurance are these: (1) that insurance companies are not always solvent (*Dor, "Le Problème de l'Assurance en Matière de Navigation Aérienne,"* 11 Rev. Jur. Inter. de la Nav. Aérienne 5 (1927)); (2) that any compulsion must result in a loss of liberty for the insurance companies (*Le Gall, "Quelques Expériences Récentes en Matière d'Assurance Obligatoire,"* 13 Droit Aérien 3, 5; *Blum, op. cit.* note 8, p. 337); (3) that for the rich obligatory insurance would be inadequate and that for the poor it would be too expensive (*Roubier, "Les Assurances Aériennes,"* 9 Rev. Jur. de la L. A. 322 (1925)); (4) that many passengers who are already insured would want no new insurance (C. J. I. A., Seventh Congress, p. 157); (5) that by making insurance compulsory you admit the risks (*Ibid.*, p. 227); (6) and, finally, that the customers of aviation are superstitious and would think that an accident would inevitably follow if they insured (*Ibid.*, p. 140).

tances are short and international rivalries intense, the fear has been often expressed that it would be unwise for any one country to compel a guarantee of responsibility from its airmen, without an assurance of similar action on the part of neighboring countries.¹¹⁴ This international objection has been one of the loudest arguments against compulsory insurance. In the United States parallel conditions demand uniform state laws¹¹⁵ or federal legislation requiring insurance.¹¹⁶ The widespread adoption of the old Uniform Aeronautics Act indicates the practicability of consistent state action.¹¹⁷ And the development of state registration and licensing is a contribution to the easy enforcement of insurance laws.

Whenever mention of compulsory airplane insurance is made to the insurance companies, their stock reply is that any legislation now would be premature. They have as yet had too little experience in underwriting the airplane risks. That this argument is not the unique discovery of the American companies is indicated by these observations of M. Kaftal:

"While the learned assembly of jurists discoursed on the impossibility or prematurity . . . of these forms of insurance in their application to aviation, the big air navigation companies, wishing to free themselves from their uncertain liability, without discouraging travelers in depriving them of the possibility of obtaining compensation for their injuries, applied compulsory insurance to their passengers, both automatically and without adding to the price of tickets. By the simple act of buying a ticket the passenger found himself insured for the sum of 150,000 francs in France and for 25,000 Reichmarks in Germany. These insurances have functioned for several years on all lines in Germany, in Austria (Oesterreichische Luftverkehrs—A. G.) in Switzerland (Societe 'Ad Astra') and in France (C. I. D. N. A.) and what should be remembered is that, despite the fear expressed by many jurists, one must believe that the premiums have not been very important, since the air navigation companies have been able to insure the passengers without making them pay either directly or indirectly, that is, without raising the price of the tickets."¹¹⁸

In the United States also, in spite of their protests, three large insurance pools and an old independent company are soliciting air-

114. *Blum*, op. cit. note 8, p. 340. And see *Ambrosini*, "Liability for Damages Caused by Aircraft on the Ground: A Proposed International Code," 3 *Air Law Review* 1 (1932).

115. As to the rights of a state to require insurance for interstate carriers, see *George*, *Motor Carrier Regulation in the United States* (Spartanburg, 1929) pp. 226-228.

116. On the question of federal power over intrastate aviation under the Pan American Convention see "Report of the Standing Committee on Aeronautical Law of the American Bar Association, October, 1932," 3 *JOURNAL OF AIR LAW* 632, 637 (1932).

117. The need for such uniformity is obvious; see note 75.

118. *Kaftal*, op. cit. note 20, p. 42. See various continental authors for expressions of this same objection: *Dor*, op. cit. note 113, p. 3; *Blum*, op. cit. note 8, p. 338.

plane risks. Every well-organized airline today carries coverage on all of its liabilities,¹¹⁹ and the private flyer may secure insurance on the third party risk at reasonable cost. Insurers give varying estimates as to the number of years necessary before rates may be placed on a strictly actuarial basis,¹²⁰ but they admit that Department of Commerce statistics are a considerable aid. Liability insurance is now written "against loss by reason of the liability imposed by law." Although the re-definition of "the liability imposed by law" to mean all loss would, of course, increase the cost of the insurance, yet, at the same time it would enable the insurer to establish his premium rates more nearly on a claims costs basis. For, at the present time, the point of greatest uncertainty is not the occurrence of the accident itself but the action of the jury.

To the transport companies it should be said that there is a considerable advertising value in insurance, that compulsory insurance would be an incentive for the calm acceptance of aviation by the public. The truth of this assertion is implicit in the experience of a German company. When the Lufthansa first voluntarily contracted policies of insurance on passengers the gesture was resented by other air lines who saw in it only a motive of competition. Subsequent events revealed that this policy increased business.¹²¹ The other companies were quick to imitate the Lufthansa.

The establishment of insurance rates is admittedly difficult.¹²²

119. In reply to a question as to the usual amount of liability insurance carried by transport companies per passenger seat one insurer stated, "Ordinarily \$10,000 but as high as \$50,000; another \$25,000; a third '\$40,000, as there have been settlements made in excess of \$30,000;' and a fourth \$50,000. A textbook, analyzing the disbursements of transport companies in 1924, asserted that insurance formed 30% of the cost of operation. *Kennedy*, Introduction to the Economics of Air Transportation (New York, 1924) p. 54. Insurance coverage on a plane owned by an insurance company represents twenty per cent of the operating cost. *Brednow*, "An Analysis of Operation Costs," 3 Southern Aviation 13 (July, 1932). See also *Dwerlkotte*, "Tracking Down Maintenance Expenses," 31 Aviation 257 (June, 1932).

For a discussion of the insurance now available see *Crowdus*, "Aviation Insurance," 2 JOURNAL OF AIR LAW 184, and *Sweeney*, "Tendencies in the Insurance of Aviation Hazards," 161 The Annals of the American Academy of Political and Social Science 111 (1932).

120. One insurer suggested that it would require four years more. Others were disinclined to prognosticate because of the rapidity with which technique and equipment develop; although one suggested that "In order to develop a proper experience for rate making purposes in automobile insurance it was necessary to have figures showing the operation of 50,000 cars over a period of three years in one particular locality." Recently an association of the principal insurance writers was organized and it is to be hoped that this cooperative gesture will speed results.

121. *Döring*, Die Luftversicherung Entwicklung, Recht und Technik (Berlin, 1928) p. 123. It is important to notice that the C. I. D. N. A. in France and the Lufthansa in Germany have found that insurance for the sum of 150,000 francs costs but nine per cent of the ticket price. *Kaftal*, "Le Régime des Assurances dans les Transports Aériens Internationaux," 15 Droit Aérien 589, 612 (1931).

122. "A well-known underwriter recently stated, as his opinion, that there were over four hundred different factors to take into consideration in the handling of aircraft risks. When we couple this with the understanding that statistics, up to the present, have not been gathered in a standardized manner, except by the insurance carriers themselves, it is easier to understand the difficulties faced in securing commensurated premiums properly to take care

But it does not necessarily follow that such rates must be prohibitive. The air line today which carries liability insurance offers to its patrons a very tenuous protection, a protection contingent upon the dexterity of a judge at pouring new wine into old bottles and upon the collective whim of a bewildered jury. With personal policies made integral with the transport ticket the passenger would have an absolutely certain quantum of protection and he might buy frankly as much more protection as he liked. And with obligatory third party insurance, aviation would be made safe for the public.

The airplane is distinct from other mediums of transportation and it is on the recognition of this fact that the intelligent growth of air law depends. Rules designed for the railroads and for automobiles should not be blindly applied to airplanes. Air transportation requires not only a new technique of operation but a new regulatory technique, a new law¹²³. And a new law may never be created out of shopworn analogies and faded precedents, but only out of imagination.

IV. RECOMMENDATIONS.

- (1) *As to the risk to persons and property on the ground, It Is Recommended:*
 - (a) That aviators be held absolutely liable for damage to persons and property on the ground;
 - (b) That this liability be limited to certain fixed amounts;
 - (c) That all aviators be required to guarantee by a bond, a deposit of money, or an insurance policy, financial responsibility to the limits set by (b).
- (2) *As to the passenger risk, It Is Recommended:*
 - (a) That transport companies be permitted to contract away all liability to passengers up to certain limits established by legislation;¹²⁴

of the hazards." Doyle, "Underwriting Aviation Insurance," 15 Aero Digest 87 (September, 1929).

123. If compulsory insurance has not been practiced before it is because the principle of obligation constituted a new stage "of judicial technique which the state of civilization has not yet been able to attain. The growing complexity of society, the intricacy of the most diverse risks, the greatest need for security will conduce without doubt to the practice of compulsory insurance." Le Gall, "Quelques Expériences Récentes en Matière d'Assurance Obligatoire," 13 Droit Aérien 2 (1929).

124. On the advisability of following the plan of limitation of liability suggested by the Warsaw Convention see Knauth, "Limitation of Aircraft Owner's Liability," 3 Air Law Review 135 (1932). For a copy of the Convention itself see McNair, *The Law of the Air* (London, 1932) Appendix D, p. 201.

- (b) That all transport companies be required to include in the transport ticket a policy of insurance payable upon the injury or death of the passenger;
 - (c) That additional insurance be made available to the passenger at his option at a reasonable charge;
 - (d) That insurance companies be permitted to consider the history of the applicant transport company in determining the cost of the insurance.
- (3) *General.* It Is Recommended:
- (a) That all aviation insurance claims be provable in cases of disputes before a commission established for that purpose.¹²⁵

¹²⁵ In some states the established state aviation commissions might be found well qualified to assume jurisdiction of such disputes.