The Economy Class Syndrome and Air Carrier Liability

Ruwantissa Abeyratne*

1. Introduction

There is a sustained record of medical research that brings to bear a disturbing fact in long distance travel, that particularly air travel may cause venous thromboembolism, or deep vein thrombosis – commonly called the economy class syndrome. Thrombosis, which is the medical term used for the formation of a blood clot in the heart or in a blood vessel,[1] can be triggered, according to medical studies, by long periods of confinement in bed or cramped airline seats, which reduces circulation, causing blood to pool and clot.

Normally, the formed elements of the blood – the red and white blood cells and platelets – move along in the center of the stream in a blood vessel. If there is alteration from normal flow, which may be caused *inter alia* by inactivity of a person's limbs for long periods of time, the platelets and blood cells may scrape along the blood vessel lining. Abnormally large numbers of platelets so assembled may cause an increased tendency of the blood to coagulate.[2] There are of course other symptoms shown as a result of long confinement to small spaces, such as leg swell-

* DCL LL.M FRAeS FCIT. The author is a senior official in the International Civil Aviation Organization. He has written this article in his personal capacity.

1. The New Encyclopedia Britannica, Vol. 11 Micropaedia (15th ed.) at 739.
2. *Id.*

ing, pulmonary embolism, strokes, and even death.[3]

In 1856, Scientist Rudolf Virchow conducted detailed autopsies on 76 patients, 11 of whom had died from massive thrombi in the pulmonary arteries. He identified through scientific methodolgy that 10 of the 11 patients' thrombi in the pulmonary arteries had started in the legs and concluded that arterial thrombosis had emanated from the leg veins. This led to the development of the famous "Virchow's Triad" of causation of thromboembolism: trauma to the vein wall; decreased velocity of venous blood flow; and increased blood coagulability.[4] The syndrome was first identified and described in 1940 as a result of a finding that during the War, cramped seating in air raid shelters for prolonged periods during the London "blitz" had frequently resulted in pulmonary embolisms.[5] Embolisms related to air travel were first described in 1946 after a 54 year old man had developed Thrombophlebitis after sitting for 14 hours during a flight from Boston to Venezuela.[6] There have been several subsequent cases of Thrombophlebitis reported as a consequence of air travel.[7] It is reported that at least over 20 of the cases reported in the research have been definitely linked to air travel.[8]

It is an incontrovertible fact that air travel at high altitudes and long durations may involve stagnant recycled air, fluctuations in cabin pressure and jet lag. The passenger may end up at his destination dehydrated and disoriented. Additionally, smaller seat pitch, particularly in economy class, may seriously affect the circulatory process, causing thromboembolism. It is reported that the Aerospace Medical Association Journal in 1988 concluded that the risk of fatal pulmonary embolism was at least 10 times greater after travel than before, linking the risk to long periods of

3. *See* Brian Dexter, *Cramped Airline Seats can Kill, Studies Find*, THE TORONTO STAR, Jan. 30, 2000, at 2.

4. Rudolf Virchow, Gessamelte Abhandlungen zur Wissenschaftlischenn 324(Frankfurt: Meidinger 1856).

5. K. Simpson, *Shelter Deaths from Pulmonary Embolism*, 2 LANCET, 744 (1940).

6. J. Homans, *Thrombosis of the Deep Leg Veins due to Prolonged Sitting*, 250 NEW ENG. J. MED., 148-49 (1954).

7. *See* P. H. Beighton and P. R. Richards, *Cardiovascular Disease in Air Travel*, 30 BRITISH HEART J., 367-72 (1968). *See also* R. E. C. Collins & S. Field, *Thrombosis of Leg Arteries after Prolonged Travel*, BRIT. MED. J., 1478 (1979); J. M. Cruickshank, R. Gorlin & B. B. Jennett, *Air Travel and Thrombic Episodes: The Economy Class Syndrome*, 2 LANCET, 497-98 (1988); J. Holliday, *Atypical Presentation of Multiple Pulmonary Embolism in a Young Air Traveller*, J. R. COLL. GEN. PRAC., 497 (1985); J Homans, *Thrombosis of the Deep Leg Veins Due to Prolonged Sitting*, NEW ENG. J. MED., 250, 148-49 (1954); J.A. Lederman & A. Keshavarzian, *Acute Pulmonary Embolism following Air Travel*, 59 Postgrad Med. J., 104-05 (1983); M. Naide, *Spontaneous Venous Thrombosis in Legs of Tall Men*, 148 JAMA, 1202 (1952); I. S. Symington & B.H. R. Stack, *Pulmonary Thromboembolism after Travel*, 71 BR. J. CHEST, 138-40 (1977).

8. Farhad Sahiar & Stanley R. Mohler, *Economy Class Syndrome*, AVIATION, SPACE & ENV'L SCI., Oct. 1994 at 957.

sitting and cramped seating.[9]

A. A Case Study

In 1998, a study was conducted at Tripler Army Medical Center, Honolulu, Hawai, which reviewed hospital records of patients discharged over a 4-year period with a final diagnosis of venous thromboembolism.[10] The term venous thromboembolism was broadly used in the Study to describe a continuum of diseases including deep vein thrombosis, pulmonary embolism or both. Inpatient medical records of 207 patients with a discharge diagnosis of venous thromboembolism were available for analysis and review. Of the patients reviewed, 134 met the case criteria for venous thromboembolism and of those 66 patient records reflected some information evidencing presence or absence of travel. Of these 66, 33 patients had travelled one month prior to the onset of the thromboembolism and 8 patients had travelled within a 6-month period. All 33 patients (none of whom was an aircraft crew member) had travelled at least 4 hours non stop. Their profiles showed that 8 had onset of thromboembolism on the first day of travel, 4 had onset during the journey and 27 had onset symptoms on or before travel day 15.[11] The Study also took into consideration a study which had revealed that, at London's Heathrow Airport, of the 104 natural deaths reported to the Coroner from 1979 to 1982, 12 had been attributed to pulmonary embolism.[12] An earlier 1992 study, which had reviewed 25 patients with travel associated venous thromboembolism, had noted that in 7 patients (6 of whom travelled by air) the onset of symptoms had occurred during travel or on disembarkation, and the onset of symptoms had occurred within 96 hours in 23 patients.[13] Another 2 patients had experienced onset of symptoms within a 10 to 12 day period after travel. All had travelled non stop for at least 3 hours.

The results of the study concluded that air travel appeared to be a significant risk factor for venous thromboembolism. However, it is important to bear in mind that the study was a retrospective one which had no way of determining the true number of travellers in the various thromboembolism patients. There was also the danger that the patients considered by the Study may have been under diagnosed. Perhaps the most serious

9. *Id.* at 3.

10. Mercer A. Brown, *Venous Thromboembolism Associated with Air Travel: A Report of 33 Patients*, 69 Aviation, Space & Env'l Sci. No. 2, at 154-57 (1998).

11. *Id.* at 155.

12. *See* R. Sarvesvaran, *Sudden Natural Deaths Associated with Commercial Air Travel*, 1 Med. Sci. L., at 35,38 (1986).

13. R. Milne, *Venous Thromboembolism and Travel; Is there an Association?*, J.R. Coll Physicians (London) at 47-49 (1992).

flaw in the Study was that it was unable to document such important and key factors as the class of travel, seat pitch, type of airline service offered in flight, leg room, body habitas or intra vascular volume during flight. Thus, the question arises as to whether it is even justifiable to call symptoms of venous thromboembolism consequent to flight "the economy class syndrome."[14]

The Study by no means is conclusive medical evidence that prolonged air travel inevitably causes venous thromboembolism. At best, it concludes that long periods in the air within confined spaces, without the movement of limb may be a risk factor towards causing deep vein thrombosis. More prospective, controlled studies are needed to determine the true incidence of venous thromboembolism among air travellers and its link with air travel *per se.* A study of airline pilots and the incidence of disease among them would be particularly valuable, since arguably the airline pilot is the most prolific individual air traveller.

Although studies on the subject are still somewhat inconclusive from a medical perspective, the issue of venous thromboembolism brings to bear important legal issues pertaining to the liability of the air carrier who knows or ought to know of this particular risk factor. Inasmuch as the carrier is required to take all possible measures to ensure clean air in the cabin, consistent cabin pressure and the ultimate safety of the flight – all of which portend risk factors if not attended to, a restricted seat pitch may be a potential hazard to the health of the passenger, as the foregoing study reveals. Furthermore, the question also arises as to whether the carrier's failure to advise the passenger of the ill effects of being cramped in a seat without moving would give rise to the carrier's liability.

This article will address liability issues of the carrier in this regard.

2. Legal Liability of the Carrier

As the discussion below will reflect, the most fundamental postulate of air carrier liability for death or injury caused to a passenger should involve an accident if liability were to be decided under applicable treaty law.[15] As to whether the term "accident" means an unexpected or unusual event or happening,[16] in which case it may be arguable that if injury were to ensue as a result of the passenger's own internal reaction to the usual, normal and expected operation of the aircraft, where, as a matter of course, the passenger has to be seated in cramped space for long periods of time, the carrier may not be liable. However, if it can be argued

14. The term "economy class syndrome" was ironically coined by a business class traveller. *See* J.M. Cruickchank et al., *supra*, note 7 at 497, 498 (1988).

15. El Al Israel Airlines, Ltd. v. Tseng, 525 U.S. 155 (1999).

16. Air France v. Saks, 470 U.S. 390, 404 (1985).

that the act of the carrier in providing seats known to be too small or crowded together and not warning the passenger of the hazards of travelling in confined spaces for long periods of time, brings about results to the average passenger who has no knowledge of the risk involved, it would not be surprising to find a court awarding damages against a proven incidence of venous thromboembolism which results after flight.

A somewhat delicate balance is called for in determining whether, in the absence of cogent evidence that a restricted seat pitch in the economy class of an aircraft would inevitably cause venous thromboembolism in passengers; an exigency involving the affliction of a passenger would be considered "unexpected" and therefore an accident, or whether the carrier knows or ought to know of the risk and takes necessary measures to avoid the danger or risk, in which case absence of such measures would impute to the carrier a certain intent, proving his wilful misconduct. An accident is purely an "inappropriate and unexpected happenstance"[17] which does not happen as a matter of course. Sudden turbulence or the sounding of a smoke alarm in the cabin which is unexpected, are typical profiles of an accident. If such were the case, would it be reasonable to consider the infliction of a passenger by venous thromboembolism an accident?

A probable approach that a common law court may adopt is to treat a proven instance linked to air travel as an accident in the same way as in instances of turbulence. Of course, in similar vein, the carrier may be expected to issue prior warning and advice as to how to cope with the risk. In such circumstances the analogy of an accident and possible negligence that would take the issue beyond a mere accident would be a distinctly logical sequence.

The new Montreal Convention of 1999, in Article 17 provides that the carrier is liable for damage sustained in case of death or bodily injury of a passenger upon condition only that the accident which caused the death or injury took place on board the aircraft or in the course of the operations of embarking or disembarking.[18] Liability of the carrier is limited on the basis of strict liability at 100,000 Special Drawing Rights. Furthermore, this limit cannot be exceeded if the carrier proves that he and his servants or agents were not negligent or did not commit a wrongful act or omission in connection to the injury or such damage was solely caused by the negligence or wrongful act or omission of a third party.[19] The Montreal Convention, which is yet to come into force, seemingly makes provision to recognize carrier negligence both in terms of the pro-

17. Laor v. Air France, 31 F. Supp. 2d 347 (S.D.N.Y. 1998).

18. Convention for the Unification of Certain Rules for International Carriage by Air, May 28, 1999,

19. *Id.* Article 21.2 a) and b).

vision of abnormally small seat pitches in his aircraft and in regard to his neglect in warning passengers of potential hazard of prolonged air travel in restricted areas and not advising passengers of ways and means to mitigate possible risk of venous thromboembolism.

The currently operative legal regime in this area is governed by the Warsaw Convention of 1929 which provides that the carrier is liable for damage sustained in the event of death or wounding of a passenger or any other bodily injury suffered by a passenger, if the accident which caused the damage so sustained took place on board the aircraft or in the course of any of the operations of embarking or disembarking.[20] Of course, on the face of the provision, the words "wounding" and "bodily injury" do not necessarily lend themselves to be associated with infection. *A fortiori*, according to the Warsaw Convention, the wounding or injury must be caused by "accident" which is not typically a synonym for "infection." However, the recent decision in *El Al Isreal Airlines Limited* v. *Tseng* introduced a new dimension to the word "accident" under the Warsaw Convention by giving it pervasive scope to include such acts as security body searches performed by the airlines.[21] In this context, the word "accident" loses its fortuity and it becomes applicable to an expected or calculated act. Thus, if an airline knows or ought to have known that an infected passenger was on board its flight, causing others on board to be infected, it may well mean that the act of the airline would be construed by the courts as an accident within the purview of the Warsaw Convention.

A. Liability Under the Warsaw Convention

It is an incontrovertible principle of tort law that tortious liability exists primarily to compensate the victim by compelling the wrongdoer to pay for the damage he has done.[22] The second international conference on Private International law[23] which led to the introduction of the Warsaw Convention[24] obviously followed this basic principle but deviated to align the provisions of the Warsaw Convention to existing exigencies of civil aviation. The Conference based its approach toward air carrier liability on the fault theory of tort—which has its genesis in the Industrial Revolution where common law adopted the principle that a wrong doer or tortfeasor must be at fault for him to be compelled to compensate the

20. Convention for the Unification of Certain Rules Relating to International Carriage by Air, Oct. 12, 1929,

21. El Al Israel Airlines, Ttd. v. Tsena, 525 U.S. 155 (1999).

22. John G. Fleming, The Law of Torts 1, (6th ed., The Law Book Company 1983).

23. Warsaw Convention, Oct. 12, 1929, 49 Stat. 3000.

24. Convention for the Unification of Certain Rules Relating to International Carriage by Air, *supra* note 20.

injured. The fault theory was introduced as a solution to the problems caused by injury to persons by the proliferation of machinery during the industrial revolution and on the basis that those responsible for introducing faulty machinery should pay those who are injured by them.

One of the fundamental deviations from the fault liability principle in the context of the Warsaw Conference was that, instead of retaining the basic premise that the person who alleges injury must prove that the injury was caused by the alleged wrongdoer, the Conference recognized the obligation of the carrier to assume the burden of proof. This was done seemingly to obviate the inherent difficulties which are posed in situations of air carriage where it would be difficult, if not impossible, to determine fault from evidence which is reduced to debris and wreckage after an aircraft accident.

The Conference succinctly subsumed its views on liability through the words of its Reporter:

> These rules sprang from the fault theory of the liability of the carrier toward passengers and goods, and from the obligation of the carrier to assume the burden of proof. The presumption of fault on the shoulders of the carrier was, however, limited by the nature itself of the carriage in question, carriage whose risks are known by the passenger and consignor. The Conference had agreed that the carrier would be absolved from all liability when he had taken reasonable and ordinary measures to avoid the damage . . . one restriction on this liability had been agreed upon. If for commercial transactions one could concede the liability of the carrier, it did not seem logical to maintain this liability for the navigational errors of his servants, if he proves that he himself took proper measures to avoid a damage.[25]

The Conference went on to suggest that if the damage arises of an "intentional illicit act" for which the carrier was liable, he should not have the right to avail himself of the provisions of the Convention.[26] The words "intentional illicit act" were later changed to "willful misconduct" by the Conference at the request of the British delegate Sir Alfred Dennis and the Greek delegate Mr. Youpis.[27]

Deeming that it was not equitable to impose absolute liability upon the carrier, the Conference admitted that the carrier's responsibility would be limited to liability limits of monetary value and, furthermore, he could be freed of all liability when he had taken the reasonable and normal measures to avoid the damage.[28]

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25. Second International Conference on Private Aeronautical Law, Oct. 12, 1929, 49 Stat. 3000, *translated in* ROBERT C. HORNER & DIDIER LEGREZ, MINUTES: OCT. 4-12, 1929, WARSAW/SECOND INT'L CONF. ON PRIVATE AERONAUTICAL LAW 21 (Fred B. Rottman & Co. 1975).

26. *Id.* at 58.

27. *Id.* at 59-66.

28. *Id.* at 251-52.

The Conference obviously based the Warsaw Convention on tort law principles of liability, where tort duties are primarily fixed by law in contrast to contractual obligations which can arise only from voluntary agreement.[29] Sixty-six years after the Warsaw Convention was introduced, however, there has been a palpable shift towards introducing a contractual element by the 1995 IATA Inter carrier Agreement which, although not having the legal status of a Convention but remaining an agreement among air carriers, retains the basic presumption of air carrier liability of the Convention but rejects the liability limitations of the Warsaw Convention and its Protocols by recognizing that the compensatory amount that a carrier should pay for personal injury or death may be contractually agreed upon by the carrier and claimant according to the law of the domicile of the claimant.

Admittedly, this is not what the Conference envisaged. However, it must be borne in mind that the Conference recognized that the Warsaw Convention applied only to the unification of "certain" rules—as proposed by the delegate of Czechoslovakia. Also, the underlying purpose of the IATA initiative—which is to allow for greater flexibility for insurance underwriters on the one hand, and more leverage for airlines in their risk management on the other—is fundamentally consistent with the views of the Warsaw Conference. At the same time, the Convention does not preclude the right of a carrier to enter into agreement with a claimant on the issue of compensation. The Warsaw Conference itself recognized that:

> in reality, this Convention creates against the air carrier an exceptional system, because in the majority of the countries of the world, contracts of carriage are concluded under a system of free contract. The carrier is free to insert in the contract clauses which exclude or reduce his liability, as much as for goods as for travellers . . . .[30]

The Inter-Carrier Agreement which was approved by IATA carriers at their Annual General Meeting in Kuala Lumpur in October, 1995, claims to preserve the Warsaw Convention but carriers agree to take action to waive the limitation of liability on recoverable compensatory damages in claims for death, wounding or other bodily injury so that recoverable compensatory damages may be determined and awarded by reference to the law of the domicile of the passenger. This provision in effect introduces a contractual element to an otherwise pure tortuous liability regime. The agreement attacks the monetary limits of liability of the Convention and retains all other provisions of liability—which are

29. Fleming, *supra* Note 22, at 2.

30. SECOND INT'L CONF. ON PRIVATE AERONAUTICAL L., *supra* note 25, at 47.

essentially the presumption of liability of the carrier and his defenses against such a presumption.

With the rejection of the liability limits, the provision relating to breaking such limits in instances where the carrier is guilty of wilful misconduct has also been rejected. Therefore, effectively, certain elements of tortious liability that the Convention had have been expunged from the Convention. In the final analysis, the principle of fault which the architects of the Warsaw Convention entrenched into the Convention has been rejected by the IATA agreement. Lee Kreindler observes:

> The fault system is extremely important to the public. It is a public protection.
>
> It has improved aviation safety and security. While I don't profess to understand what the international airlines are now up to, it is clear to me that one of their purposes is to put an end to the tort system, in international airline transportation, at least as between the passenger and the airline, and that I oppose.[31]

Kreindler points out the ambivalence of the IATA Agreement in designating the law of the domicile of the passenger as being applicable for the award of compensatory damages, while it retains the provision of the Warsaw Convention which designates jurisdictions.[32] Sean Gates picks up the issue of "domicile" and observes that the IATA agreement refers to Article 28 of the Warsaw Convention which it claims relates to "domicile" but in actual fact does not. In fact, Gates questions whether "domicile" would cover personal or corporate domicile and holds that this is another area where the IATA Agreement has not shown clarity.[33]

B. General Principles

Generally in law an accusation has to be proved by the person who alleges it. Therefore, a presumption of innocence applies to an accused person until he is proven guilty. However in the instance of carriage by air of passengers the airline is presumed liable if a passenger alleges personal injury or if his dependants allege his death as having been caused by the airline.[34] Of course the airline can show in its defence that it had taken all necessary measures to avoid the damage[35] or that there was

31. Lee S. Kreindler, *The IATA Solution*, LLOYD'S AVIATION L. vol. 14 no. 21, Nov. 1, 1996, at 4, 5.

32. *Id.* at 6.

33. Sean Gates, *IATA Inter Carrier Agreement—The Trojan Horse for a Fifth Jurisdiction?*, LLOYD'S AVIATION L. vol. 14 no. 23, Dec. 1, 1995, at 1, 2.

34. CHRISTOPHER N. SHAWCROSS ET AL., SHAWCROSS AND BEAUMONT AIR L. 152 (Butterworths 1988) (1977).

35. *Id.* at 116.

contributory negligence[36] and obviate or vitiate its liability. This curious anomaly of the law imposing on the airline a presumption of liability is contained in the Warsaw Convention, Article 17 of which states:

> The carrier shall be liable for damage sustained in the event of the death or wounding of a passenger, if the accident which caused the damage so sustained took place on board the aircraft or in the course of any of the operations of embarking or disembarking.

To control the floodgates of litigation and discourage spurious claimants the Convention admits of certain defences the airline may invoke and above all limits the liability of the airline to passengers and dependents of deceased passengers in monetary terms. The Warsaw System therefore presents to the lawyer an interesting and different area of the law which is worthy of discussion.

Article 17 of the Warsaw Convention needs analysis in some detail in order that the circumstances in which a claim may be sustained against an airline for passenger injury or death be clearly identified. Further, the defenses available to the airline and the monetary limits of liability need also to be discussed.

"Accident" in Air Law

In commercial aviation, the word "accident" is sometimes given as broad a definition as those just considered. The Chicago Convention of 1944 defines accident as "occurrence associated with the operation of an aircraft."[37] The Warsaw Convention in Article 17 speaks of the "the accident which caused the damage" reducing the accident to the cause rather than to the death or injury.[38] The United States Supreme Court has held that an accident must be unexpected and external to the passenger.[39] It is not sufficient that the plaintiff suffers injury as a result of his own internal reaction to the usual, normal and expected operation of the aircraft.[40] Such incidents as hijackings, terrorist attacks and bomb threats, have been considered to be accidents, together with aircraft crashes.[41] An accident could even involve such lesser incidents as tyre failure on take-off[42] and the supply of infected food causing food poisoning of

36. *Id.* at 117.

37. Convention on International Civil Aviation Annex 13, Dec. 7, 1944, T.I.A.S. No. 1591.

38. SHAWCROSS, *supra* note 34, at 153.

39. Air France v. Saks, 470 U.S. 392, 405 (1985).

40. *Id.*

41. Husserl v. Swiss Air Transp. Co.,. 485 F.2d 1240 (2d Cir. 1975). *See also* Day v. Trans World Airlines Inc., 528 F.2d 31 (2d Cir. 1975); Evangelinos v. Trans World Airlines Inc., 550 F.2d 152 (3d Cir. 1976); Salerno v. Pan American World Airways, 606 F. Supp. 656 (SDNY 1985).

42. Arkin v. Trans Int'l Airlines Inc, 19 Avi Cas 18, 311 (E.D.N.Y. 1985).

passengers.[43]

In 1982 a passenger travelling from New York to Manila suffered a massive coronary seizure in flight. The allegation against the airline was that as a result of the failure of the employees of the airline to render medical assistance the patient's condition suffered irreparable deterioration resulting in death. Responsibility devolved upon the court to fit this incident to that of an "accident" within the meaning of the Warsaw Convention. The court readily did this by deeming that the word "accident" in air law in this instance was not the heart attack itself but the failure on the part of the airline to render medical assistance in flight. The Court said, "After all, it is no different from an airline's liability in a hijacking incident where the accident is not the acts of the hijackers but the alleged failure on the part of the carrier to provide adequate security."[44] The airline was accordingly found liable for damage so sustained by the deceased passenger.

In a contemporaneous case, a passenger brought action in the US District Court of Puerto Rico for a hernia sustained by the lifting of a heavy suitcase from the conveyor belt. A baggage handler of the defendant airline had refused to carry the suitcase and the plaintiff had solicited aid from her relatives who were not allowed to enter the baggage area by a guard on duty. The action against the airline was dismissed by the court primarily on the grounds that the plaintiff did not suffer an unexpected injury as she had previously undergone a gall bladder operation and would have known her condition to be delicate.[45]

In 1983, a medical practitioner suffering from a head cold and respiratory infection boarded an aircraft. He disembarked completely deaf. The plaintiff averred that he suffered discomfort in his ears at descent probably due to sudden pressure changes that may have occurred. He alleged that the airline knew or ought to have known that passengers suffering from head colds would risk losing their hearing. In addition, it was alleged that the airline owed a duty to warn the passenger that it was dangerous to travel with a head cold. The airline denied the existence of such a duty. The U.S. District Court for the Southern District of New York reasoned that it would be incongruous to impose a duty on an airline to envisage all possible human afflictions and assess their effect on air travel and warn passengers accordingly. In any event, the airline was in this instance not aware that the passenger was suffering from a head cold. In this decision the court clearly indicated that the presumption of

43. Abdulrahman Al-Zamil v. British Airways Inc., 770 F.2d 3 (2d Cir. 1985).

44. Seguritan v. Northwest Airlines Inc., 86 A.D. 2d 658 (N.Y. 2d 1982). *See also* 1 LLOYDS AVIATION L. No. 4, Aug. 1, 1982, at 1.

45. Vincenty v. Eastern Air lines, 528 F. Supp. 171 (D.P.R. 1982). *See also* 1 LLOYDS AVIATION L. No. 3, July 15, 1982, at 2.

liability imposed by the Warsaw Convention on airlines and the highest-degree-of-care doctrine applicable thereto should not be taken advantage of by plaintiffs.[46] Similarly there would be no cause of action against an airline where a passenger's ill health is aggravated due to acceleration at take off or deceleration at landing.[47]

In April 1984 an intermediate Appellate Court in New York was faced with the task of deciding whether an airline can be held liable for the death of a passenger who chokes to death owing to his own intoxication. The decision was in the affirmative and the court in enforcing judgment against the airline drew the analogy between a dispensing druggist and an airline. The airline serves its passengers with drink and thus undertakes the responsibility not to serve in excess and to exercise reasonable care for the safety of passengers. In addition, in the event of excessive intoxication of a passenger, the airline is under a legal duty to render such medical assistance as is necessary to revive the passenger or in any event to keep him out of danger. In the light of this principle, the airline has a further duty to protect others from a drunken passenger who gets out of control.[48]

In *Air France v. Saks*[49] the United States Supreme Court interpreted the word "accident" in the context of the Warsaw Convention to mean an occurrence whereby a passenger is injured owing to an unexpected or unusual event or happening that is external to the passenger,[50] and that where the injury results from the passengers own internal reaction to the normal exigencies of air travel such injury would not be construed as having resulted from an accident. In this case, the plaintiff was a passenger on an Air France flight from Paris to Los Angeles. During the descent the plaintiff suffered severe pain in her left ear which was aggravated thereafter. The plaintiff, who consulted a doctor after the plane landed, was informed that she was rendered completely deaf in her left ear. The plaintiff brought an action in a California State court on the grounds that her hearing loss was due to the negligent maintenance by the airline of the pressurization system of the aircraft which transported her. Air France moved that the allegation of the plaintiff cannot be sustained within the meaning of the word "accident" of Article 17 of the Warsaw Convention was meant to be an unusual and unexpected happening. Further, the airline alleged that at all times the pressurization system of the

46. Sprayregen v. American Airlines Inc., 570 F. Supp. 16 (SDNY 1983). *See also* Warshaw v. Trans World Airlines Inc., 443 F. Supp. 400 (E.D. Pa. 1977); Pironneau v. Cie Air-Inter (Pan CA 03 July 1986); Demarines v. KLM Royal Dutch Airlines, 58o .F 2d 1193 (3d Cir. 1978).

47. *See* Warshaw v. Trans World Airlines Inc., 443 F. Supp. 400, 408 (E.D. Pa. 1977).

48. O'Leary v. American Airlines, 475 N.Y.S. 2d 285 (N.Y. Sup. Ct. 1984).

49. Air France v. Saks, 470 U.S. 390 (1985).

50. *Id.* at 1345.

aircraft had been normal. The District Court granted summary judgment to the plaintiff on the basis that "accident" in Article 17 was meant to be an unusual and unexpected happening. The Supreme Court rejected the rationale adopted by the lower court on the ground that Article 17 refers to an accident which causes an injury and therefore it is the cause and not the effect that is the determinant. Accordingly, the Supreme Court held that air carriers would be liable only if an accident caused the passenger injury. Thus, an injury that was in itself an accident was insufficient to satisfy the requirements of Article 17 of the Warsaw Convention.

There will be no accident if in a normal flight free of turbulence a passenger suffers discomfort from a condition he suffers from such as a hiatus hernia[51] or thrombophlebitis.[52] In *Abramson v. Japan Airlines* an airline passenger suffered an aggravation of a pre-existing hiatal hernia shortly after take-off from Anchorage on a flight to Tokyo. The passenger, who was under medication for his condition for six years, had not informed the carrier prior to boarding. The passenger, however, claimed that had he been given occupation of a few empty seats he could have massaged his stomach to normalcy. The airline had claimed that there were no empty seats in flight, contrary to the passenger's claim that there were in fact nine empty seats in flight in the first class section of the aircraft. The passenger claimed that his hernia attack constituted an "accident" within the provisions of Article 17 of the Convention. The court rejected this claim and held that the plaintiff's difficulty was not in any way related to his transportation by air and accordingly, there was no accident under Article 17.

It would have been interesting if the court applied the principle of *Seguritan's* case[53] where failure to render medical assistance by the airline was construed as falling within the purview of the word "accident". After all, the airline did not make any attempt at rendering assistance to the passenger in *Abramson's* case. The court's reasoning in the latter case contradicts the earlier decision and leads to a logical absurdity. The intention of the Convention was seemingly to provide a uniform system of compensation for passengers bringing claims against airlines operating international air services. To suggest that the failure of an airline to render required assistance is excusable under the Convention is completely at odds with earlier decisions and also arguably with the intention and purpose of the Convention itself.

Insofar as the word "wounding" of a passenger in Article 17 is concerned, courts have initially held that such would only be in instances of

51. Abramson v. Japan Airlines Co., 739 F.2d 130, 135 (3d Cir. 1984).
52. Scherer v. Pan Am. World Airways, Inc.,54 A.D.2d 636 (N.Y. 1d 1976).
53. Seguitan v. Northwest Airlines Inc., 86 A.D.2d 658 (N.Y. 2d 1982).

"bodily injury" and consequently would be palpably conspicuous physical injury.[54] This excluded mental injury. However, a later decision held that types of injuries enumerated should be construed expansively to encompass as many types of injury as are colourably within the ambit of the enumerated types including mental and psychosomatic injuries.[55] This decision has been followed consistently in a strong line of cases.[56] In the United States, mental injury is now entrenched in most jurisdictions as an independently compensable head of damages.[57] As indeed C.J. Burnett said in *Medlin v. Allied Investment Co*:[58]

> Memory and empathy tells us that "hurt" perceived through sensory media other than that of touch may be just as painful if not more than the hurt perceived by the tactile sense. Moreover, physicians tell us that the consequences of invasion of the person accomplished through the perceptory media of sight and sound may be also as damaging if not more damaging than invasions of the persons accomplished through the sense of touch.[59]

Indeed, therefore, mental anguish or injury would now be recognized by most jurisdictions, as falling within the purview of "wounding" of a passenger under Article 17 of the Warsaw Convention.

It is apparent from the *cursus curiae* that a stringent standard of proof of the nature of the occurrence is insisted upon by the courts if liability of the carrier is to be established under Article 17 of the Warsaw Convention. In *Salce v. Aer Lingus Airlines* the District Court for the Southern District of New York required the plaintiff to show that the landing of the aircraft in which the plaintiff travelled was anything other than a normal landing.[60] The plaintiff averred that he had received personal injuries due to the hard landing of the aircraft. In the absence of clear evidence of a hard landing, the court would presume that the landing performed by the aircraft in this instance was not an unexpected or unusual event that would satisfy the requirements of an "accident" under the Warsaw Convention.

However, when facts are self evident as in the case of *Salerno v. Pan American World Airways*, the courts would not hesitate to award damages to a plaintiff passenger.[61] In this case, the District Court for the

54. Rosman v. Trans World Airlines, Inc., 314 N.E.2d 848, 858 (N.Y. 1974).

55. Husserl v. Swiss Air Transport Co., 388 F. Supp. 1238 (S.D.N.Y. 1975).

56. Krystal v. BOAC, 403 F. Supp. 1332(C.D. Cal. 1975). *See also* Karfunkel v. Cie Nationale Air France, 427 F. Supp. 971, 977 (S.D.N.Y. 1977); Borham v. Pan American World Airways, Inc., 19 Av. Cas. (CCH), 18,236 (S.D.N.Y. 1980).

57. *See* Ruwantissa I.R. Abeyratne, *The Human Stress Factor and Mental Injury in American Tort Law—A Patchwork Quilt?*, 15 ANGLO-AM. L. REV. 338, 338-360(1986).

58. Medlin v. Allied Inv. Co., 398 S.W.2d 273 (Tenn. 1966).

59. *Id.* at 273-274.

60. Salce v. Aer Lingus Air lines, 19 Av. Cas. (CCH) 17, 377 (S.D.N.Y. 1985).

61. Salerno v. Pan Am. World Airways, Inc., 606 F. Supp. 656, 657 (S.D.N.Y. 1985).

Southern District of New York held that knowledge of a bomb threat which subsequently caused a miscarriage to a passenger came within the meaning of scope of the word "accident." The plaintiff, together with her two children, were passengers aboard a PAN AM flight from Miami to Uruguay. The cockpit crew, after take off, instructed the cabin crew to look for a bomb which the former had been informed by air traffic control to be on board. The crew notified the passengers including the plaintiff. She suffered a miscarriage 24 hours after having been informed of the alleged bomb on board and having watched the cabin crew looking for the object. The court held that an "accident" within the meaning of the Warsaw Convention caused the plaintiff's injuries because a bomb threat is "external to the passenger" and in an unexpected and unusual event outside the usual, normal and expected operation of the aircraft.[62]

The above discussion surfaces the salutary principle that the word "accident" is considered far more liberally in modern air law than is done under other areas of common law. It also underscores the fact that courts would be more inclined to treat acts of omission on the part of airlines as an "accident" as was shown in *Seguritan's* case.[63] The airline is presumed liable for an "accident" where a drunken passenger assaults another, or where a passenger suffers a heart attack and is not given the necessary medical attention in flight as is possible, just to name two instances. Of course, the claimant has to adduce clear evidence of the event and the ensuing injury.

C. Defences Available to the Airlines

The foregoing discussion involved two key factors which govern the civil liability of airlines. They are, the presumption of liability that is imposed upon the airline and the liability limits that apply to the protected the airline from unlimited liability and spurious claimants. There are two other factors which operate as adjuncts to the initial concepts. They are that the airline may show certain facts in its defence to rebut the presumption and that if the airline is found to be guilty of wilful misconduct it is precluded from invoking the liability limits under the Warsaw Convention. Viewed at a glance, the said four concepts seem to the grouped into two sets of balancing measures. The end result is that whilst on the one hand the airline is subject to stringent standards of liability, on the other, it is protected by two provisions which limit its liability in monetary terms and allows a complete or partial defence in rebuttal of the presumption.

Article 20(1) of the Warsaw Convention provides that the airline

62. *Id.*

63. Seguritan v. Northwest Airlines Inc., 446 N.Y.S.2d 397 (1982).

shall not be liable if it proves that the airline and its agents had taken all necessary measures to avoid the damage or that it was impossible for the airline and its agent to take such measures. Shawcross and Beaumont are of the view that the phrase "all necessary measures" is an unhappy one in that the mere happening of the passenger injury or death presupposes the fact that the airline or its agents had not in fact taken all necessary measures to prevent the occurrence.[64] The airline usually takes such precautions as making regular announcements to passengers on the status of a flight starting with instructions on security and safety measures that are available in the aircraft. These measures are taken by the airline to conform to the requirements of the Warsaw Convention that the airline has to take all necessary measures to prevent an accident in order that the presumption of liability is rebutted. Thus in a case decided in 1963 it was held that a passenger who leaves her seat when the aircraft goes through turbulent atmosphere is barred from claiming under the Warsaw Convention for personal injury.[65] Here it was held that an admonition of the airline that the passengers were to remain seated with their seat belts fastened during the time in question was proof of the airline having taken the necessary measures as envisaged in the Warsaw Convention.[66] This case also established the fact that "all necessary measures" was too wide in scope and that a proper interpretation of the intention of the Warsaw Convention would be to consider the airline to require taking all "reasonably necessary measures." In a more recent case J. Chapman imputed objectivity to the phrase "reasonably necessary measures" by declaring that such measures should be considered necessary by "the reasonable man."[67] A similar approach was taken in a subsequent case where the court held that the airline should show more than the fact that it was not negligent in order to invoke Article 20 (1) of the Warsaw Convention.[68] The United States also follows this approach of objectivity. In *Manufacturers Hanover Trust Co. v. Alitalia Airlines* it was emphasised that the airline must show that all reasonable measures had been taken from an objective standpoint in order that the benefit of the defence be accrued to the airline.[69] Some French decisions have also approached this defence on similar lines and required a stringent test of generality in order that the criteria for allowing the defence by approved.[70]

64. SHAWCROSS & BEAUMONT, *supra* note 34, at 116.

65. Chisholm v. British European Airways, 1 Lloyds Rep. 626 (1963); Grein v. Imperial Airways, 1 K.B. 50 (1937).

66. *See Chisholm,* 1 Lloyds Rep. at 626.

67. Goldman v. Thai Airways Int'l, 125 Sol. J. 413 (High Ct.); 1 All E.R. 693 (1983).

68. 2 All E.R. 188 (1986).

69. Hanover Trust Co. v. Alitalia Airlines, 429 F.Supp. 964, 967 (S.D.N.Y. 1977).

70. Preyvel v. Cie Air France, 27 R.F.D.A. 198 (1973); Riviere-Girret v. Ste-Aer-Inter, Uniform L.R. 173 (1979).

The airline which has the burden of proof cannot seek refuge in showing that normal precautions were taken. For example, normal precautions in attending to the safety of the passengers prior to a flight is not sufficient. If therefore the airline cannot adduce a reasonable explanation as to why the accident occurred despite the reasonably necessary precautions being taken it is unlikely to succeed in its defence.[71] Insofar as the requirement of impossibility to take precautions is concerned, the courts have required clear evidence of the difficulties faced by the airline in avoiding the disaster. In one case of a crash landing the court required that it was insufficient for the airline to show that the aircraft was in perfect condition and that the pilot took all steps to effect a good landing. The airline had to show that the weather conditions were so bad that the aircraft could not land in another airport.[72] In *Haddad v. Cie Air France*, where an airline had to accept suspicious passengers who later perpetrated a hijacking, the court held that the airline could not deny boarding to the passengers who later proved to be hijackers.[73] In that instance the airline had found it impossible to take all necessary precautions and was considered sound in defence under Article 20 (1). A similar approach was taken in the case of *Barboni v. Cie Air-France* where the court held that when an airline receives a bomb threat whilst in flight and performs an emergency evacuation, a passenger who is injured by evacuation through the escape shute cannot claim liability of the airline since it would have been impossible for the airline to take any other measure.[74]

If the airline proves that the damage was caused by or contributed to by the negligence of the injured person the court may, in accordance with the provisions of its own law, exonerate the carrier wholly or partly from his liability.[75] Contributory negligence under the Warsaw Convention has been treated subjectively as and when cases are adjudicated. The courts have not set an objective standard as in the earlier defence. For instance in *Goldman v. Thai Airways International Ltd.* it was held that a passenger is not guilty of contributory negligence if he keeps his seat belt unfastened through the flight and suffers injury when there is no sign given by the aircraft control panel to keep the seat belt on.[76] However, if a passenger removes a bandage or brace that he is required to keep on for an existing injury and he suffers injury in flight due to the removal of the support he would be found to have contributed to the negligence re-

71. Panalpina Int'l Transp., Ltd. v. Densil Underwear, Ltd., 1 Lloyds Rep. 187 (1981).
72. Mandreoli v. Cie Belge d'Assurance Aviation, Milan 1972 (1974) Dir Mar 157.
73. Haddad v. Cie Air-France, 36 R.F.D.A. 342 (1982).
74. Barboni v. Cie Air-France, 36 R.F.D.A. 355 (1982).
75. Warsaw Convention, Oct. 12, 1929, 49 Stat. 3000, Art. 21.
76. Goldman v. Thai Airways Int'l Inc., 3 All E.R. 693 (1983).

sulting in his injuries.[77]

Article 25(1) of the Warsaw Convention states that the airline shall not be entitled to avail itself of the provisions of the Warsaw Convention which excludes or limits its liability, if the damage is caused by the wilful misconduct or by such default on the part of the airline as, in accordance with the law of the court to which the case is submitted, is considered to be equivalent to wilful misconduct. Article 25 (1) extends this liability to acts of the agent of the airline acting within the scope of his employment and attributes such wilful misconduct to the airline. Such action as the failure of the technical crew of the aircraft to monitor weather conditions and the failure to execute a proper approach on adverse weather conditions are examples of wilful misconduct of the airline[78] Similarly the failure of a crew which is going off duty to inform the incoming drew of a defect in the aircraft or any such relevant issue which would affect the safety of the aircraft could be construed as an act of wilful misconduct on the part of the airline.[79]

The effect of Article 25 is that the plaintiff becomes entitled to lift the limit of liability of the airline as prescribed in Article 22 of the Warsaw Convention if he proves that the airline was guilty of wilful misconduct. Thus the burden of proof falls on the plaintiff and if he succeeds he may claim an amount over and above the prescribed limits of airline liability.

The limitation of liability of the carrier that the Warsaw Convention imposes could be circumvented by the plaintiff proving that the carrier was guilty of wilful misconduct in causing the injury. Wilful misconduct as an exception to the limitation of liability rule appears in all three air law conventions that admit of liability limitations.[80] The original French text of the Warsaw Convention states that if the carrier causes the damage intentionally or wrongfully or by such fault as, in accordance with the court seized of the case, is equivalent thereto, he shall not be entitled to claim the limitation of liability.[81] Drion maintains that the English translation inaccurately states that the liability limitations of a carrier will be obviated if the damage is caused by his *wilful misconduct* or by such *de-*

77. Bradfield v. Trans World Airlines, Inc., 152 Cal. Rptr. 172, 176 (Cal. Dist. Ct. App. 1979).

78. Butler v. Aeromexico, 774 F.2d 429 (D.C. Cir. 1985).

79. Piano Remittance Corp. v. Varig Brazilian Airlines Inc. 18 Av.Cas. (CCH) 18,381 (S.D.N.Y. 1984).

80. Convention for the Unification of Certain Rules Relating to the Assistance and Salvage of Aircraft at Sea, May 29, 1933; Rome Convention, May 29, 1933; Warsaw Convention, Oct. 12, 1929, 49 Stat. 3000.

81. Warsaw Convention, Oct. 12, 1929, 49 Stat. 3000, Art. 25.

fault.[82] The contentious issue in this question is what kind of misconduct is required?[83] Drion is of the opinion that by approaching the issue in terms of conflicting concepts, the question whether *faute lourde* as proposed originally in the French text and for which there was an English equivalent of gross negligence was in fact more appropriate than the word *dol* which now occupies the document and for which no accurate English translation exists, has emerged as to what standards may be used in extrapolating the words dol or wilful misconduct.[84] Miller[85] takes a similar view when she states that the evils of conceptualistic thinking that had pervaded the drafting of Article 25 which rendered it destitute of coherence, has now been rectified by the Hague Convention which has introduced the words "done with intent to cause damage or recklessly and with knowledge that the damage would probably result."[86]

This confusion was really the precursor to diverse interpretations and approaches to the concept of wilful misconduct under Article 25 of the Warsaw Convention. The French Government took steps by its *Air Carrier Act* of 1957 to rectify ambiguities in this area by interpreting *dol* in the Convention as *faute inexcusable*, or deliberate fault which implies knowledge of the probability of damage and its reckless acceptance without valid reason,[87] making a strong analogy with the Hague Protocol's contents. This interpretation, needless to say, brought out the question whether such reckless acceptance would be viewed subjectively or objectively.

The Belgian decision of *Tondriau* v. *Air India* considered the issue of Article 25 of the Convention and the Hague interpretation. The facts of the case were usual, involving the death of a passenger and a consequent claim under the Convention by his dependents.[88] The significance of the case law, however, in the fact that the Belgian court followed the decision of *Emery v. SABENA* and held that, in the consideration of the pilot's negligence under Article 25, an objective test would apply, and the normal behaviour of a good pilot would be the applicable criterion.[89] The court held:

> Whereas the plaintiffs need not prove, apart from the wrongful act, that the pilot of the aircraft personally had knowledge that damage would probably

82. Huibert Drion, LIMITATION OF LIABILITIES IN INT'L AIR L. (Martinus Nijhoff ed., The Hague 1954).

83. *Id.*

84. *Id.* at 200.

85. Georgette Miller, AIR CARRIER'S LIABILITY UNDER THE WARSAW SYSTEM, op.cit. 200.

86. Hague Convention, Sept. 28, 1955, S. Doc. No. Executive H. 86th Cong., 1st Sess., Art. 13.

87. Miller, *supra* note 85, at 202.

88. Trondriau v. Air India, R.F.D.A. 193(1977).

89. Emery v. SABENA, R.F.D.A. 184 (1967).

> result from it; it is sufficient that they prove that a reasonably prudent pilot ought to have had this knowledge.[90]

The court rationalised that a good pilot ought in the circumstances to have known the existence of a risk and no pilot of an aircraft engaged in air transport ought to take any risk needlessly. The Brussels Court of Appeal however, reversed this judgment and applied a subjective test, asserting that the Hague protocol called for "effective knowledge." Professor Bin Cheng seems to prefer the objective test in the interpretation of "wilful misconduct" in Article 25, on the grounds that a subjective test would defeat the spirit of the Convention and that judges would be "flying in the face of justice in search of absolute equity in individual cases."[91]

Peter Martin, analysing the Court of Appeal decision in *Goldman* v. *Thai Airways International Ltd.*,[92] agrees with Bin Cheng and criticizes the lower court decision which awarded Mr. Goldman substantial damages for injuring his hip as a result of being thrown around in his seat in turbulence, in an instance where the captain had not switched on the "fasten seat belt" sign.[93] Martin maintains that Mr. Goldman failed to prove that the pilot knew that damage would probably result from his act, as envisaged in the Hague Protocol principle. Being an aviation insurance lawyer, Martin is concerned that, while the English courts have a proclivity towards deciding Article 25 issues subjectively, insurance underwriters could view the breach of the limits stringently. Both on the count of the need for objectivity and on the count of the adverse effects on insurance, it is difficult to disagree with Cheng and Martin.

The question of air carrier liability and the approach taken in its context by the Warsaw Convention has seen the emergence of the scholarly analysis of two issues : Should liability of the carrier be based on fault and consequently on the principles of negligence and limited liability or should liability be based on strict liability? Drion, in his 1954 treatise on liability inquires into the various rationales and scenarios that may come up in an intellectual extrapolation of the subject.[94] He examines the fact that an insurance system for liability, which would inextricably be linked to a strict liability concept, would be desirable, as a plaintiff would be able to claim compensation from an impecunious defendant through the

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90. *Id.* at 4.

91. Bin Cheng, *Wilful Misconduct, From Warsaw to the Hague and From Brussels to Paris*, 2 ANNALS OF AIR & SPACE L. *55*, 99 (1977).

92. Peter Martin, LAW SOCIETY'S GAZETTE, June 8, 1983, at 1485.

93. Peter Martin, *Intentional or Reckless Misconduct, From London To Bangkok and Back Again*, 8 ANNALS OF AIR & SPACE L. 144, 145-149 (1983).

94. Drion, *supra* note 82, at 7.

latter's insurer, on the deep pocket theory,[95] and that insurance underwriters may, in their own interest, be impelled to formulate aviation accident preventive schemes, strengthening the effects of accident prevention.[96] Drion also puts forward 9 rationales for the rebuttable limitation of liability presumption that appears in Article 17, quantified by Article 22 of the Convention. These are: maritime principles carry a limitation policy; the protection of the financially weak aviation industry; the risks should be borne by aviation alone; the existence of back-up insurance; the possibility of the claimants obtaining insurance; limitation of liability being imposed on a *quid pro quo* basis on both the carrier and operator; the possibility of quick settlement under a liability limitation n regime; and the ability to unify the law regarding damages.[97]

These rationales, and whatever else that form considerations of policy in the assessment whether a liability system should be based on negligence or strict liability should be addressed with the conscious awareness that while the Convention imposes a rebuttable presumption of limited liability on the carrier, the contributory negligence of the plaintiff can exculpate the carrier and obviate or apportion compensation. More importantly, wilful misconduct of the carrier, transcends liability limits and makes the liability of the carrier unlimited. Strict liability on the other hand, as proposed in the Montreal Protocols 3 and 4, does not admit of breaking liability limits, sets a maximum limit of compensation that the carrier has to pay, and makes this limit unbreakable by such extraneous factors as the carrier's wilful misconduct.

The ultimate question therefore is, does one keep the Warsaw-Hague concept of fault and limited liability, or does one embrace a system of strict liability which assures the aggrieved party of pecuniary or reipersecutory recompense, while obviating the need for lengthy determinations of who was at fault after the fact. In other words, does one point a finger at the carrier in the first instance, then limit his liability and again break the limit if he is at fault? or make the carrier pay a sum of money, the maximum limits of which have been set, with the assurance that such limits would not shoot up unconscionably if the carrier was negligent?

The Convention unified legal principles relating to air carrier liability, thus precluding the application of scores of differing domestic laws.[98] It however, did not succeed in presenting to the world unequivocally objective and quantified rules of liability. This precludes a plaintiff from knowing that he would be, as a rule, compensated if he is injured in an air accident, since the Convention admits of challenge on the grounds of the

95. *Id.* at 8.
96. *Id.*
97. Drion, *supra* note 82, at 12-13.
98. Reed v. Wiser, 555 F.2d 1079, 1080 (2d Cir. 1977).

plaintiff's conduct before, during or after the accident. The strict liability principle introduced by the Guatemala City Protocol and carried through by the Montreal protocols on the other hand has been applauded on the grounds that:

> First, it gets money into the hands of the passengers much more quickly. Second, it saves transaction expenses which includes legal fees and other substantial litigation costs. Third, it provides compensation to passengers in those factual situations where no responsible party is at fault, such as in an act of terrorism.[99]

Alexander Tobolewski points out very validly that actual aviation practice in terms of aviation insurance by the airlines has nothing to do with limitation of liability and claims, since airlines insure their fleets and liabilities for colossal amounts in the insurance market.[100] He suggests therefore, the harmonisation of the law and actual practice (presumably by infusing more specific quanta in damages) and simplification of the system of recovery *inter alia*, both of which strongly suggests a regime such as the one envisaged in the Montreal Protocols.[101] Werner Guldimann concludes:

> The most important and urgent matter in the present decade is the continuation of the efforts undertaken by ICAO to re-establish the former universality and uniformity of the Warsaw system by having the Montreal Protocols No 3 and 4 rapidly ratified by the greatest possible number of contracting States.[102]

Although Professor Bin Cheng holds the view that the Montreal Protocols are: heavily weighted towards the carrier; the limits therein are inadequate; and that the unbreakeability of the limit of the SDR value is undesirable,[103] the view that strict liability should be embraced seems more sensible, in view of the inconceivable number of passengers carried every year by air, the possible eradication of legal contingency fees, and above all, giving teeth to the meaning and purpose of law—that it should be an instrument of solace, not an opportunity for debate.

In an evaluation of the Warsaw System[104] it has been said in 1979

99. Nicholas Mateesco Matte, *The Warsaw System and the Hesitation of the United States Senate*, 8 Annals of Air and Space L.151, 163 (1983).

100. Alexander Tobolewski, *Against Limitation of Liability, A Radical Proposal,* 3 Annals of Air and Space L. 261, 263 (1978).

101. *Id.* at 266.

102. Werner Guldimann, *A future System of Liability in Air Carriage,* XVI Annals of Air and Space L. 93, 104(1991).

103. Bin Cheng, *What is Wrong with the Montreal Additional Protocol No. 3?,* AIR LAW v. XIV no. 6 220, 232 (1989).

104. The Warsaw Convention of 1929 was amended by : The Hague Protocol 1955, the Guadalajara Convention 1961, The Guatemala City Protocol, 1971, and the Montreal Protocols 1, 2,

that during the first 25 years of the existence of the Warsaw Convention, it had served the aviation community satisfactorily.[105] Peter Martin bases this observation on the argument that when the Hague Protocol was being drafted in 1955, it was recorded that only 55 Warsaw cases had been adjudicated, and that is a very small number of cases for an instrument of the stature of the Warsaw Convention.[106] The unifying process of the liability of an air carrier, started by the Warsaw Convention, dealt with liability concepts, quanta of compensation, exceptions on liability, jurisdictional issues and prescription of action. It is sad however, that together with the original Warsaw Convention, there are now 7 other international agreements, few of which have ever seen the light of day. This means that the unification process started by the Warsaw Convention had been criticised and found wanting at various stages of its chequered history. The original document has been excoriated so many times, prompting Professor Cheng to call it the "Warsaw shambles"[107] although it remained, when these comments were made of it, the most widely implemented private international law convention.[108]

Ex facie, from a strictly practical standpoint, it would appear that many facets of unification of the Warsaw Convention have come under interpretation by different philosophies, presumably due to the lack of specificity of the principles of unification and *a fortiori*, the language used. For instance, the delivery of the passenger ticket and the attendant carrier liability came under a series of confounding judicial thought processes, where in two cases[109] the courts decided that the ticket had to be delivered in such a manner as to afford the passenger a reasonable opportunity to take measures to protect against liability insurance, only to decide in *Chan* v. *Korean Airlines*[110] that the only requirement of Article 3 of the Convention was that a ticket be delivered. *Goldman* v. *Thai Airways International Limited*[111] was another case where two confusing issues were decided upon. The first involved the question whether the

3, 4, of varying dates. It should also be noted that the Montreal Agreement of 1966,—a private arrangement between air carriers, also purported to amend the Warsaw Convention. Hereafter, joint references to all these instruments shall be referred to as the Warsaw system.

105. Peter Martin, 50 Years of the Warsaw Convention, A Practical Man's Guide, 1V ANNALS OF AIR AND SPACE L. 233, 234(1979).

106. *Id.*

107. Bin Cheng, . . .From Warsaw to the Hague. . ., 11 ANNALS OF AIR AND SPACE L. 55 (1977). Rene Mankiewicz also uses the word 'shambles' when he describes the Warsaw Convention. *See* Rene H. Mankiewicz, From Warsaw to Montreal With Certain Intermediate Stops. . ., 14 AIR LAW, 26 (1989).

108. Martin, *supra* note 105, at 239.

109. Warren v. Flying Tiger Line Inc., 352 F.2d 494 (9th Cir. 1965); Mertens v. Flying Tiger Line Inc., 341 F.2d 841 (2d Cir. 1965).

110. Chan v. Korean Airlines, 21 Avi 18, 228 (1989).

111. Goldman v. Thai Airways Int'l, 3 All. E. R. 693 (1983).

concept of 'wilful misconduct' as reflected in Article 25 of the Convention was to be interpreted objectively or subjectively. The second issue concerned compensatory limits which were so confusing to both the courts and the parties to litigation that an outside settlement was effected on a mutually acceptable basis.[112] The issue regarding compensatory limits for death or personal injury has had a consistent evolution, starting from the Warsaw Convention at Approximately 8300/ US dollars, increased two-fold by the Hague Protocol 1955, increased again by the Guatemala City Protocol to 100,000 special drawing rights (SDR) (about 130,000, US dollars) with the Montreal Protocols going even higher. The currency conversion to gold value has been anther contention of many parties to litigation and the case of *Franklin Mint* v. *TWA* left the situation in fiscal anarchy by deciding that in the United States, the Poincare gold franc has to converted to the last official price of gold before the US left the gold market, and not the free market price of gold.[113] This not only made the overall American attitude towards seeking enhanced compensation turn 360 degrees, but also awarded unrealistically low compensation to the plaintiff. Further, a case in Australia has given a new interpretation to the notion of carrier negligence in the carriage of cargo,[114] and a New Zealand case has decided that any interested party can now claim compensation under a cargo claim.[115]

The Montreal Agreement of 1966—a private agreement between carriers plying the United States was also the result of failure by contracting States to reach an international solution to the problem of unifying principles of liability, particularly insofar as the quantum of damages was concerned. The Montreal Agreement amply demonstrates, as an ICAO document[116] points out, that a private agreement between air carriers, sponsored by IATA can unhinge and question the credibility of a multilateral international treaty between sovereign States. Mankiewicz attributes this chaotic state of disagreement to the stand taken by the United States when he states:

> Indeed, there is real irony in the history of the Warsaw Convention. For more than thirty years, the United States of America have steadily and successfully fought for, and obtained and signed six protocols to amend the Warsaw Convention as well as a "Convention Supplementary to the Warsaw Convention." But they have ratified not one of these Warsaw instruments. In spite of the huge amounts of time and money spent all these years by

112. D.A. Kilbride, *Six Decades of Insuring Liability Under Warsaw*, 14 AIR LAW NO. 4/5, 187 (1989).

113. Franklin Mint v. TWA, 18 Avi 17,778 (1984).

114. SS Pharm. Co. v. Qantas Airways, 1 Lloyds Law Reports 319 (1988).

115. Tasman Pulp & Paper Co. v. Pan American World Airways Inc., X1 ANNALS OF AIR AND SPACE L., 323 (1987).

116. Ref. LE 3/27, 3/28 - 91/3, at .5

> ICAO and it's member States, the US judiciary is still saddled with the awkward task of applying, construing constructively or destructively, misinterpreting and circumventing a convention which is now 60 years old. . . .[117]

There is only one viable alternative towards rectifying this anomaly and preserving the unification efforts of the Warsaw Convention, and that comes in the nature of ratifying the Montreal Protocols 3 and 4. As Professor Michael Milde States:

> There is hardly any viable alternative to a determined effort to bring the Montreal Protocols Nos 3 and 4 into force. If that aim is not accomplished in the very near future, we may witness a trend to denunciation of the Warsaw System by several States with the ensuing chaotic conflicts of laws, conflicts of jurisdiction, unpredictably high compensation claims and skyrocketing increase in insurance premiums.[118]

The civil liability of an airline for the causing of death or injury to passengers has been established by international treaty and entrenched in law by judicial interpretation. The courts have attempted to balance the interest of both the airline and the passenger as indeed has been the perceived intention of the Warsaw Convention. The predominant feature of this area of civil liability is that air transport in terms of the commercial transportation of passengers is incontrovertibly the mode of transport that involves the highest levels of technology. Therefore, courts may find difficulty in ascertaining negligence, wilful misconduct and the overall liability of the airline in the face of complex technical arguments and defence. However, this reason alone should not justify obviating the tortious element that has so carefully been entrenched in the Warsaw Convention by its founders and used by Courts over the last 66 years. As the foregoing discussions reflect, liability issues under the Warsaw Convention has been consistently addressed by the Courts on the basis of their interpretation of negligence, wilful misconduct and contributory negligence, all of which are exclusively issues involving principles of tort law.

Relevance of "accident" to the Economy Class Syndrome

It is clear that the conventional interpretation of the term "accident" in tort liability has been extended in aviation cases under Article 17 of the Warsaw Convention where the Courts have imputed intention to the carrier in certain instances. To this extent, the *Seguritan*[119] case—which addressed the issue of the carrier's liability in not being able to regular

117. Mankiewicz, *supra* note 107, at 259.

118. Michael Milde, *ICAO Work on the Modernization of the Warsaw System*, 14 Air Law no. 4/5, 193, 206 (1989).

119. Seguritan v. Northwest Airlines Inc., 86 A.D.2d 658 (N.Y. 2d 1982).

medical assistance when necessary—and the *O'Leary* case[120] more liquor than he could consume in flight—perforce prove that the courts have interpreted the Warsaw Convention to enforce liability of the carrier on the principles of intention. Wilful misconduct, therefore has played an important role in establishing that, in certain circumstances at least, it would be justified in considering that the extent of the carrier's fault is a valid consideration in the award of damages.

Fault liability as enforced by the Warsaw Convention may also be adequately reflected in intentional negligence, where the carrier intentionally breaches the duty of care he owes the passenger. Determination of a breach of a duty or care as a distinct evidentiary tool by the Courts would act towards accident prevention in that instances of carrier liability which emerge from accident investigations could then be used as admissible evidence.

The new trend introduced by the Montreal Convention of 1999 in doing away with fault liability and introducing a system of liability that may apply irrespective of fault but aligned to monetary compensation based upon subjective assessments of jurisdictional liability has its genesis in the decade between 1960 and 1970. During this period civil law liability in tort entered a new phase, effectively superannuating the existing system of liability and replacing it with a system of liability insurance. Tortious liability was no longer considered cost effective, and was no match for less expensive insurance. Jurists thought it more equitable, and, above all, practical to embrace a legal system that espoused loss distribution, which acted as the national precursor to liability insurance. This system of liability was assisted along the way by three reasons which militated against fault liability and acted as catalysts towards the successful launch of liability insurance. Firstly, a tort system based upon fault was expensive to administer, when compared with any system of insurance; secondly, litigation was fraught with delay, which a plaintiff could often ill-afford; thirdly, the unpredictability of the result of cases based upon fault liability often put plaintiffs under pressure to settle their claims for amounts less than they would receive if their claims went successfully to trial.

Wilful misconduct of the carrier

Of the two instances in which the Warsaw Convention provides that the carrier's liability is unlimited, one relates to the absence of documentation (absence of the passenger ticket and baggage check or air waybill) on the grounds that the document of carriage evidences the special regime of limited liability as prescribed in the Warsaw Convention. The

120. O'Leary v. American Airlines, 475 N.Y.S. 2d 285 (N.Y. Sup. Ct. 1984).

other, which has turned out to be contentious, deals with instances where the damage is caused by the carrier's wilful misconduct, or such default on his part as, in accordance with the law of the court which exercises jurisdiction in the case, is considered to be the equivalent of wilful misconduct. Article 25 of the Warsaw Convention provides:

> The carrier shall not be entitled to avail himself of the provisions of this Convention or exclude or limit his liability, if the damage is caused by his wilful misconduct or by such default on his part as, in accordance with the law of the Court seized of the case, is considered to be equivalent to wilful misconduct.[121]

The provision further stipulates that the carrier shall not be entitled to avail himself of the above provisions, if the damage is caused as aforesaid by any agent of the carrier acting within the scope of his employment.[122]

The primary significance of Article 25 is that it addresses both wilful misconduct and the "equivalent" of wilful misconduct. The authentic and original text of the Warsaw Convention, which is in the French Language, uses the words "dol" and "faute . . . equivalente au dol". There is a palpable inconsistency between English translation of the original text and the original text itself in that the French word "dol" personifies the intention to inflict an injury on a person, whereas the English words "wilful misconduct" requires the defendant carrier to be aware of both his conduct and the reasonable and probable consequences of his conduct, in the nature of the damage which may ensue from the carriers act. Wilful misconduct, therefore, may not necessarily involve the intention of the carrier, his servants or agents and remains wider in scope as a ground of liability.

Most civil law jurisdictions have replaced "dol" with "gross negligence." Drion dismisses the element of intention by citing examples such as the theft or pilferage of goods or baggage (which are more frequent in occurrence than aircraft accidents) which may not necessarily always occur with the concurrence or knowledge of the carrier and cites a list of possible instances where gross negligence would form more justification for the invocation of Article 25.[123] Notable examples are assault or indecent behaviour by personnel of carrier; accidents caused by conduct of personnel; serving bad food; bumpy rides causing passenger injury; and failure to instruct passengers of rough weather etc.[124] Drion also makes

121. *See* Convention for the Unification of Certain Rules Relating to International Carriage by Air, Oct. 12, 1929, 18 ANNALS AIR AND SPACE L. part 2, 323, 339 (1993).

122. *Id.* Art. 25, 2.

123. Huibert Drion, LIMITATION OF LIABILITIES IN INT'L AIR LAW 212 (Martinus Nijhoff ed.,The Hague 1954).

124. *Id.* at 213.

the valid point of citing delay in carriage as having many dimensions which may be accommodated within the purview of Article 25 without warranting the consideration of intention.[125]

Common law jurisdictions on the other hand have separated "wilful misconduct" from "negligence" and insisted that the conduct of the carrier has to be "wilful" or intentional for a successful case to be grounded on Article 25 of the Warsaw Convention. This approach is consistent with the original contention of the British delegate to the Warsaw Conference, who claimed that wilful misconduct should pertain to "acts committed deliberately or acts of carelessness without any regard for the consequences."[126] In the 1952 British case of *Horabin* v. *British Overseas Airways Corp.* the Court held:

> To be guilty of wilful misconduct the person concerned must appreciate that he is acting wrongfully, or is wrongfully omitting to act and yet persists in so acting or omitting to act regardless of the consequences, or acts or omits to act with reckless indifference as to what the result may be.[127]

In the same year, in the United States, the New York Supreme Court Appellate Division held that wilful misconduct was

> dependant upon the facts of a particular case, but in order that acts may be characterized as wilful there must be on the part of the person or persons sought to be charged, a conscious intent to do or to omit doing the act from which harm results to another, or an intentional omission of a manifest duty. There must be a realization of the probability of injury from the conduct and a disregard of the probable consequences of such conduct.[128]

The above approach has been followed by subsequent American decisions which have classified wilful misconduct as requiring "conscious intent to do or omit doing an act from which harm results to another"[129] and "wilful performance of an act that is likely to result in damage or wilful action with a reckless disregard of the probable consequences."[130]

As to the second limb of Article 25.1 which provides that the equivalent of wilful misconduct would suffice to impose liability, the Convention leaves the scope of the provision wide open to include an instance of the carrier knowingly providing small seats and not advising the passenger of the inherent dangers related thereto.

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125. *Id.* at 213.

126. SECOND INT'L CONFERENCE ON PRIVATE AERONAUTICAL L., *supra* note 25, at 42.

127. Horabain v. British Oversears Airways Corp., 2 All E.R. 1016, 1022 (1952).

128. Goepp v. American Overseas Airlines, U.S. Av. R. 486 (N.Y. App. Div. 1952).

129. Grey v. American Airline Inc., 4 Avi. 17, 811 (2d Cir. 1955).

130. Wing Hang Bank Ltd v. Japan Air Lines Co., 12 Avi. 17,884 (S.D.N.Y. 1973).

Recent Judicial Decisions on Wilful Misconduct

Arguably the watershed decision on the notion of wilful misconduct in recent times was contained in the case *In re Korean Airlines Disaster of September 1, 1983* where the trial court considered wilful misconduct to be:

> The performance of an act with knowledge that the act will probably result in an injury or damage, or in some manner as to imply reckless disregard for the consequences of its performance.[131]

The above pronouncement was used by the American Courts, in the 1994 decision of *Pasinato* v. *American Airlines Inc.* who concluded that the act in question of a flight attendant did not constitute wilful misconduct within the purview of Article 25.2 of the Warsaw Convention.[132] In the *Pasinato* case, a passenger of an American Airlines flight which was bound for Chicago from Italy was struck on the head when a heavy totebag fell from an overhead bin in the cabin. The incident was the outcome of an initial request by the passenger for a pillow immediately after take off, where the flight attendant, in a bid to open the overhead bin above the passenger to retrieve the pillow, was unable to prevent a totebag falling from the bin onto the passenger's head. The passenger and her husband sued American Airlines under Article 25 on the grounds of wilful misconduct. The trial court was of the view:

> there is no dispute that the flight attendant opened the overhead bin to get a pillow for another passenger. The flight attendant's disposition indicates that she opened the bin with one hand, in her customary manner, with the other hand placed defensively above her head near the bin to prevent an object from falling upon her or a passenger sitting below. Further, the flight attendant stated that she tried to catch the totebag that fell from the bin (and may have touched it as it fell), but that it fell too quickly.[133]

The court took cognizance of the contention of American Airlines that the technical and cabin crews give reported warnings to passengers of the dangers of opening overhead bins, both over the public address system of the aircraft and by personal messages. The evidence of the flight attendant—that incidents of objects falling from overhead bins were infrequent and generally harmless—based on her experience, was also considered relevant. The Court found difficulty in applying the criterion of the *Korean Airlines Disaster* case in that it was difficult for the Court, if not impossible, to envision how the flight attendant's actions could amount to wilful misconduct.[134] It was of the view that the pivotal criterion for de-

131. *In re* Korean Airlines, 932 F.2d 1475, 1479 (D.C. 1991).
132. Pasinato v. American Airlines Inc., U.S. Dist. LEXIS 5676 (N.D. Ill. 1994).
133. *Id.*
134. *In re* Korean Airlines, *supra* note 131.

termining the existence of wilful misconduct—knowledge that the act would probably result in an injury or damage—was absent. *A fortiori*, the Court observed that the other criterion established in the *Korean Airlines* case—that of an act which is performed in a manner indicating reckless disregard for the consequences—was also missing in the *Pasinato* case.

In the 1994 case of *Baba v. Compagnie Nationale Air France*, involving damage to cargo, a Federal trial court in Washington found for the plaintiff and awarded damages against the act of the defendant carrier for improperly packing and storing hand-woven Persian carpets, as a result of which some of the carpets were damaged owing to the seepage of rain water when the carpets were kept outside by the carrier pending their loading onto the aircraft.[135] The Court in this instance followed the Bench in *Pasinato* by reiterating the criteria for the proof of wilful misconduct as established by the *Korean Air* litigation. A compelling piece of evidence which enabled the court to arrive at its conclusion in the *Saba* case was the fact that the air carrier had disregarded its own cargo handling regulations in storing the carpets outdoors, in the rain. In its findings the court held:

> In short, through a series of acts, the performance of which were intentional, the carrier has demonstrated a reckless disregard of the consequences of its performance, This disregard is emphasized by the fact that no damage report was ever produced.[136]

The court, while waiving the liability limits of the Warsaw Convention in the *Saba* case noted that a combination of facts can, taken together, amount to wilful misconduct. It was sufficient, in the Court's view for an act to be intended, and not necessary for the resulting injury or wrongfulness of the act to reflect intention or knowledge. It was also significant that the Court further observed that a finding of wilful misconduct was appropriate when the act or omission constituted a violation of a rule or regulation of the defendant carrier itself.

Courts in the United States have been cautious to determine the parameters of "scope of employment" as envisaged in Article 25.2 of the Warsaw convention, which imputes liability to the carrier with regard to acts of its employers acting within the scope of their employment. In the 1995 case of *Uzochukwu* v. *Air Express International Ltd.* where a New York Federal trial court had to decide on a case of theft by two airline employees of cargo of the two carriers, it was held that the fact that the employers had used forged documents to perpetrate the offence of theft was sufficient to conclude that the act was outside the scope of employ-

135. Baba v. Compagnie Nationale Air France, 866 F. Supp. 588 (D.D.C. 1994).
136. *Id.*

ment and that the carrier could not be held liable under Article 25.2.[137] It is arguable that the conclusion of the court was based on the fact that generally, in the United States, "wilful misconduct" is regarded as the intentional performance of an act with knowledge that the performance of that act would probably result in injury or damage or that intentional performance of an act in such a manner as to imply reckless disregard of the probably consequences.

In *Robinson* v *Northwest Airlines Inc.*,[138] a case decided in March 1996 and involving circumstances similar to the *Pasinato* case, the United States Court of Appeals dismissed the appeal of the plaintiff who had lost judgment in the trial court against the carrier. The trial court had allowed a motion of the carrier that the plaintiff's claim in relation to her being injured by a piece of hand luggage falling from an overhead bin while the plane was taxiing, and additional injuries caused to her by a passenger striking her on the head with the latter's baggage were valid at law.

The Court of Appeals in affirming the dismissal of the action of the plaintiff noted that while a common carrier (a carrier who opens itself to the world to conduct business in the carriage by air of passengers, baggage and goods) owes a high degree of care to its passengers, it cannot be considered an insurer of the passenger's safety. The court found that the plaintiff failed to raise an issue of fact regarding the carrier's breach of duty towards her. the court was of the view:

> Short of physical constraint of each passenger until each is individually escorted off the plane, we fail to see what Northwest could have done to prevent this accident. At best, that is precisely what the plaintiff has established; the fact that an accident occurred. However, as noted above, common carriers are not insurers of their passenger safety.[139]

A similar approach can be seen in the contemporaneous case of *Bell v. Swiss Air Transport Co. Ltd* where an Intermediate Appellate court in New York State refused to allow the plaintiff's claim that the loss of his laptop computer during a security check of the airline was due to the airline's wilful misconduct.[140] In the court's view, the plaintiff had failed to prove that the airline intentionally mishandled his baggage with knowledge or reckless disregard for the probable consequences of his conduct. The court also noted that it was the local police, and not the airline, who had required the carrying out of the security check.

The case of *Singh* v. *Pan American World Airways* decided in May, 1996 offers a helpful insight into the rationale for determination of wilful

137. Uzochukwu v. Air Express Int'l, U.S. Dist. LEXIS 22228 (E.D.N.Y.1995).
138. Robinson v. Northwest Airlines Inc., U.S. App. LEXIS 8237 (6th Cir. 1996).
139. *Id.*
140. Bell v. Swiss Air Transport Co., 25 Avi. Cas (CCH) 17, 259 (N.Y. App. Term. 1996).

misconduct.[141] In wrongful death and personal injury actions arising out of the 1995 hijacking of a Pan Am flight between Bombay and New York, the jury concluded that the carrier had been guilty of wilful misconduct on the reasoning that the management of the carrier knew, or ought to have known of serious lapses in its security programme. In fact, there had been representations made by the carrier's staff to the management on several occasions prior to the hijacking. Furthermore, the jury was influenced in its conclusion by the fact that the carrier was aware of terrorist activity at European, Middle Eastern and Asian high risk airports and that very little had been done by the carrier to provide enhanced security at these airports.

In the case of the crash of Thai Airways Flight TG-311 near Katmandu, Nepal in July 1992, the question at issue was whether the air crew had been guilty of wilful misconduct in flying into terrain.[142] The fatal crash occurred during approach to Kathmandu airport—an airport known to be one of the most difficult in the world to land.[143] Evidence had revealed that the captain had given the bearings of the aircraft to the control tower shortly before the crash, and that such were inconsistent with instruction previously given by the tower to the crew in the cockpit of the aircraft. The court concluded that the plane had veered towards terrain surrounding the airport due to the crew's conscious failure to monitor their navigational instruments. The court held:

> the captain and the first officer knew or should have known that failing to perform their duty to continuously monitor the aircraft's navigational instruments would create a grave danger under the circumstances. . . . [B]oth the captain and the first officer were well aware that their duty to consciously monitor navigational instruments was an act *necessary for safety*. . . . [T]heir duty to perform this crucial act was so obvious under the circumstances that failing to perform it was *reckless in the extreme*. . . .[144]

The Thai Airways case therefore marks an instance where the elements of wilful misconduct were imputed to the crew on the basis that due to their expertise, they knew or ought to have known the reasonable and probable consequences of their act.

A further dimension to the notion of wilful misconduct was added in the *Northwest Airlines Air Crash Case* of August 1996, where the Court of Appeals of the Sixth Circuit added that a finding of wilful misconduct may be based upon consideration of a series of actions or inactions.[145]

141. Singh v. Pan American World Airways, 920 F. Supp. 408 (S.D.N.Y. 1996).

142. *See* Koirola v. Thai Airways International, Westlaw 402403 (N.D. Cal. 1996).

143. *Thai Airways found guilty of Wilful Misconduct in 1992 Kathmandu Crash Litigation,* LLOYD'S AVIATION L. v. 15 n. 6, March 15, 1996 at 1.

144. *Id* at 2-3.

145. Polec v. Northwest Airlines, 86 F. 3d 498 (6th Cir. 1996).

The court was of the view that since many complex safety systems interact during an air plane flight, an air disaster would usually require multiple acts. In other words, the court held that it was permissible for a jury to consider an airline's individual errors or a series of errors and not restrict itself to the only act which seemingly caused an accident.

If one were to analyse the rationale of wilful misconduct in the light of the *cursus curiae* so far discussed, one would conclude that wilful misconduct hinges itself on knowledge of the perpetrator that damage would result or reckless disregard for consequences of an act on the part of the perpetrator. The question which then arises is whether an instance of the carrier knowingly providing small seats and not advising the passengers of the dangers of prolonged air travel in confined spaces or as would subscribe to the notion of wilful misconduct as it is perceived at the present time.

3. Conclusion

Admittedly, it would be extremely difficult for an airline to determine the proclivity of their passengers to latent illnesses such as venous thromboembolism. Therefore, instances of negligence pertaining to an airline accepting for travel a person who could possibly be afflicted with the disease may arguably be difficult to determine. However, it would not be uncommon to critically evaluate the conduct of an airline, which, knowing full well that the seat pitch in the aircraft would cramp an average-size passenger and being cognizant of the medical evidence which identifies prolonged air travel in confined spaces as a risk factor for deep vein thrombosis, does not take any precautions toward the prevention of the occurrence. The cases of *Seguritan, Horabin, Thai Airways* and the *Korean Airlines Disaster* strongly suggest the need for vigilance on the part of airlines to follow scientific and medical developments related to air transport and passenger safety.

It must be emphasized that, in selling an airline ticket for travel by air, an airline offers a composite service, not only to carry a passenger from point A to B, but also to ensure that transportation is accomplished in a safe and sanitary manner. Therefore, the services offered by the airline in the area ergonomics and professional advise as to the risks entailed in air travel become extremely relevant and critical to the issue.

As for issues of liability under the Warsaw Convention, although the *Tseng* Case[146] widened the scope of the word "accident" the case itself addressed a personal security check on a passenger and it remains to be seen whether courts would interpret negligence on the part of the airline to warn the passenger of inherent dangers and advise him of the appro-

146. El Al Israel Airlines, Ltd. v. Tseng, 525 U.S. 144 (1999).

priate precautions as wilful misconduct under the Warsaw Convention. It certainly could be argued, that in the light of the varied interpretations emerging from the *cursus curiae* that an accident under the Convention, although not explicitly defined in any past instance, could be considered as "any incident unexpected and external to the passenger which is avoidable by the airline and which causes death, wounding or injury to a passenger." Therefore, although no conclusive medical evidence has been released distinctly and conclusively linking Venous Thromboembolisms to the so called "Economy Class Syndrome," since there is strong evidence to suggest a risk factor in air travel, the airline could be expected to take or seen to take some precaution against the danger.

Airlines would be well advised to apprise passengers that, in order to minimise risk of venous thromboembolism, some of the guidelines are that they should not place baggage in the space under the seat, as it may reduce the ability to move the legs; exercise legs at regular intervals while seated, in order to improve blood flow; change positions regularly; take a stroll down the aisle every once in a while; avoid sleeping in a cramped position; avoid using alcohol, tobacco, narcotic drugs and hypnotic drugs; and consume as much water and other fluids during the flight as possible.