

CHAPTER THREE
AIR CARRIERS

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COMMON CARRIERS

As a common carrier, an air carrier owes its passenger a duty of utmost care. Calif. Civil Code § 2100¹. It must provide a safe vehicle that is fit for its purpose. CC §2101. It is responsible under a higher standard of care for even the slightest negligence. Irwin v Pacific Southwest Airlines. An air carrier must use the utmost care to guard against the reasonably foreseeable dangerous consequences of its operations, either from mechanical or human failure or from meteorological conditions. Powell v Dell Air Aviation, Inc.

The utmost degree of care is owed while passengers are in transit and until they have safely departed the carrier's vehicle. Marshall v United Airlines (because airline was not owner or lessee of, and had no right of control over, stairway at airport where plaintiff fell while in route from airline's plane to helicopter, airline had no duty to maintain stairway). This duty attaches once the passenger surrenders a ticket and is under the carrier's control and care. Only ordinary rules of negligence apply to the condition and maintenance of equipment and premises at the carrier's station. Orr v Pacific Southwest Airlines (carrier not liable for injury to prospective passenger by third party at airport security check).

¹ Calif. Civil Code Section 2100
A carrier of persons for reward must use the utmost care and diligence for their safe carriage, must provide everything necessary for that purpose, and must exercise to that end a reasonable degree of skill.
Section 2101
A carrier of persons for reward is bound to provide vehicles safe and fit for the purpose to which they are put, and is not excused for default in this respect by any degree of care.
Section 2102
A carrier of persons for reward must not overcrowd or overload his vehicle.
Section 2103
A carrier of persons for reward must give to passengers all such accommodations as are usual and reasonable, and must treat them with civility, and give them a reasonable degree of attention.
Section 2104
A carrier of persons for reward must travel at a reasonable rate of speed, and without any unreasonable delay, or deviation from his proper route.

Because a passenger's entry into a carrier's station is not characterized by any of the hazards incident to the journey itself, the carrier is required to exercise only a reasonable degree of care for the protection of its passengers within the station, and ordinary rules of negligence apply to the condition and maintenance of equipment and premises at the station. Moreover, the carrier's duty to use reasonable care in the maintenance of its stations or other premises applies only if the defendant is the owner or occupant of the premises with the right to control or manage the property.

Orr can be distinguished where the security checkpoint is maintained by the carrier to screen passengers only, and is thus part of provision of transportation. It is not clear where the highest degree of care ends and ordinary care begins. It is the duty of an air carrier to determine the competence of its pilots in the interests of public safety. An air carrier can be negligent in evaluating a pilot's judgment and technical skills if it fails to consider prior mistakes. World Airways, Inc. v International Brotherhood of Teamsters, etc.

A common carrier does not guarantee the safety of its passengers. Gradus v Hanson Aviation, Inc.. The carrier is not liable for injury to a passenger resulting from unavoidable or inevitable accident, or from unforeseen events not attributable to negligence on the part of the carrier. Gray v America West Airlines, Inc. (carrier not liable for passenger's injuries at ticket counter from third party's negligence. Airline did not owe duty to protect passenger from tripping over luggage left at ticket counter since airline did not have control over concourse area where counter was located, Kohler v Aspen Airways, Inc. (airline not liable for injury from clear air turbulence not forecast or foreseeable).

A common carrier includes every person and corporation providing transportation for compensation to or for the public or any portion of the public, except as otherwise provided in the Public Utilities Act. Pub Util C §211. A defendant need not have a regular schedule of flights, a fixed route, or an air taxi certificate to be held to the standard of an air carrier. It is sufficient to have an established place of business and standard charges, be engaged in flight as a regular business, and advertise. Gradus v Hanson Aviation, Inc. An air carrier is necessarily liable for the negligence of its employees, such as a flight attendant's failure to make sure that hand luggage is properly stored in an overhead bin.

On domestic flights, carriers are held to a standard of utmost care but are not absolutely liable for passenger safety. Roberts v Trans World Airlines.

A common carrier must provide a safe vehicle that is fit for its purpose; no degree of care excuses the carrier's failure in this regard. CC §2101 A plaintiff can argue that this statute makes a carrier strictly liable for any injury caused by an

unsafe vehicle. However, common carriers are not generally held absolutely liable for safety defects. Nelson v American Airlines, Inc.

RES IPSA LOQUITUR

Negligence is presumed in air accidents if the doctrine of res ipsa loquitur applies. To invoke the doctrine of res ipsa loquitur, the plaintiff must plead negligence generally. The doctrine of res ipsa loquitur can be properly invoked if the accident was of a kind that does not ordinarily occur without a negligent act, the instrumentality which caused the accident was under the exclusive control of the defendant, and the accident was not due to any action by the plaintiff. Ayer v Boyle (airplane wrongful death action). The evidence must eliminate plaintiff's conduct as a factor contributing to the occurrence. Newing v Cheatham (airplane crash in clear weather would not have occurred absent negligence). The doctrine has three conditions: (1) the accident must be of a kind which ordinarily does not occur in the absence of someone's negligence; (2) it must have been caused by an agency or instrumentality within the exclusive control of the defendant; and (3) the accident must not have been due to any voluntary action or contribution on the part of the plaintiff.

The doctrine of res ipsa loquitur does not apply to crashes of airplanes under dual control, absent proof of exclusive control by one occupant. Whittemore v Lockheed Aircraft Corp. (evidence that left hand operator customarily has control was not conclusive). Thus, it does not apply to mid-air collisions. Gotcher v Metcalf. Nor does it apply to an injury caused by unforeseen natural conditions outside the aircraft. Kohler v Aspen Airways, Inc. (clear air turbulence).

An inference of negligence based on res ipsa loquitur arises in cases where a passenger on a common carrier is injured as a result of the operation of the vehicle. To rebut the inference, the carrier has to satisfy the court it exercised the utmost care and diligence for safe passage, by introducing sufficient evidence that either the accident resulted from a cause entirely independent of any negligence on the carrier's party, or that the carrier exercised due care in all respects where it might have been negligent. Irwin v Pacific Southwest Airlines

Thus, to rebut the presumption of res ipsa loquitur, a defendant should disprove either negligence or proximate cause. Fagerquist v Western Sun Aviation, Inc. The presumption of negligence can be rebutted by showing that defendant complied with safety procedures. Roberts v Trans World Airlines (accident due to unpreventable cause)

What follows is the legal decision in re the crash of PSA flight 182. When reading these decision, it is easy to forget the human element. Lest we forgot, the

following is the last recorded words from PSA 182, after a fatal mid-air with a Cessna over San Diego, 25 September, 1978. The unidentified voice was one of the pilots, the flight engineer, or a company pilot riding the jumpseat.

“Ma, I love yah.”

Case # 1

IRWIN v. PACIFIC SOUTHWEST AIRLINES (1982)

133 Cal.App.3d 709, 184 Cal.Rptr. 228

ANTOINETTE IRWIN, Individually and as Administratrix, etc., et al., Plaintiffs
and Respondents, v.

PACIFIC SOUTHWEST AIRLINES, Defendant and Appellant.

OPINION

Pacific Southwest Airlines (PSA) appeals a summary judgment against it for liability and an award of damages arising from a midair collision between PSA flight 182 and a small plane, which occurred over the North Park area of San Diego.

The facts surrounding the collision of the aircraft are not in dispute. Flight 182 was on a visual approach to San Diego's Lindbergh Field on a clear day. Flight 182 was in a gradual descent and overtook the small plane, which was ascending. The Lindbergh control tower warned flight 182 of the proximity of the small plane and told it to maintain visual separation, but the pilot and crew, having acknowledged sighting the plane below, lost sight of the craft. The following crew colloquy took place just before impact:

"09: 01:10 (First Officer): Are we clear of that Cessna?

"09: 01:13 (Second Officer): Supposed to be.

"09: 01:14 (Captain): I guess.

"09: 01:15 (First Officer): Fifteen.

" [Unknown] (sound of laughter)

"09: 01:20 (Off duty PSA Captain): I hope.

"09: 01:21 (Captain): Oh yeah, before we turned downwind, I saw him about one o'clock, probably behind us now."

One hundred forty-four people died in the crash, including John A. Irwin who was a passenger on flight 182. An action for wrongful death was brought by Antoinette Irwin, individually, as the surviving widow of John A. Irwin and as administrator of the estate of John A. Irwin, and by John B. Irwin, James P. Irwin,

Michael J. Irwin and Antoinette Irwin by and through their mother (plaintiffs).

The Irwin action became part of the Judicial Council Coordination Proceeding number 623. Plaintiffs joined a companion case (also part of the judicial council proceeding) in a motion for summary judgment which was granted on the issue of liability under the doctrine of *res ipsa loquitur*.

This case was then transferred to the Sacramento superior court for trial on the issue of damages. The jury returned a verdict for plaintiffs in a lump sum of \$1,215,000. PSA's motion for a new trial was denied. PSA appeals, claiming the San Diego court erred in granting plaintiffs' motion for summary judgment based on *res ipsa loquitur* because (1) plaintiffs failed to show PSA had exclusive control of flight 182; (2) there were triable issues of fact as to whether the inference of negligence under the doctrine of *res ipsa loquitur* had been overcome; and (3) *res ipsa loquitur* is inapplicable where plaintiff fails to bring other known culpable parties before the court. PSA also alleges the Sacramento court erred by (1) failing to instruct the jury that wrongful death awards are not taxable and (2) submitting BAJI No. 15.00 to the jury.

Plaintiffs contend PSA admitted liability at the damages phase of the trial, and should, therefore, be precluded from appealing issues pertaining to the liability phase of the trial. They cite **Horn v. Atchison T. & S.F. Ry. Co.**, which held a defendant bound to its counsel's unequivocal concession of liability in spite of earlier formal denials of such liability. However, in *Horn*, liability was an issue before the court at the time the concession was made. Here, liability had been established in a separate trial. The admission was extraneous because it was not of a fact "bearing on the issues involved" in the proceeding. **Oscanyan v. Winchester R. Arms Co.** (1881) Moreover, an admission is not binding if it is made improvidently or unguardedly, or if it is in any way ambiguous. In context, the admission here lacks the gravity of a complete relinquishment of rights on the issue of liability, particularly in light of the inappropriateness of a denial of liability at a trial for damages and PSA counsel's refusal to abandon the appeal. PSA is thus entitled to appeal the summary judgment granted in the liability trial.

PSA argues the San Diego trial court erred in granting plaintiffs a summary judgment on a theory of *res ipsa loquitur*. In order for *res ipsa loquitur* to apply, three conditions must be met: (1) the accident must be of a kind which ordinarily does not occur in the absence of someone's negligence; (2) it must be caused by an agency or instrumentality within the exclusive control of the defendant; and (3) it must not have been due to any voluntary action or contribution on the part of the plaintiff. PSA claims plaintiffs have failed to show PSA had exclusive control over flight 182 as a matter of law, alleging concurrent control of flight 182

between it (PSA) and the F.A.A. (represented by the air traffic controllers).

As a common carrier, PSA has bound itself to carry safely those it takes into its aircraft. It is responsible for any, even the slightest, negligence and is required to do all that human care, vigilance and foresight reasonably can do under given circumstances (**Acosta v. Southern Cal. Rapid Transit Dist.**. This higher standard of care is reflected in a relaxation of the elements of proof for an inference based on *res ipsa loquitur* against a common carrier. An inference of negligence based on *res ipsa loquitur* arises in cases where a passenger on a common carrier is injured as the result of the operation of the vehicle.

Here PSA has admitted it is a common carrier. Flight 182 was on a regularly scheduled trip from Sacramento to San Diego with an intermediate stop at Los Angeles. John A. Irwin was a paying passenger who died of injuries sustained in the crash. Flight 182 overtook and collided with the Cessna. Federal Air Regulations give an aircraft being overtaken the right_of_way and require a pilot of an overtaking aircraft to alter its course and pass well clear of any plane it overtakes (14 C.F.R. § 91.67(e) (1982)). The legal obligation of the PSA crew was to see and avoid the Cessna. We adopt the view that responsibility for the separation of two aircraft flying in visual flight rule weather, regardless of the type of flight plan or air traffic clearance, rests directly upon the operating personnel of the respective aircraft. Thus, flight 182's reliance upon the assistance of the air traffic controllers does not relieve PSA of liability. As a common carrier PSA is also not relieved of liability because the accident involved another vehicle not under its control.

When the facts giving rise to the doctrine of *res ipsa loquitur* are undisputed, as here, the inference of negligence arises as a matter of law. To rebut the inference of negligence, PSA as a common carrier had to satisfy the court it exercised the utmost care and diligence for Mr. Irwin's safe passage. Such a showing could be made by introducing sufficient evidence to sustain a finding either (1) the accident resulted from a cause entirely independent of any negligence on PSA's part, or (2) PSA exercised due care in all respects wherein it might have been negligent. The evidence here shows neither a definite cause unconnected with PSA's lack of care, nor such care in all possible respects as leads to the conclusion the accident must have been due to some unknown but unpreventable cause. Plaintiffs were entitled to a summary judgment because the undisputed evidence supported the inference of negligence under the doctrine of *res ipsa loquitur*.

PSA is estopped from claiming error because the owner of the Cessna and the federal government were not subjected to the motion for summary judgment. PSA failed to raise the issue before the trial court and may not raise it for the first

time on appeal.

PSA claims the Sacramento court erred in failing to instruct the jury that plaintiffs' wrongful death recovery is not taxable. Its proffered instruction was based on a number of out_of_state cases and the United States Supreme Court case, **Norfolk & Western Ry. Co. v. Lie_pelt** (1980) 444 U.S. 490. However, the California courts have consistently held it is not error to refuse to give such an instruction.

In **Norfolk & Western Ry. Co. v. Leopold**, supra., the wrongful death action arose under the Federal Employers' Liability Act. The holding was based on federal statutory interpretation, not constitutionality. Thus the decision is not binding on this court. Moreover, the **Leopold** decision involved an F.E.L.A. action which crucially distinguishes it from a case involving an action under state law. The trial court did not err in refusing the instruction.

PSA contends plaintiffs waived any right to keep the issue of nontaxability of the award away from the jury. During cross_examination of PSA's expert economist, plaintiffs' counsel asked the witness several questions regarding the "consumption figure" the witness used in calculating the economic loss sustained due to the decedent's death. The witness testified the consumption figure is the percentage of the decedent's income which the decedent could have reasonably been expected to spend on his own personal consumption. During the cross_examination, the following exchange occurred: "Q. Now, with regard to consumption, what does that refer to?

"A. What is being consumed. Well, if you are talking about the problem of consumption?

"Q. No. First of all, if you have a house payment, is part of that going to be refunded upon the death of the breadwinner?

"A. No.

"Q. If you have to pay taxes, is the government going to give you some rebate because the head of the household died?

"A. No."

During redirect of the witness, PSA's counsel, outside the presence of the jury, asked that he be allowed to bring to the jury's attention the award would not be taxable. The request was in light of the references to taxes by plaintiffs'

attorney. The court felt the possibility of prejudice and confusion from an exploration of the tax question would far exceed the probative value of such evidence, particularly because the reference appears to be to property rather than income taxes. The court offered to give a corrective admonition or instruction to the jury explaining taxes were not at issue. PSA refused to have the jury so instructed. PSA has not shown any prejudice, nor has it shown any reason why the admonition or instruction would not have rectified any prejudice which may have resulted. The contention is thus meritless.

PSA argues the court erred in submitting BAJI No. 15.00 to the jury.² The airline claims the error may have allowed the Irwin family members to recover for more companionship and financial support than the decedent would have been able to physically or financially give. However, the evidence as to damages was presented to the jury in terms of the value of what the decedent would have produced, had he lived, as opposed to the loss incurred by each family member. Thus, the giving of BAJI No. 15.00 was not prejudicial to PSA.

The judgment is affirmed.

Work, J., concurred.

CONCURRING:

STANIFORTH, Acting P. J.

I concur in the sound reasoning and result reached by my brethren but would reason to the same conclusion by a different route. In my opinion it is not necessary to reach the *res ipsa loquitur* issue, because PSA is precluded from appealing the issue of liability in this case. Counsel for PSA made an admission of liability in open court before the jury after it had affirmed that position in chambers to the court. PSA cannot renounce those significant acts here.¹

The majority would distinguish **Horn v. Atchison T. & S.F. Ry. Co.**; I can find little difference between the statement made by counsel in this case and the statement made by counsel in Horn: "I am going to ask you to pay him some money. I will, however, contend now and throughout the case and in my final argument, legally we don't owe the plaintiff a dime. Nevertheless, we want you to give him some money." The Supreme Court found "Defense counsel's unequivocal invitations to a plaintiff's verdict can only be construed, in legal significance, as a concession of liability...in spite of earlier formal denials of such liability." In **Bank of America v. Lamb Finance Co.**, the Court of Appeal said "In the absence of fraud, the admissions of an attorney in open court are binding upon the client."

The majority states "the admission here lacks the gravity of a complete relinquishment of rights on the issue of liability, particularly in light of the

inappropriateness of a denial of liability at a trial for damages and PSA counsel's refusal to abandon the appeal." (Ante, p. 414.) Considering the pending appeal on the summary judgment motion, any comment on liability was surplusage in the damages trial.

PSA seeks the best of all worlds. By an open court admission of liability, PSA put its most sympathetic face before the jury. At the appellate level, it would deny the admission and seek to avoid liability entirely. It is a fair inference these admissions were made as calculated trial tactics designed to keep the damage award as low as possible. The doctrine of estoppel precludes PSA from asserting this contention on appeal. As a general rule a party relying on a specific ground of defense in the trial court will not be permitted to assume an inconsistent position in the appellate court, and a criminal defendant may not mislead the court and the jury by taking one position at trial and another position on appeal. To adopt a different rule in this a civil case confuses and unsettles the law, unfairly disadvantages the plaintiffs. It encourages a capricious self_ advantageous change in position. The damage award judgment was determined, presumably based on counsel's admission, proof and argument. PSA should not be allowed to reap the benefits from this judgment and yet attack it on appeal.

A petition for a rehearing was denied July 27, 1982, and appellant's petition for a hearing by the Supreme Court was denied September 30, 1982. Kaus, J., did not participate therein.

FOOTNOTE 1. Her contention is based on PSA's opening statement and colloquy:

"Mr. DeMers (counsel for PSA): Judge Tuttle, ladies and gentlemen of the jury, as you can well imagine, defending a case such as this makes a lawyer earn his keep. That family you see in this courtroom, Antoinette Irwin, and I say 'hello' to them and the children, is a lovely family. Cast anything from your mind that I will ever attack them in any way. I'm not going to do it. I wouldn't do it. They are and were a very nice, warm, healthy, all_ American family, and an accident occurred in which their father, her husband, their breadwinner was taken from them, but life doesn't stop there. It goes on and obviously, because of the liability in this case, which we have admitted [*italics added*] we could not settle this case.

"Mr. Thielen (counsel for Irwin): Excuse me your Honor. I have to object to that as a misstatement of the facts of the case, and I would like to approach the bench on the second part.

"The Court: We are now meeting in chambers at the request of the plaintiff.

"Mr. Thielen: I apologize for interrupting Mr. DeMers' argument.

"Mr. DeMers: Don't apologize, that's fine.

"Mr. Thielen: The defense has not admitted liability, and it's a very different situation where they stand up and fess up to their liability. This case plaintiffs brought on for a motion of summary judgment which was opposed vehemently and plaintiffs were successful. If the defense would like to admit liability, we'll accept that admission at this time.

"The Court: Maybe I missed what we're talking about. Did you state the defendant has admitted liability?

"Mr. DeMers: I'll admit liability in this case.

"Mr. Thielen: Yes?

"Mr. Harney (co_counsel for Irwin): Then, you abandon the appeal?

"Mr. DeMers: I don't abandon the appeal.

"Mr. Thielen: They have admitted liability, that's fine.

"Mr. DeMers: Do I have the authority to admit liability?

Mr. Harney: You did in front of the jury.

"Mr. DeMers: I'll admit liability. I have no quarrel with admitting liability."

FOOTNOTE 2. BAJI No. 15.00 says: "Although there are several plaintiffs in this suit, the case of each is separate from and independent of the other. The instructions govern the case as to each plaintiff so far as they are applicable to him, unless otherwise stated. You will determine each plaintiff's case separately, the same as if you were trying different lawsuits."

FOOTNOTE 1. The trial court stated "On the record we have had an admission of liability which is a statement to the jury, defense admits liability?" Counsel for PSA returned to the courtroom and stated in front of the jury "at the end, you will have to make an award to this lady. There is no dispute as to that, and the award will be fair and reasonable to Mrs. Irwin and her family, and fair and reasonable to my client." (Italics added.)

Roberts v. Trans World Airlines (1964)
225 Cal.App.2d 344, 37 Cal.Rptr. 291

JOHN ROBERTS, Plaintiff and Appellant, v.
TRANS WORLD AIRLINES, Defendant and Respondent.

OPINION

Plaintiff, a passenger on a scheduled plane flight, sues the airline as the result of a landing accident. He appeals after a defense verdict and denial of his motion for new trial.

At the trial plaintiff relied upon the inference of negligence drawn from the res ipsa loquitur doctrine, particularly as expressed in passenger actions against carriers. The airline produced evidence designed to show exercise of care on its part and to establish a "non_negligent" explanation for the accident. The jury were fully instructed on res ipsa loquitur. With one minor exception, no procedural errors or mishaps are urged. There is no claim that the jury's verdict might have been based on a negative finding of damage. The issue on appeal is presence or absence of substantial evidence to support the jury's implied finding that the res ipsa loquitur inference had been overcome.

Plaintiff was a passenger on a Trans World Airlines jet plane leaving Los Angeles at 1:30 p.m. April 29, 1960, and scheduled to arrive in Kansas City at 6 p.m. The jet, a Boeing 707, had a passenger capacity of 117 and carried a crew of eight, consisting of four officers and four stewardesses. On this particular flight the plane carried a full crew plus 101 passengers and a cargo of air freight. Captain Eugene Gerow, a transport pilot of extensive experience, was in charge of the plane. At the time of the Los Angeles departure, the Kansas City weather forecast called for rain and for a visibility ceiling between 1,500 and 2,000 feet. By the time the flight arrived in the vicinity of Kansas City, the weather had deteriorated and the ceiling was only 500 feet. This condition required a "blind" approach by instrument landing system (abbreviated ILS). The flight plan designated St. Louis as an alternate destination if unsafe conditions prevented a landing at Kansas City.

The Kansas City airport is bounded on three sides by the Missouri River. Runway 18 was 7,000 feet in length and was the only runway equipped for an ILS

approach. The runway lay in a north_south direction, but an ILS approach could be made only from the north. A levee was situated between the south end of the runway and the Missouri River. There were markers 5.5 and 1.5 nautical miles from the north edge of the runway. The wind at the time of the landing was shifting between north and east, its velocity varying between 6 and 12 knots. Normally a plane would land against the wind. Since the ILS approach necessitated a landing from north to south, this particular flight would have to land with the wind. TWA landing regulations for this type of plane, as approved by the Federal Aviation Agency, provided at that time that the landing on this runway should not be attempted with a tailwind in excess of 10 knots per hour. Minimum landing speed for this particular plane was 135 knots. The plane was equipped with four stopping mechanisms for ordinary use in landings:

(1) Flaps, or downward extrusions from the trailing edge of the wing.

(2) Spoilers or speed brakes, which are extensions upward from the top of the trailing edge of the wing. These are four in number, one inboard and one outboard on each wing. Their primary function is to change the contour of the wing, thereby creating a drag against air resistance.

(3) Hydraulic brakes on the eight wheels of the main landing gear. These brakes are equipped with an antiskid mechanism based upon the factor that maximum braking power is achieved just at the point before the wheel commences to skid. When the brakes are applied to the point where the wheels commence to skid, this electrical mechanism causes the brake to release automatically. The hydraulic pressure exerted through the brake pedal then reapplies the brakes so that the wheel is constantly at or near the skid point. Thus the brakes are kept in a cyclical action which maintains the maximum efficient friction load on the wheels. Annunciators or flashing lights on the instrument panel demonstrate the cyclical braking and releasing action. These annunciators are located above the heads of the pilot and copilot, being monitored by the flight engineer. When the annunciators indicate that the wheels are skidding slightly or only occasionally, the maximum braking effect is being achieved.

(4) Reversal of the direction of the engine jet flow. Simultaneously with the application of the brakes with his foot, the captain places the jet engines in "reverse thrust" by pulling individual thrust levers, one for each engine. These levers are mounted on a single standard and are physically manipulated by the left hand alone. The levers may be pulled to a position of maximum reverse thrust, where the full power of the jet engines is applied in reverse, or to a position of normal reverse thrust, which achieves about 90 per cent of the power of the maximum position. Maximum reverse thrust overheats the engines and is used only in emergencies. The four jet engines are numbered consecutively from One to Four and from left to right. Thus engines One and Four are the outboard engines, while engines Two and Three are the inboard engines.

Additionally, there was an emergency braking system referred to as the "air bottle." By releasing a compressed air container, the pilot could cause all the wheels to lock and put the plane in a skid. This system is used only in emergencies, because the pilot loses directional control of the plane when it skids.

When the April 29 TWA flight approached Kansas City, it was placed under orders from the Kansas City approach control until it was cleared for landing. Approach control kept the plane circling for 15 or 20 minutes at approximately 2,500 feet of elevation until it was cleared for landing. At that point it came under control of the Kansas City airport tower. The plane crew requested and received frequent wind reports from the airport control tower. When the plane was near the outer marker (5.5 nautical miles from the airport) the tower reported a 12_knot wind from the north, which was in excess of the maximum permissible tailwind. The plane, however, was not "committed to land" at that time. As Captain Gerow continued the approach, he received additional wind reports. At the 1.5_ mile marker, the wind had dropped to 10 knots. Since all operating conditions were at or above those specified for safety, Captain Gerow decided to proceed with the landing. The plane broke through the ceiling about 3,000 feet from the approach end of the runway. From this point onward, good visibility existed. The runway was wet, but there was no standing water on it. The jet touched down 400 feet from the beginning of the runway. At that point the actual tailwind velocity was 8 knots, 2 knots below maximum. Speed at point of touchdown was 138 knots, a normal speed and slightly above the minimum permissible speed. Flaps having been extended during the descent, the speed brakes or spoilers were raised immediately upon touchdown. Captain Gerow applied the wheel brakes. He noticed that the pedal pressure was "soft and rubbery" as though the pedal were "dancing." This action indicated that, because of the wet and comparatively slick runway, the anti_skid mechanism was releasing and resetting the brakes at very fast intervals. The annunciators likewise were blinking rapidly. Captain Gerow "backed off" on the pedal to reduce the skidding and secure more braking power. According to his testimony he was achieving the maximum possible braking effect on the wet runway. There was no brake failure; rather, the slick condition of the runway prevented the brakes from exerting the stopping power available on a dry runway.

Simultaneously with application of the wheel brakes, the captain commenced the process of placing the engines in normal reverse thrust position. Engine Nos. One, Two and Three went into normal reverse thrust immediately, but engine No. Four, the outboard engine on the right wing, did not go immediately into reverse because the thrust lever stuck. To balance the thrust of the plane, Captain Gerow placed engine No. One in an idling position, then tugged on No. Four lever until it went into reverse thrust. The time lag caused by the sticky lever

was about five seconds. Within 8 to 10 seconds after landing, all four engines were in normal reverse thrust.

The plane continued down the runway for another 8 to 10 seconds. At that point, with approximately 3,500 feet of runway remaining, the plane speed was between 90 and 100 knots, and Captain Gerow realized that he was not getting adequate deceleration. He placed the engines in maximum reverse thrust, but this step did not accomplish enough speed reduction. With 1,400 feet of runway remaining, Captain Gerow decided that it was not possible to bring the plane to a stop within the length of the runway and that he would have to turn to one side in order to avoid crashing into the levee at the runway's south end. He commenced to search for an appropriate turnoff point. Rain had turned the earth soft and muddy. With 400 feet of runway remaining, Captain Gerow turned the plane off the paved runway and onto the soft earth. Just before its turn, the plane was traveling at about 40 knots (approximately 46 miles per hour). The plane traveled 170 feet across the soft earth, slowing constantly all the while. The suction point of the jets threw mud up against the windows. At its stopping point the wheels sank a foot into the mud. Various crew members and passengers testified that the stop was quite smooth. Nothing had been thrown around inside the passenger area or the cockpit. None of the passengers, including plaintiff, reported any injuries. According to his testimony, plaintiff had been thrown forward and had struck his head on the seat in front of him, discovering the next day that he had suffered a whiplash injury.

Asked to explain the plane's failure to achieve adequate speed reduction within the length of the runway, Captain Gerow testified: "Undoubtedly something associated with the weather. ... I am practically convinced that it was some kind of a sheer [sic] wind coming in off the river, quartering tail wind angle blowing across from the river. Now, the tower is on the other side, so to speak, from the river and they would be the last to get a wind shift like that. ... It is more than a gust, it would be called a sheer [sic] condition, a small jet stream of air would be traveling along on its own, so to speak, down the river."

Defendant does not suggest that *res ipsa loquitur* is inapplicable to this kind of accident involving a scheduled airliner. The doctrine creates an inference that the accident was caused by negligent conduct of the defendant, imposing upon the defendant the obligation of going forward to rebut the inference. The defendant's evidence need only offset or balance the inference of negligence, and he need not prove himself free from negligence by a preponderance of proof. A defendant has alternative methods by which to rebut the inference. First, he may offer a satisfactory explanation of the accident, that is, a definite cause for the accident in which no element of negligence on his part inheres. Alternatively, he may show such care in all possible respects as necessarily to lead to the conclusion that the

accident could not have happened from want of care, but must have been due to some unpreventable cause, although the exact cause is unknown. In a suit by a passenger against a carrier, the latter must show exercise of the utmost care and diligence, and adequacy of the defendant's rebuttal proof must be measured accordingly.

Res ipsa loquitur in the hands of a jury is one matter; in the hands of an appellate court, another. Whether the inference of negligence is rebutted by the defendant's evidence is a question of fact for the trier of fact. Appellate judges cannot substitute their own "verdict" for that of the fact trier. If the record discloses substantial evidence in rebuttal of the res ipsa loquitur inference, the verdict of the jury must be upheld. The jury, however, cannot arbitrarily disregard the inference of negligence; their instructions are to find for the plaintiff if the defendant fails to meet or balance the inference. Where the res ipsa loquitur inference is properly drawn, an appellate court will set aside a defense verdict if there is no substantial evidence to rebut the inference.

The appellate court's approach to its task of limited review is described in **Gerhardt v. Fresno Medical Group**, 217 Cal.App.2d at page 361: "The first question that naturally comes to mind is what constitutes substantial evidence? The term is difficult to define as an isolated concept because the evidence to be weighed as well as the issue which the evidence is professed to prove is always peculiar to the individual case. The United States Supreme Court has said that 'Substantial evidence is more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.' (**Consolidated Edison Co. v. National Labor Relations Board**, 305 U.S. 197, 229) California courts have approved the reasonable_mind standard in testing the sufficiency of evidence. For example, in the early case of **Houghton v. Loma Prieta Lumber Co.**, 152 Cal. 574, the Supreme Court, in discussing the term 'substantial evidence' uses the test of whether the evidence would appeal to a fair and reasonable mind."

Pointing out that Captain Gerow was an expert transport pilot whose opinion was entitled to weight, defendant puts forth his opinion testimony of a "shear wind" or "jet stream" as substantial evidence which the jury, as trier of fact, could have accepted as an explanation for the accident. In order to meet or overcome the inference of negligence, an explanation must offer a definite cause for the accident. In support of its argument that Captain Gerow's opinion constitutes substantial evidence. Without pausing for extended discussion of these decisions, we simply point out that in each of them the court found substantial evidence to support the finding that the defendant had exercised care in all respects, notwithstanding a speculative coloration in some of the defense evidence. In none of these cases was

the court concerned, as we are at this point, with adequacy of the evidence to satisfy the "definite cause" concept, available as an alternative method of meeting the *res ipsa loquitur* inference.

The demand for definite causation must be observed with some literalness. An explanation drawn out of thin air, so to speak, will not do. The defendant must offer tangible evidence that the accident was caused by an agency beyond his control. Opinion testimony, particularly in scientific or technical fields, may run the gamut from the concrete to the abstract, from the actual to the remotely possible. It may be expressed as a scientific certitude drawn from known facts, or only in terms of refined guesswork based upon partial data or assumptions. The problem is not one of admissibility, but of the opinion's weight in counterbalance to the gravitational force of the *res ipsa loquitur* inference. Opinion testimony resting upon speculation, or even upon a balance of probabilities, is entitled to no weight at all against direct evidence.¹ Direct evidence may itself be outweighed by the circumstantial force of the *res ipsa loquitur* inference.

Since the *res ipsa loquitur* inference is permitted to outweigh direct evidence, while a conjectural opinion may not, then in all logic the conjecture cannot offset the inference. The victim of an accident which does not ordinarily happen in the absence of negligence should not lose the benefit of inferred negligence simply because the defendant hypothesizes some agency over which he has no control as a possible cause of the accident. If the law's demand for a definite explanation on the part of the defense is to have any meaning at all, then the court, either on motion for new trial or on appeal, may not leave adequacy of an explanation entirely in the jury's hands, but must set the balance right by rejecting a speculation which the jury may have mistaken for a definite explanation.

Captain Gerow's "shear wind" opinion was, at worst, nothing but theory, conjecture; at best, an appraisal of possibilities without any basis in the known facts of the Kansas City accident. His statement that he was "practically convinced" of the wind explanation was only a verbalism cloaking an educated guess. A reasonable mind could accept it as a possible explanation but not as a definite explanation. Thus it possessed no weight to balance the *res ipsa loquitur* inference. The defense verdict must find evidentiary support elsewhere in order to stand.²

Much of defendant's evidence was aimed at demonstrating the exercise of care in all respects on the part of the airplane crew members. This evidence tended to show that the landing conditions conformed to permissible standards approved by the Federal Aviation Agency; that tailwind velocity was at or under the 10_knot maximum; that touchdown occurred within the first 400 feet of runway, although 1,500 feet was allowed; that the temporary stickiness of one jet reversal control

was a normal phenomenon on this aircraft; that the five-second delay in the application of reverse thrust to all four engines did not contribute to the accident in any event; that the pilot was justified in not resorting to maximum reverse thrust earlier in the landing process; that there was no failure of the wheel brakes; that the antiskid mechanism achieved maximum stopping power possible on the wet runway; that the runway, while wet, was not unusually so, and had no standing water on it; that Captain Gerow's action in turning the plane off the runway was a skillful improvisation which saved plane and passengers from more serious consequences; that the plane actually came to a smooth stop on the muddy field. All this was substantial evidence which supported the jury in rejecting inferred negligence in the actual process of the landing and in the mechanical condition of the aircraft.

Defendant, however, had the burden of going forward with evidence that it exercised care as to all preventable causes of the accident. Its burden was augmented by the passenger-carrier relationship, which imposed on it the duty of exercising the utmost care. Evidence that the airline employees conformed with standard operating procedures did not cover all possible causes of the accident. The procedures themselves were a possible cause. The burden of care rested not only on the pilot and crew in conforming to established standards, but also on the carrier itself in the formulation of these standards. The carrier's own rules did not as a matter of law fix the standards by which its negligence was to be determined.

TWA's operating manual for the Boeing 707 permitted a landing on Kansas City runway 18 with a maximum tailwind of 10 knots. The evidence demonstrates that the relative wetness of the runway lowered the speed at which the antiskid mechanism was activated, thus materially extending the space requirements for the plane's landing roll. The tailwind allowance was the same for a dry or wet runway. Conceivably, care in formulation of the standard would demand a lower tailwind maximum for wet or slippery runway conditions. Under these circumstances, the soundness of the landing regulations was an issue in the case. Absence of evidence of care in formulating this operating standard would be a gap in the line of defense against inferred negligence.

This landing regulation had been submitted to and approved by the Federal Aviation Agency. Federal law empowers the Administrator of the Federal Aviation Agency to adopt regulations and minimum standards in the interest of safety in air commerce. (49 U.S.C. § 1421.) The agency's regulations require that each air carrier maintain an approved flight manual for each type of transport airplane it operates. (14 Code of Fed. Regs., §§ 40.50, 40.53.) "Approved" means approved by the Administrator of the Federal Aviation Agency. (Ibid., § 1.1.) The manual must contain "landing and take-off minimums" for each airport. (Ibid., § 40.51(a)(7).)

Compliance with a safety standard fixed by law or administrative regulation is a fact which a jury may weigh in determining the issue of care. Safety regulations of the Federal Aviation Agency have been regarded by the courts as impartial and authoritative criteria for judging the conduct of persons covered by these regulations. While the TWA operating manual for the Boeing 707 did not have the status of a governmental safety regulation, it had been submitted for expert examination and review by the agency delegated by law to achieve safety in air transport. Federal Aviation Agency approval of the TWA flight manual, and specifically the maximum tailwind regulation, provided the jury with an authoritative standard by which to measure not only the affected conduct but also adequacy of the regulation itself. Federal Aviation Agency approval constituted substantial evidence which the jury could accept as evidence of care in the formulation of the company's operating standard.

Carried to an extreme, the demand for evidence of care as to all preventable causes of the accident would call for an examination of almost unlimited causal possibilities, including those which hindsight alone might eliminate. Our examination of the trial record leads us to conclude that the defense fairly and candidly produced an array of evidence reasonably designed to demonstrate that it had not been negligent in any respect. There was substantial evidence to justify the jury in concluding that the inference of probable negligence had been balanced or overcome.

Judgment affirmed.

FOOTNOTE 1. " 'A judgment cannot be based on guesses or conjectures. [Citation.] And, also, "A finding of fact must be an inference drawn from evidence rather than on a mere speculation as to probabilities without evidence. A majority of chances never can suffice alone to establish a proposition of fact, since the slightest real evidence would outweigh all contrary probabilities." ' "

FOOTNOTE 2. Contrast aviation accidents caused by definite (rather than conjectural) weather conditions, such as downdrafts. The latter decisions usually involve "straight" negligence proof rather than *res ipsa loquitur*, pivoting on such factors as foreseeability of the adverse weather condition and availability of precautionary steps.