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Learning from air disaster

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The crash of a Delta L-1011 jumbo jet at Dallas-Fort Worth International Airport last week raises an important question affecting airline safety: When should caution take precedence over schedules and profits?

Let's first go back to the crash. On the evening of Aug. 2, Delta 191, with 161 aboard, was on its final approach. Severe thunderstorm activity was surging around the airport and much of central Texas, the type of summer storms that produce violent winds, lightning and thunderheads.

Such storm conditions often create a dangerous phenomena, little understood until the past three years, called wind shear. Planes landing or taking off encounter strong downdrafts from storm clouds; at first, these drafts give additional lift to the aircraft by increasing the flow of air under the wings. Suddenly, the powerful downdraft shifts direction: Lift is greatly reduced and, at the same time, downdrafts press the aircraft toward the ground.

Wind shear can be deadly to aircraft on final approach or just after takeoff: It is considered aviation's greatest danger. The Delta crash is the 29th accident ascribed to wind shear in the past 21 years. The most appalling accident caused by wind shear occurred in 1982 at New Orleans where a Pan Am plane, with 145 aboard, was literally run into the ground by storm winds.

During the past two years, many airports, including the mammoth Dallas-Fort Worth complex, have installed wind shear warning devices. Such devices are not always effective nor can they predict when the violent bursts of air will come; in fact, at the time of the Delta crash, wind shear equipment showed no danger. Pilots must often rely for warning on reports of aircraft that have just landed or taken off and, as in the case of the crash at New Orleans, this type of warning is not always heeded.

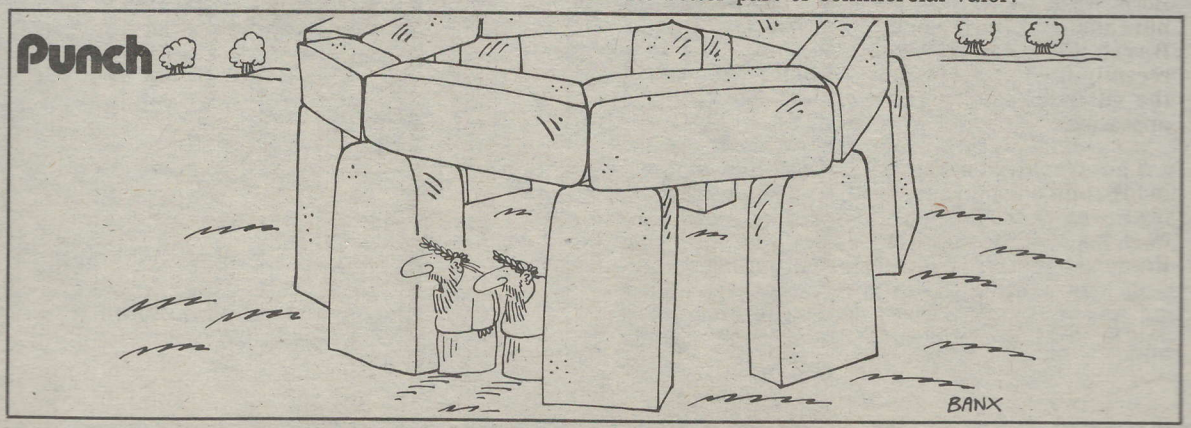
Many aviation experts doubt whether a 100% effective wind shear warning system can be developed since these currents are of extremely short duration, coming in what are called "microbursts" and may occur just when a plane is touching down — that is, when warning would be too late.

Now, back to the question of safety. There is one effective way to avoid most, though not all, wind shear situations. That is simply to avoid landing or taking off during thunderstorms or conditions of violently disturbed air. Many is the time I have been aboard storm-tossed airliners, wondering why on earth our lives were being risked trying to land in the middle of a tempest when we could just as well be dropped off at a less convenient but infinitely safer spot. Somehow, the choice between being bused in from, say Albany, or hitting the ground and burning is not difficult to make.

Why, then, do airliners take such risks with their passengers, crews and expensive equipment? The answer is, of course, money and competition. Dallas-Fort Worth is a major airline connection point for the entire southwest. If Delta 191 had been late or had it diverted elsewhere, passengers aboard would have missed connecting flights and those waiting on the ground to go onward to the west coast would have been forced to take another airline. A great deal of money would have been lost and hundreds of valued customers inconvenienced.

Ironically, Delta, an excellent airline, is noted for always selecting the smoothest routes when flying, so that its aircraft are often followed by other lines' planes. In the present case, however, commercial and passenger service urgency took precedence. Every airline leaves the decision to land or take off to the pilot; nevertheless, many crews are under considerable pressure to maintain schedules and make connections. In today's highly competitive climate, where profit margins are thin, airlines cannot afford to dump hundreds of irate passengers at some distant locale. Nor can they tell passengers, "it was too dangerous to land."

Still, I think that the government should make a rule that no aircraft land during violent thunderstorms. As a passenger, I would not mind circling or landing elsewhere, irritating as that may be. Passengers should be made to understand that air travel's most dangerous moments occur during storms; lives, in this case, are more important than meeting schedules. Until devices can be perfected that give dependable real-time warning of wind shear activity, operational caution should be the better part of commercial valor.



"I wish someone would invent wall insulation."