

Premeditated Stupidity

A planned mistake is **something worse**



U.S. AIR FORCE

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The U.S. Air Force's primary jet trainer in the 1970s and 1980s

We aren't as smart as we think. I need periodic reminders of that fact, but even then, I seem to fall into the trap again. Fortunately, my biggest mistakes are ancient history. (Yes, I'll share those with you shortly.)

As a unique demographic, it seems we pilots never run out of ways of to be, well, stupid. I think the best way to learn how to avoid that is to examine the actions of others who clearly did not. It may be worth a laugh — "I would never do that!" — but keep in mind you may be

tempted to do something along the same lines. You must always be on guard for the next stupid thing.

There is no shortage of stupid in the pilot pool; it seems to be a phase some of us go through, including me. Luckily, I got my dunce cap in 1981, long before the advent of cellphone cameras and Flight Operational Quality Assurance (FOQA) programs. The other advantage that I had was we lieutenants in the U.S. Air Force were expected to be stupid back then. (It was part of our bloodthirsty killer training.) The service, fortunately,

grew out of that mindset. But before I start throwing stones from my glass house, let me fess up about my worst. Then we can move on to more recent examples and consider a way of surviving it all.

The 90/270

It is a trite saying among some pilots: "I feel the need, the need for speed." I've flown supersonically a few times and, honestly, it was a bit of a letdown. In a well-designed, Mach+ airplane,

the only indication that you are leaving your own sound behind you is the indication on your Mach meter and perhaps a “blip” on the altimeter when the shock wave passes the static ports. Yawn. So, when I was 25 years old my need wasn’t speed but Gs.

I filled that with the Cessna T-37B “Tweet.” How did I come into possession of a twin-engine, fully aerobatic jet? That’s a story in and of itself. But briefly, it involves the Vietnam War. At its height, the war required the U.S. Air Force to produce about 2,000 pilots a year. Airplanes were not as reliable as today’s, and the service tolerated a lot of accidents back then. The airlines vacuumed up any Air Force or Navy pilots finishing initial commitments and you ended up needing a lot of T-37 aircraft to train their replacements. Meanwhile, B-52 bombers and KC-135 tankers flew heavy rotations in Southeast Asia.

When the war ended, the Air Force chopped pilot production to only 500 pilots a year and flying time in the B-52 and KC-135 dried up. In a rare act of brilliance, the service sent excess trainers to B-52 and KC-135 bases to “season” copilots. I ended up at Loring Air Force Base, Maine after a major drug bust sent half the copilot force to the stockades. Most of my crop of copilot-students didn’t want the extra flying time, so whenever I felt the need for Gs, I had my own T-37 at my disposal.

I ended up doing most of my T-37 flying with Bernie, another KC-135 copilot. His only goal was to get enough flying time to upgrade to aircraft commander or to leave for the airlines. Our standard routine was to depart on a Thursday, fly anywhere for a few days, and return by Sunday night. Most copilots went someplace warm, sat for a few days, and came home. Bernie insisted on logging 6.5 hr. each day, the maximum allowed by regulation for these kinds of flights. We would fly someplace, and then burn up the traffic pattern until at minimum fuel. It didn’t take long before one touch-and-go landing after another got boring.

We were back at Loring after four days of flying and had about 30 min. of fuel left. I flew a standard overhead pattern to a touch-and-go and gave Bernie the airplane. After his touch-and-go on Runway 19 he climbed to about 500 ft. and told the tower, “Request a 90 right, 270 left, touch-and-go Runway 1.”

“Approved as requested,” came the response.

Bernie snapped the airplane into a 90-deg. bank roll to the right and pulled

about 3 Gs. Things were happening so fast I could only watch, glued by the G forces into my ejection seat. Once perpendicular to the runway, he reversed his roll for a climbing turn to the left. A few seconds later we were on final to Runway 1. He landed, pushed the power up, took off again and said, “Your airplane.”

I pointed the nose up and climbed to 500 ft. and keyed the mike: “Request 90 left, 270 right, touch-and-go Runway one niner.”

And again, “Approved as requested.” And that’s how we spent the rest of our fuel. Nobody asked how it was we could fly from Portsmouth, New Hampshire, to home base, and still have enough gas for eight touch-and-go landings and one full-stop landing. Those 90/270 patterns happen fast.

Of course, this wouldn’t be much of a story if it ended there. It didn’t. Over the next few months we repeated the low-altitude G-fest, gradually increasing the initial pull to 5 Gs and lowering the starting altitude to just under 100 ft. It never crossed either of our minds that perhaps what we were doing was a little dangerous (besides violating half a dozen Air Force regulations). Then one day we discovered the triangular runways at McGuire Air Force Base, New Jersey. So, instead of doing a 90/270, we could fly a very tight 240-deg. continuous turn from one runway to the next. We showed up early Sunday morning to an empty pattern and calm winds.

Yet again, “Approved as requested.” After the third or fourth pattern, we didn’t even have to ask. It was a blast. Finally, it came time to end our fun, we were at “bingo fuel.”

“Gear down, full stop,” I said after leveling the wings after our last 240-deg. turn from one runway to the next.

“Clear to land,” tower said. “And on behalf of everyone in the tower, thanks for the air show. You guys never once climbed above the height of the tower. It was great.”

We were rather pleased with ourselves, especially when we pulled into the transient ramp and saw five line guys standing at attention, clapping. “Got to like that,” I said. Bernie took off his helmet and had a huge grin. But then the smile disappeared along with the line guys as a blue and white sedan pulled up with a colonel in the driver’s seat. He got out of the car and glared at us. I was in the left seat, so his gaze was fixed on me. I unstrapped

from the ejection seat, took off my helmet, and stepped out of the jet.

Bernie and I faced the McGuire AFB wing commander together, two lieutenants getting read the riot act from a colonel. Most of what he said focused on professionalism and an Air Force prohibition on aerobatic flight that would endanger the public. But he also mentioned the possibility of an engine failure while we were that low to the ground and outside of the ejection envelope. I hadn’t thought about that. Bernie took the left seat for the ride home and got the first 90/270 in the pattern. His turn was to the right, so it was me on the bottom side of the airplane as we pulled our 5 Gs just 100 ft. off the deck. When it was my turn, I managed to grunt out a sentence under the G load with Bernie in the left seat just above the tree tops.

“If we lose the left engine right now,” I asked, “what happens?”

“We both die,” he said. “But me first.”

For Bernie’s pattern he tried something new. At 100 ft. off the deck, wings level, he pulled 5 Gs straight up. The Gs bled the speed off nicely and we found ourselves at 150 kt., pattern altitude, and ready to let the nose fall to one side and fly our 90/270 at altitude. “Better,” I said.

Bernie and I followed each other around the Air Force for a few years. We both ended up as squadron commanders who didn’t put up with stupid pilot tricks from any of our pilots. He retired at about the same time as me and started a small business in D.C. I’ve seen him a few times over the years and we never talk about this, our brush with stupid pilot tricks. But I am always on the lookout for the next stupid thing.

The Pinnacle of Stupidity

On Oct. 14, 2004, two Pinnacle Airlines pilots flew their Canadair Regional Jet CRJ-200LR on a deadhead leg from Little Rock National Airport, Arkansas (KLIT), destined for Minneapolis-St. Paul International Airport, Minnesota (KMSP). It seemed to them the perfect opportunity to join the rumored “Four One Oh Club,” reserved for the few members of the airline who had ever made it to the aircraft’s service ceiling of 41,000 feet.

They succeeded, but they also made news as two reckless pilots who didn’t understand the aerodynamics of high-altitude flight or, it seems, the basics of how to recover from a stall. For their trouble, they were nominated for the 2004 Darwin Awards, given

NTSB



Pinnacle Airlines Flight 3701 wreckage

for stupid acts that serve to “thin the gene pool.”

The airline had flight-planned the ferry flight at 33,000 ft. But just 5 sec. after takeoff the pilots began the first of several pitch-up maneuvers that at one point caused stick shaker and pusher activations. These maneuvers included large rudder and aileron inputs and continued through 25,000 ft. where their vertical velocity briefly reached 9,000 ft. per minute. At this point they asked for and were given clearance to FL 410. When asked about this, the captain told air traffic control, “We don’t have any passengers on board, so we decided to have a little fun and come on up here.” In less than 3 min., the aircraft ran out of speed.

In the next few minutes the pilots mishandled several stick shaker and pusher activations with improper stall recovery procedures and continued to increase pitch to the point the aircraft entered an aerodynamic stall. The aircraft rolled sharply, up to 82 deg. of bank, finally forcing the nose down. The pilots managed to recover from the upset at 34,000 ft., but not before both engines flamed out. Then they mishandled the windmilling engine relight procedure, which would have required an airspeed of at least 300 kt. Their speed had been as low as 150 kt. and never exceeded 236 kt. Once they descended low enough for an APU-assisted start, both engines were frozen at 0% RPM.

With less than a minute to ground impact, the pilots made a conscious decision to avoid a housing area, thereby limiting the fatality count to two.

This is an incredibly sad story that inspires at least one of two reactions. To the flying public, it creates a question as to whom are they trusting their lives? To professional pilots, such histories evoke a “Those guys were idiots” reaction followed by, “I would never do that.” Fair enough, but the lessons don’t stop there.

The Pinnacle pilots clearly didn’t understand a fact known by most experienced high-altitude aviators: Just because you have enough thrust to make it to an altitude doesn’t mean you can hold that altitude. Engine thrust limits and warm outside air temperatures can erode airspeed margins very quickly.

Once that aircraft stalled, the pilot flying failed to positively break the stall by aggressively lowering the angle of attack. He was, perhaps, attempting to minimize altitude loss as his stall recovery training taught him. But their low speed at high altitude with failed engines produced one unpublicized final surprise. The high-pressure turbines of the CRJ’s engines had close-tolerance seals to improve efficiency. When the engines flamed out, the huge difference in temperatures caused some parts to contract faster than others, resulting in the engines seizing, a phenomenon known as “core lock.” The only way to prevent that is to keep the turbines spinning, by windmilling them at a very high airspeed. The pilots didn’t know that; they’d never been so instructed. The appropriate manuals have since been modified to include the immediate action

caution: “Failure to maintain positive N2 may preclude a successful relight.”

There are broader lessons from that and other accidents for the entire pilot population, even those not operating turbofan engines manufactured with such tight tolerances. Chief among these is this: You don’t know everything you need to know when operating outside of “normal” conditions. If you’ve never had the airplane in a known flight regime, it’s in your best interest to get back into a known operating envelope as soon as possible.

While the Pinnacle pilots were out for what they openly stated was “a little fun,” many stupid pilot tricks are part of a game of demonstrating “airmanship” that ends up doing the opposite. Pilots joke that the two most dangerous words in aviation are “Watch this . . .” but there are variations.

‘Have You Already’ (Been Stupid)?

On Feb. 14, 2010, a pair of Cessna 550B Citation Bravo pilots were on an empty leg from Praha-Ruzyne International Airport, Czech Republic (LKPR), destined for Karlstad Airport, Sweden (ESOK). The copilot was the more senior of the two and was the pilot flying (PF). The pilot in command was the pilot monitoring (PM). While the airplane was climbing into the night sky, the PM said, “I didn’t fly night for a long time.” The PF asked, “Have you already experienced a roll during night?” She answered, while laughing, “Yes, really.”

A few minutes later, as they were still in the climb to FL 260, the PF rolled the



Cessna 550B Citation Bravo OK-ACH

VACAV KUPDELA

aircraft left and right, perhaps playfully. The PM said, "Let's go, we are high enough, you nettle me, come on." The PF said he would wait for a higher altitude. Once at FL 270, the nose was raised to a pitch angle of 14 deg. and rolled to the right. After 4 sec., the aircraft was inverted. In another 4 sec., the aircraft rolled another 90 deg., but its pitch decreased to -85 deg. and the airplane impacted the ground nearly vertically.

Subsequent investigation revealed the pilots had never been trained in aerobatics but had flown aerobatics in the past with other company airplanes. It was a moonless night and the aircraft's artificial horizon was not designed for inverted flight. Up until the point the roll was initiated, there were no indications of any technical problems.

As a pilot who has been trained to fly aerobatics, I can't imagine doing so at night. Over the years I've heard stories of pilots who have taken their transport category aircraft into the realm of aerobatic flight and when I protest, they remind me of legendary test pilot Alvin "Tex" Johnston's daytime barrel roll of the Boeing 707 prototype over Lake Washington on Aug. 7, 1955. Though I am tempted to say, "He was a company test pilot paid to take risks and sell airplanes," I don't. I think the better retort is, "Two stupid acts don't make a smart act."

A pilot who feels shackled by the constraints of flying passengers for a living may be at highest risk for stupidity when flying an empty leg. It may be helpful to think of the black boxes on board the aircraft as passengers; they will have perfect recall of your stupidity when the accident board meets. But even if the airplane isn't bent and nobody is hurt, the world is filled with eyewitnesses.

Wow ('Look How Stupid I Can Be!')

A professional photographer who attended the NBAA Business Aviation Convention & Exhibition (BACE) in 2017 sent me a series of photos he took from Henderson Field, Las Vegas (KHND), which hosted the event's static display. His subject line read, "Is this safe?"

The photos clearly show the nose gear of a departing Hawker retracting even as the main gear are still on the ground. The last photo shows the aircraft in 80 deg. of bank just a few hundred feet over the NBAA display tents. I've redacted the N-number but provided it to another friend who traced the aircraft operator



A Hawker 800 takes off with its gear handle up in a demonstration of foolishness in 2017

Airport, Hong Kong (VHHH) to Dalian Airport, China (ZYTU), with 153 passengers and nine crewmembers aboard.

About a half hour after takeoff and minutes after leveling off at 35,000 ft., the copilot switched off an air-conditioning unit. The loss of pressurization caused a cabin altitude alarm, triggering the deployment of passenger oxygen masks and prompting the pilots to perform an emergency descent to 10,000 ft. in about 10 min. Both pilots were fired from the airline as a result. To understand why the copilot was fired, you need only investigate the moments leading to the depressurization.

The Civil Aviation Administration of China determined the copilot had smoked an electronic cigarette and, without telling the pilot, tried to turn off a circulation fan to keep the vapor out of the passenger cabin — but switched off the air-conditioning instead. That covers the events leading up to the emergency descent and why the copilot lost his job. To understand why the pilot was fired, you need to consider what happened next.

After the pilots figured out the cause of the depressurization, they turned the air-conditioning unit back on and climbed to 26,200 ft. for another 2 hr. to their planned destination. You can almost predict their thought process, which ends with "nobody will ever find out." However, they failed to consider their return to high altitudes left their passengers with no oxygen in the event

and contacted the FAA. The Feds, however, said they don't have the time to track down every stupid pilot. I hope these two stupid pilots don't destroy their lovely airplane or get anyone (including themselves) killed.

The renowned pilot's blog "The House of Rapp" (<http://www.rapp.org>) posted the series of photos and tied the pilot's actions to the habitual intentional non-compliance made famous by the 2014 crash of a Gulfstream GIV at Hanscom Field, Bedford, Massachusetts (KBED). His readers almost unanimously condemned the conduct of these Hawker pilots. But not all. One reader wrote, "We do that all the time when no passengers are on board; it can be done safely. We even do that at high-density airports. Have to know your limitations. It's a great feeling living on the edge sometimes." To which the host of the blog, Ron Rapp, had a one-word reply: "Wow."

Wow indeed. In most cases of premeditated stupidity, the process of becoming stupid is planned with ample time to consider the consequences. But to torture and redirect a quote from William Shakespeare, "Some pilots are born stupid, some pilots achieve stupidity, and some have stupidity thrust upon them." All pilots are at risk and must have the discipline to do the right thing when wrong things happen.

Being Stupid With the Lives in Your Hands

On July 10, 2018, Air China Flight CA106 was a Boeing 737 flying from Hong Kong-Chek Lap Kok International

WEIBO



Oxygen masks deployed on Air China Flight 106 after vaping incident

of a real depressurization. (Their passenger oxygen systems had a “one-time supply” of 12-20 min. and were depleted during the first event.)

Of course, the story ends well for everyone except the pilots and the airline (whose reputation was sullied). No passengers were hurt and they all got to their destination only slightly delayed. Weibo, the Chinese version of Twitter, had a field day. But there is another victim in all this, and that is every professional pilot who will be forever compared to these idiots. It seems we are all — young and old — at risk. There must be a secret to surviving the madness. There is.

Surviving the Urge to Be Stupid

How can you prevent this from happening to you? How can you talk some sense into someone who appears to be under the grips of pilot stupidity?

(1) Realize the airplane doesn't belong to you.

The owner (airline, company, individual) has entrusted the airplane to your hands. The contract you signed assumes you are acting in good faith. Even when the principal isn't on board, you owe it to him or her to behave as if they were. Besides, in today's era of flight-tracking software, cellphone cameras, ADS-B, FOQA, etc., they might as well be on board 24/7.

(2) Realize your training doesn't cover everything you might be doing.

I think if you could have put the Citation on flight freeze just prior to

impact and asked the nighttime aerobatic pilots what went wrong, they would still be clueless. They had rolled other company airplanes and everything worked out. Even at night. But they didn't have the training, experience or ability to do what they thought they could do. And now they are dead.

(3) Realize that the airplane's manufacturer hasn't tested the airplane beyond regulatory requirements.

If you are doing something that has never been done before, even something that seems fairly tame, you have no guarantee about the outcome. Even highly experienced company test pilots are surprised at times during certification testing and people have been killed as a result.

(4) Realize the airplane isn't as sturdy as it was on day one.

When your aircraft was certified, it was brand new. Some of the certification parts, such as the brakes, have to be pre-worn, but for the most part it is a new airplane. Just as importantly, all the parts are manufacturer approved and installed correctly. By the time you get to the airplane, you don't know about any of this. There are many cases of material fatigue causing aircraft to fail, even when the aircraft is operated by the book. If you have a 2 G wing that has never operated above 1.5 Gs for its entire lifespan, for example, taking it to 2Gs is an act of faith in all who have had anything to do with the airplane before you.

(5) Realize the 50% engineering pad is a lie.

Transport category aircraft usually have safety margins, but these are rarely the often-cited 50% pad. Yet even when they are, such as with load limits, they should be approached with

caution. When I was in Air Force pilot training, we had pilots who believed our Northrop T-38's 7.33 G limitation was an overly cautious number that the engineers had reduced by 50%. They said we could actually pull $(1.5)(7.33) = 11$ Gs. The mere fact 7.33 was a messy number derived from 11, a clean number, was proof enough.

But just because a brand-new airplane in certification could theoretically take an additional 50% of G-load, it doesn't mean a tired jet can. During my year in pilot training (1979) we had a number of pilots killed when the wings snapped off. The Air Force investigated and found nearly half the fleet had cracked wing spars. Your Airplane Flight Manual limitations exist for a reason.

(6) Realize more lives are at stake than yours.

When the Pinnacle Airlines flight was descending to its demise, the pilots were playing a game of Russian roulette with the public at large. As it was, they crashed behind a row of houses. The only fatalities were the two pilots, but it was only a matter of luck that the death toll didn't reach the hundreds. If that had happened, the pilots would have been guilty of manslaughter.

(7) Realize the issues after you are gone.

Let's say your final act costs you your life. It doesn't end there. You will have family members and friends who have gone through life thinking you were the “pilot's pilot,” an epitome of professionalism. With your demise, they will have to question that. Your family can be found liable for the financial losses. They will certainly be left with the grief of it all.

(8) Realize social media cuts two ways.

Much of our culture is consumed with people showing the rest of the world that they have amazing lives and are doing amazing things. And here you are having an amazing life and doing amazing things. Some people, in a race to show just how amazing they are, push the envelope into stupidity. And once it is online, there is permanent proof of that stupidity.

I warn my children that everything they post on social networks can and will be used against them when applying for jobs. Ditto for us pilots.

(9) Realize morality trumps all.

Finally, remember that many of these acts of stupidity are simply wrong. 'Nuff said. **BCA**