

SAFETY FIRST

COMPLEXITIES OF DEFENSE AND FATE Did Ernie Gann Get It Right?

By: Felix Tormes, M.D.

Since last I penned some thoughts in this column, the NTSB released on June 9, 2009 the Factual Report (LAX08FA265A) on the mid air collision that took the lives of three pilots, including our distinguished FPA colleagues and friends, Drs. Ralph Otto and Mike Downey, on 10 August, 2008. Both were in a Cirrus SR 22 which collided with a Cessna 172 over Rock Springs, Wyoming. The NTSB has not yet assigned a Probable Cause. One would hope that after a comprehensive review, the NTSB will not submit the proverbial and inane "failure to see and avoid" as the sole cause of the accident. This tragedy had many layers of complexity, and hopefully some insight and corrective action will ensue as a result of the mishap investigation.

After re-reading the initial and subsequent Factual Report, which I invite you to do, (<http://www.ntsb.gov/ntsb/Month.asp>), one is struck by how highly improbable this accident was, given all the active factors at play to prevent a collision. It reminded me of Ernest K. Gann's musings in his book *Fate is the Hunter*, where he vividly describes how early commercial pilots in the 1930s and 40s survived careers in aviation when the risks were so overwhelmingly stacked against them. In this case, it was just the reverse; all the major risk factors were addressed but the accident was not prevented.

The most recent 2008 Nall Report listed 4 fatal and 6 non fatal

mid airs in 2007. Two of the fatalities involved air racing in Reno and a formation landing at Oshkosh, not the type of risk exposure we experience in the FPA. However, the other two fatalities involved a C-172/V35 Bonanza collision, and the other an encounter between a student pilot and a light twin on an IFR flight plan, a more familiar GA scenario. To put that in perspective, there were 252 fatal accidents in 2007. These are very uncommon accidents.

There are four layers of defense against mid air collisions. The first layer of protection lies in probability theory. The likelihood of two aircraft meeting at the exact site, altitude and time is exceedingly low given the volume of airspace available. This is particularly the case in the US midwest. The little airplane/big sky concept saved many a B-17 departing in a gaggle over the perpetually overcast English countryside to bomb the Third Reich. And in formation flying, it is not a piece of cake to visually acquire and form up on your lead with all the sky around you. In the Wyoming incident, while we all know the probability of a hit increases in the vicinity of an airport, the accident occurred while the aircraft were still 5 miles away.

A second layer of defense is the ATC system, which was shaken in 1956 by what we would call today a sentinel event; the collision of a United DC-7 and a TWA Super Constellation over the Grand Canyon. Repercussion from that accident, which cost 128 lives and was the



deadliest aviation accident to date, led to the dissolution of the CAA and subsequent passage of the Federal Aviation Act of 1958, which established the FAA and revamped US airspace and traffic control.

The Otto/Downey accident is troubling in that both aircraft were under radar surveillance, and the Cirrus had been advised of, and acknowledged the traffic call. The controller was subsequently presented with a conflict alert with flashing symbols on his screen for 90 seconds before impact, more than ample time for a radio call and evasive action. Inexplicably, the controller did not attempt to re-establish contact with the Cirrus after a frequency change while the targets continued to merge.

A third layer of defense is traffic avoidance systems, which are not mandated for Part 91 operations, but have filtered down the GA food chain. TA systems were originally very expensive, but nowadays can be had in portable models with altitude and distance and no azimuth, for \$500. The Cirrus in this accident had a sophisticated panel with an advanced TA system. The L3 Skywatch system should have painted traffic, and finally generated an alert 30 seconds before impact with an aural "traffic! traffic!" warning and simultaneous display of relative bearing, altitude and distance, also displayed on the MFD. Thirty seconds is more than enough time for

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an evasive maneuver. The NTSB report does not address the type of equipment in the 172.

The fourth layer of defense which was broached in this mishap was the visual component. Weather was VFR, clear skies, with 10 miles visibility. All technology aside, visual separation would have prevented this accident. There were six eyeballs out there, and when all else fails, scanning techniques are the last hope and are rightfully taught to all pilots.

The NTSB Factual Report leaves many questions unanswered. To be fair, very few accidents are fully resolved by mishap boards. But what is perplexing in this case are the failures at so many levels in the chain of events leading to the accident. And other issues are not mentioned. Complacency may have been a factor, possibly by the pilots, controller, or both. Fatigue factors are not mentioned. Human factors could have had a role, in so far as the Cirrus pilots were cruising at 15,000 feet for an hour and 45 minutes. Presumably, both were on oxygen. Details of this nature may never be known with certainty.

Both Ralph and Mike were noted by our membership and their families as safe, conservative and prudent pilots, certainly not risk seekers. But safety is a relative term. Flying is not safe. Neither is driving or riding a bike. The only way to be truly safe from transportation accidents is to stay home. These gents chose not to do that, but to live their life to the full, and accept a modicum of risk. Regardless, this accident should not have happened. We manage risk by flying well maintained aircraft, remaining proficient, and applying sound judgment to weather issues, but maybe Ernie Gann had it figured. Maybe in spite of all the armor that we put on, fate is the hunter.

*Nil illigitimae
carborundum*

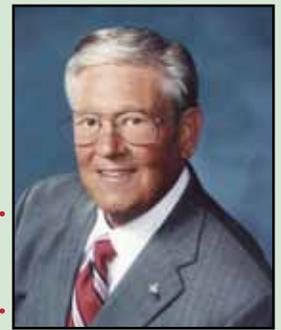
COMMENTARY

*Peter Bartlett,
FPA Past President 2007-08*

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chance to support our organization."**
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The FPA held its 55th Annual Meeting in Falls Church, Virginia, from which some of us just returned. The meeting featured a nice hotel meeting site, great food and drink, enjoyable off site events, time to indulge our individual sightseeing preferences, camaraderie, and most of all, a terrific CME program.

Unfortunately, the meeting attendance was only a little more than half of the previous year's Asheville meeting, although 10% of the registrants were "first timers." Members who could not or chose not to attend really missed a great meeting and the chance to support our organization. As previously alluded to, the CME program put together by Jim Gainer, Rusty Sloan, and Bill Friedman was the best I can remember in 15 years of attending national meetings. There was a mixture of the usual aviation focused talks, but



the "scientific" talks, most of which were evidence based (therefore 2 for 1 AAFP Prescribed credits at this time), were excellent. They were rigorously academic while of great clinical application; the program generated much discussion and many comments, which is what one wants to see.

John Hall, and his Program Chairman, Steve Towle, are well along in the planning process for next year's meeting in Kansas City in mid-June of 2010. The site is easy to reach (GA or commercially) for the bulk of the membership. The hotel is great (I've stayed there.), and there are interesting aviation venues nearby which John is planning to incorporate into the meeting. By attending, you and the FPA will benefit, both then and into the future. "Be there or be square!"



Thank you note for the Distinguished Service Award

J'ai été surpris vraiment que j'étais recevoir cette récompense et n'avais aucune idée que cela se passerait. I was very surprised to receive this award and had no idea this would happen. I want to acknowledge and thank Larry Gahagan for nominating me and Owen Brodie for the Award.

I also want to give credit to my right front seater, Carrie Reinninger, "ma femme", for her help. She always rises early with me at the meetings to help set up the audio-visual equipment for the medical presentations.

We really enjoy and look forward to the FPA meetings. We enjoy the flying, well planned meetings with the social functions and seeing old friends as well as the newcomers. We like participating and providing a service for the FPA with the golf arrangements and audiovisual presentations. It is, so to speak, a labor of love. Although it is sometimes difficult to get the speakers presentations in advance to avoid problems during the meeting, it usually goes well.

Je vous remercie encore et laissez le bon temps rouler.

Charles and Carrie Reinninger