

Friendly Fear

*Fear creates caution, which is protective
Fear creates anxiety, which is not.*

I wish this month to change gears and look at two incidents that illustrate some patterns of human behavior related to fear. (I am using “fear” in the broad psychological sense: a fundamental, undifferentiated human emotion. Google it up if you want the debates and nuances.)

1: Feeling fear, protectively

I wrote a column on judgment, highlighting a fatal stall, that appeared in this space April, 2012 – <http://tinyurl.com/Ine2u73> – which is one of my better essays, worth reading.

Recently, a correspondent reminded me of a critical letter about that column, printed in *Soaring* in July, 2012 – a letter from the grave, for the author died in a stall-spin accident, during a contest, before it was published.

As we are attempting to promote soaring through the ‘Let’s Go Gliding’ campaign and the World Gliding Championship 2012 at Uvalde, the improbable description of the final flight of ‘racing pilot’ Quent marred a potentially interesting article on risk management and proper decision-making; two important areas of safety.

“While the author may have been trying to draw various examples of poor decisions from flights real and imagined, it would have been more constructive to avoid weaving the fictional compilation described.

“Competition pilots are not immune from making mistakes, but are we trying to encourage pilots to develop better decision-making skills to improve safety for all of us, or are we attempting to scare newcomers away with inaccurate tales of bravado?”

–Tim Gossfeld

Tim crashed while making a mysteriously motivated turn over an airfield at

low altitude in strong wind. Sadly, his letter was printed about six weeks after Tim’s death. He left a wife and 17-year-old daughter; he was an accomplished and responsible professional, a former FBI agent working as the Director, Global Security, Americas, for Thomson Reuters. He was an experienced and accomplished soaring pilot, holding six MN records and sharing two. 2012 was his eleventh year flying contests. He had been a Chicago Glider Club board member.

Tim incorrectly believed the story of “Quent” to have been fiction. It was not. With that story, as with all my stories of glider accidents, I take a real incident and fictionalize it – primarily because writing an “accident report” is *not* the goal; the details and the responsibility of persons are distractions from the teaching point, which is better made with a parable, so I fictionalize.

The story of Quent followed carefully the details of the NTSB account of his accident. It’s historical fiction, to be precise. The point of Quent’s amazingly bad

judgment is that, under physiologic stress, normally wise pilots may do unbelievably foolish things.

Can we learn anything from Tim’s accident?

NTSB report CEN12LA330 states, “A witness stated that he saw the glider returning to Y70 from the east. The glider was traveling at a ‘very slow speed’ and the winds were gusting to 28 knots. As the glider got closer to the airport, it appeared that it side stepped and lined up for a straight-in approach to runway 27 (4,298 by 75 feet, asphalt). The witness stated that about 200 feet [above ground level], instead of deploying spoilers to land, the glider entered into a 90 degree turn to the south as if to ‘work a thermal’ over runway 18/36 (4,261 feet by 340 feet, turf). The wind was pushing the glider ‘hard.’ The glider entered a turn to the left as if to enter a left downwind. At this point, the glider’s left wing dropped followed by its nose, almost straight down to a northerly heading, while at an altitude that was about three times the height of the nearby trees.... The glider entered at about a 60 degree angle.”

The report quotes the AWOS during that time as 270-290, 18-20 kt, gusting 24-27, later increasing.

Some things about this are interesting to me.

First, Tim found the story of Quent’s very poor judgment to be unbelievable – and later, for reasons we cannot know, struggling to get away to start a contest flight, found himself at 200 ft agl,



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essentially lined up on the ideal landing runway – and decided it would be a good idea to turn, at very low altitude, in a strong and gusty wind.

It's hard work flying in strong winds, and Tim was late starting. Tim would have been physiologically and psychologically stressed, causing fatigue. Fatigue is a syndrome of many causes, that impairs performance and judgment – to the extent that skilled, experienced, wise people may make unbelievably foolish decisions.

Tim made decisions that resulted in his death, so I guess that qualifies for the label “poor judgment.” But we can assume that in his mind it seemed like the logical thing to do, and that he wasn't planning to stall-spin. We can't know what he may have had in mind, and though accident analysis is fascinating, the problem is prior judgment: he should not have allowed himself to get where he was.

Analysis boils down to two possibilities: either he was trying to get away from an impossibly low altitude (when the wind is gusting over 20, there are never thermals big enough in which to turn, with long wings, down low), or he had decided to land, even though badly positioned.

If this, he was actually high for landing on runway 27 – over the intersection of the paved 9-27 – with 18-36, about 1000 ft of runway already behind him, over the near end of the grass verge used by gliders; perhaps he judged his altitude to be enough for a quick 360.

My own experience is that, with plenty of airspeed, this is easily feasible in calmer air in a glider of ASW-27 performance. I've done it in a Blanik, in calm air, over the end of a runway, for the same reason. He wasn't going terribly slow – the NTSB report states that his data devices, which were retrieved and analyzed, showed the glider's true airspeed at the time of the accident was 96km/hr, exactly between the white and green arc lower ends.

On the other hand, in a 20-30 kt headwind with full spoilers, one's descent is, shall we say, satisfyingly steep, and the ground speed on landing is at bicycling velocity. And he could have set up a slipping approach. He had plenty of room to land.

If his plan was to climb away, in that wind, that low – well, there are only disorganized bumps in such conditions – truly a foolish fantasy.

We repeat the obvious: the air we fly through in gliders is invisible, especially the turbulence it contains. The air close to the ground, in strong wind, tumbles and burbles, and within which it actually may reverse direction, whirling in small rotors.

A pilot such as this is not likely to accidentally cross-control or accidentally stall. Tim would not have been the first highly competent pilot to have one wing in very different wind than the other. I have entered incipient spins many times in the turbulence of thermals, and the turbulence near ground in strong winds like these has the same effect.

The point, dear reader, is that (we) very competent and wise people sometimes do unbelievably stupid things when fatigued (stressed). And research has shown that we start making mistakes *hours* before we start *feeling* fatigued.

We can respond to this truth in three ways: One is to avoid fatigue by avoiding dehydration, hypothermia, sleep deprivation, medications, and psychological stress.

Another is respond to fatigue of all types with a touch of fear (labeled “caution”), treat it as meaning that we are impaired, and until we are able to land, *fly like a beginner* – cautiously and with wide margins.

The third is what's been traditionally taught: if one of the possible outcomes is death, create a big margin for error. Yes, it *is* possible to safely land with pattern entry 300 ft agl – but it's also possible to die that way, if turbulence or traffic or our own perception and coordination are not quite what we expect. So we teach use of a higher altitude, which allows pilots to compensate for all sorts of unexpectednesses, including our own misjudgments.

The highest aircraft-accident rates have always been among those pilots who have a few hundred hours. Analyses have always cited “complacency” as a factor, which would include the accurate discovery that we don't always “need” the margins taught in training (and it's a lot more thrilling to perform on the edge).

A correspondent pointed me to a 1993 article that lists many skilled soaring pilots killed in Europe <http://tinyurl.com/2lqv5kv> (DG's site) and stated that he has known about 15 guys killed in soaring, mostly guys he'd met at soaring contests.

Why do we keep losing skilled pilots? Partly, it's a loss of fear for flying at the boundary of safety, a lack of fear of the unseen (turbulence and other aircraft, for examples) and or the unknown. We're blind to our ignorance, we can't be aware of what we don't know: the only safe attitude is that always there may be an unknown factor, and keeping plenty of margin to accommodate to the unknown is safe.

There are two things that reliably degrade the performance of every athlete:



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complacency and abandoning fundamentals of technique. Pilots are athletes, and a little dose of fear plus discipline on the fundamentals will reduce the tragedy rate.

To repeat: **Brilliant pilots like you sometimes do blindingly stupid things** *without intending to*. OK. Change of pace.

2: Causing fear to others.

I am one of the sinners here, I confess (just to be clear that I am not holier than thou).

Turn in your missal today to <http://soaringcafe.com/2013/04/an-apology/>. Again, no fiction. Frank Paynter, one of the other columnists in this magazine, and a skilled soaring pilot, whose June, 2013, mountain crash I heavily fictionalized in a previous column, scared some colleagues in a contest some months ago.

He was chastised by the contest director, and posted both the critical letter and an apologetic response to Soaring Cafe. Doing so required moral courage.

One of the problems with causing fear in others is that it causes emotions – anxiety or anger – that impairs *their* performance. Strong emotion is extremely distracting; when it occurs in a soaring contest this may extend the risk from person to person like dominoes falling.

It is not my goal to analyze Frank's actions or his letter. I simply wish to have us think about that fact that we may unintentionally frighten others, and how this might come about, so that we can intelligently modify our attitude about our actions, to include others' perception of risk.

As one of the sinners, I can tell you some things I've learned in the school of hard knocks. Perhaps you will see someone similar in your mirror.

Frank's experience was typical. His apology explains steps he had taken to control risk, and he offers to do better in the future.

Let's be clear: it is one thing to *inadvertently* or *unintentionally* frighten others; it is entirely another thing to *deliberately* do so. That is cruel and unacceptable. I will explain here some common ways that we may do so *without* intending to.

A failure of telepathy.

Here's a basic situation with provoking fear: the highly skilled person appears to take risks when his or her abilities are not known.

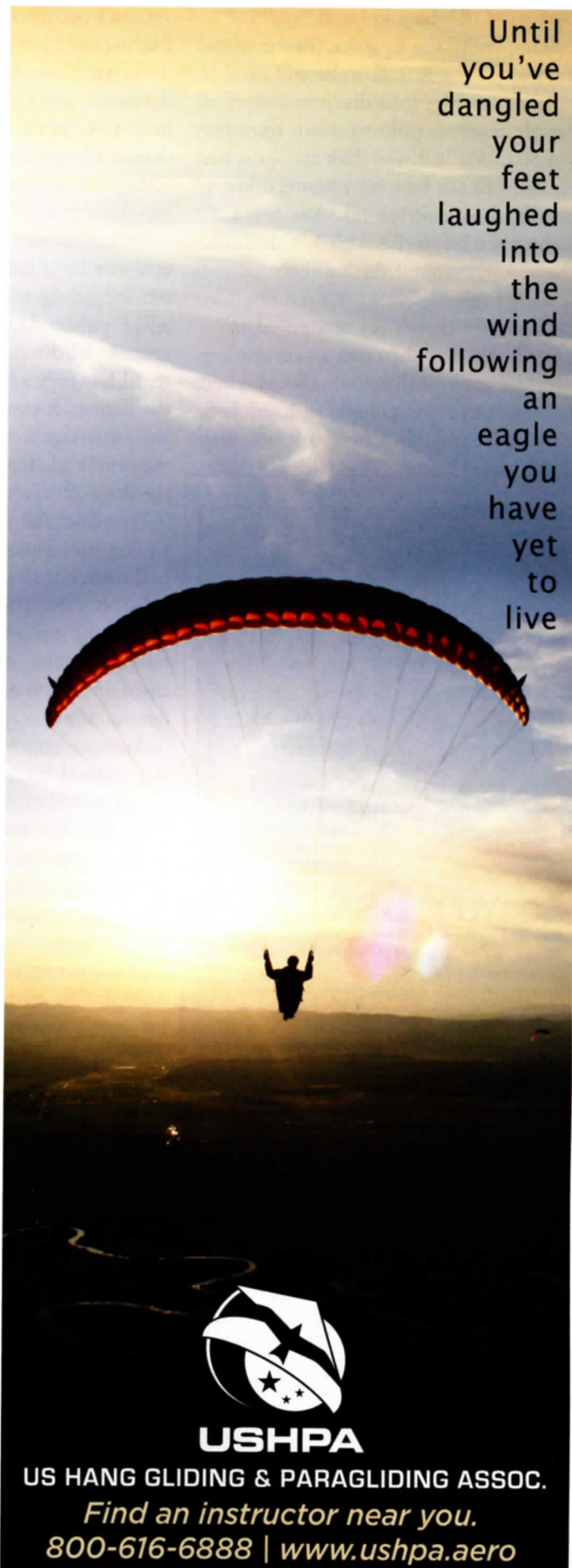
Rob lives in Chicago, is young, and a talented and skilled driver. Marian has recently moved from her parents' dairy farm near Amery, Wisconsin. Rob is driving her to dinner near the end of rush hour.

Rob, who knows the roads and traffic almost intuitively, zips along, changing lanes quickly back and forth, braking, accelerating, reading the signal lights and traffic far ahead in order to pick openings as they develop and to arrive for their 7 pm reservation in plenty of time. He's having fun.

Marian sits quietly, sometimes bowing her head. She is trying not to shake visibly. Why did she get into this kamikaze's car? She thought Chicago would be more exciting than the farm, but this is a carnival ride from hell!

Rob pulls up in front of the restaurant, walks around, opens her door with a flourish. Marian just sits there, like a zombie.

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you've
dangled
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feet
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into
the
wind
following
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eagle
you
have
yet
to
live



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"Are you OK?" he asks.

"Um, yeah," she squeaks. "Just give me a minute." She isn't sure she will be able to stand up. She feels dizzy and short of breath. Sweat is running down from her armpits. Will it make dark spots on her blouse? She sits for a full minute, calming herself, then lets Rob take her arm and, feeling wobbly, walks with him into the restaurant, thankful she had decided not to wear heels.

Whether there's a second date – indeed, whether she takes a taxi home – depends very much on whether she and Rob will be able to grapple with this failure of telepathy. (In Chicago, as she may

yet discover, the taxi ride may be no less frightening.)

The problem of course, is that Rob understands very well how to anticipate and limit risks in this situation. But Marian does not know this. To her, he *seems* to be taking extraordinary risks; to him, he is just driving normally.

I'm confident that many of us have created similar distress while driving without intending to. I know I have. Years ago, my sister dawdled with her wedding prep, and I discovered, out near O'Hare, that I had only a half-hour to get her and the fiancée downtown to the courthouse for a marriage license before it closed for the weekend. Success: the clerk locked the door after letting them in.

Years later she told me calmly how terrifying the drive was. I had taken minimal risks, but she couldn't have known.

Lesson: the spectator who has his own skin in the game may have no idea about our competence or judgment, and is justified in assuming the lowest common denominator.

Another way to cause fear is **removing control** from the other person. This is easy to do between two aircraft because often only one is visible to the other. For example, very early in my soaring career, I was near a Nevada airport in a 1-26, sharing airspace with a few other gliders scratching around for altitude. I finally found a strong thermal. As you know, a 1-26, at slow airspeed, in a bank of 45 degrees or better, makes a small circle and climbs well.

A few hundred feet above me was a low-time pilot, making turns with a shallow bank angle, big circles and climbing slowly. I was ascending much faster than he, and it was obvious we might come close. I very carefully kept him in my sight throughout the climb, and when I got to his altitude, carefully adjusted my speed and bank so that while I climbed through his altitude I had him in sight continually and was turning away as I went above.

After we landed, he (and the safety director) chewed on me pretty hard. He had been terrified. Of course he could not ever have seen me, because by keeping him where I could see him continually, I was always in his blind spots. My

radio calls were confusing because he heard me but could not see me. Then, when I finally showed up, I popped into his vision close, inside, and turning away.

I felt bad, but it was a very long time before I realized that the problem mainly was that I had not early on maneuvered to let him *see* me – which would have given him some sense of control, would have let him negotiate a passing maneuver he felt comfortable with, and that would have avoided the last-second scary surprise.

We truly can't see very much from the cockpit (see this column, July, 2011 – <http://tinyurl.com/ny2wdys>). For example, I'm on final glide to home and call, "Local traffic, glider 18UF six miles northeast, 3000, inbound." Eleven seconds later, I hear, "Local traffic, Cessna 2274Xray six miles northeast, 3000." *Yikes!* All sphincters on full alert!

I make cautious clearing turns. He's a hundred yards to the right and fifty feet lower. *Whew!* It's my friend Brian. I tell him I have him in sight, I'm behind and above. I decide it would be fun to zip along in formation and compare descent rates – I reflex the flaps and match his speed, and discover we're descending at almost the same rate. I follow close behind, gaining a little altitude on him, keeping the same separation, until he turns base.

Now he can see me if he looks, so I peel off, to the inside, into a gentle climbing turn. Before I can tell him to go ahead and land, he panics a little. "Glider, I'll go around – you go ahead and land!"

Hearing the fear in his voice, I feel bad, and say, "No, I'll hold over the field; you land."

Again, the problem was that while I was in full control of the situation, he never had visual contact with me, creating persistent anxiety that changed to alarm when he turned base and saw me ahead and above him. If I had been a little more clear on the trip home, he could have been reassured.

A third situation is when we see a pilot do **something that has turned out badly before**. An instructor was flying with a student, the grandson of a fellow pilot who was watching from the ground. During the downwind leg, the instructor had the student deviate from a normal



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pattern to help him develop judgment in case he got out of position. Unseen by them, an airplane joined the pattern in the standard way – and from the ground appeared to be about to collide.

After a safe landing by both aircraft, Grampa was irate. Years before, he had watched a dear friend collide his glider fatally with an airplane in the traffic pattern. You can imagine the powerful emotions of anxiety, fear, and grief that inspired an eloquent and angry chastisement of the instructor. It little matters who was at fault or who had the right of way: the rules are to create default decisions, to prevent uncertainty, but preservation of life and safety is a superior law, and we want to *feel* safe as well as have a safe outcome.

A sense of proportion.

Let's roll these ideas together, and consider that it makes a difference who's

frightened, and who's the critic. For example, I'm a physician. The criticism of a colleague is very different from, and strikes more profoundly, than the criticism of a patient. The difference is that the colleague's expertise gives great weight to the "suggestions for change."

In the stories above, Marian's fear was due partly to her inexperience and her unawareness of Rob's skill. But a caring gentleman would, honestly, have anticipated this and been aware of her body language. He was rude, and he'd better have some pretty strong compensating virtues to be worth another date.

Frank's situation is like mine: he frightened fellow racing pilots. Their fear means that he truly violated their standards of risk; hence the formal letter of reprimand, and the formal response.

Apology v. Repentance.

The concept of "sin" has been lost in modern society. It's not a purely religious concept. Sin occurs when we hurt or distress others by crossing into the wrong behavioral territory. It's something we *do*, not something we *feel*; it involves crossing an understood line; it has adverse consequences for someone else.

Most of the time we do this inadvertently. If we distress others deliberately, that damages friendship and we lose their respect. Communication is important here, because the distress may be invisible, or the damage invisible to us, obscured in our dust. Somebody has to speak up.

"Apology" is our expression of regret for the consequences, directed toward the distressed person. This is socially useful and appropriate, but is merely the decoration on the cake. "Repentance" means to change our mind, such that we are no longer inclined to repeat the distressing act. "I'm sorry I took the money from the till" has to be followed by consistent, demonstrable honesty to (slowly) rebuild trust and respect.

When we sin toward a fellow pilot, apology is fine and necessary, but it's repentance he wants to see – which is not something we say, but something we *do*, changing the pattern of our behavior so as to *show* that we're no longer inclined to again cause the distress.

Apology without repentance is simply dishonest. Change is not religious. It's collegial.

Doing this can convert fear to respect. We gain friendship by choosing to be kind, choosing not to provoke fear. We can convert fear to respect by admitting when we've caused distress or harm, and by changing our thinking in order to change our actions.

It's a way to be liked and respected, something we all treasure.

Acknowledgements:

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What is Fatigue?

Fatigue is a broad term that indicates, generally, an unconscious or conscious disinclination toward necessary action. It is a syndrome with many causes; with fatigue, error rates increase long before we feel tired, or bored, or sleepy.

Fatigue occurs from physiologic stress such as infection, work, hypothermia, dehydration, hyperthermia, medication, abnormal blood sugar, hypoxia, high or low barometric pressure, etc.

Fatigue is caused by social tension or disruption, performance anxiety, time pressure, vigilance needs, repeated alerts, repetitive tasks, lack of stimulation, boredom, noise, etc.

Sleepiness is a particular type of fatigue caused by things like inadequate sleep time, poor quality sleep, motion, or dysynchronous circadian rhythm (jet lag). In my experience, inadequate sleep is not the most important source of fatigue. Sleepiness is a danger signal that we have been impaired for awhile, and we should respond accordingly.

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