The Safety Wire

February 2022

I can be angry or effective, but not both… There are so many things in the public safety world that seem intent on pushing our buttons. The people we work for, with and in support of sometimes seem to have a competition going to see who can finally cause the vein in our forehead to burst. We see the worst of human nature, deal with some of the most complicated technology in the world and operate in unpredictable, hostile environments. There is plenty of justification to be mad on a regular basis. Still, however justified our anger is, the impact is the same: degraded performance.

Remember that fantastic boss you worked for that was always mad? Or that incredible aircrew member who was always furious? Of course not. When we are angry, it degrades our physical performance, interrupts our decision-making skills, disrupts communication and CRM and generally keeps us from reaching our highest potential. In 1995, Daniel Goleman wrote the book, *Emotional Intelligence: Why It Can Matter More Than IQ*. In his book, he discusses the importance of emotional intelligence, or the ability to control one's own emotional response and, thus, emotional influence on our behavior. One of the concepts he addresses is Amygdala Hijack. This happens when a strong emotional response takes over our decision-making process, replacing it with a primordial fight-or-flight process.

The problem with letting emotions such as fear or anger into our decision-making process is that those emotions influence how we perceive and process incoming data from the environment. The primal goal is geared towards an immediate, short-term resolution that is combative in nature, i.e., fight or flight. This type of decision making is sometimes appropriate, however, what we usually need are long-term, permanent problem resolutions that work with our environment, not against it. However, with the Amygdala in control of data filtering for survival needs, we will simply not see the information we need for analytical, level-headed decision making. Our conclusions will be rash, shortsighted and fall short of optimum goals.

Aviation, in general, cannot abide by poorly thought-out, short-term solutions to problems. Aviation safety certainly cannot accept anger-based decision making. When a problem arises, especially an incident or accident, anger will direct us towards determining blame, being sure to deflect it from ourselves. When something goes poorly tactically on a mission, we may curse the ground units or another aircrew member for their incompetence and go no further to explore an actual fix. Such self-imposed limits in problem solving prevent us from overcoming the issue, confining us to a cycle of failure.

The first thing we need to do to maintain an appropriate level of emotional control is to take a break or separate ourselves from the situation for a period of time. In flight, this may be difficult. On the ground, we usually have the option to catch our breath in order to increase mental effectiveness. We need to ask ourselves if the decision needs to be made immediately. Do we need to make a fight or flight decision, or do we need to fix something? If something needs to be fixed, being angry will guarantee we do a poor job of it. Giving the issue some more time will allow us to complete another objective in emotion management, the collection of additional information. Again, emotionally intelligent decision-making means understanding the true facts of a problem, and it takes time to uncover the answers to what and why.

Time will allow us to de-escalate ourselves so we can properly think through challenges. Self-de-escalation and emotional self-management require practice. It honestly does not come naturally to passionate people, such as those often drawn to aviation and public safety. What works for each of us will vary somewhat but it all starts with realizing that we are, or are about to be, emotionally hijacked and it needs to be addressed.

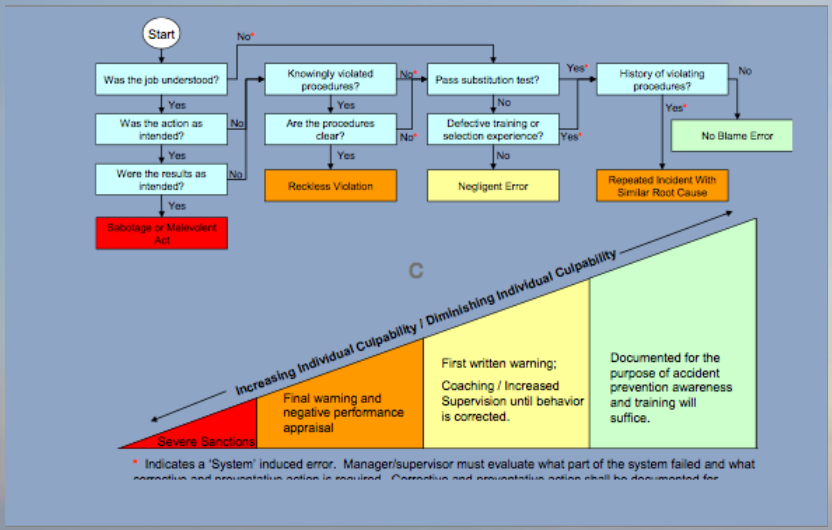
We often talk about making ourselves better pilots, mechanics, TFOs, leaders, etc. through practice of skills, continuing education on technical knowledge, etc. etc. If we want to be the most effective professionals we can be, understanding and practicing emotional intelligence is as critical as any other skill. This is a skillset I still struggle with more frequently than I'd like to admit. I must constantly remind myself that it's a choice between being awesome or angry, because the two simply cannot coexist.

"An ounce of performance is worth a pound of promises"

~ Mae West

Safety Management Systems

One place that tempers flare in safety management is after an incident or accident. The public safety and aviation industries traditionally spring directly into the blame and punishment game, without looking at the root causes of the incident or determining if punishment is a useful solution. You may find yourself in a room full of angry people talking about who to fire, suspend, ground, fine or publicly hang as soon as possible. You might be one of those people. Just Culture is a concept that is easier to say than do in cases such as this. A tool that will help you navigate these emotion-infused waters is a Just Culture flow chart. The example below is from the SMS Toolkit and is also available in the APSA SMS Installation Guide.



ONLINE MEETINGS

APSA conducts regularly scheduled online meetings for safety officers, maintenance technicians, SAR personnel, UAS operators and natural resource personnel via a conference call you can join using your computer, mobile device or phone. Online meetings are open to any APSA member. Contract maintenance providers to APSA members are welcome to participate in the maintenance meeting as well. If you would like to join, send an email to: safety@publicsafetyaviation.org

The schedule for upcoming APSA online meetings is as follows.

UAS:
Wednesday, March 2, 2022
1:00 PM - 2:00 PM EST (1800 UTC)

Safety Officers:
Friday, March 18, 2022
1:00 PM – 2:00 PM EDT (1700 UTC)

Natural Resources:
Wednesday, March 30, 2022
1:00 PM – 2:00 PM EDT (1700 UTC)

Maintenance:
Wednesday, April 6, 2022
1:00 PM - 2:00 PM EDT (1700 UTC)

SAR:
Wednesday, April 20, 2022
1:00 PM – 2:00 PM EDT (1700 UTC)

"There's a big difference between skill and judgment."

~Kurt Robinson

In each monthly emergency situation, discuss what you would do, as a crew, to respond to the following emergency. If the EP does not apply to your specific aircraft, think of something similar.

Emergency landing in water

REALITY CHECK

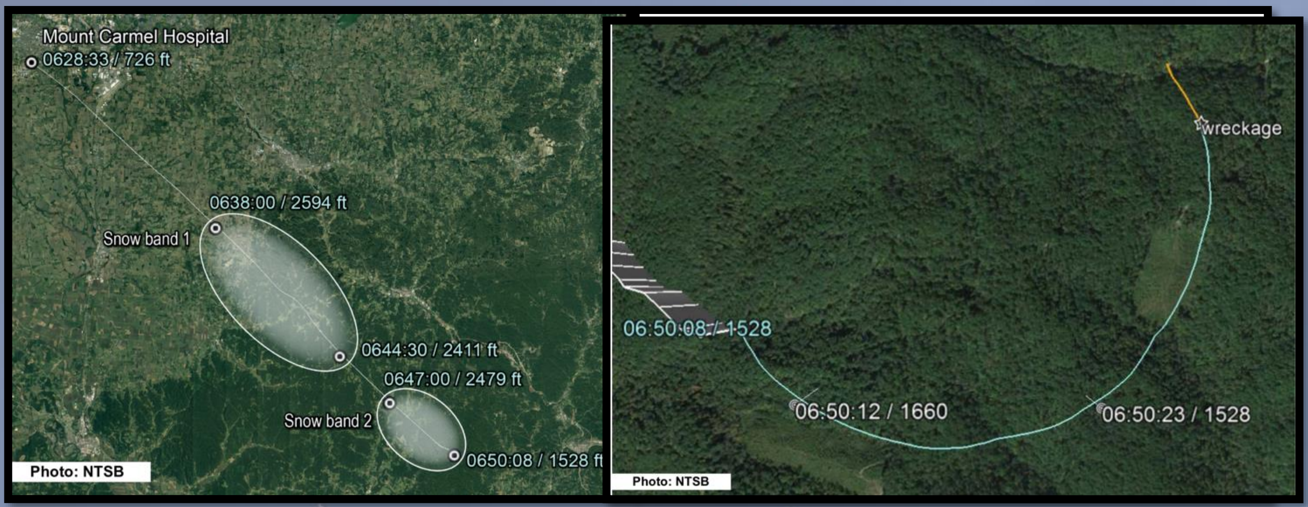
Note: *The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in red where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.*

Aircraft:	**Bell 407**
Injuries:	**3 Fatal**

On January 29, 2019, a Bell 407 helicopter collided with forested, rising terrain. The helicopter was doing business a visual flight rules helicopter air ambulance. The certificated commercial pilot, flight nurse, and flight paramedic were fatally injured. Visual meteorological conditions existed at the departure location, and company flight following procedures were in effect.

According to the Survival Flight Operations Control Specialist (OCS) on duty at the time of the accident, the night shift pilot had originally accepted the flight. The OCS said that, while he was on the phone with that pilot reviewing flight details about 0612, he was told that, due to the upcoming shift change, the day pilot would be taking the flight.

The OCS said that, while watching the helicopter on flight tracking software in the Operations Control Center, he observed that, about 15 minutes after departure, the helicopter made a turn to the right, then "a sharp left turn," which was immediately followed by a "no-tracking alarm." The emergency action plan was then initiated.



The helicopter wreckage was located on a tree-covered hill and exhibited significant fragmentation. The wreckage and debris path extended about 600 ft downslope on a heading of about 345° magnetic. A portion of the front-left skid tube was found at the start of the wreckage path, followed by the main rotor hub and blades, tail boom and tail rotor, cockpit and cabin, and the engine and transmission deck. Tree branches broken about 30 ft above ground level were observed near the front-left skid tube. Additionally, one main rotor blade had separated from the main rotor hub and was embedded in a tree. The elevation of the wreckage area ranged from 850 to 980 ft above mean sea level (msl). There was no evidence of a postcrash fire, but a strong smell of fuel was reported by first responders when the wreckage was first discovered.

Aircraft:	**AS 350 B2**
Injuries:	**3 Fatal**
NTSB#:	**CEN18FA149**

An AS350 B2 helicopter was destroyed when it was involved in an accident near Hazelhurst, Wisconsin. The commercial pilot and two emergency medical services crewmembers were fatally injured. The helicopter was operated as a Part 91 repositioning flight.

About 2104, the pilot radioed the operator to report that the helicopter was ready to depart MSN for 60WI. According to information from the helicopter's on-board Appareo Vision 1000 recorder yawning and sighs were heard. The pilot requested clearance to 60WI and departed about 2107. About 1 minute later, the pilot asked if the medical crew was "alright back there," and one of the medical crewmembers responded "yup." One of the medical crewmembers then stated, "question is are you alright up there?" The pilot responded, "uhhh think so. Good enough to get us home at least."

About 2200, a medical crewmember stated, "I could go to sleep," and the pilot responded, "yeah that'd be nice huh." After about 2215, the medical crewmembers started non-aviation-related conversations, and the pilot was last heard during the conversations about 2229. Between about 2215 and 2242, the pilot made movements including raising his left arm near his helmet (which was mounted with night vision goggles), flexing his legs, adjusting his seating position, and changing cyclic position.

About 2243, the helicopter was operating in level flight at an airspeed of 126 knots and an altitude of at 2,280 ft mean sea level (msl). The artificial horizon indicator then showed the initiation of a right bank. The pilot's right forearm started moving along with the cyclic to the right, and the artificial horizon indicated a bank between 10° and 15°. The roll rate to the right appeared to increase rapidly, and the pilot's body, right forearm, and right hand (which was holding the base of the cyclic grip) appeared to move along with the increased roll rate.

A medical crewmember stated, "what are we doin'?" twice. The pilot's head moved to the right and could no longer be seen in the image, and the right bank increased to more than 90°. A medical crewmember stated, in a strained voice, "Ohhh [expletive]." The crewmember then shouted "what?" and the pilot's name. The other medical crewmember also shouted the pilot's name. The pilot's head returned to the image and moved to the left. His right hand still gripped the cyclic. The artificial horizon showed an inverted indication, and the torque gauge indicated a value beyond the red line. The emergency locator transmitter light illuminated while the pilot's head and upper body moved to the left. Sounds similar to a rotor high rpm horn and a grunt were recorded, along with a medical crewmember shouting the pilot's name. The recording contained no response from the pilot when the crewmembers shouted his name. The artificial horizon indicated a right roll of more than 270° with a pitch-down attitude, the altimeter indicated 1,900 ft msl, and the airspeed indicator showed 98 knots. The last two frames showed that the pilot's head and upper body had moved to the right and that the airspeed indicator displayed 70 knots, the artificial horizon indicated a 90° left bank with a pitch-down attitude, and the altimeter indicated 1,825 ft msl.

The company's satellite tracking of helicopter showed a normal route of flight until contact was lost at 2243. The helicopter wreckage was found about 0215 the next day.


There are no new ways to crash an aircraft…
…but there are new ways to keep them from crashing.
Bryan 'MuGu' Smith
Safety@PublicSafetyAviation.org
407-222-8644