Frequency Gambling

By Gene Benson

The four-year old child is fascinated with the kitchen. She loves all the shiny appliances and imagines herself preparing meals just like she sees mom and dad do. She often entertains herself by making believe she is preparing a meal for the family. Both her mom and her dad have watched her pretend that she is cooking and have both warned her never to touch the coils on the electric stove because they might be hot and she might get burned.

Her enchantment with all things kitchen continues for several weeks and her mom and dad have become accustomed to her flitting around the kitchen while they relax after dinner. The warning about the potentially hot burners has been long forgotten by our four-year-old. One day, while pretending to prepare something on the counter, she inadvertently touches a burner. It is cool to the touch, so she continues her play. The next day, she remembers touching the burner and finding it cool, so she touches it again. She shrugs as, once again, it is not hot. Her daily routine now includes touching a burner as she makes her rounds of the kitchen appliances.

But one day, one of the burners was unintentionally left on while the family ate dinner. One of the parents noticed it during the final stages of clean-up and turned it off. Unfortunately, the burner was no longer glowing bright red, but had not cooled sufficiently when our precocious four-year-old began making her rounds of the appliances. She let out a scream as she placed her hand firmly on the burner.

She had been warned about the possibility that a burner might be hot and she had understood the warning. She unintentionally violated the warning once and there were no unpleasant consequences. She was now less likely to believe that touching a burner could have a bad outcome and it became part of her routine.

We think that we, as pilots, have moved beyond the four-year-old stage. Perhaps not as much as we would like to think. Our flight instructors warned us about many hazards and how to avoid them. Always visually check the fuel. Always drain the fuel tank sumps and check for contamination. Always use the checklists. Don't fly in ice if the airplane is not certified for known icing conditions. Never fly when you might be impaired. Always check the flight controls for "free and correct" before takeoff.

The well-known human error researcher, Dr. James Reason, used "Frequency Gambling" to describe this human phenomenon. If a similar deviation from procedures has been encountered in the past and a particular course of action has succeeded, the pilot will expect to succeed the next time with the same response. Baselines become misrepresented over time as a situation becomes familiar and the individual becomes more comfortable with it. "The fuel gages have always been correct, so why should I look in the tanks?" "This is a simple airplane; I don't need a checklist." "I have been in structural icing many times and I have never had a problem with it."

There probably is not one of us, who has had a pilot certificate for more than five years, who has not violated some rule or procedure that was taught to us by one of our instructors. I plead guilty. I think and I hope that I have learned my lesson by a few PASS events. If you are not familiar with the acronym, it stands for Pants Almost Seriously Soiled.

Many pilots have not been so fortunate. No age group or experience group has a lock on violating basic operating procedures. In 2014 a professional flight crew failed to perform a control check per the checklist and attempted to takeoff in a Gulfstream G-IV. Seven people died. In 2015 a private pilot was killed when his Cessna 150 crashed as a result of fuel contamination. The FAA cited the pilot's failure to perform an adequate preflight inspection in the probable cause finding. In 2017, four people died in the crash of a Mitsubishi MU2B with a commercial pilot at the controls. The NTSB probable cause finding states, "The pilot's intentional flight into an area of known icing and convective thunderstorm activity, which resulted in a loss of control of the airplane." In 2015, a private pilot and his passenger died in the crash of a Champion 7BCM. The NTSB probable cause includes, "Contributing to the accident was the pilot's impairment due to alcohol and drugs." In 2017 an airline transport pilot and his passenger died in the crash of a Beechcraft 300 King Air. The NTSB probable cause cites impairment by the effects of a combination of psychoactive substances. The list could include hundreds of recent accidents in which a pilot did something that is contrary to

standard, basic operating procedures. We can not be sure, but it may not have been the first time those pilots violated the associated rules or operating practices.

Those regulations and procedures are written in the blood of pilots. Each one came about because of an accident. Let's do our best to follow those basic procedures even when we think they are frivolous. Take it from a pilot who has been around the block, they may seem unnecessary until they prove to us that they are not.