

Elmendorf Aero Club

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PIF 09 - 05

‘Deliberate Calm’

The Flight of US Airways 1549

16 Apr 2009

This Safety Gram once again talks about Captain Chesley B. “Sully” Sullenberger III and the events that took place on 17 January, 2009. All pilots need to be ready to place themselves into the right state of mind when being confronted with emergency situations. Panic is not an option. You have heard the adage “fly the aircraft to the crash site” unless you take a moment and actually place yourself in that seat and think about what was going on, if this situation befalls you, you might not be as successful.

The PIF speaks about what occurs to a human when they are placed under stress. Everything from the neurological system to the physical capability of the human changes. Remaining ‘Deliberately Calm’ is a practice that must be accomplished and an ability that must be mastered.

It is easy to arm chair quarterback an incident when it occurs, and many times the people doing so have no experience with what had happened or could even understand the dynamic events that lead up to or what had occurred during a major event.

The important thing is to be ready yourself.

On the ground – get a thorough weather briefing to include ALL NOTAMs

On the ground – Perform a thorough pre-flight

On the ground – Perform a thorough run – up

On the ground – Ensure ALL checklists are completed thoroughly

On the ground & In the air – listen to and read back all required and directed communication

In the air – Be ready for that engine failure after takeoff

In the air – Be ready for that malfunction of Man & Machine and what your actions will be if necessary

In the air – be looking for that landing spot even though it may not be a runway

Fly the plane to the crash site

Understand stress and how it will affect you, master the Deliberate Calm

Be ready, avoid if possible, remain calm, evaluate, and land safely as soon as practical.

Flight Safety “Make It First, , Make It Last”

This PIF is to be in effect until 30 April 2010 or until contained dated material has expired



SAFETYGRAM

April 2009

I found this article and discussed the contents with some of the managers at the meeting. There's some interesting information here that could stimulate further discussion. Enjoy.

'Deliberate calm' guided US Airways crew

A mental state called megacognition probably kept Flight 1549's captain cool and collected.

OPINION; By Jonah Lehrer; January 17, 2009

We can all learn something from Capt. Chesley B. "Sully" Sullenberger III. After his US Airways plane lost power and the smell of smoke and jet fuel filled the cabin, he needed to make a decision. The air traffic controllers were instructing him to proceed to a small airport in Teterboro, N.J., which was less than 10 miles to the west. But could the plane make it that far? Or would it crash in the Bronx?

In recent years, neuroscientists have been able to see what happens inside the brain when people, like Sullenberger, are forced to make decisions under pressure. Though the typical assumption is that some people don't feel fear -- that they are somehow less scared than the rest of us -- that assumption turns out to be false. The fear circuits in the brain, such as the amygdala, generate their response automatically; it's almost certain that everyone on board Flight 1549 was terrified.

What, then, allows people like Sullenberger to make effective decisions in harrowing circumstances? How do they keep their fear from turning into panic? Scientists have found that the crucial variable is the ability to balance visceral emotions against a more rational and deliberate thought process, which is centered in the prefrontal cortex. This balancing act is known as metacognition -- a sort of thinking about thinking.

Pilots have a different name for this skill: They call it "deliberate calm," because staying calm under fraught circumstances requires both conscious effort and regular practice.

This is where flight simulators enter the picture. The advantage of these realistic simulators,

which have been in widespread use since the early 1980s, is that they allow pilots to practice extreme flight scenarios, such as a total loss of engine power over water. The training provides pilots with important technical skills -- they can practice flying crippled planes -- but it also teaches them something more important: how to draw on an optimal blend of reason and emotion. They learn how to ignore their fear when fear isn't useful and how to make quick, complicated decisions in the most fraught situations. Flight crews don't panic because they've practiced staying calm.

Sullenberger's moment of deliberate thought probably went something like this: He needed to make a decision about where to land. He had to carefully weigh the risk of not being able to make the Teterboro airport against the risk of landing in freezing water. The decision required him to weigh numerous variables. How quickly was he losing altitude? Could he clear the George Washington Bridge? Would he be able to steer the plane without thrust? He probably had only a few seconds to consider all this information, but Sullenberger wisely realized that the Hudson was his best option.

Of course, pilots aren't the only people who are forced to act in a crisis. Soldiers must make complicated battlefield decisions; investors must choose when to sell in a sinking market; consumers must figure out how to navigate a turbulent economy.

The important lesson of US Airways Flight 1549, however, is that no matter how difficult or unprecedented the problem, we have the ability to look past our primal emotions and carefully think about how we need to think. Metacognition allows a person to remain calm when every bone in his body is telling him to panic. It is almost certainly what allowed Capt. Sullenberger to assess his options and settle on the best one. That's why he turned the plane south and pretended the river was a runway.

Jonah Lehrer is the author of "Proust Was a Neuroscientist" and "How We Decide."

Fly Safe!



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