On Second Thought –
Episode 7: What Safer Decision-Makers Have in Common
Notes and Viewer Takeaways

One of the most persistent myths in aviation is that safe decision-making is primarily a function of personality. We often assume that some people are naturally cautious, naturally disciplined, or naturally gifted at risk management, while others simply are not. Psychology tells a different story.

What researchers repeatedly find is that safer outcomes are not driven by fixed traits nearly as much as they are driven by learned habits of attention, judgment, and self-awareness. The safest aviators are rarely those who are fearless, exceptionally talented, or even the most experienced. They are the people who have developed habits that compensate for the limitations of the human brain. This distinction matters because habits can be learned.

As a psychotherapist, I spend much of my professional life helping people understand the difference between who they are and what they do. Human beings often mistake repeated behaviors for permanent characteristics. We tell ourselves, "I'm just not good under pressure," or "I'm naturally cautious," or "I've always trusted my instincts."

In reality, most of what we think of as personality is a collection of practiced responses. The research discussed in this episode points toward five habits that consistently appear among safer decision-makers. From a psychological perspective, each of these habits serves as a corrective to a predictable cognitive bias.

Calibrated Confidence

One of the most important concepts in decision science is calibration. Calibration refers to the relationship between confidence and accuracy. Ideally, the two should match. When someone feels 90% certain, they should be correct approximately 90% of the time.

Unfortunately, humans are not naturally well calibrated.
Psychologists have documented the phenomenon of overconfidence for decades. Most people consistently overestimate their knowledge, skill, and ability to predict future outcomes. This tendency appears across professions, cultures, and experience levels.

Aviation is not immune

In fact, experience can sometimes increase confidence faster than it increases competence. As familiarity grows, uncertainty often becomes less visible. Tasks begin to feel easier. Risks become normalized. Situations that once demanded deliberate attention become automatic.

The psychological challenge is not confidence itself. Confidence is valuable. The challenge is ensuring that confidence remains connected to reality.
The safest decision-makers maintain a healthy relationship with feedback. They actively compare their predictions against outcomes. They are willing to discover that they were wrong. Their confidence becomes calibrated because it is continuously adjusted by experience rather than protected from it.

Risk Appraisal and Cognitive Framing

Another important finding from the research involves how people evaluate risk. Most individuals assume that risky behavior results from courage, thrill-seeking, or a lack of fear. The evidence suggests something more subtle.
Safer decision-makers tend to spend more time evaluating potential consequences before acting. They ask two questions:

- How likely is the negative outcome?
- How severe would that outcome be if it occurred?

Psychologically, this process is known as appraisal.
Appraisal is the brain's attempt to assign meaning and significance to a situation. It determines whether something feels safe, threatening, manageable, or dangerous.

The problem is that appraisal is heavily influenced by emotion.
When we strongly want something—a completed flight, a successful repair, a smooth traffic flow—our brains naturally discount information that threatens that

desired outcome. Psychologists refer to this as motivated reasoning. We unconsciously search for evidence that supports the decision we want to make. The safest decision-makers intentionally slow this process down. They evaluate the downside before committing to a course of action. They deliberately examine information that challenges their preferred outcome. In many ways, mature decision-making is not about trusting your instincts. It is about knowing when not to trust them.

Attention as a Safety Skill

One of the most fascinating findings discussed in this episode comes from research on expert attention. When experienced pilots were tracked during simulated failures, their advantage was not superior intelligence or faster reactions. Their advantage was attentional. They looked at different things. More specifically, they directed their attention toward information that actually helped diagnose the problem. This finding aligns with decades of cognitive psychology research. Attention functions like a spotlight. Whatever falls within that spotlight becomes psychologically real. Everything outside it becomes surprisingly easy to miss.

As we have highlighted in previous episodes, humans do not experience reality directly. We experience the portion of reality to which we are paying attention. This is why attention is perhaps the most underappreciated skill in aviation. Situational awareness is often discussed as though it is something people either possess or lack. In reality, situational awareness emerges from attentional habits. The safest operators learn where to point their attention when conditions begin to change. Expertise is often less about knowing more and more about knowing where to look.

Help-Seeking and Psychological Safety

One of the strongest predictors of good decision-making is a willingness to seek help before a situation deteriorates. This may sound obvious, yet it runs directly against several powerful psychological forces.

Humans are deeply motivated to appear competent [especially males]. We avoid situations that might expose uncertainty. We fear embarrassment, judgment, or appearing inadequate in front of peers.

These concerns are not signs of weakness. They are normal social instincts.
The problem is that aviation environments sometimes reward certainty more visibly than curiosity.

The safest professionals learn to resist this pressure. They understand that asking for assistance is not evidence of incompetence. It is evidence of self-awareness. Psychological safety—the ability to admit uncertainty without fear of humiliation—plays a critical role in effective decision-making. Whether in a cockpit, control facility, or maintenance hangar, people make better decisions when questions are welcomed and uncertainty can be discussed openly.

Cognitive Flexibility

Finally, the research highlights the importance of flexibility.
From a psychological perspective, flexibility is the ability to update one's mental model when new information becomes available. This sounds simple. It is not.
Human beings become attached to plans.

Once we commit to a decision, confirmation bias begins working immediately. We seek evidence that supports the plan. We ignore evidence that threatens it. The longer we invest in a course of action, the harder it becomes to abandon.
This tendency is known as escalation of commitment.

The safest decision-makers recognize that changing a plan is not a failure. It is often evidence that the decision-making system is working correctly.
Flexibility protects against one of the most dangerous traps in aviation: continuing to execute a plan that no longer matches reality.

Final Thoughts

The central message of this episode is both simple and encouraging.
A safer decision-maker is not a special type of person.
Safer decision-makers are people who practice a specific set of habits.
They calibrate their confidence.
They appraise risk honestly.
They direct their attention deliberately.
They ask for help early.
They remain flexible when conditions change.
These are not personality traits.

They are learnable skills.
And because they are skills, they are available to every pilot, every technician, every controller, and every aviation professional willing to practice them.
The goal is not perfection.
The goal is to become slightly more aware, slightly more accurate, and slightly more adaptable than we were yesterday.
That is how safer decisions are made.
