Title: Plan Continuation Bias

1. Introduction

The purpose of this advisory memorandum is to promulgate information to the General Aviation community about the dangers of commencing or continuing a flight when circumstances indicate that it may be a more prudent decision to cancel the flight or divert to an alternative destination. Situations where pilots have continued with their planned flight, despite clear indications that this may be a bad idea, is often called "Get-there-itis" or "Plan Continuation Bias".

The possibility of under-reporting of Plan Continuation Bias as a factor in some aviation accidents has been uncovered following research in the US by the National Aeronautics and Space Administration (NASA). An analysis of reports by the National Transport Safety Board (NTSB) identified a number of occasions where this bias may have been relevant but was not identified as a factor in the original report. Their findings show a recurrent theme of pilots continuing with their original plan despite changing circumstances indicating that consideration of a new plan may be required.

Additionally, research conducted by the General Aviation Joint Safety Committee (GAJSC) Controlled Flight into Terrain (CFIT) working group, suggests that human bias, particularly plan continuation bias, may be a significant factor in CFIT accidents[1].

In Ireland, an Air Accident Investigation Unit (AAIU) report for a fatal GA accident[2] published in 2024, includes "Plan Continuation Bias" as a contributory accident causation.

2. Plan Continuation Bias

Plan Continuation Bias has been defined as an unconscious mindset:

> *"when the desire to get to a destination overrides logic, sound decision-making, and basic instinct"*[3].

This unconscious bias can sometimes urge pilots to 'push on' regardless of indications that the plan should be modified in the interest of aviation safety. The effect of this bias can become stronger the closer a pilot gets to a planned destination. This urge to continue with a plan can often result in reduced safety margins, an aviation incident or a serious or fatal accident.

[1] FAAS Team Safer Skies Through Aviation AFS-850 2022-11

[2] AAIU Final Report: Accident involving a Robinson R44 Raven II Helicopter, Report 2024-007

[3] S. Woods, FAA Safety Briefing 2013

3. Pilot Decision Making and Human Factors

Human factors such as "biases" can distort the way a pilot perceives situations and makes decisions. For example, when flying VFR, if the flight conditions en-route or at a planned destination deteriorate, a pilot may tend to continue with a planned flight due to external influences. These influences on a pilot's decision making could be commercial or social pressure to get to a destination for events such as meetings with family or friends or perhaps hotel bookings.

Other influences may be personal factors or prior experience where a pilot has managed to reach a destination on a previous occasion in poor conditions and 'feels' now that it will 'all work out ok' if they push on with the planned flight despite obvious danger(s). Sophisticated avionics fitted to many General Aviation aircraft including automation and GPS may also tempt pilots to 'push on' into deteriorating conditions that they are not qualified to fly in.

Understanding these influences on pilot decision making is important to avoid the effect they may have on Flight Safety. Plan Continuation Bias may be accompanied by a confirmation bias where a pilot may have a tendency to search for or interpret information in a way that confirms preconceptions to support the original plan. For example, a pilot may misinterpret a feature on the ground to be a visual point on a planned routing while ignoring other navigation inconsistencies like the wrong magnetic heading or ground-speed timing.

By understanding Plan Continuation Bias, a pilot can help prevent it influencing the decision-making process and pause to consider all available options. A revised or new plan of action can then be implemented if more appropriate to ensure the safe outcome of the flight.

4. Recognising the Warning Signs

a) **Ignoring or downplaying changing weather signs:** While the weather may have been considered at the planning stage, has it changed unexpectedly beyond your capability, the privileges of the licence you hold, or the limits set by the aircraft operator?

b) **Rushing procedures or skipping checklist:** A perceived shortness of time to get to a planned destination may be a factor of Plan Continuation Bias. If the flight or its preparations cannot be conducted at a normal pace, it is a clue something is not right.

c) **Anxiousness, Irritability:** As the circumstances change around us, such as deteriorating weather, dwindling fuel reserves or technical issues, so can our conscious or unconscious level of stress increase. Unexplained anxiousness or irritability can be a sign of stress. Excess stress can have catastrophic consequences for flight safety[4].

d) **Pressure to get to a destination without delay:** Arrival plans will usually accompany any planned flight, whether it is an overnight stay or a meeting with others. The social or commercial pressure to get clients or travel companions to their destination can be underlying or even stated bluntly by others intentionally or otherwise. These pressures must be acknowledged and carefully managed to avoid influencing safety-related decisions.

[4] Causse, Mickael and Dehais, Frédéric and Péran, Patrice and Sabatini, Umberto and Pastor, Josette The effects of emotion on pilot decision-making: A neuroergonomic approach to aviation safety. (2013) Transportation Research Part C: Emerging Technologies, vol. 33. pp. 272-281. ISSN 0968-090X

5. Mitigating Strategies

a) **"Have an alternative plan**"- While your day might start off with blue skies, things may change. Allocate sufficient time for your preflight planning. Build in contingency plans for changing weather, equipment failure or airspace restrictions. Have your alternate plan worked out already in advance to make it easier to switch between plans. Changing your plan is not a failure; not having enough fuel to reach your destination or alternate is.

b) **"Don't fixate"-** Sometimes it's easy to focus on one thing especially when things get busy. Use regular mental checks to see if the plan needs to be altered. Stay flexible, if weather or conditions change, replan, as necessary. Make continuous assessments during the flight. Has the weather changed? Are the headwinds stronger? How is your fuel burn? Based on these assessments adjust your plan as necessary. Avoid tunnel vision and stay aware of the possible threats and errors that may exist.

c) **"Know your Limits"** – Everybody's limits are different, know yours! Consider your own experience and how current you are on the aircraft. Monitor yourself for stress and fatigue, if necessary, take a break or delay a flight to ensure optimal decision making. Situational awareness means continually monitoring your environment, terrain, weather and current aircraft capability. Deal with issues as they arise. A small problem dealt with now, may avoid a much larger problem developing later.

d) **Recognise "Get-there-itis"** – We've all been in situations where we really wanted to go flying or once airborne to reach our destination.

Ask yourself :

- Would I be making the same decisions if I was not so focused on getting there,
- Am I rushing?
- Are my decisions safe?
- What are my options to Divert, Go-Around or Change my Plan if necessary?

e) **Remember your training** – At any point in a flight you can **Pause**, **Evaluate**, **Decide**.

- **Pause,** take a moment to reassess the situation**,** recognise the warning signs, don't allow a pre-occupation with pressing on to take away the capacity to make sound decisions in the interest of flight safety;

- **Evaluate** your situation and determine the options for a safe outcome to the flight, even if this is not the original planned destination;

- **Decide,** the best option for the safe outcome of the flight and if appropriate execute a revised plan.

6. Further Reading

- Fuel Starvation/Fuel Exhaustion" Publication By: EHEST Component of ESSI
- "Weather Anticipation for General Aviation Pilots" Publication By: EHEST Component of ESSI
- "Decision Making for Single-Pilot Helicopter Operations" Publication By: European Helicopter Safety Team (EHEST) Component of European Strategic Safety Initiative (ESSI)
- Helicopter Airmanship Methods to Improve Helicopter Pilots Safety" Publication By: EHEST Component of ESSI
- CAA Safety Sence Leaflet No.23 PILOTS – "IT'S YOUR DECISION"

7. Useful Links

Irish Aviation Authority:
Weather Anticipation for General Aviation Pilots
Helicopter Airmanship Methods to Improve Helicopter Pilots Safety

EASA:
UIMC - After Take Off | EASA Community (europa.eu)

General Aviation Safety Council of Ireland (GASCI):
GASCI Generic Outbrief

CAA:
CAP2960 VFR flight into IMC
Safety Sence Leaflet 23 Pilots -It's Your Decision

FAA:
Plan Continuation Bias in 57 Seconds (youtube.com)
Strategies to Avoid Controlled Flight into Terrain in 57 Seconds (youtube.com)
FAA Safety Briefing: "Get-Home-It is: The Keys to Treating an Airborne Disease" (March/April 2013)

END