Get-there-itis

A determination to reach your destination despite changing circumstances is commonly referred to as 'get-there-itis'. The technical term for this is plan continuation bias – continuing with a failing plan despite evidence that it's not working.

This phenomenon continues to catch pilots out with serious or fatal consequences. Here are some recent accidents which illustrate the different ways in which it can manifest.

Cresco

In 2008, a fatal accident involving a Cresco showed many hallmarks of get-there-itis. The pilot was in the final stages of completing a topdressing job when the accident occurred, just after takeoff from a farm airstrip.

Self-imposed time pressure may have been a factor, as there were two strong incentives to get the job done that day. The weather forecast for the following day was poor, a low pressure system was approaching, bringing wind and rain, and the pilot was to begin an extended period of leave the following day.

The pilot departed for the farm strip at 6:30 am, but didn't arrive there to begin the job until 9:40 am, due to an engineering issue that required a diversion to the company maintenance base. Part 137, Appendix B, allows agricultural aircraft to be operated up to 28 percent over the maximum certificated takeoff weight (depending on certain conditions set out in the Aircraft Flight Manual). Running behind schedule may have influenced the pilot's decision to use these provisions in order to complete the job faster.

At the time of the accident the aircraft was 145 kg below the Part 137 maximum allowable weight. However, it was probably overloaded for the prevailing environmental conditions. Tyre tracks on the airstrip surface showed that the aircraft had been using the entire airstrip length to become airborne. The pilot needed to jettison some or all of his load on three occasions to achieve the required aircraft performance, and Satloc data showed that on some flights the aircraft had descended by 26 feet after takeoff before commencing a climb.

The pilot continued with this plan despite experiencing poor aircraft performance, lime that wasn't flowing from the hopper evenly, and changing meteorological conditions, as late morning the wind backed, introducing a tail-wind component and turbulence during takeoff and climb out.

As with most accidents, there was no one cause. In this case, get-there-itis (or get-the-job-done-itis) may have been a contributing factor that influenced the pilot's decision-making.

Thames Cess-pit

Plan continuation bias is most often reported in the approach-to-landing phase of flight, when a pilot's goal is to land the aircraft, and their focus is on progress toward that goal. It is a powerful but unconscious cognitive bias to continue the

Photo courtesy of Graeme Giffney.

original plan, and it can prevent pilots from noticing subtle clues that the original conditions have changed.

The Thames cess-pit is a good example of this. In the last six years, three Cessna aircraft have ended up in the sewage oxidation ponds at the end of Runway 14 at Thames Aerodrome, a C150, and two C172s. Two of these encounters show elements of get-there-itis.

The pilot of the first C172 was intending to carry out a touch-and-go at Thames, before continuing to Tauranga. A standard overhead join was made, and the pilot observed a light direct crosswind on Runway 14/32 from the south west, which was fluctuating between a head and tailwind for either runway choice. Since the pilot was heading to Tauranga next, he chose Runway 14 to expedite his departure on track.

On finals, the pilot decided he was too high to make his aiming point, so he went around. On his second attempt to land, the same thing happened – he was too high, and went around. At this point, instead of considering why he might be having trouble landing, checking the wind direction and reassessing his choice of runway, the pilot continued with his failing plan – determined to make a landing work on Runway 14.

The pilot extended downwind on the third circuit, and on realising he was high on finals once again, the pilot closed the throttle in an attempt to descend back onto profile. The pilot initiated a go-around when he saw that he couldn't achieve his aiming point, moving the throttle from fully closed to fully open. When no change in acceleration, attitude, or engine revolutions occurred, the pilot closed the throttle again and landed, but was unable to stop on the runway remaining. The aircraft ended up floating in the oxidation pond and the pilot swam to shore. It is likely that plan continuation bias led this pilot to either miss or dismiss clues that he was experiencing a tailwind and needed to reassess his plan for landing. This, combined with many other contributing factors identified during the investigation, all added up to produce an unfortunate outcome.

The pilot of the second C172 was also on a cross-country, and attempting a touch-and-go landing on Runway 14, before departing for Tauranga. The pilot experienced a tailwind on finals but did not recognise this, or the need to go-around. He continued, and landed deep into the runway. The pilot applied power to commence a takeoff, but then realised he did not have enough runway left to get airborne. He aborted the takeoff by applying the brakes, but inadvertently left power on. The aircraft failed to stop before the end of Runway 14.

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Photo courtesy of Michael Craig.

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Cognitive Bias

Cognitive bias is a general term used to describe many distortions in the human mind that are difficult to eliminate, and that lead to perceptual distortion, inaccurate judgment, or illogical interpretation. Research has shown that plan continuation bias (or get-there-itis) can combine with other cognitive biases. Here are two examples.

Confirmation Bias

Confirmation bias is a tendency for people to favour information that confirms their preconceptions, regardless of whether the information is true. As a result, people gather evidence and recall information from memory selectively, and interpret it in a biased way. Essentially, you see what you want to see. Confirmation biases can therefore maintain or strengthen beliefs in the face of contrary evidence, leading to potentially disastrous decisions.

In 2010, the pilot of a Cessna 172 was on a cross-country flight to Ohakune. The pilot had not landed there before, so prior to the flight he called the operator of the strip to ask a few questions about the area and advise his ETA. The pilot also obtained the GPS coordinates of the strip to load into his GPS unit, and used Google Earth to familiarise himself with the airstrip location and approaches. Overhead Ohakune, the pilot called the operator again to check the status of the runway, because the operator had mentioned he would be clearing stock off the strip before the pilot arrived.

The operator told the pilot that he could see him overhead and to join for Runway 04. The pilot looked down at what he thought was the runway and commented that it looked very brown. The operator said that was from the harrowing he had been doing. The operator then said that he was moving off the runway so the pilot could land. As he said that, the pilot watched a tractor move off the end of the field he was looking at. The pilot stated that glare from the sun prevented him from seeing the condition of the surface of the field and it was not until he was crossing the fence and flaring that he noticed the brown field was in fact ploughed dirt. As the nose wheel touched the ground it dug in and aircraft flipped onto its roof.

Confirmation bias meant this pilot's mind distorted what his eyes could see to fit the information he had been given on the phone. It also meant he dismissed evidence to the contrary,

the lack of a windsock, the short length of what he thought was the strip (the paddock was only 300 m compared to the strip which is 950 m), and the fact that he did not cross State Highway 49 on short finals, or identify a prominent go-karting track abeam the Runway 04 threshold.

Frequency Bias

This is the tendency to revert to high-frequency actions, beliefs, and interpretations. Frequency bias can lead you to see a routinely observed object as it normally appears, even when this differs from its actual current appearance. Similarly, when making decisions, frequency bias manifests as a tendency to do what you most frequently do in that situation, even when you have previously decided to do otherwise. In simple terms, it is your brain thinking, "it's always worked before".

In 2010, an overrun accident by a Glastar showed elements of frequency bias. The pilot had taken off from the strip successfully on previous occasions and assumed this day would be no different. When the pilot could not get the tail raised he aborted the takeoff and braked, but could not stop before the aircraft ended up in a river at the end of the strip.

The pilot did not recognise that the conditions that day were different, and that he needed to change his usual actions and plan. He just assumed the outcome would be successful based on previous experience, without analysing the situation closely. In doing so, he attempted to takeoff with a tail wind, during the hottest part of the day, and without using a short-field takeoff technique.

Summary

While the examples given here are from General Aviation, cognitive biases are experienced by all pilots. Airline pilots who fly the same sectors day in and day out need to be particularly aware of the dangers of frequency bias.

As human beings we like a successful result, and to achieve our goals. This desire can be increased by outside influences such as time, money, and not letting people down. Be aware that this tendency can lead you to make assumptions, see what you want to see, or disregard clues that would require a change of plan. In order to combat cognitive biases, be aware of their potential existence, and try to analyse everything objectively. ■