Cognitive Bias: Voices In Your Head?

Below is a tiny sampling of cognitive biases—just a few starting with the letter "A"—that can lead to flawed risk management. One can make a very deep dive into the psychology of decision making, but these five ways in which we can rationalize our way into a tight spot by ignoring disagreeable evidence are a good place to start.

AMBIGUITY EFFECT

The tendency to avoid options that have missing information, which makes the outcome probability seem unknown

Just because, for example, airborne icing is forecast, but no pilot reports confirm it, or the region's terminal forecasts include a wide range of possible conditions.

ANCHORING OR FOCALISM

The tendency to rely too heavily, or "anchor," on one trait or data point when making decisions.

Just because one airport near your destination is advertising good VFR doesn't mean the other forecasts for MVFR or worse aren't correct.

ATTENTIONAL BIAS

The tendency to pay attention to emotionally dominant stimuli in the environment and to neglect relevant data when making judgments of a correlation or association.

Yes, your airplane has sufficient range to reach the planned destination without refueling. But the winds aloft forecast says you'll come up short. On which should you rely?

AVAILABILITY HEURISTIC

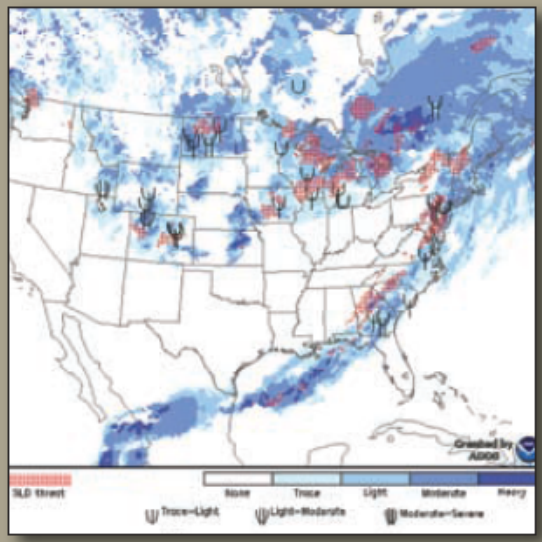
The tendency to overestimate the likelihood of events with greater "availability" in memory, which can be influenced by how recent, unusual or emotionally charged the memories are.

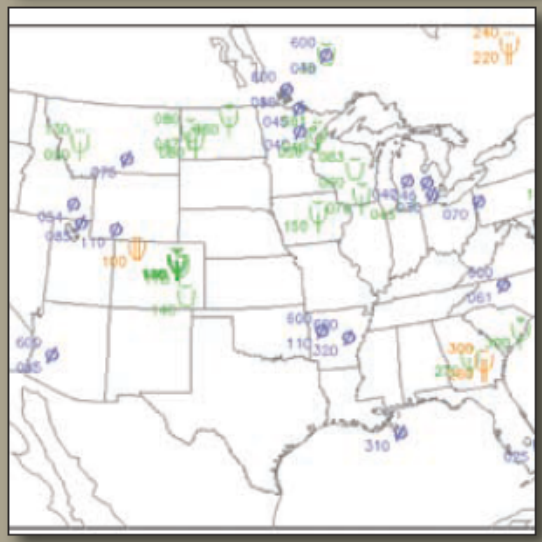
You're not really current on instruments, but the autopilot is. And you've made this trip numerous times, and they've all come out fine. Why should this one be any different?

AVAILABILITY CASCADE

The tendency for a belief to gain more and more plausibility through its repetition in public discourse (or "repeat something long enough and it will become true").

The guys in the FBO lounge say the fuel gauges on (insert aircraft type) always read empty when there's still an hour's worth remaining.





Above, two icing-related weather charts show how an ambiguity effect can occur.. Note the absence of forecast icing over Arkansas and eastern Oklahoma, for example, but recent Pireps confirming its presence anyway.