

The startle reflex normally triggers within 100 milliseconds of the stimulus, it is pre-emotional and contains physiological and subjective dimensions. In the jungle this is the fight-or-flight response when encountering something unexpected. . **The true problem is the change in mental processing due to the surprise associated with an unexpected event.**

◆ **Reluctance to accept the emergency situation.** A pilot who allows the mind to become paralyzed at the thought that the airplane will be on the ground, in a very short time, regardless of the pilot's actions or hopes, is severely handicapped in the handling of the emergency. An unconscious desire to delay the dreaded moment may lead to such errors as: failure to lower the nose to maintain flying speed, delay in the selection of the most suitable landing area within reach, and indecision in general. Desperate attempts to correct whatever went wrong, at the expense of airplane control, fall into the same category.

◆ **Desire to save the airplane.** The pilot who has been conditioned during training to expect to find a relatively safe landing area, whenever the flight instructor closed the throttle for a simulated forced landing, may ignore all basic rules of airmanship to avoid a touchdown in terrain where airplane damage is unavoidable. Typical consequences are: making a 180° turn back to the runway when available altitude is insufficient; stretching the glide without regard for minimum control speed in order to reach a more appealing field; accepting an approach and touchdown situation that leaves no margin for error. The desire to save the airplane, regardless of the risks involved, may be influenced by two other factors: the pilot's financial stake in the airplane and the certainty that an undamaged airplane implies no bodily harm. There are times, however, when a pilot should be more interested in sacrificing the airplane so that the occupants can safely walk away from it.

◆ **Undue concern about getting hurt.** Fear is a vital part of the self-preservation mechanism. However, when fear leads to panic, we invite that which we want most to avoid. The survival records favor pilots who maintain their composure and know how to apply the general concepts and procedures that have been developed through the years. The success of an emergency landing is as much a matter of the mind as of skills.

- Realistic scenario-based training.
- Recognizing and responding to ill-defined events.
- The inability to train for all possible surprising situations.
- Integration of thinking skills and emotional control, with the requisite “stick-and-rudder” skills necessary to successfully perceive, process and respond to any unexpected situation.
- If necessary, use maximum available flight control inputs and power. Employ alternate control strategies as required.
- Modify known procedures to novel situations.

The following mental processes should be considered during training and continuously revisited during flight operations:

- **Reflexive** — The reflexive process is purely instinctive, involving automatic reactions learned by the pilot.
- **Reflective** — The reflective process is a conscious, systematic thought process aimed at problem solving.
- **Repeated reviewing** — The repeated reviewing process involves intelligence gathering in which the pilot looks for changes in the flight environment that might affect the safety of the flight.

Threats are anything that alone, or combined with something else, can have an adverse effect on the outcome of the flight. Threats occur outside the influence of the pilot, like weather,

terrain, a complex procedure, or an aircraft malfunction. Threats require your attention and management if safety is to be maintained.

Errors are pilot actions or inactions that lead to a deviation of some kind. You are likely familiar with the myriad of pilot errors that occur.

- **Anticipation:** Staying alert, knowing that you can't possibly predict everything that can go wrong. Maintaining a state of vigilance and avoiding complacency. AKA=Situational Awareness (SA)
- **Recognition:** The sooner you recognize that something is not right, the faster you can act to mitigate that threat or error. Early recognition obviously aids recovery.
- **Recovery:** This is you intervening in what will soon become, or has already become, an undesired aircraft state.