

The crew of the ill-fated flight PK8303 which crashed in a Karachi suburb thought that they had landed safely the first time. **Actions reveal that the crew thought that they had selected the landing gear down and landing Flap3.** Unfortunately, actions alone couldn't assure safety. **Acting impulsively, the crew selected switches and levers in the opposite direction probably due to cognitive overload.** The CVR will reveal the chaos inside the cockpit.

Reverse loop

The preliminary report released by the AAIB reveals less than what could have been or they know of.

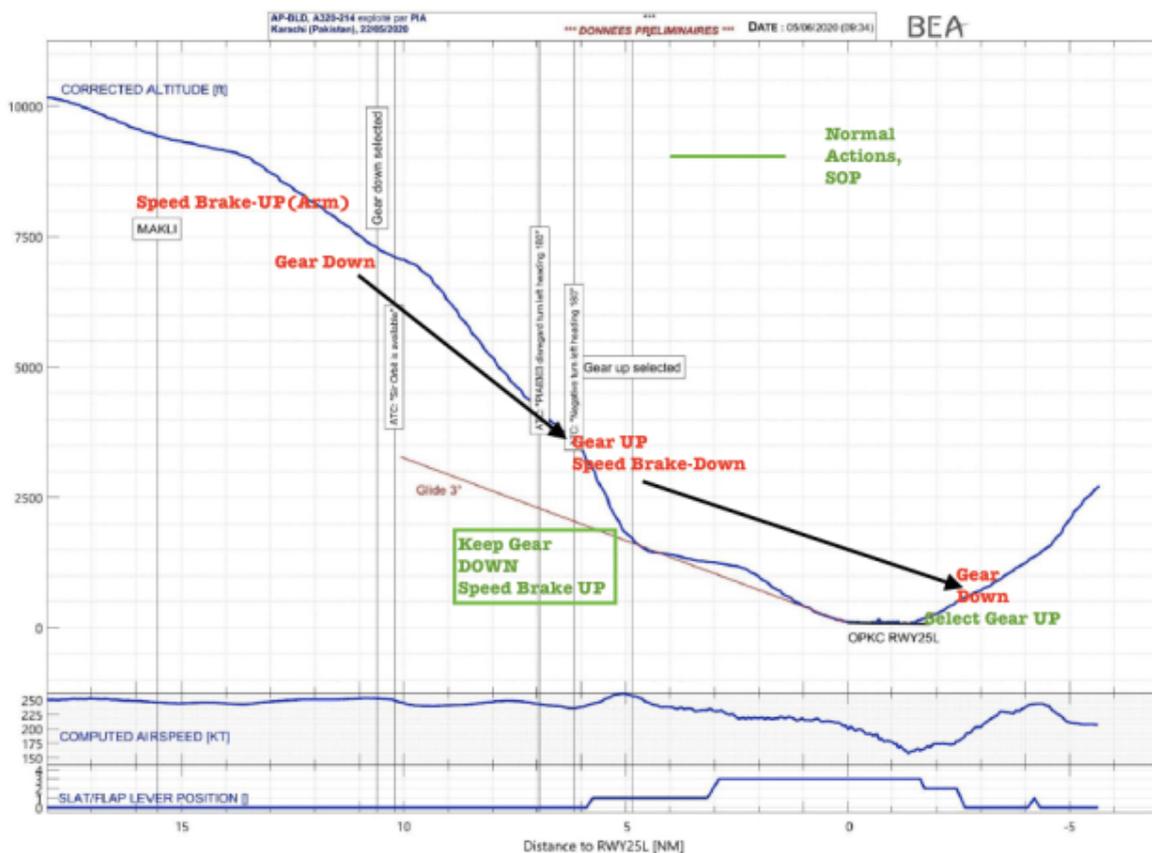


Fig 21 : Selected FDR parameters during last part of the first approach



Speed Brake Lever

In this case, the significant highlight is the reverse order.

Probably, the Captain selected the landing gear down during descent.

Since the aircraft was very high than the intended path, the Captain would have been using the speed brake and nearing the glide slope or catching up with the profile, retracted the speed brake but kept it in UP position , ready for landing.

At ~1740' when the Flap was selected, the Gear was selected Up and Speed brake retracted. Flap 3 was selected for landing.

The aircraft touched down amidst a number of warnings sounding.

Reverse thrust was selected as if the crew had landed normally.

A go around was performed, and when airborne, the Landing gear was selected down briefly.

Impulsivity

Impulsivity is characterized by taking action with less thought in comparison to most individuals with the same level of skill and knowledge. Dickman pointed out another component called inhibition component which manifests as inadequate attention, which itself is a cause of impulsivity

According to Patton et al. there are three factors contributing to impulsivity:

**acting on the spur of moment (motor activation),
not focusing on the task at hand (inattentiveness), and
not planning and thinking carefully (non-planning)**

Cognitive overload

When humans direct their attention towards one task and the task is considered critical, the brain begins to direct shut down other processes in order to allocate extra resources. In the process, the brain can even shut down bodies sensory organs like hearing. This is called load induced deafness.

High perceptual load in a task is known to reduce the visual perception of unattended items (e.g., Lavie, Beck, & Konstantinou, 2014). However, it remains an open question whether perceptual load in one modality (e.g., vision) can affect the detection of stimuli in another modality (e.g., hearing). Four experiments were establish that high visual perceptual load leads to reduced detection sensitivity in hearing. Participants were requested to detect a tone that was presented during performance of a visual search task of either low or high perceptual load (varied through item similarity). **The findings revealed that auditory detection sensitivity was consistently reduced with higher load, and that this effect persisted even when the auditory detection response was made first (before the search response) and when the auditory stimulus was highly expected (50 % present). These findings demonstrate a phenomenon of load-induced deafness and provide evidence for shared attentional capacity across vision and hearing.**

mindFly analysis

Impulsiveness is “the trait of acting suddenly on impulse without reflection.” Impulses are often described as “whims, sudden involuntary inclinations, unpremeditated, and instinctual urges.”

The crew was apparently under tremendous stress managing the flight profile which was very high and fast. The focussed attention caused **impulsive action probably by the co-pilot who had to perform or was ordered to perform an action on the landing lever.**

The landing gear lever was in the Down position but since the co-pilot was to perform an action, he did perform an action but in the opposite direction.

This is confirmed by the fact that after the go-around, **the co-pilot who normally selects the landing gear UP, in this case did perform an action but in the opposite direction by selecting the landing gear DOWN.**

The copilot had therefore lost awareness of the switch positions and acting mindlessly. **The crew did not hear the warning sounds and the ground proximity warning alerting the crew that the landing gear was not down due to induced load deafness.**

Mindfulness, decoupling of tight situations and effective breathing are a few ways by which these unfortunate accidents could be prevented.

The culture of the organisation, professional and national culture too has a big role to play. The Captain had 18000 hours of experience and the PDI would have been very high.



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Conformism & Cultures, an Asian perspective