



# Diverse Opinions at the Big Table

Can a group of people from different backgrounds come up with a better solution to a problem than the sole expert? Research indicates they can. That may have implications for decisions about aviation safety.

It would seem logical that an aviation operator needing a solution to a problem would gather together the chief executive officer, the chief pilot, and the chief engineer to thrash out an answer.

After all, they would have years of experience between them, have attained seniority based on merit, would possess advanced skills, intimate knowledge of the operation, and be cohesive in their attitudes.

But 'diversity' research is indicating that the answer that impressive trio comes up with may not be as effective as the one found by a group of outsiders, who are not cohesive at all in their attitudes to the problem.

There are some practical reasons why that might be the case.

An outsider will see the problem as a stranger, and that will sharpen their observations. Likewise, they'll avoid the confirmation bias<sup>1</sup> that may get in the way of the decision made by the insider group.

Secondly, their different backgrounds will provide novel perspectives on the issue.

And thirdly, an organisation insider who is nevertheless a decision-making outsider, may 'know stuff' the executives are strangers to.

In *Pushing Your Aviation Risk Management Comfort Zone* (2007) from the Dallas-based International Risk Management Institute, aviation commentator Adam Webster says:

"Solicit ideas from the janitor to the CEO, giving them equal weight.

"While this may sound preposterous to the CEO who rides comfortably in the corporate jet as (s)he reads the contents of the suggestion box, one carefully constructed argument by diversity author James Surowiecki, is that the pool of idea generators should *not* focus on recruiting the smartest and most experienced exclusively.

"Unabashed and maximum diversity of opinion is more valuable than the typical circles we've been acclimated to seek out first."

Further, diversity research is finding that groups made up of individuals with differing perspectives are almost eerily accurate in their estimation of a probability, or prediction, of something happening.

<sup>1</sup> The tendency to interpret new evidence as confirmation of one's existing beliefs or theories.

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This is thought to be the result of each member of the group having at least some information *of their own* to contribute; that they're not influenced by the opinions of the others in the group; and that they're able to specialise, and draw on local knowledge.

When those individual opinions are turned into a collective decision, their answer is likely to be accurate.

But why?

Put simply, if you ask a large enough group of diverse, independent people to make a prediction or estimate a probability, then average those estimates, the errors each of them makes (sometimes called 'idiosyncratic noise') in coming up with an answer will cancel each other out (or, eliminate the 'noise').

American social scientist, Scott E Page, has arrived at a mathematical theorem that translates in plain language, to 'when the diversity of the group is large, the error of the crowd is small'.

But it's not just about finding specific answers to mathematical questions. In formal studies, 'collective insight' seems to result in better decisions than the sole expert, or a small group of experts, produce.

In October 2014, the magazine *Scientific American* wrote in "How Diversity Makes Us Smarter":

"It (diversity) encourages the search for novel information and perspectives, leading to better decision making and problem solving. Diversity can improve the bottom line of companies and lead to unfettered discoveries and breakthrough innovations. Even simply being exposed to diversity can change the way you think.

"Interacting with individuals who are different forces group members to prepare better, to anticipate alternative viewpoints, and to expect that reaching consensus will take effort."

Former CAA Regulatory Intelligence Analyst, Tania Chinnaiyah, looked for patterns and trends in occurrences reported to the CAA. She says an operator trying to find a solution to a problem might do well to bring in an outsider.

"A solution to a significant problem, arrived at by a sole operator based only on their own perspective could be quite ineffective, even dangerous.

"Sometimes an operator will need someone to challenge the status quo. So they could consider bringing in people from the wider system. For example, the local aerodrome operator, or someone from the CAA. All three together might pick apart the problem, leading to a better understanding of the issue, and find a customised solution that originates from their different perspectives."

Organisational psychologist and ex-RNZAF squadron leader, Keith McGregor, says that despite the obvious benefits of obtaining diverse opinions to avoid the risks of 'groupthink' (see caption next page) there are subtle, hidden barriers to doing so.

"One example is the phenomenon known as 'positional chauvinism'. For instance, a former air force officer recalls an incident when a wing commander who had transferred from another base enquired about joining a local service organisation.

"On being advised to talk to a particular corporal, everyone in the room noted the look of confusion on the wing commander's

face, and knew exactly what he was thinking, 'But how could that be? He's just a corporal.'

"That unconscious belief that people of lower 'status' are somehow less intelligent or have less to contribute is evident from its origin in family life and on through to virtually all private and public sector organisations.

"It's been a factor in countless aviation tragedies, it throttles organisational creativity, and it demotivates those with much to offer."

## But Think About What You Want

CAA Principal Policy Adviser, Brigid Borlase, says while a fresh pair of eyes is always useful, it's important to first decide what sort of eyes are needed.

"Sometimes, that might be someone with technical expertise that's maybe comparable to the group, but from a different sector.

"There are some conversations where you would not want a total outsider brought in because it would be just too disruptive.

"Although sometimes," she adds, "disruption can be a good thing."

Brigid also says it's critical to understand why you want different perspectives.

"You need to tease out why diverse minds would be better than that of the like-minded group. Ask 'What is the benefit of bringing in someone from outside the group?'

"And ask 'What are the risks of bringing in just the CEO and chief pilot?'. It may be that they will see only what they expect and want to find there."

Brigid says for a 'diverse minds' approach to be effective, it must be respected by the wider organisation.

"There's no point ticking the 'diverse thinking' box and ignoring the result. It has to be wanted, respected, and valued."

Keith McGregor agrees, saying for a manager, overcoming something like positional chauvinism can be a challenge.

"It can take a great deal of courage, as Captain David Marquet discovered when, as the captain of a United States nuclear fast attack submarine, he one day gave what turned out to be an impossible order, which his crew tried to carry out anyway.

"When he questioned why no-one had challenged that order, he was told 'because you gave an order'.

"He made a decision to encourage leadership at every level, and never give another order himself.

"Within two years, Captain Marquet's submarine went from having the worst morale and retention in the US Navy to achieving the highest possible grading."

## Try It Out

Tania Chinnaiyah says aviation operators don't always need to worry about exactly what group would be 'diverse enough', or how different from the norm their perspectives would have to be, to come up with a good decision.

"It's just a matter of embracing the idea that including people who're not normally at the big table, in an otherwise homogenous group, might lead to a more effective decision, than that arrived at by just two or three like-minded 'experts'." ■





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28 January 1986. The Space Shuttle Challenger STS 51-L with seven crew, exploded 73 seconds after launch.

Social psychologist Irving Janis believed the tragedy was at least partially due to what he called "groupthink" – it becomes more important to people in a like-minded group to agree, than to look at alternative ways of doing things.

The official Challenger investigation found the program engineers were anxious about the robustness of protective O-ring seals in the freezing temperatures predicted for the launch. Unable to prove the seals would fail, they were persuaded to support the launch. The NASA managers to whom the engineers reported, were desperate for the launch to go ahead. It was therefore more important to have unanimous agreement to the launch, than to deal with dissenting opinions.

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