



Update ME

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A brief update from the
Civil Aviation Authority
Central Medical Unit

16 January 2006

Reminder: Suspension

The recent use of a very old Notice of Unfitness, instead of suspension, prompts this reminder.

The Notice of Unfitness cannot be used for CAA medical certification processes. This old form is thoroughly inappropriate given the changes to the Act that came into effect on 01 April 2002 and its use would potentially expose an ME and the Director to unnecessary legal risk.

In situations where, in the old system, a Notice of Unfitness would have been appropriate our current regulatory system relies on the provisions of section 27I(1) of the Civil Aviation Act ... especially the options for suspension, and the imposition or amendment of conditions, restrictions, or endorsements.

Please destroy any stores of the old Notices of Unfitness that you hold. If you have any uncertainty concerning compliance with s27I of the Act please contact the CAA medical personnel for further information.

From the literature: Signal light guns

An article in the latest issue of *Aviation, Space, and Environmental Medicine*¹ reports an analysis of aviation signal light guns at airports and concludes: "There is sufficient variability in the light colours and intensity across airports so that any given LG cannot be used as valid practical test of colour vision in aviation".

For argument's sake

Another of the many fallacious arguments applied in debate is called *affirming the consequent*².

An example of affirming the consequent can be found in: "When cats are bitten by rabid hedgehogs they die. This cat is dead so obviously there is a rabid hedgehog about."

In this fallacy the arguer has mixed-up the antecedents and consequents. In an 'if ... then' construction, the 'if' part is the antecedent, and the

'then' part is the consequent. It is valid to affirm the antecedent in order to prove the consequent, but not vice versa:

"If I drop an egg, it breaks. I dropped the egg, so it broke." is valid; but

"If I drop an egg, it breaks. This egg is broken, so I must have dropped it." is not.

For the logic to be valid we must affirm the first part in order to deduce the second. In the fallacy we affirm the second part in an attempt to deduce the first.

Dr Pirie's advice is that:

Affirming the consequent is an extremely good fallacy to use when you wish to impute base motives to someone.

Aircraft Accident Report: TAIC 05-003

The Transport Accident Investigation Commission (TAIC) recently published their report into the 02 February 2005 accident of Piper Seneca ZK-FMW in which the three occupants of the aircraft were killed.

The TAIC report³ concluded that "No obvious cause for the accident could be determined. Autopsy reports showed the pilot had consumed cannabis, probably between 12 and 24 hours before the accident. While cannabis can adversely affect a person's ability to operate an aircraft, its effects can vary greatly so this could not be conclusively identified as a cause of this accident." and noted that the "Safety issues identified included:

- the lack of a test regime to identify the use of illicit drugs and alcohol in the transport industry;
- inadequate medical standards for pilots with an aortic valve replacement;
- the urgent need to have terrain awareness warning systems installed in Part 135 aircraft."

From the literature: ROC curves etc

For those interested in the modelling of aviation decision-making a recent paper⁴ by our previous PMO may be well worth a look.

¹ Hovis JK et al. Aviation Signal Light Gun: Variations in Photometric and Colorimetric Properties Among Airports. [Aviation, Space, and Environmental Medicine](#), Volume 77, Number 1, January 2006, pp. 46-52(7).

² Pirie, M. *Book of the Fallacy: A Training Manual for Intellectual Subversives*. Routledge & Kegan Paul Books Ltd (1985).

³ TAIC investigation 05-003: Piper PA34-200T Seneca II, ZK-FMW, controlled flight into terrain, 8 km north-east of Taupo Aerodrome, 2 February 2005. (<http://www.taic.org.nz/aviation/05-003.pdf>)

⁴ Irwin RJ & Callaghan KSN. Ejection Decisions by Strike Pilots: An Extreme Value Interpretation. [Aviation, Space, and Environmental Medicine](#), Volume 77, Number 1, January 2006, pp. 62-64(3)