When they've already made up their mind:

lessons from recognition-primed decision-making

IPRRG 2018
Taichung, Taiwan
16 October 2018

Melanie Newfield

Plants and Pathways Risk Assessment
Regulation and Assurance, Ministry for Primary Industries
Wellington, New Zealand



It's a common complaint of scientists and analysts that they are providing advice to people who have already made up their mind.

Evidence suggests that this is at least partly true.

"Naturalistic decision making" – the study of how people actually make decisions

e.g. Klein 2008 – review of naturalistic decision making e.g. Dillon 1998 – study of New Zealand local government decision makers.

What can we learn from the way people make decisions?

Studies of fire fighters, platoon commanders, power plant operators, airline pilots...

e.g. How do decision makers evaluate options?

Recognition-primed decision model

Step 1: Identify option – pattern recognition

Step 2: Will this work or not?

Step 3: Do option, modify option or discard.

e.g. Klein 2008 (also see Naikar 2010)

How and why does it work?

Goal is to find a "good enough" answer quickly

Considers what has worked before

Johnson and Raab 2003 – first option is likely to be the best,

sometimes

When does it work?

Predictable environment
Valid cues
Immediate feedback
Sufficient experience

Kahneman and Klein 2009 – "Conditions for intuitive expertise"

When doesn't it work?

Insufficiently predictable environment – rare events
Insufficient feedback

"People... sometimes have subjectively compelling intuitions even when they lack true skill."

Decision makers have preferences and are likely to have a preferred option very quickly.

Know where they stand – this will affect your communication

Ask "what would change your mind"?

Consider whether the best option is needed, or will "good enough" do.

Next steps?

What can we do when recognition-primed decision making is being used, but the conditions mean it is not appropriate?

References, further information

Dillon, Stuart M. (1998). Descriptive Decision Making: Comparing Theory with Practice. Conference Proceedings Society for Operational Research

Johnson, J. G. and Raab, M (2003). Take The First: Option-generation and resulting choices. Organisational Behaviour and Human Decision Processes.

Kahneman, Daniel and Klein, Gary (2009). Conditions for Intuitive Expertise. American Psychologist.

Klein, Gary (2008). Naturalistic Decision Making. Human Factors.

Naikar, Neelam (2010). Comparison of Decision Ladder Template and Recognition-Primed Decision Model. Report to Australian Defence Science and Technology Organisation.