




Defence Management Network  
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# Understanding risk attitude

*Presented by*

 Dr David Hillson FAPM FIRM  
Director, Risk Doctor & Partners

 Ruth Murray-Webster MBA MAPM  
Director, Lucidus Consulting

 [www.risk-attitude.com](http://www.risk-attitude.com)  
[info@risk-attitude.com](mailto:info@risk-attitude.com)

 **Lucidus**  
Consulting

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## Objectives

- Move beyond process, documentation, review and analysis
- Stimulate thinking about appropriate risk-taking when making business decisions
- Examine the influence of risk attitude, understand it so it can be managed

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### Two aspects of uncertainty

- **Variability** – “aleatoric” uncertainty
  - Rolling “unloaded” dice, or playing the lottery
  - Uncertainty can be statistically determined
- **Ambiguity** – “epistemic” uncertainty
  - Incomplete knowledge about the situation
  - Uncertainty cannot be calculated as there is uncertainty about the situation itself

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### Risk and uncertainty


Risk  $\neq$  ~~Uncertainty~~

True or False ?

Risk = Uncertainty that matters  
(i.e. can affect **objectives**)

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### Key questions

- 
- How uncertain?
  - How much does it matter?
  - Matters to who?
  - How do you know?

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### Risk management & decision-making

- Both involve **uncertainty**
  - “The problem with the future is that more things might happen than will happen” (Plato)
- Both **matter**
  - “Decision-making is the primary task of any manager” (Drucker)
- “Zero risk” is neither possible nor desirable
  - “Appropriate risk-taking must be followed by effective risk management” (Hillson & Murray-Webster)

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### Two-dimensional risk

Risk has two dimensions :

1. **uncertainty**
2. **effect on objectives**



*"probability"*

*"impact"*



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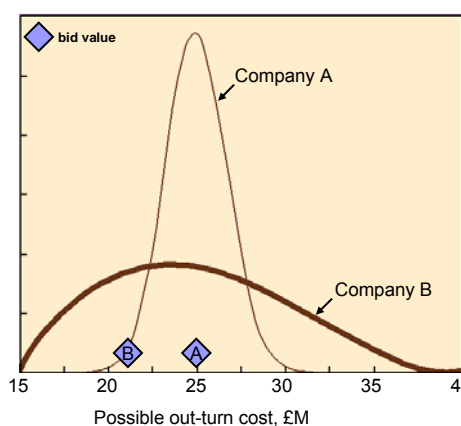
### What matters?

- “Impact” assessed against objectives
  - But what kind of impact “**matters**”?
  - Could be either **positive** or **negative**
  - Uncertainty that **helps** as well as uncertainty that **harms**
- “Risk” includes threat & opportunity
- Both need managing proactively

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### A simple example: The procurement dilemma

- Two bidders have been short-listed
  - Company A bids £25M. Your risk analysis suggests a realistic range of £20-30M.
  - Company B bids £22M. Your risk analysis indicates a range of £15-40M.
- Consider threats & opportunities
- **Which** company do you select, and **why**?



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### DEFINING RISK ATTITUDE

**risk** (1. uncertain event or condition which if it occurs has an effect on objectives (tr.) 2. to expose to the effects of variability or ambiguity..



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### What is “risk”?

- **“Uncertainty that matters”**



- Only defined in relation to **objectives**
  - “What is **at risk**?”
- Driven by **perception**
  - “How uncertain?” “How much does it matter?”

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### What is “attitude”?



- Two definitions :
  1. State of mind **in relation to** a fact or situation
  2. Orientation of axes **in relation to** a reference plane
- People and aeroplanes :
  - **Choose** direction of lean to achieve desired outcome
  - Attitude  $\neq$  motion, **choice** must be followed by **action**
  - Multiple **options** in given situation, no right answer
  - **Extremes** cause instability (stall/spin)
  - Preferred **default** option but can still **choose**

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### What is “attitude”?

- “**Chosen response to given situation**”
- Only defined in relation to **something specific**
  - “Attitude **towards what** ?”
- Affected by **perception** of situation
  - “What do I think it is?”

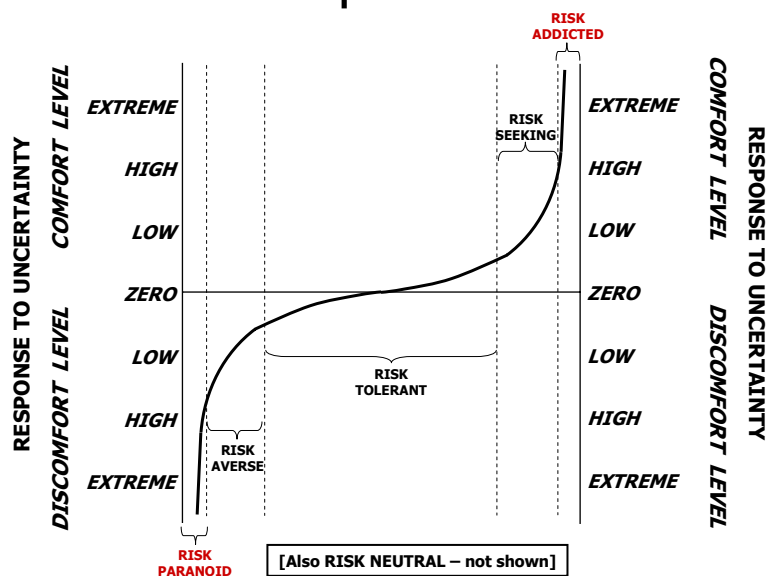
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### What is “risk attitude”?

- “Risk Attitude” = “Risk” + “Attitude”
  - “*Chosen response to uncertainty that matters, influenced by perception*”
  
- Risk attitude operates at **many levels**:
  - individual
  - groups
  
- Risk attitude exists on a **spectrum**

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### Risk attitude spectrum



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### UNDERSTANDING INFLUENCES



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### Where are you on the spectrum?

- Is risk attitude :
  - Inherently fixed? *"I was born like this"*
  - Habitually influenced? *"I'm always like this"*
  - Situationally variable? *"I'm not sure what I'm like"*

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### Where are you on the spectrum?

- ***“It depends ”***

- On ...

- External environment (situation)
- Internal environment (subconscious factors)

### And where should you be?

- ***“It depends ”***

- On ...

- Objectives

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### What influences perception? Three intertwined factors

1. **Situational assessment (rational)**
2. **Heuristics (subconscious)** = “Rule of thumb” / “Gut feel”
3. **Emotions (visceral)**



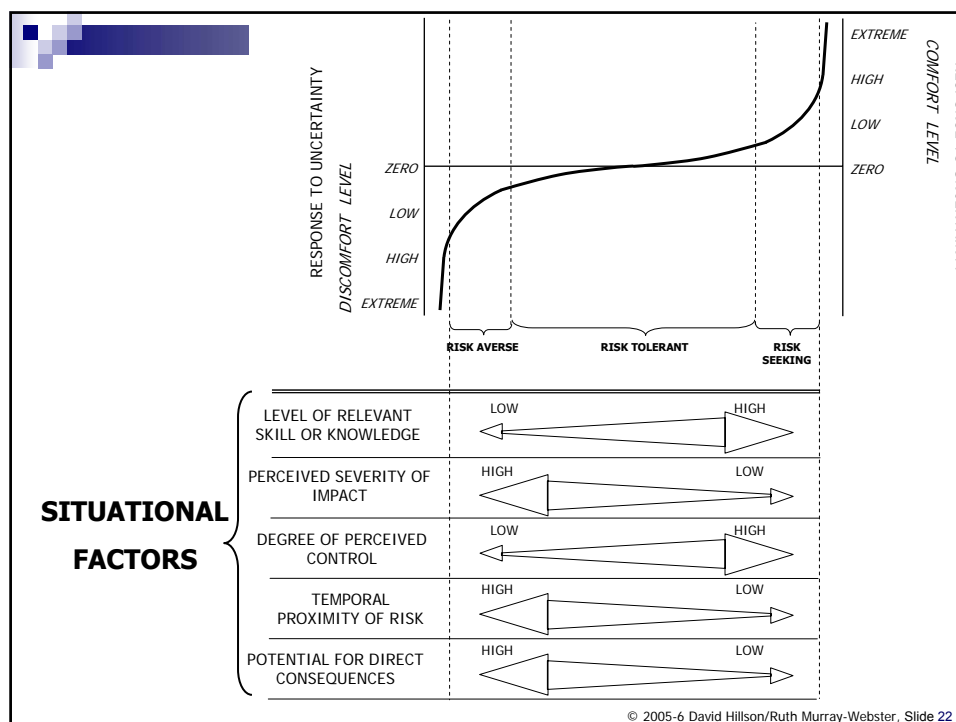
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# Understanding & Managing Risk Attitude

## 1. Situational factors

- **Familiarity:** Level of relevant skill, knowledge or expertise
- **Severity of impact:** Size matters
- **Manageability:** Possibility of control or choice
- **Proximity:** Closeness of risk in time or space
- **Propinquity:** Potential for direct consequences (self or organisation)

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### 2. Heuristics

- Different heuristics affect *individuals* & *groups*
- **Individual** influences :
  - *Availability* : more memorable = more significant
  - *Representativeness* : similarity to stereotypes
  - *Anchoring & adjustment* : vary from initial value
  - *Confirmation trap* : seek supporting evidence
- [**Group** influences later...]

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### 3. Emotions (really?)



...and now for something completely different!



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### Did you all feel something?

#### Some previous responses

- Looking for package
  - Curious
  - Excited
  - Hopeful
  - Sceptical
  - Interested
  - Amused
  - Optimistic
  - Nervous
- Stand on chair & sing
  - Stupid
  - Embarrassed
  - Silly
  - Excited
  - Abused
  - Horrible
  - Foolish
  - Nervous

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### Did you all feel something?!

- What matters is whether the emotions you feel instinctively (and that may affect you physiologically) are leading you:
  - Towards a decision that matters, or
  - Away from a decision that matters, and
  - Is that appropriate?
  - Sometimes it might not be and you'll want to change it.

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## MORE ON EMOTION !



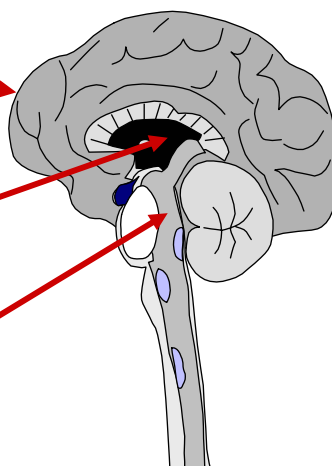
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## The Triune Brain (Paul McLean)

Level 3  
Neo-cortex  
Intelligence Quotient  
IQ

Level 2  
Limbic system  
Emotional Quotient  
EQ

Level 1  
Brain stem  
Physical Quotient  
PQ



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### Emotions as sources of influence and bias

- Limbic system – where all emotions are experienced and remembered whether the situation is real or imagined
- Seeks pleasure, avoids pain, decides whether a course of action is good or not
- Not “rational”, not necessarily best way forward to achieve objectives, but we have a neo-cortex we can choose to use!

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### Risk management at work

- Organisations need reliable decision making in uncertain situations
  - Want people to identify threats & opportunities, assess them, decide how to respond etc
- Those decisions are made (or fail to be intentionally made) by emotion feeling humans
  - Not a mechanistic, tick-box process

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### Does emotional management matter?

- **Yes - if your process isn't going to be dry, boring, mechanistic and ineffective**
- *“Psychologists who study risky choice don't talk about a surprisingly large number of factors that are psychologically relevant in choosing among risks. Words such as fear, hope, safety, danger, fun, plan, conflict, time, duty and custom are not found in the theoretical vocabulary, nor can these words be given meaning in psychophysical or rational theories*

Lopes, 1987, from 'Beyond hope & fear: the psychology of risk'

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### Does emotional management matter?

- **Yes – if you want decisions and actions that take into account all the relevant factors**
- *“Proponents of formal risk analysis tend to view affective responses to risk as irrational. Current wisdom disputes this view.”*

Slovic et al, Risk Analysis, Volume 24 No.2, 2004

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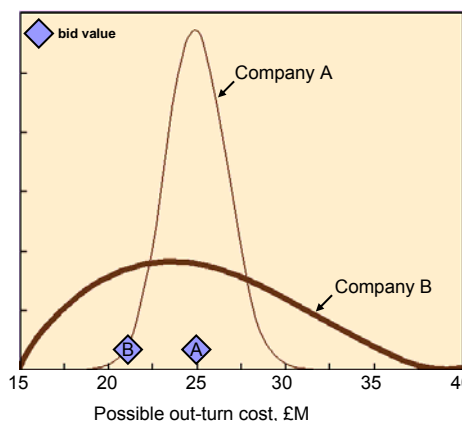
### Basic steps to emotional management

1. Recognise emotions
  - And acknowledge them as entirely natural
2. Understand emotions
  - Why and are they helping or hindering
3. Appropriately express emotions
  - In a way that supports your objective
4. Deal with emotions
  - Don't have to be a victim

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### Revisiting the procurement dilemma

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### PEOPLE AND GROUPS

- “No man is an island” *[John Donne]*
- Multiple levels of membership & influence
  - family, work, teams, organisation, friends, social class, clubs, community, profession, nation...
- Risk attitudes do not exist in isolation
- Group influences :
  - External = relationships
  - Internal = heuristics

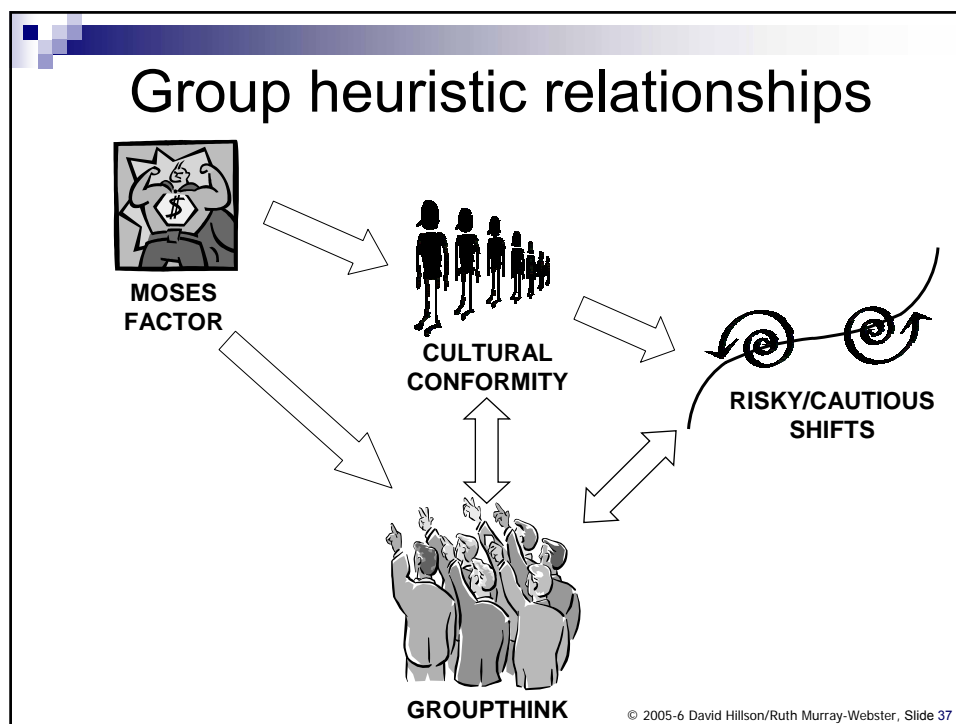


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### Group heuristics

- Four examples:
  - **Groupthink** : follow the majority
  - **“Moses factor”** : follow the leader
  - **Cultural conformity** : “the way we do things here”
  - **Risky/Cautious shift** : groups tend to extremes

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## Managing Group Risk Attitude

- The behaviour of decision-making groups in uncertain situations reflects group risk attitude which is influenced by a complex web of factors. Making appropriate decisions (\*) is essential for delivering value/benefit/success, and requires that these factors should be both understood and managed.

(\*) An “appropriate decision” is one which is accepted by all group members as giving the best possible chance of achieving the desired outcome

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### Our working hypothesis: The Five Factors

1. The risk attitude of powerful people (“leaders”)
2. The individual risk attitudes of group members
3. Group dynamics
4. Organisational culture
5. Wider national and societal influences

■ **Key factor = *decreasing propinquity* ?**

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### Risk assessments at work

- Whoever controls the description of risk controls the solution to the situation at hand and the subsequent decision (adapted from Slovic 1997)
- Identifying and describing risk is an exercise in power
- Who are the stakeholders involved in decisions?
- Trust is fragile – but essential

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### Defence Values for Acquisition: some links to appropriate risk-taking

- Allow space for innovation
- Put risk where it can be managed most effectively
- Value openness and transparency – avoid wasted effort
- Value objectivity based on clear evidence rather than advocacy

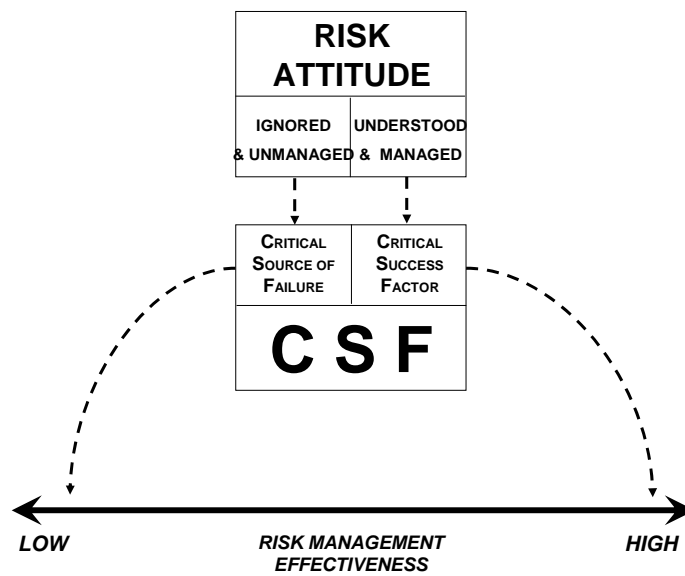
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## AND FINALLY ...



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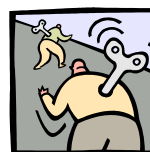


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## Understanding & Managing Risk Attitude

### Three key messages

1. What is risk?
    - Risk = uncertainty that matters
    - Both probability and impact are important
  2. Why is risk important?
    - Risk = opportunity + threat
    - No 'risk-free' option
    - Managing the innovation/risk balance
  3. Why do people matter?
    - Risk attitudes are vital, both individual & groups
    - Perceptual influences include situation, heuristics & emotion
- Awareness ⇒ understanding ⇒ management
    - "Know thyself"
  - And now... ???

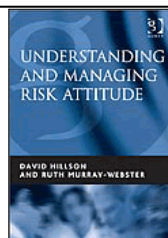


**JDI!**

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# Thank you

Further details are in David & Ruth's book,  
**"Understanding & Managing Risk Attitude"**  
Gower, 2005, ISBN 0-566-08627-1



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