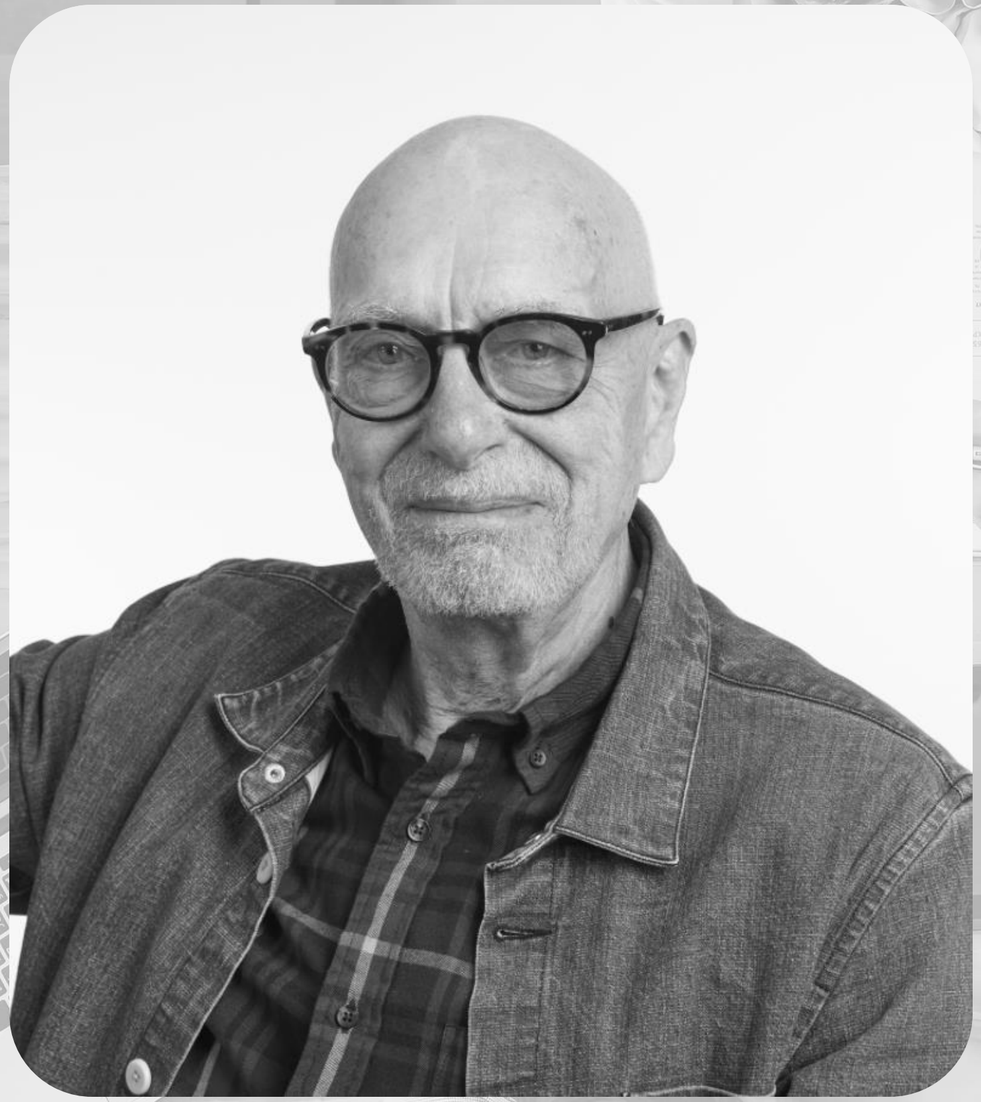
Metricating Mindsets

Integrating Human Factors in Risk Management



Introduction

1. Chartered Psychologist

2. CEO & Founder of PCL (30+ years)

3. ...and still standing

Risk Management Modelling

Douglas Hubbard –Monte-Carlo modelling

Frank Knight – 2 kinds of uncertainty:

1. RISK - 'odds' **CAN** be assigned
2. RADICAL UNCERTAINTY - 'odds' **CANNOT** be assigned

"A desire for certainty is a deep-seated characteristic. It is as irrational as it is understandable"

Mervyn King

Fragility and Limitations of Mathematics

- Decisions made with mathematics alone are misinformed

"depend on nothing but mathematical expectation, enterprise will fade and die"

John Maynard Keynes

- Models can be susceptible to the Butterfly Effect

"Replacing 0.506127 with 0.506 – could produce dramatically different forecasts"

Philip Tetlock

Sir Dennis Weatherstone

CEO of J.P. Morgan since 1990

Obscure financial products designed by traders and mathematicians.

Each product **must be explainable** to senior managers

He offered 3 x 20 minute sessions to explain

People & Probabilities

- Irrespective of the model, people need to use the output

- Even professionals fail in interpreting probabilities

“People are not built to understand probabilities”

Gerd Gigerenzer

Summary of Modelling

1. Taking debate away from people who have to make decisions → wonderland of abstraction

2. Models themselves are often wrong

3. Biologically we are not equipped to make appropriate inferences based on probabilities

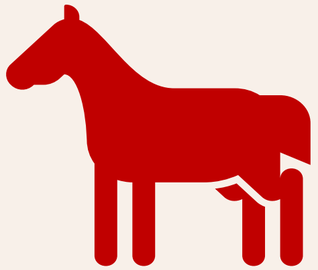
A Shift in Perspective

- Risk Management should focus on people rather than events
- Decisions are strongly influenced by those involved

  Wolves of Wall-Street Study

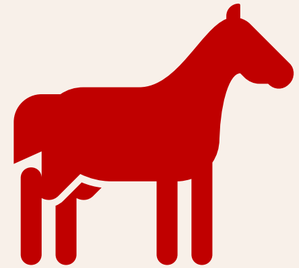
- So, how can ‘human factors’ be better represented?

2,500 Years Of Dualism



Plato: “two horses pulling us in opposite directions”

Body - Mind
Feeling - Thinking
Heart - Head
Intuition - Reason
Emotion - Cognition
System One – System Two
Thinking fast - Thinking slow



Plato 428 BC - Aristotle 384 BC - Descartes 1641 - Antonio Damasio 1995
Glimcher 2011 - Daniel Kahneman 2011

Dual Process In Neuroscience

SYSTEM 1 (Emotional)
Associative
Holistic
Automatic
Fast
Contextual

Acquired by
Biology

SYSTEM 2 (Reasoning)
Rule based
(cognitive)
Analytic
Controlled
Slow
Rationalised

Acquired by
culture and tuition

Glimcher's Theory

Shall I? – Shan't I? …We're ALL In Two Minds

Emotion

The “GO” system

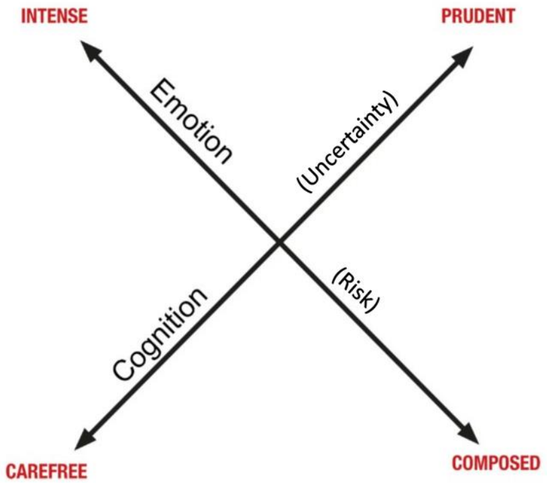
System One
Impulsive
Automatic
Hot
Temptation
Intuitive
The oldest parts of the brain

Cognition

The “KNOW” system

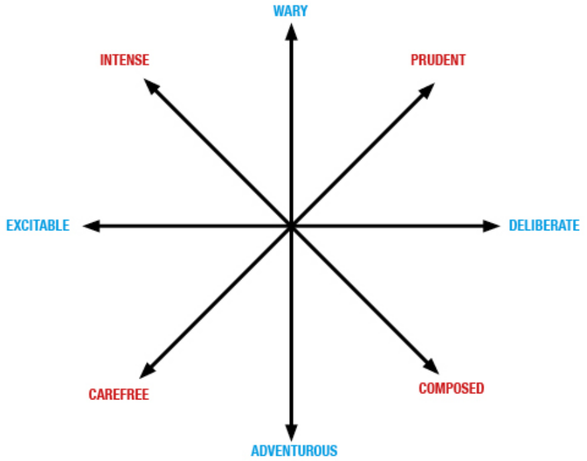
System Two
Slow
Effortful
Cool
Reflective
Controlled
More recent parts of the brain

Metricating Human Factor Risk



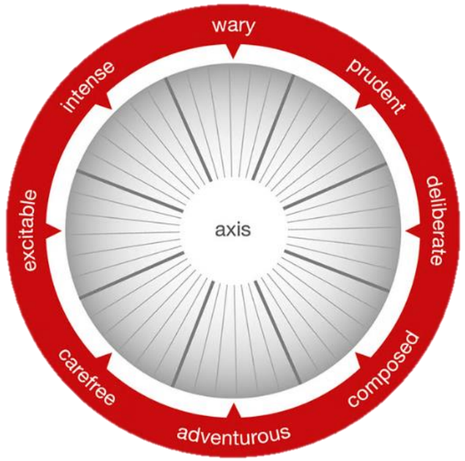
2 Scales

Individuals' positions on Emotionality and Cognition – the two scales highlighted by research that underpin decision making



Discerning Difference

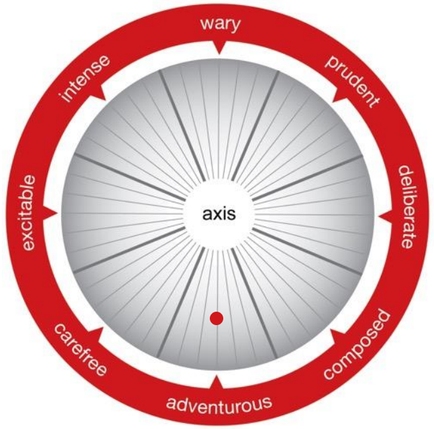
There are a myriad of ways in which scores on these two scales can be combined, highlighting our unique differences



Making Sense

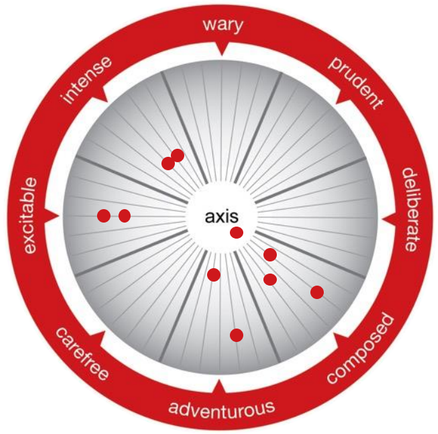
The Risk Type Compass provides a taxonomy which places every individual into 9 possible Risk Types based on these scores

What the Risk Type Compass Enables



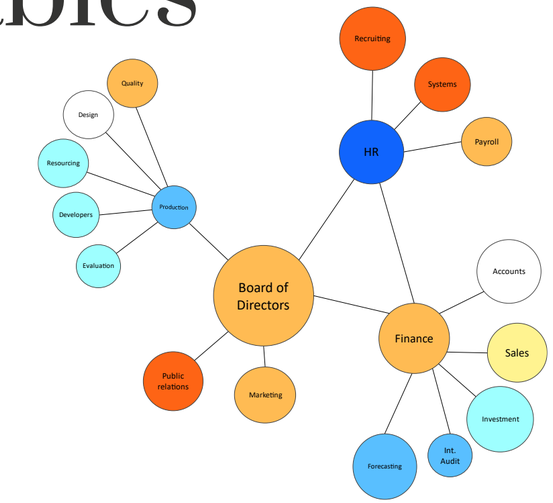
Individual Self-Awareness

Individuals can recognise their own risk disposition, elevating self-awareness, enabling strengths to be leveraged and shortcomings to be managed



Team Effectiveness

Teams can understand what every member brings to the table, their unique contributions and perspectives, and how to harness diversity for the benefit of the group



Organisational Overview

Organisations can audit and map risk dispositions across their entire organisation. This provides a tangible and insightful lens into risk culture


Any
questions?

pcl opening minds

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