THE PSYCHOLOGY OF RISK

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Today’s Objectives

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<td>1.</td>
<td>Learn how to recognize and narrow the gap between perceived risk and actual risk</td>
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<td>2.</td>
<td>Be able to recognize the most common types of cognitive bias that can interfere with decision-making and risk analysis</td>
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<td>3.</td>
<td>Learn how to apply techniques to overcome/compensate for cognitive bias and other factors that can skew our perception of and response to risks</td>
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When a Deadline is Approaching...
Risk

Reward
System 1 & System 2
Thinking
Two Thinking Systems Running in Our Brains

These are the “operating systems” that run your brain’s decision-making processes.

It’s important to understand how and when each one is working/running decision-making.
### Thinking Fast / Thinking Slow

<table>
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<th>SYSTEM 1 THINKING</th>
<th>SYSTEM 2 THINKING</th>
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<td>Fast</td>
<td>Slow</td>
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<tr>
<td>Instinctive</td>
<td>Deliberative</td>
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<td>Emotional</td>
<td>Logical</td>
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**The 2 Systems**

**System 1 (Fast Thinking)**
- Continuously scans our environment.
- Fast but error-prone
- Works automatically & effortlessly via shortcuts, impulses and intuition.

**System 2 (Slow Thinking)**
- Used for specific problems, only if necessary
- Takes effort to analyze, reason, solve complex problems, exercise self-control
- Slow but reliable
“The Bat & The Ball” Problem

• A bat and a ball cost $1.10 total

• The bat costs $1.00 more than the ball

• How much does the ball cost?
• *Intuition* - the ability to understand something immediately, without the need for conscious reasoning.

• *Heuristics* - mental shortcuts to problem-solving or learning; based on previous experience; not always reliable.

• *Framing* - The collection of anecdotes and stereotypes that make up the mental/emotional filters individuals rely on to understand and respond to the world around them.
Why is This Important in OUR Work?

System 2 Thinking is Less Error-Prone

When making choices about how to engage with a risk/opportunity, we want to make sure we are using System 2 thinking.

Creating RESPONSE Rather than REACTION

We need to develop cognitive and emotional flexibility/resilience to RESPOND (System 2) versus REACT (System 1).

Fight, Flight, or Freeze Response

Creating a System 1 response in an emergency that is really a System 2 response.
Cognitive Bias
Some of the most common COGNITIVE BIASES

**RECENCY/PRIMACY EFFECT** – people tend to remember best the information they hear first and last

**ZERO RISK BIAS** – people tend to favor reducing a small risk to zero over a greater reduction in a larger risk

**CONFIRMATION BIAS** – tendency to listen/give weight to only that information which supports our existing position/beliefs

**OSTRICH EFFECT** – tendency to avoid or ignore negative information

**AVAILABILITY HEURISTIC** – tendency to overestimate the importance of the information that is available to us
Slippery Slopes
The “Sorites Paradox”
The Boiling Frog
Big Little Lies – The “Ethical Slippery Slope”
Cognitive Dissonance
COGNITIVE DISSONANCE is the mental discomfort experienced by a person who holds two or more contradictory beliefs, ideas, or values. This discomfort is triggered by a situation in which a person's belief clashes with new evidence perceived by the person.
Conflicting Ideas are Uncomfortable

To relieve the discomfort, a person can:

• Change one of the factors/beliefs/behaviors
• Acquire new information
• Rationalize it
How Does Cognitive Dissonance Impact Safety & Risk Management?
Dread Factors
AIRCRAFT: NATIONAL GUARD JOINED IN RESCUE ATTEMPT
Common Dread Factors

- Scale
- Immediacy
- Imaginability
- Personal Control
- Lack of Choice
- Unfairness
- Children Involved
- Lack of Familiarity
- Media Coverage
Genetic Predisposition
Scientists have identified more than 100 genetic variants linked with risk-taking, according to a recent study

(University of Toronto, Jan 2019 – over 1 million study participants)
Example of a Genetic Factor Influencing Risk-Taking Behavior

• DRD4 7R (7 repeat long)
Fraud, Waste & Abuse (FWA)
The Fraud Triangle
OVERCOMING COGNITIVE BIAS IN RISK EVALUATION

The 4-Step “Pre-Mortem” Technique

1. Accept that a plan has failed or something bad has happened
2. Brainstorm to elicit all possible reasons for the failure
3. Discuss, evaluate and prioritize the list of potential reasons for failure
4. Look for ways to avoid/mitigate potential/likely drivers of failure

The result is usually a more realistic assessment of risks and/or potential failure points in a plan or protocol
Rain on the Parade!

- Assign a devil’s advocate/antagonist/dissenter
- Argue against/poke holes in your premise
- Take the opposite view and argue it
Use Values-Based Risk Management Instead of Rules-Based Risk Management
Be a Story-Teller; Begin with the “Why”
Determine Decision Criteria Ahead of Time & Use “Tripwires”
Play the “Free Cash Flow Game”
or the
“What if We Were Just Starting Out Game”
or the
“What if this Option Wasn’t Available” Game
Be Willing to Hear Bad News
Respond to Tremors; Don’t Wait for the Big Earthquake
The Silver Lining: Use A Negative Event for Positive Impact

(AKA “Never Let a Good Disaster Go to Waste”)
CREATE Cognitive Dissonance
How to File A Safety Concern

1. Have you noticed a safety concern?
2. Do you have any evidence or documentation of the concern?
3. Is the concern related to a specific location?
4. Have you reported the concern to the appropriate authority?
5. Are there any potential hazards associated with the concern?
6. Is the concern related to a specific product or service?
7. Have you attempted to resolve the concern on your own?
8. Are there any ongoing training programs or initiatives related to the concern?
9. Have you consulted with a legal professional about the concern?
10. Are there any previous incidents or complaints related to the concern?

Additional Resources:
- Safety Concern Hotline: 1-800-SAFER-10
- Company Website: safety.com
- Industry Standards: ISO 45001
- Safety Training: Online courses available at safetytraining.com

For further assistance, please contact your local safety coordinator or the human resources department.
To be safer, take more risks!
QUESTIONS & OPEN DISCUSSION
Thank You

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