Betting the Farm: Risk Propensity and Field Applications

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Overview of Session

• Discussion regarding risk
  • Adventure Education
  • Everyday Life

• Risk-Taking Propensity
  • What is it?
  • How does it work?
  • What does it mean for us?

• Designing for Risk-Taking
  • What components should go into a curriculum for risk-taking?
  • Should we design for risk-taking?
Characteristics of Top Climbers (Breivik, 1996)

- Bright
- Socially Reserved
- Imaginative
- Self-sufficient
- Aggressive
- Expedient
- Forthright
- Impulsive
- Experimenting
This year what do you think, in chances per million, the risk is that you will die from falling?
Risks You Will Die This Year Falling

- Off a cliff
- Down steps
- Off a ladder
- Off a building
- Out of bed
- After stumbling

Chances per Million
“You risked your life, but what else have you ever risked? Have you risked disapproval? Have you ever risked a belief? I see nothing particularly courageous in risking one’s life. ...You get your reward and suffer not earthly consequences. That’s not courage. Real courage is risking something that you have to keep on living with, real courage is risking something that might force you to rethink your thoughts and suffer change and stretch consciousness. Real courage is risking ones’ clichés.”

-Tom Robbins
What Are We Talking About

- Ancient Greek - Around 140 B.C. - *Peirao*: To attempt, endeavor, try to do, to try one's fortune, to make an attempt by sea, to make trial of one

- Ancient Latin - 109 A.D. - *Perículum*: 1. a way through, passage, a trial, experiment, attempt, proof, essay 2. Risk, hazard, danger, peril 3. To run the risk of one's life, to get into danger, to release from danger, to do a thing at one's own risk.

- Middle Latin – 1359 - *Risiscus* or *Risicum*: danger, venture or risk, crisis
• Italian – 1598 - *Riscare*: “to hazard, to adventure, to jeopard, to endanger.”


Our Definition of Risk and Adventure

Risk

• A lack of certainty and the prospect of loss or failure (Kogan & Wallach, 1967);
• The potential to lose something of value or simply potential for accident (Brown, 1998);
• Creates a feeling of discomfort (Grant, Thompson, & Boyes, 1996)
Adventure

A variety of self-initiated activities usually utilizing a close interaction with the natural environment, that contains elements of real and apparent risk, in which the outcome, while uncertain, can be influenced by the participant and circumstance.
How people perceive Risky Situations

Thoughts / Perceptions

Images

Images Become “Marked” as Positive or Negative

Negative = Alarm
Positive = Incentive

“Dance” of Affect & Reason

ALL Images Marked with Affect

Perceptual & Symbolic Representations
The Affects Serves as a Mental Shortcut that we term: “Heuristics”

The Affect Heuristic

Affect

Perceived Benefits

Perceived Risks

“GOOD”

“BAD”

Think + Feel = Judgment
How do we judge risk?

‘The affect heuristic:’

“People base their judgments of an activity or a technology not only on what they think about it but also on how they feel about it. If their feelings towards an activity are favorable, they are moved toward judging the risks as low and the benefits as high; if their feelings toward it are unfavorable, they tend to judge the opposite – high risk and low benefit.” —Slovic, Finucane, Peters, & MacGregor, 2004
Prospect Theory

Individuals tend to be risk-seeking when the rewards show great worth, if they are of little perceived value...they avoid them.

- Kahneman & Tversky, 1979
What’s the foundation for your risk-taking behavior?

**Prospect Theory:** Individuals tend to be risk seeking when the rewards show great worth, if they are of little perceived value...they avoid them.

**Affect Heuristic:** People base their judgments of an activity or a technology not only on what they think about it but also on how they feel about it.
## Ranking of Perceived Risk

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<th>Your Ranking</th>
<th>College Students</th>
<th>Club Members</th>
<th>Experts</th>
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## Ranking of Perceived Risk

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<td>30</td>
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Factor 2: Unknown Risk

Diagnostic X-Rays

Jogging

Mushroom Hunting

Scuba Diving

Caffeine

Football

Downhill Skiing

Motorcycles

Mountain Climbing

Hunting

Factor 1: Dread Risk

Nuclear Power

Pesticides

Bridges

Nuclear Weapons

Terrorism

Smoking

Handguns

Controllable

Not Dread

Not Global Catastrophic

Consequences not fatal

Risk Decreasing

Uncontrollable

Dread

Global Catastrophic

Consequences fatal

Risk Increasing

Comprehending Risk

Analytic System
- Formal logic
- Probability
- Rule-Based
- Slow / Methodical
- Conscious Analysis

Experiential System
- Mostly Automatic
- Fast / Intuition
- Affect
- “The faint whisper of emotion”
What is more Risky?

1 = Most Risky
8 = Least Risky

___ Deciding to try an unclimbed mountain route.
___ Deciding to get married and have a family.
___ Borrowing money to start a business.
___ Running a class of rapid that you have never attempted.
___ Road biking on a busy road with no shoulder.
___ Leaving a long-term relationship.
___ Free solo rock climbing.
___ Starting a new career.
Risk-Taking Propensity

What is it?

How do we define it?

What do we mean by Risk Propensity?

Should we program to influence?
Risk Propensity

- An individual’s current tendency to take or avoid risks.
- An individual trait (i.e. risk) can change over time and become an emergent property of the decision maker.
- It remains a question as to whether it is Static or Dynamic.
Risk-Taking Propensity Characteristics

- Enduring, but can be learned or changed.
- Past experience can result in adaptation.
- As experience grows there is a cross-situational consistency.
- If prior risk decision making was positive, there will be persistence in taking risks.

- Risk **Adverse** Individuals = Weigh potential **Negative** outcomes.

- Risk **Seeking** Individuals = Weigh potential **Positive** outcomes.
Why is Risk Propensity Important in Adventure?

1. Attraction: Seeking and Coping with Risk
   - Psycho-Social Antecedents
     - Need for Stimulation
     - Need for Autonomy
     - Social Environment
   - Positive Affect
     - Self-Expression
     - Centrality to Lifestyle

2. Cognitive Appraisal of Situational Risk
   - Objective / Subjective Risk
   - Perceived Risk
   - Perceived Competence
   - Anticipation of Outcome

3. Decision Making Approach / Withdrawal

4. Performance Experience
   - Task Selection
   - Risk Engagement

5. Intuitive Reflective Appraisal
   - Intense Task Involvement
   - Cognitive and Affective Arousal

The Risk Recreation Model
Modified from Robinson, 1992
How Does it Work?

• *Problem framing*: whether a situation is presented to a decision maker as an opportunity or a threat.
  
  — *What are the gains or losses of the situation?*

• *Outcome history*: the degree to which the decision maker believes that previous risk-related decisions have resulted in successful or unsuccessful outcomes.

  — *Does prior success in risks increase the propensity to take risks?*
Revised Model of the Determinants of Risky Decision-making Behavior
Modified from Sitkin & Weingart, 1995

Outcome History

Problem Framing (Opportunity or Threat)

Risk Propensity

Risk Perception

Risky Decision-Making Behavior

Threat

Opportunity
Basic Risk Attitudes
(Adapted from Murray-Webster and Hillyer, 2008)

• **Risk Adverse:** Uncomfortable with uncertainty; desire to avoid or reduce threats and exploit opportunities to remove uncertainty.

• **Risk Seeking:** Comfortable with uncertainty, no desire to avoid or reduce threats or remove uncertainty.

• **Risk Tolerant:** Accepting of uncertainty; no strong desire to respond to threat.
Optimal Arousal

Yerkes – Dodson Rule
Arousal and Performance in Risk-Taking Activities

A = Gambling
B = Climbing
C = Base Jumping
D = Driving

Risk-Taking Activities

Arousal

Performance
1. If changeable should we change it?

2. Should we move our clients from risk adverse or tolerant to risk seeking?

3. Does risk-taking in outdoor adventure relate to risk-taking in the rest of our life?


Quotes on risk

• “Everything is sweetened by risk.”
  • Alexander Smith

• “We learn wisdom from failure much more than from success.”
  • Samuel Smiles

• A man of genius makes no mistakes. His errors are volitional and are the portals of discovery.”
  • James Joyce

• “Nobody takes a risk in the expectation that it will fail.”
  • Bernstein
Model of the Determinants of Risky Decision-Making Behavior (Sitkin & Weingart, 1995)

- Outcome History
- Problem Framing (Opportunity or Threat)
- Risk Perception
- Risk Propensity
- Risky Decision-Making Behavior

Direction of influence:
- Outcome History → Risk Propensity (+)
- Problem Framing (Opportunity or Threat) → Risk Perception (+)
- Risk Perception → Risk Propensity (+)
- Risk Propensity → Risky Decision-Making Behavior (+)
- Risky Decision-Making Behavior → Risk Perception (−)
- Risky Decision-Making Behavior → Risk Propensity (−)
Reference


