



Betting the Farm: Risk Propensity and Field Applications

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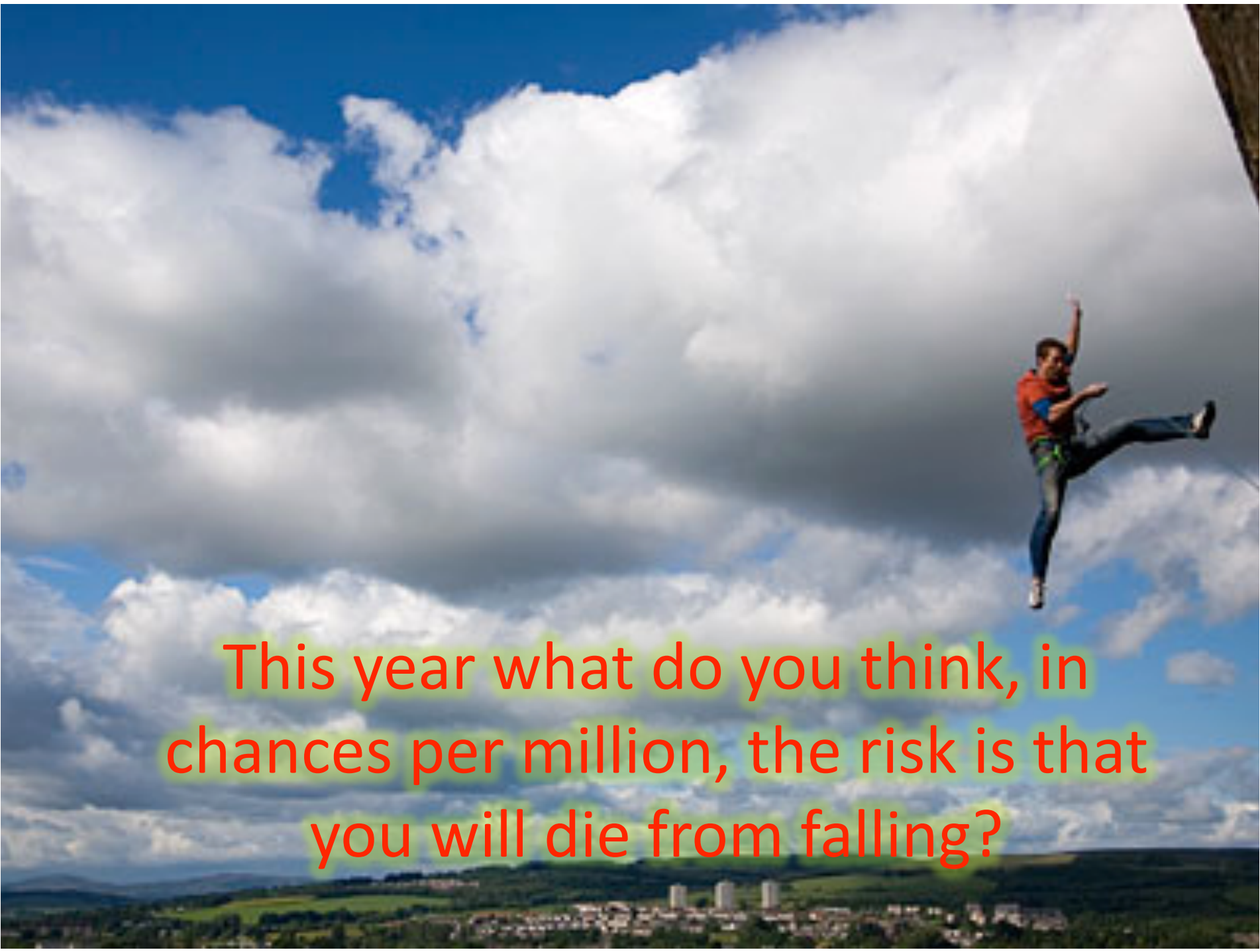
Overview of Session

- **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)

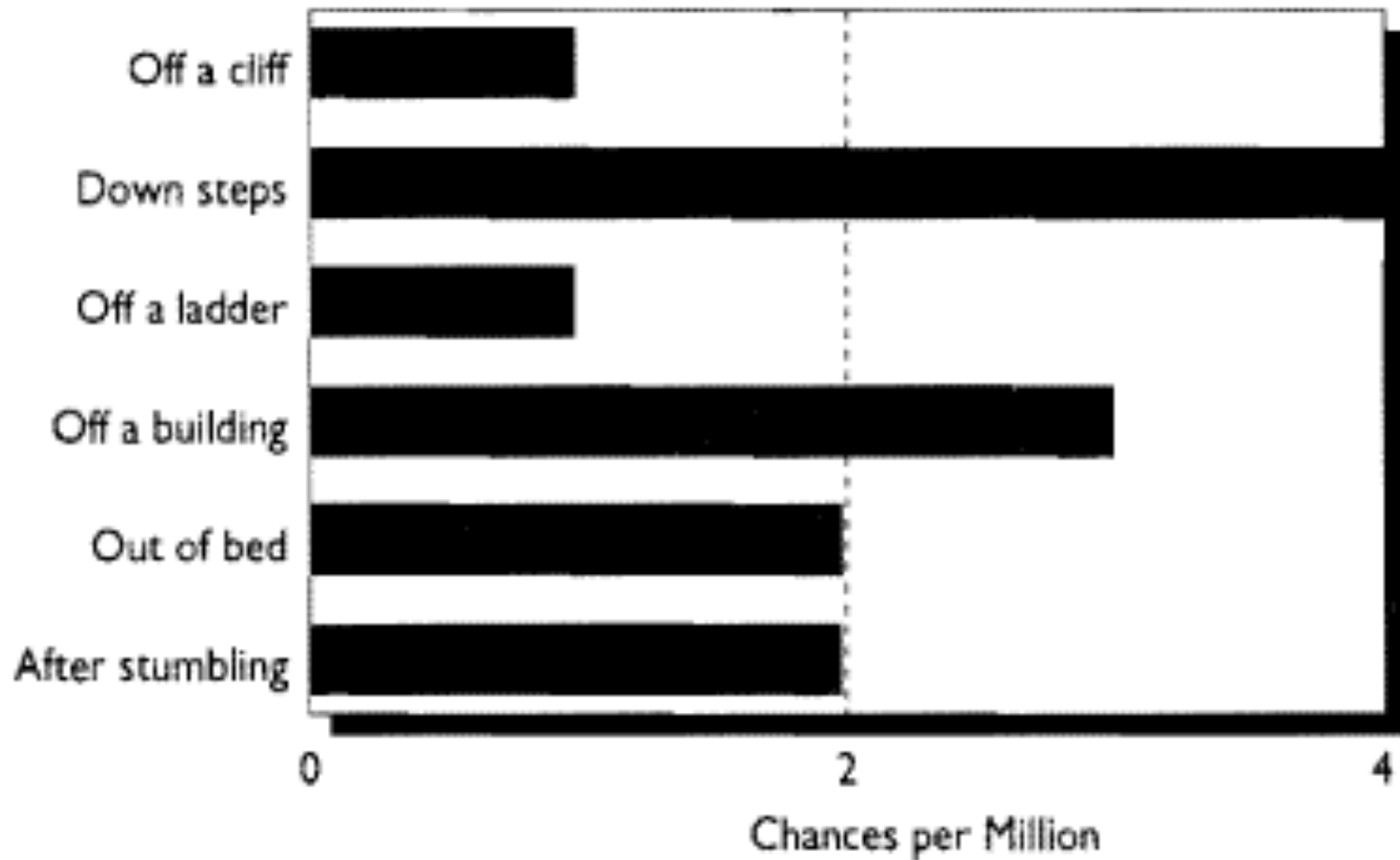
- Bright
- Socially Reserved
- Imaginative
- Self-sufficient
- Aggressive
- Expedient
- Fortright
- Impulsive
- Experimenting





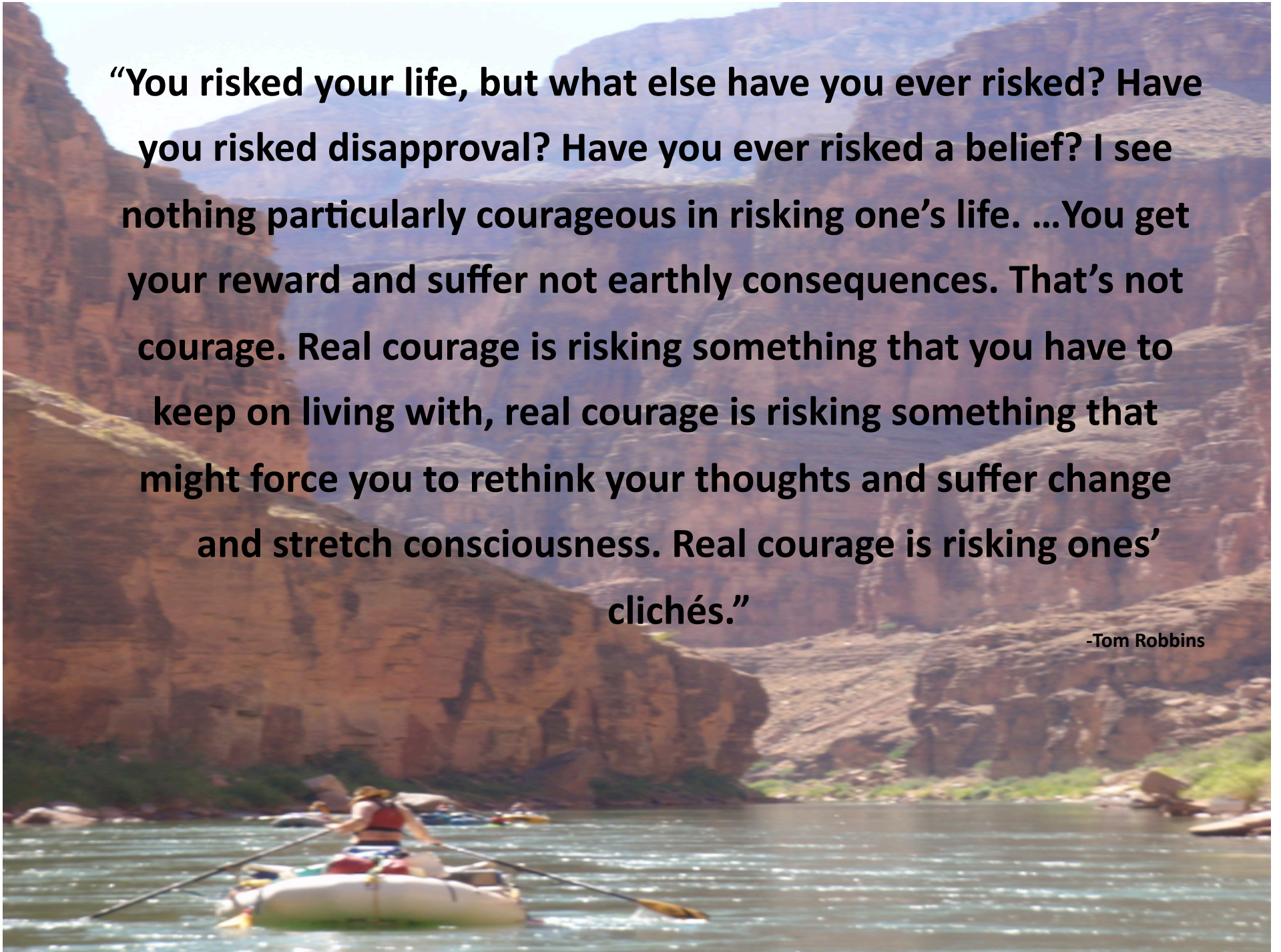
This year what do you think, in chances per million, the risk is that you will die from falling?

Risks You Will Die This Year Falling



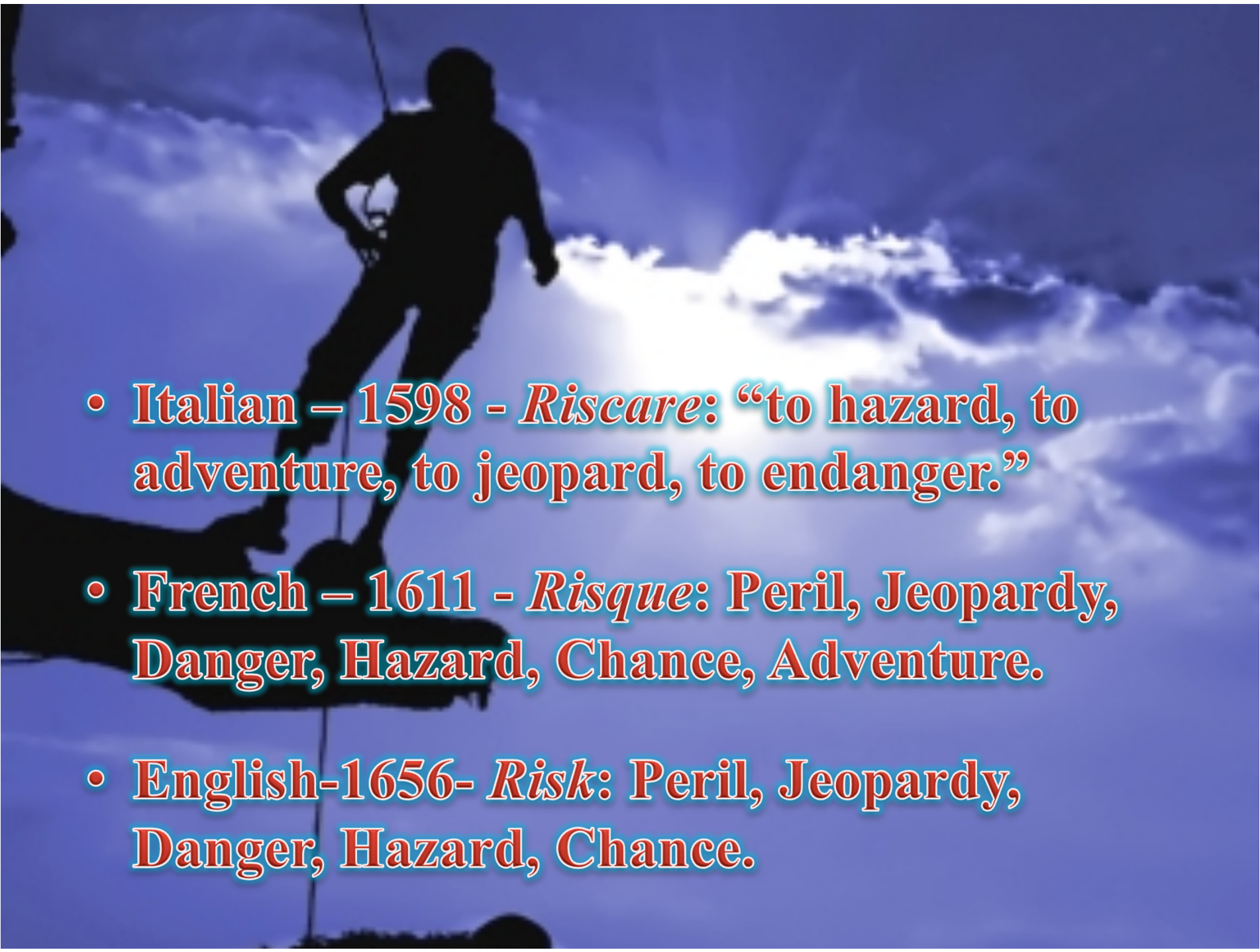
“You risked your life, but what else have you ever risked? Have you risked disapproval? Have you ever risked a belief? I see nothing particularly courageous in risking one’s life. ...You get your reward and suffer not earthly consequences. That’s not courage. Real courage is risking something that you 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. - *Periculum*: 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**

- 
- A silhouette of a person rappelling down a rope against a bright blue sky with scattered white clouds. The person is positioned on the left side of the frame, facing right. The background is a gradient of blue, with the sun or a bright light source creating a lens flare effect behind the person.
- Italian – 1598 - *Riscare*: “to hazard, to adventure, to jeopard, to endanger.”
 - French – 1611 - *Risque*: Peril, Jeopardy, Danger, Hazard, Chance, Adventure.
 - English-1656- *Risk*: Peril, Jeopardy, Danger, Hazard, Chance.

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

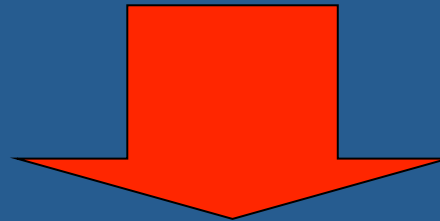
Perceptual & Symbolic
Representations

Images Become "Marked" as
Positive or Negative

Negative = Alarm
Positive = Incentive

"Dance" of Affect &
Reason

ALL Images Marked
with Affect





The Affects Serves as a Mental Shortcut that we term: "*Heuristics*"



The Affect Heuristic



Affect

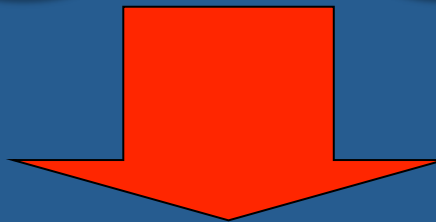


Perceived Benefits

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

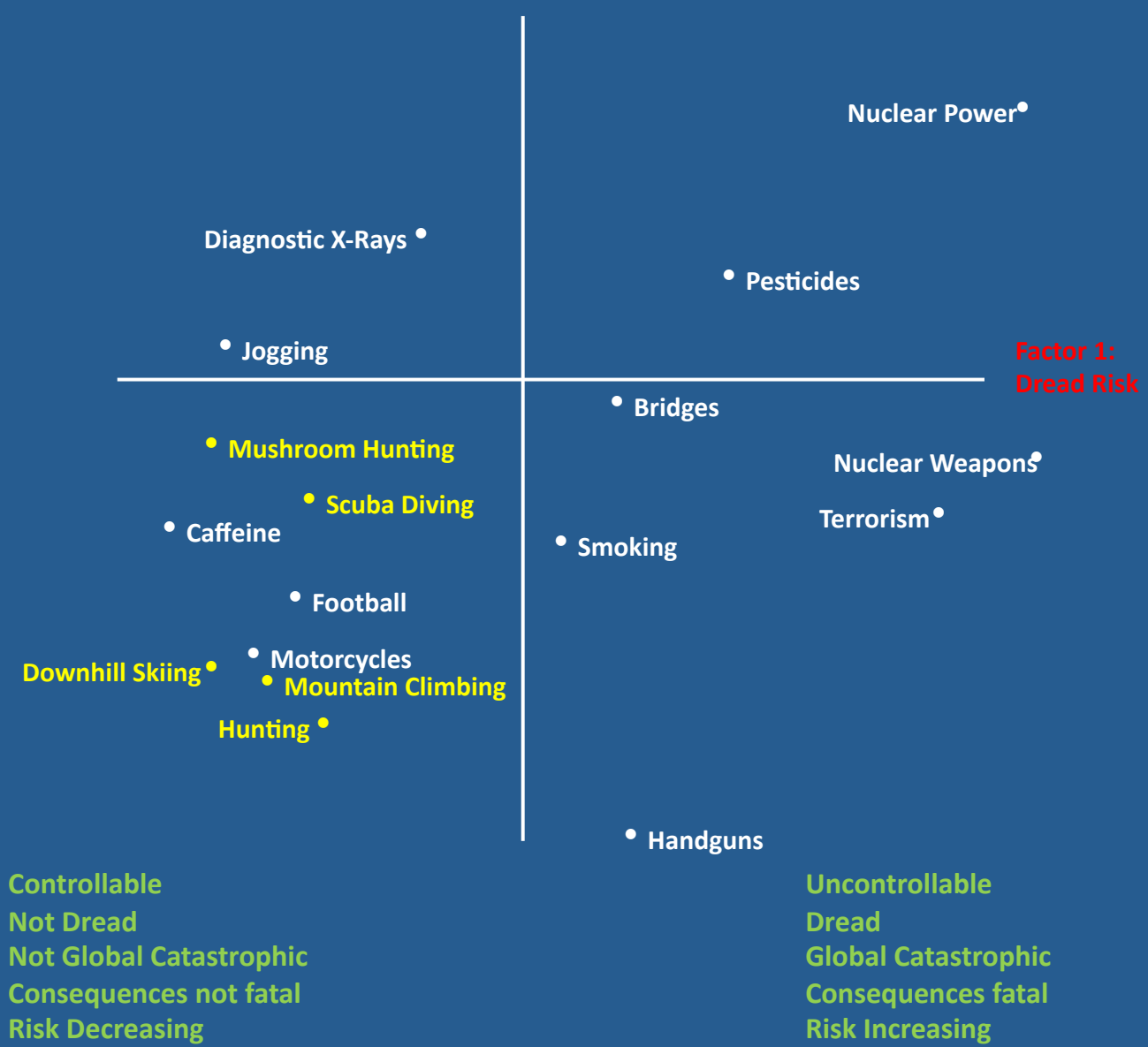
	Your Ranking	College Students	Club Members	Experts
Nuclear power				
Motor vehicles				
Handguns				
Police work				
Surgery				
Hunting				
Mountain climbing				
Skiing				

Ranking of Perceived Risk

	College Students	Club Members	Experts
Nuclear power	1	8	20
Motor vehicles	5	3	1
Handguns	2	1	4
Police work	8	7	17
Surgery	11	9	5
Hunting	18	10	23
Mountain climbing	22	12	29
Skiing	25	16	30

Modified from Slovic, P., Fischhoff, B., & Lichtenstein, S., 1979.

Factor 2:
Unknown Risk



Comprehending Risk

Analytic System

Experiential System

Formal logic
Probability
Rule-Based
Slow / Methodical
Conscious Analysis

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**.

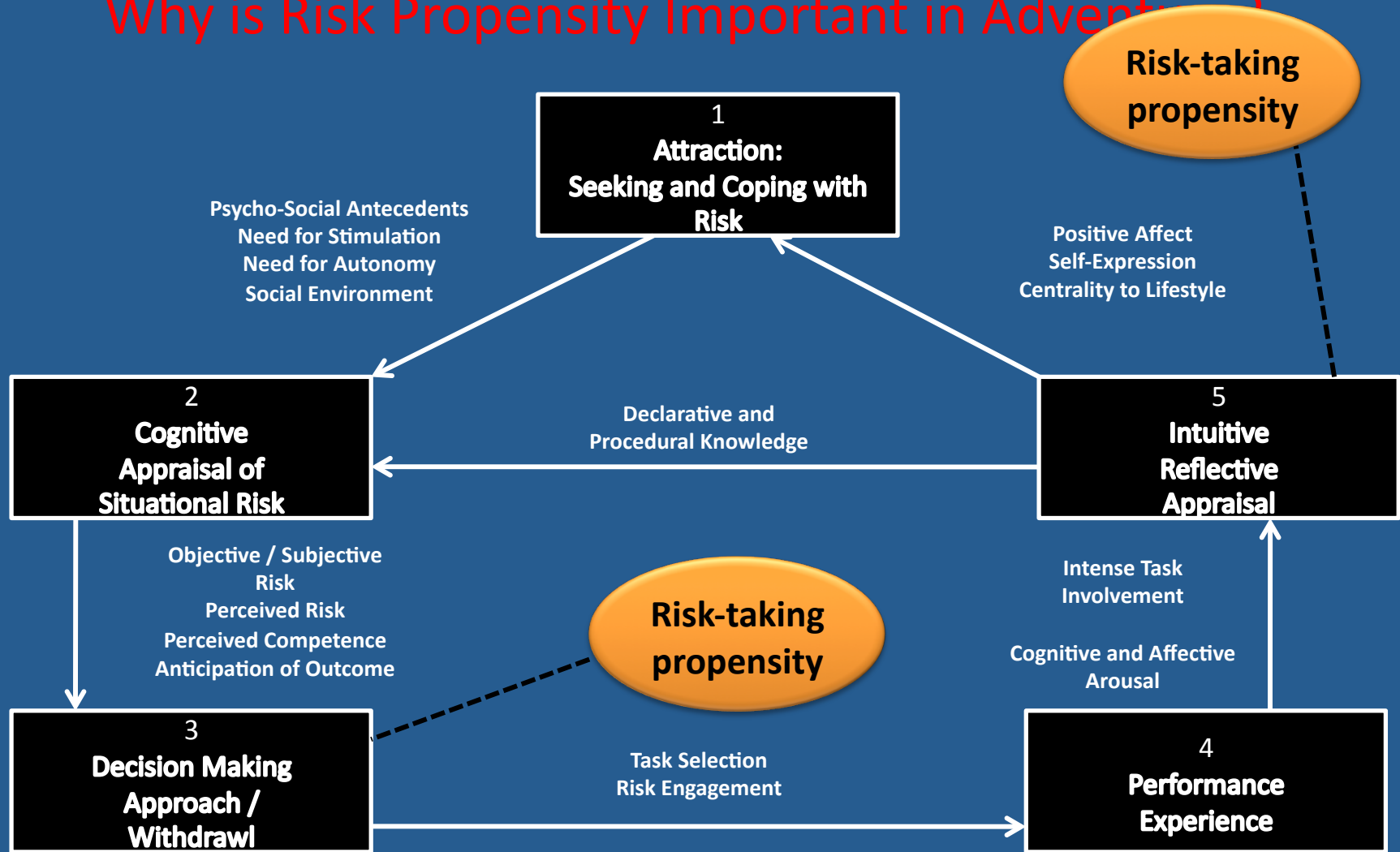


Risk-Taking Propensity Characteristics

- 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?



The Risk Recreation Model

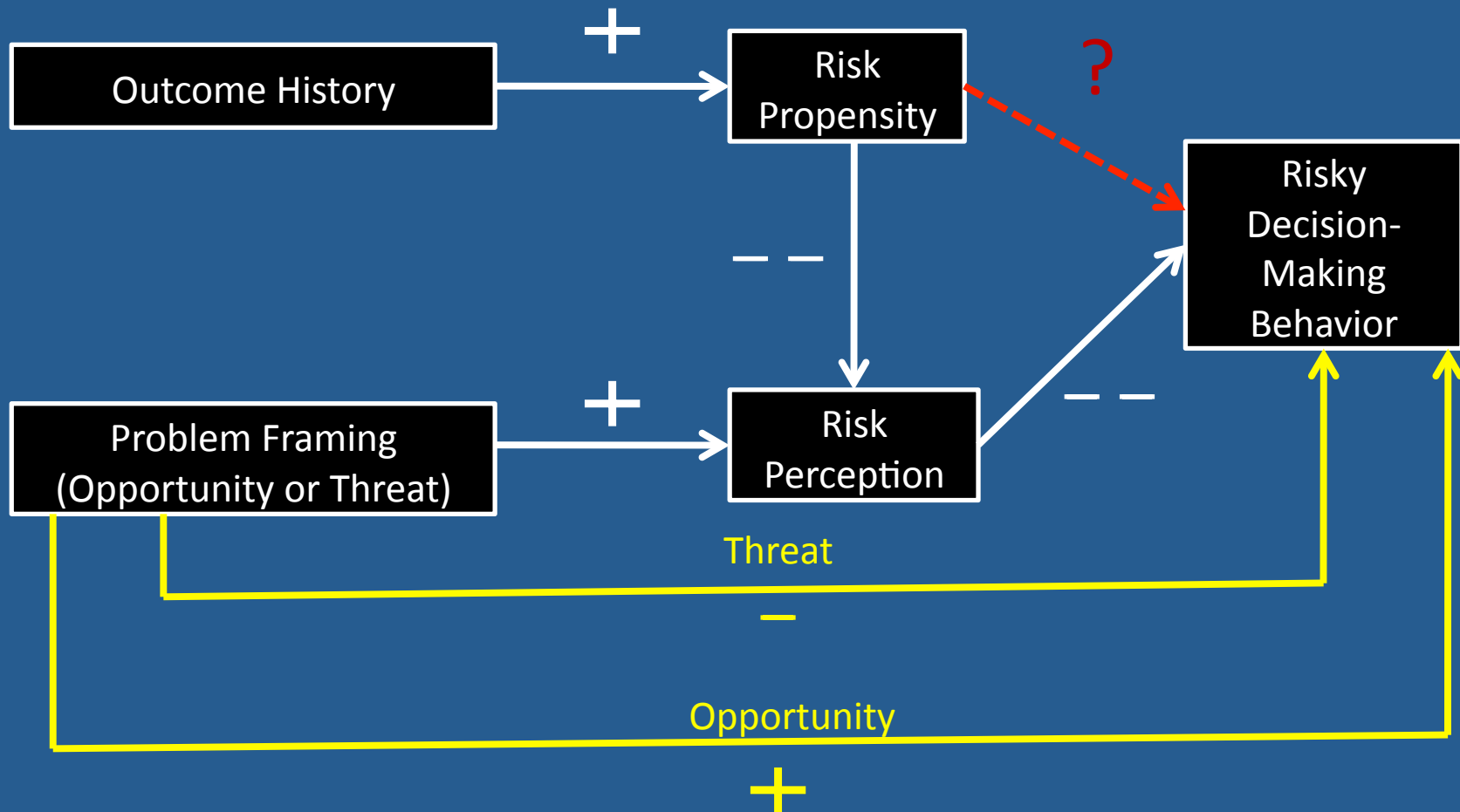
Modified from Robinson, 1992

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

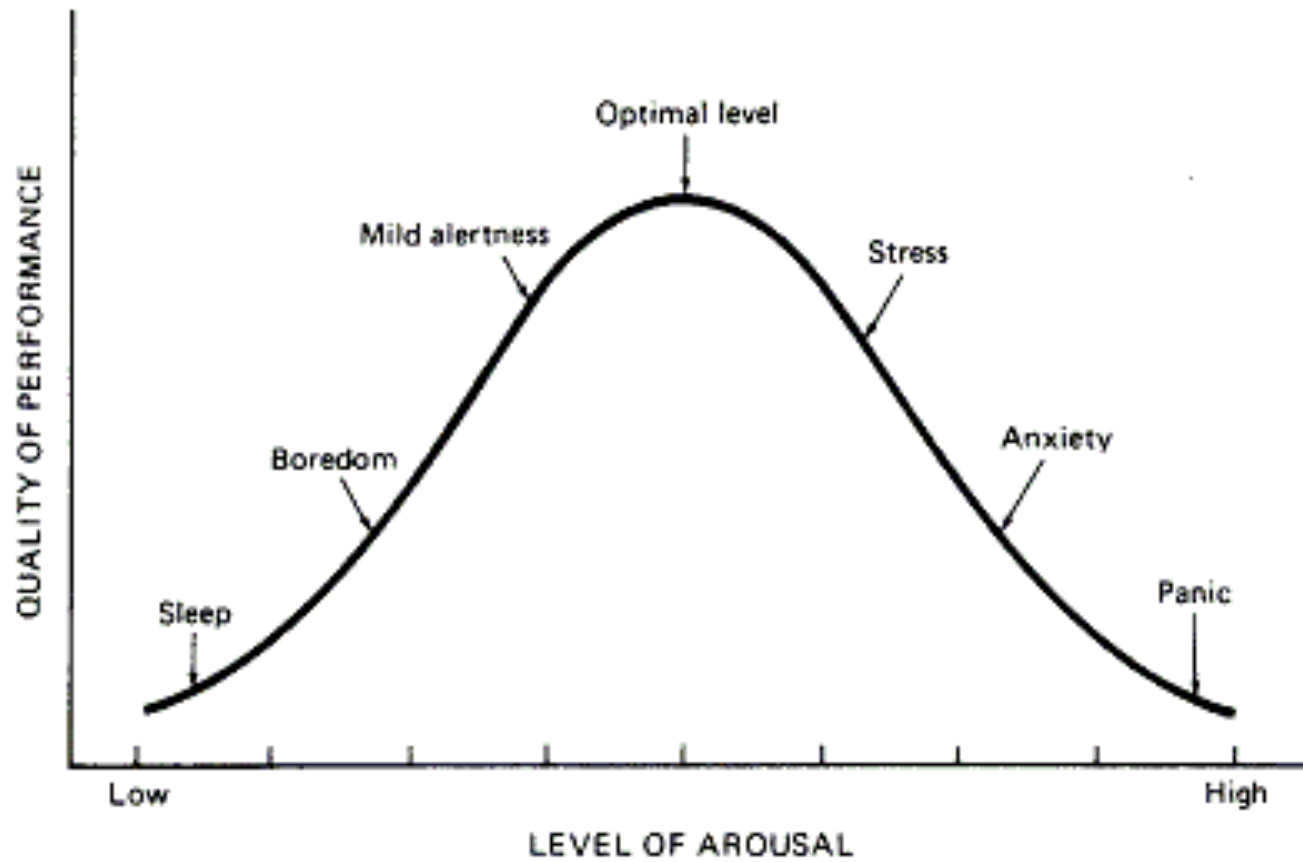


Basic Risk Attitudes

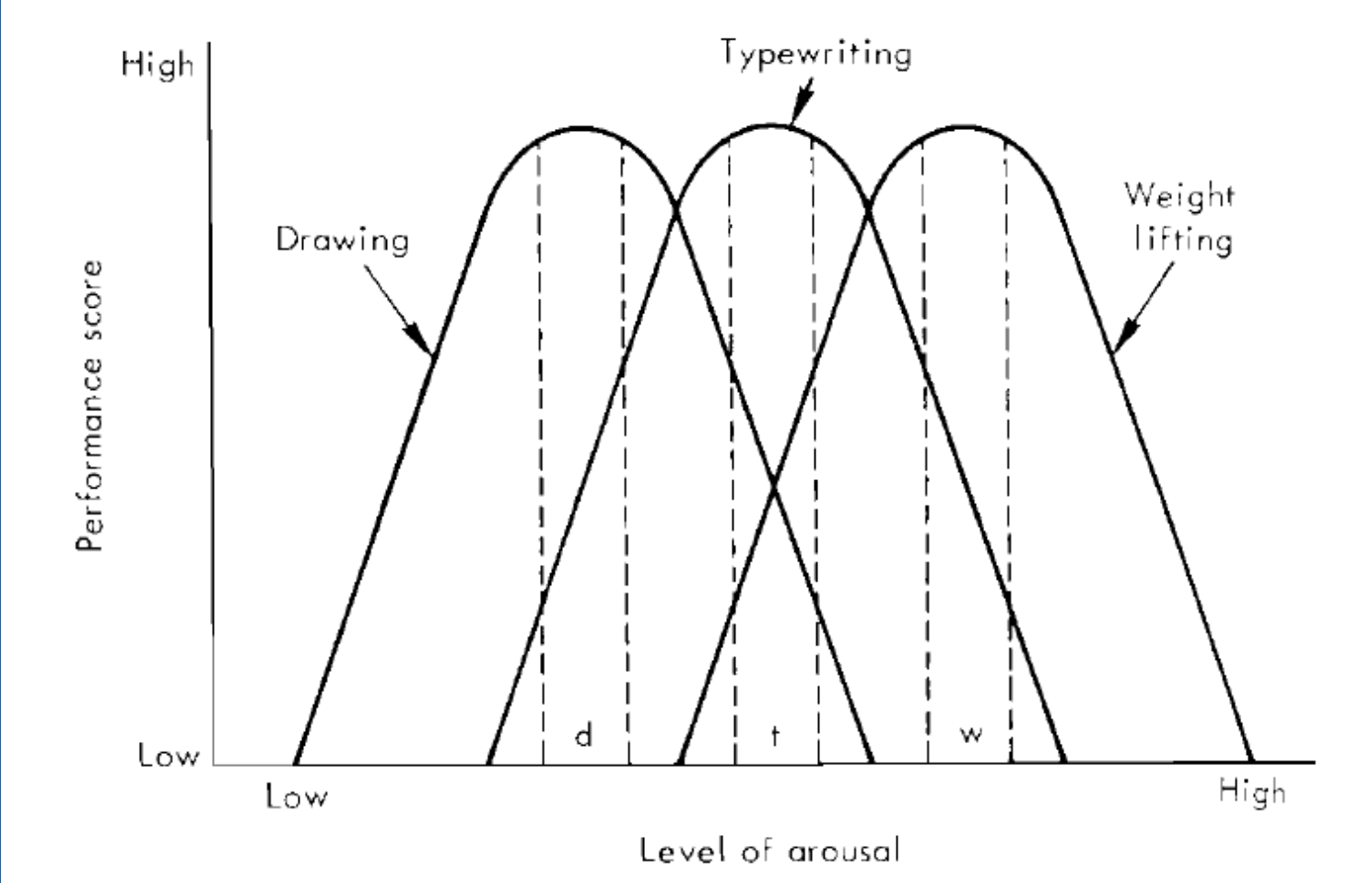
(Adapted from Murray-Webster and Hillson, 2008)

- **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



A = Gambling

B = Climbing

C = Base Jumping

D = Driving

Performance



Arousal

Risk-Taking Activities





FORECLOSURE

**HOME
FOR
SALE**











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?

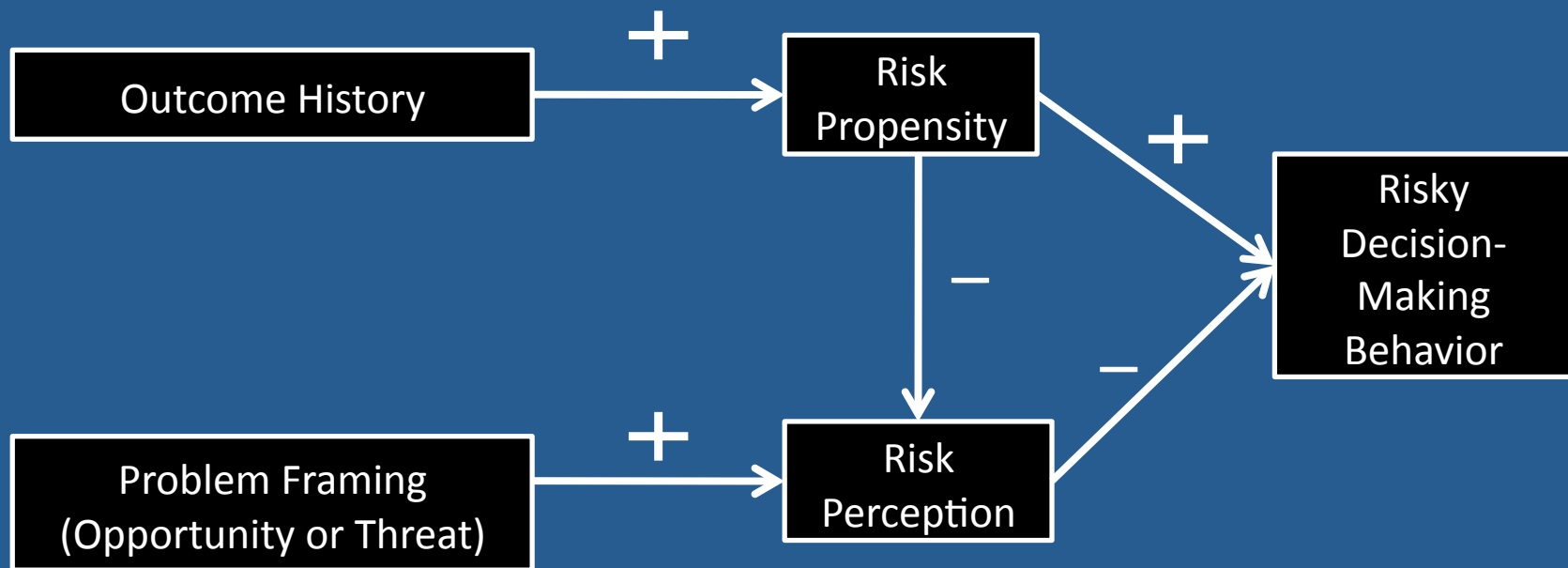
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Quotes on risk

- “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)



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- Breivik, G. (1996). Personality, sensation seeking and risk taking among Everest climbers. *International Journal Sport Psychology*, 27, 308 – 320.
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