

# 20 Years of Decision Making

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# Outcomes

- A bit of history and myth busting.
- A sketch of where we think we are now.
- A conversation about where we want to go.

***“Judgment is the greatest safety factor.”***

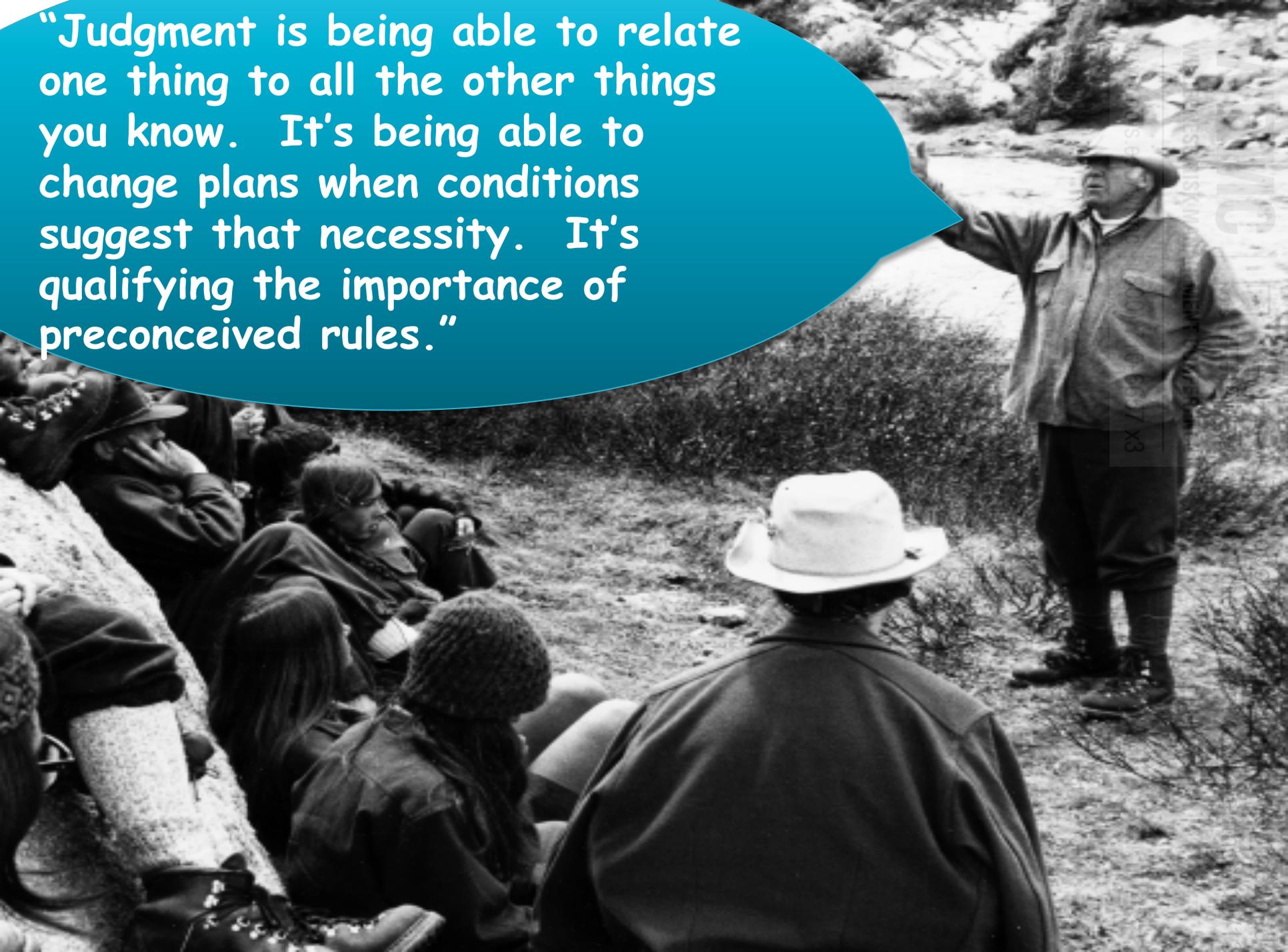
***Paul Petzoldt***



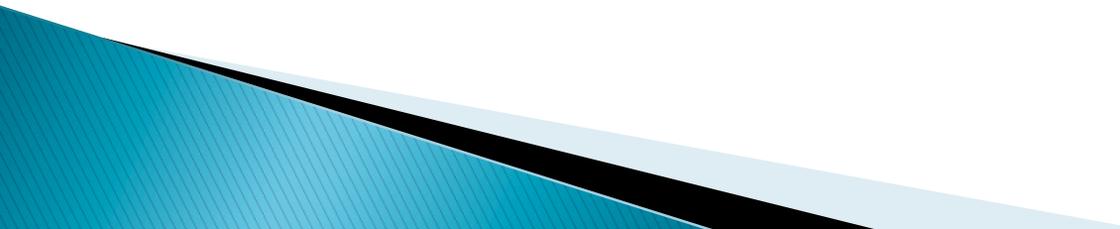
"The human mind must be programmed to bring forth answers for similar situations, not just situations identical with those already encountered."



“Judgment is being able to relate one thing to all the other things you know. It’s being able to change plans when conditions suggest that necessity. It’s qualifying the importance of preconceived rules.”



- 70's Learning as we go.
- 80's Can we teach judgment?
- 90's How do we teach judgment?
- 00's How does the brain work? How do we make decisions?



## The Danger of Substituting Rules for Instructor Judgment in Experiential Education

Jasper S. Hunt, Jr., Ph.D.

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It is appropriate in this issue of the *Journal* to deal with an issue that is intimately connected with the overall problem of safety and risk management in outdoor pursuits. The issue is the conflict between rules and instructor judgment as the means to achieve safe adventure courses.

My assumption here is that reasonable experiential educators are united in agreeing that reckless activities which will result in injury or death to students or staff are not acceptable. This is not a particularly controversial proposition. However, reasonable people quickly begin to disagree about the best means to achieve the goal of eliminating recklessness on courses.

An approach to safety and risk management that is becoming increasingly popular in man adventure-based programs is simply to devise a system of rules that will minimize risk. This is a deductive approach to the problem. The particular instructor when confronted with a potentially dangerous situation, simply picks the appropriate rule or policy which covers that situation and concludes what should be done. The function of the instructor is to be able to apply the rule to the case and

sandy bottomed, shallow stream. They want to have dry sneakers for the next day's marathon and they want to finish the hike in dry boots. The rule-based, legalistic instructor simply applies the rule to the case and deduces that the students must wear either boots or sneakers. The situational instructor might assess this particular stream crossing and induce the **in this situation** foot gear need not be worn. Both instructors are in agreement that cut feet are not desirable. They are not agreed upon the best means to achieve this goal. The legalist has the advantage of absolute certainty. The situational, instructor-based judgment decider could be wrong about his or her assessment of the situation.

Frankly, I am afraid that the rule-based model for making decisions is gaining the upper hand in experiential education in the United States today. Fear of lawsuits and bad publicity is impelling many program administrators to minimize the amount of freedom provided to their field instructors in order to maximize the certainty of the outcome of specific situations.

There is something very strange and incongruent about an educational movement that espouses the values of

**NOLS**

**Judgment**

**Skills**

**Institutional**

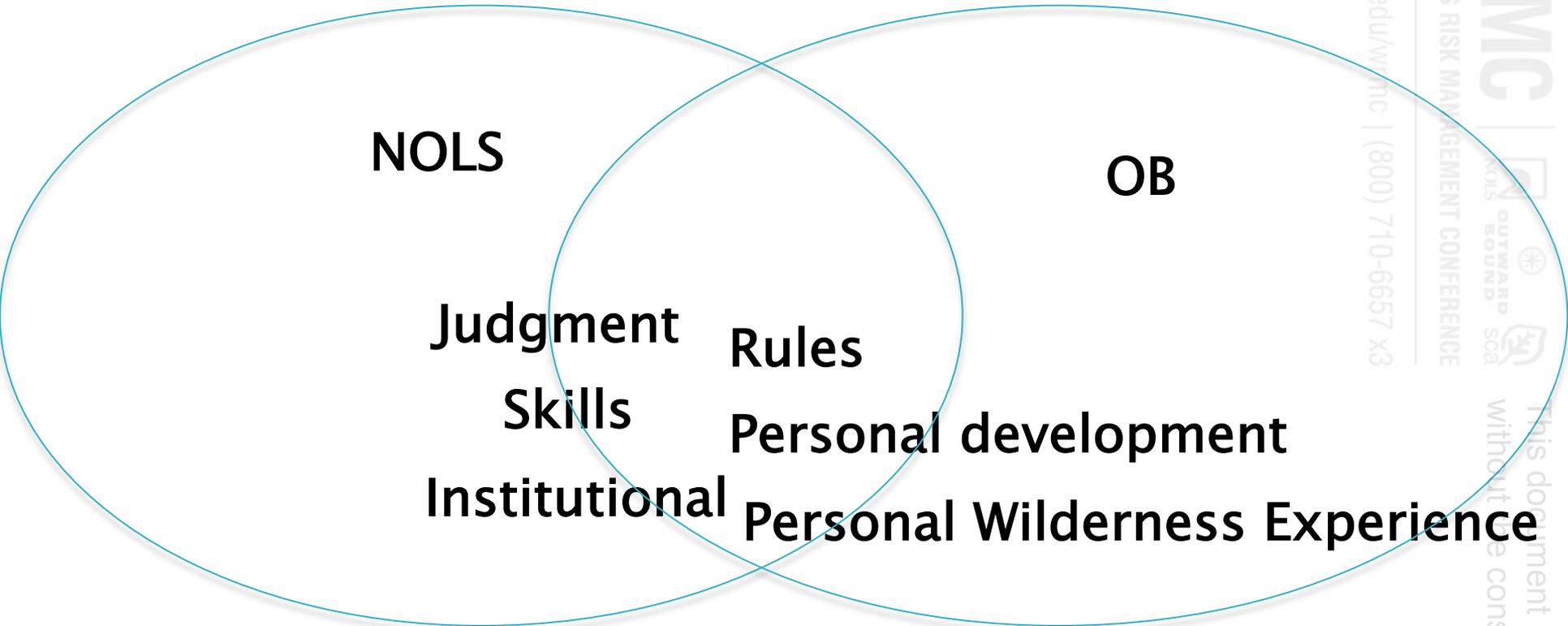
**OB**

**Rules**

**Personal Development**

**Personal Wilderness**

**Experience**



**NOLS**

**OB**

**Judgment**

**Rules**

**Skills**

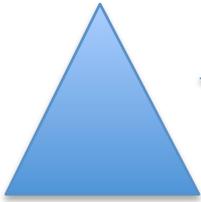
**Personal development**

**Institutional**

**Personal Wilderness Experience**

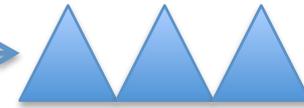
# Field Staff Decisions

**Simple/Linear**



Ropes Course  
Day Hiking on Trail

**Complex**



Avalanche Terrain  
Grizzly Bears



# Decision–Making topics at the WRMC

www.nols.edu/wrmc | (800) 710-6657 x3

WILDERNESS RISK MANAGEMENT CONFERENCE



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1995 Questioning Decisions. Gary Faris

1998 Cockpit Communication

1999 New Concepts in Judgment Kent Clement

2000 OB Judgment Workshops Jim Garrett  
Human Factors Scott Erickson

2005 Decision Making: Modern Theories Ian McCammon

2008 The Learning Brain – Jeb Schenck  
Human Factors – Lester Zook

2011 Group Think – Zook  
Decision–Making in Wild Medicine  
When Judgment Fails – Madden  
Errors of Perception – Gates Richards  
Systems – Jeff Jackson

2013 Human Factors – Stupidity Explored Zook  
Errors of Perception – Gates Richards  
Systems – Jeff Jackson

# How We Make Decisions

## System 1

Automatic

Quick, little or no effort

No sense of voluntary control

Pattern recognition, intuition

# How We Make Decisions

## System 2

Effortful mental activities

The reasoning self with beliefs and choices

Affected by attention and distraction

▶ “A number of studies show that procedures help people in typical tasks but in novel situations people do best by understanding the underlying system. People who understand the system develop richer mental models than those who only follow checklists.”

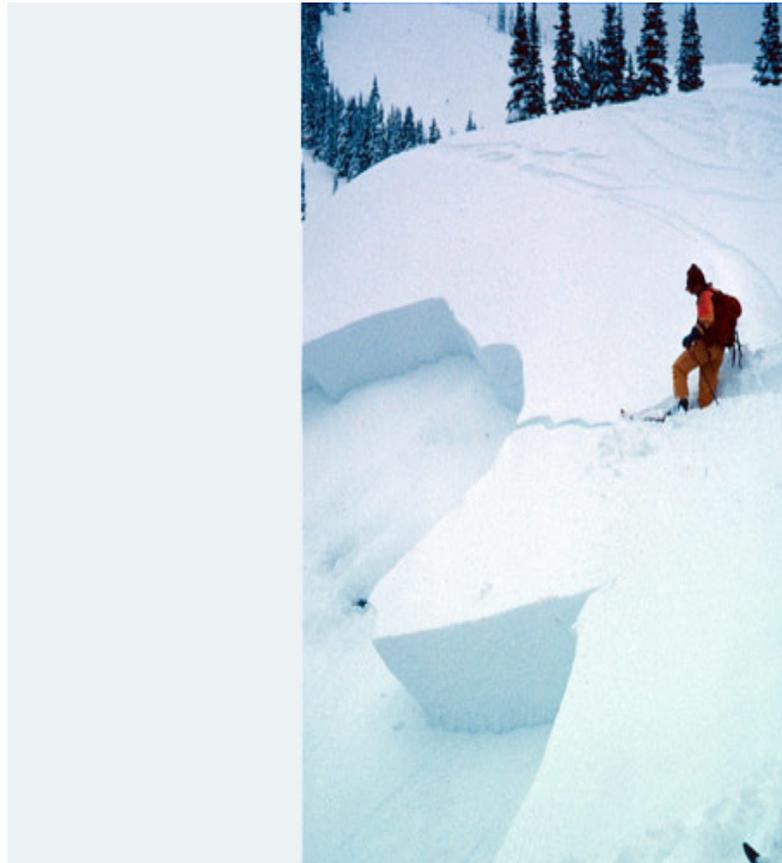
▶ Streetlights and Shadows Klein 2009

# Heuristics



# Decision-Making Traps

Familiarity  
Acceptance  
Commitment  
Expert Halo  
Tracks (Scarcity)  
Social Proof



McCammie, Ian. Evidence of heuristic traps in recreational avalanche accidents. *Proceedings of the International Snow Science Workshop, Pentelima, British Columbia, Sept. 30 - Oct 4, 2003*.

# Obvious Clues

- ▶ Avalanches in the area
- ▶ Loading by snow, wind or rain in last 24 hours
- ▶ Paths (historic avalanche paths)
- ▶ Terrain Traps
- ▶ Rating of considerable or higher
- ▶ Unstable snow: collapsing or cracking
- ▶ Thaw instability: recent & rapid warming

McCammon, I., & Hageli, P. (2007). An evaluation of rule-based decision tools for travel in avalanche terrain. *Cold Regions Science and Technology*, 47, 193-206.

# Kind v Wicked

Relevant  
Honest  
Timely  
Exacting

Irrelevant  
Dishonest  
Delayed  
Lenient

# Breakout!

Is the level of expertise of your staff consistent with the kinds of decisions required of them?

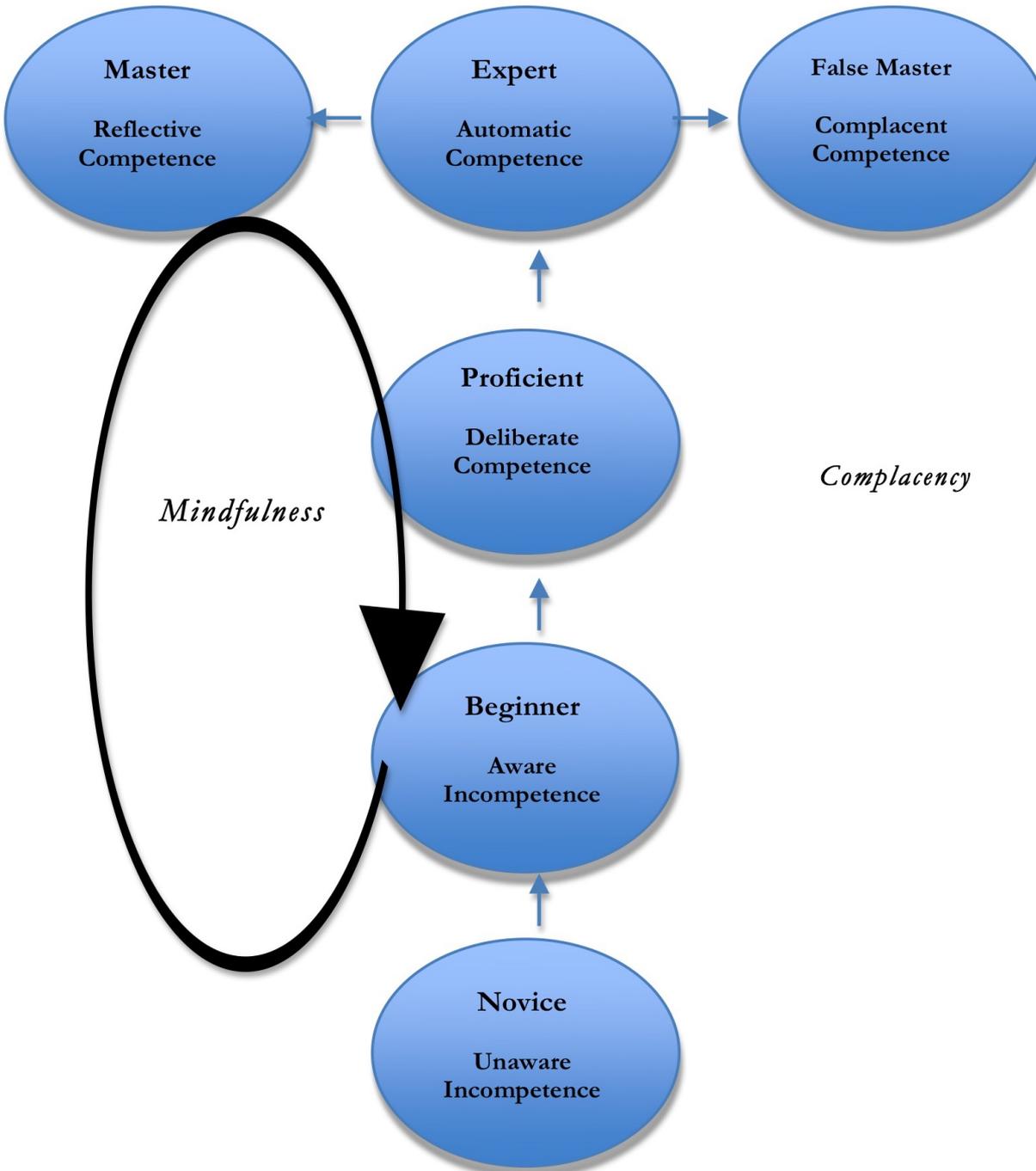
If you have multiple programs, are they all on the same place on the spectrum?

Do you feel like there is pressure to increase the number of rules in your organization?



## Levels of Expertise

<b>Novice</b>	<b>Beginner</b>	<b>Competent</b>	<b>Expert</b>
Unconscious	Conscious	Conscious	Subconscious
Incompetent	Incompetent	Competent	Competent



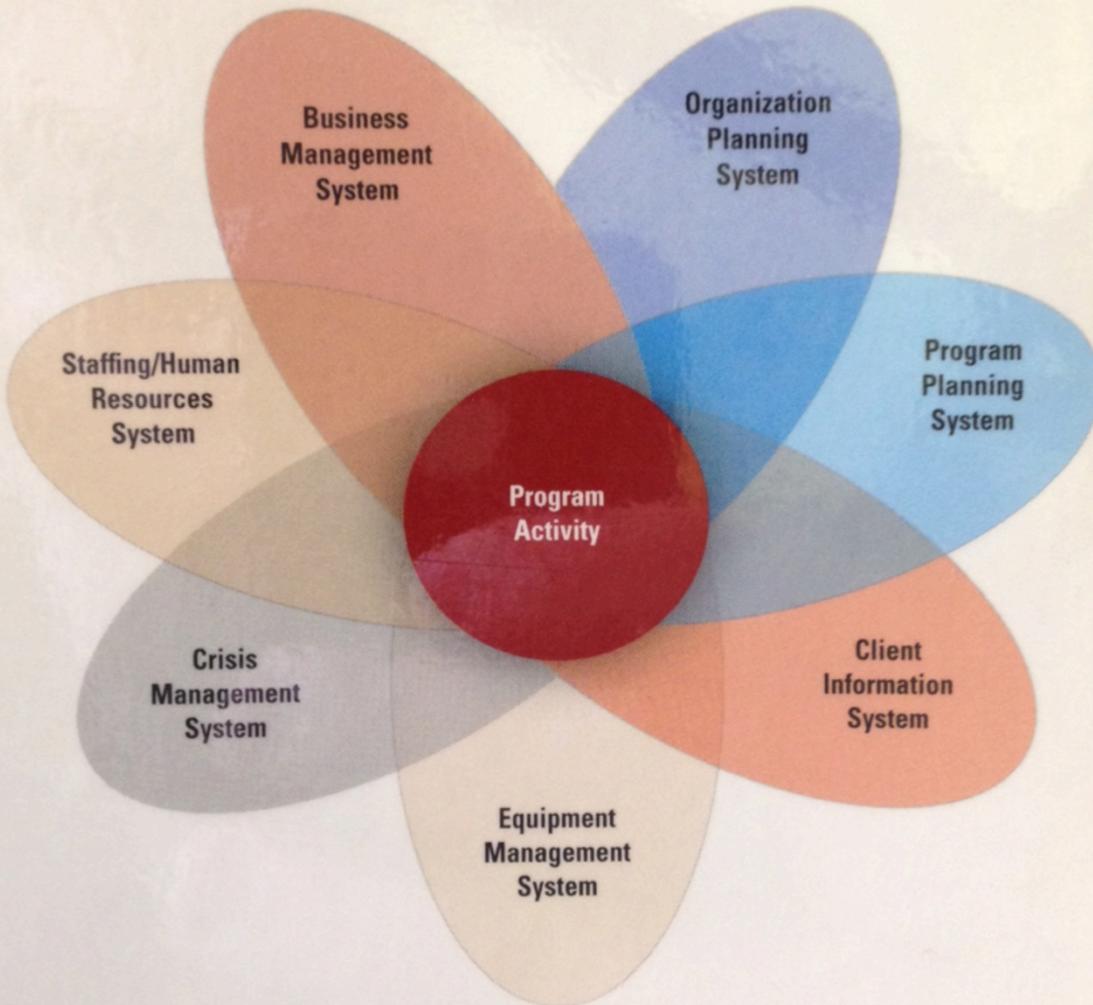
# Mindful Practice

*The ability to observe ourselves in the midst of the complexity and chaos of the moment.*

- **Awareness** of *how* we are thinking, observing and feeling.
- **Curiosity** to examine the effects of our actions.
- **Willingness** to use those observations to improve.



# The Seven Systems of Outdoor Adventure Risk Management Planning





The Future.....

# The end