

# When Judgment Fails

A Voyage Into The Mechanics Of Human Decision Making

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*“Even though people are capable of making decisions in a thorough and methodical way, it appears that most of the time they don’t”*  
*-Ian McCammon*

# Intuition

## Angel or Demon?

# Experts

## Same Question

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# Intuition

Reliable or Dangerous?

Fire Fighters

ER Nurses

Stockbrokers

Gamblers

A Topic That Stirs Up Emotions!

# Skilled Intuition

Use of intuitive decision making by skilled people

In environments wherein they have a wealth of experience

(This part gets complicated!)

# A Tale of Two Camps

## Glass = Half Full

### Naturalistic Decision Making

In certain environments, the right skilled, experienced people can make intuitive decisions with an amazing success rate

## Glass = Half Empty

### Heuristics/Bias Decision Making

Yes, but those allegedly skilled people will blow it a lot and we're better off replacing intuition with heuristics (rules of thumb), rules, or algorithms wherever possible

# A Tale of Two Camps

**Naturalistic**

**Heuristic**

Example:

Fire Captain on Factory  
Roof

Example:

Clinical Psychologist



# 2 Systems Theory

## System 1

Automatic

Involuntary

Almost Effortless

## System 2

Controlled

Voluntary

Effortful

# Naturalistic Decision Making

Master Chess Players

50,000 – 100,000 recognizable patterns

Select, test, go

Firefighting Commanders

Compare options?

Single option!

# Process

Recognition of cues

Select a pattern

Devise course of action

Progressive Deepening (mentally test plan for weaknesses)

Aka Pre-Mortem

Implement or Modify

Environments:

Complexity

Time Pressure

Consequence

Diagnosis & Management happen simultaneously

Eg: Combat

# Skilled Intuition

Not infallible!

(Certainly not!)

But it is rational.

Skilled intuition = recognition of a pattern

And selection of a course of action based on that pattern

Demystify!

# NICU

(Neonatal intensive care unit) study of

Nurses who could detect life-threatening infections in infants before tests came back

Unable to describe how....."I just know"

Debriefing (CTA)>>>Cues and Patterns

Some patterns opposite of signs for adults

Created successful training program based on outcomes

# Traps

Skilled intuition = rational process, therefore prone to error!

No clear way to know where intuition comes from

Confidence is not a reliable indicator of validity

How to define “expert”?

In the absence of skill, an intuitive response may still come to mind

Not recognizing when you’ve left the environment where you’re an expert

# Only Works Well

In certain decision making environments

That provide a sufficient regularity of valid cues

Adequate opportunity to learn relevant cues

Sufficient talent



# Skilled Intuition

## Consistent Positive

Fire Commanders

Test pilots

Livestock Judges

Astronomers

Chess Masters

Insurance Analysts

## Consistent Negative

Stockbrokers (!)

Clinical psychologists

Psychiatrists

College Admissions  
Officers

Court Judges

Intelligence Analysts

# Both!

Nurses

Physicians

Auditors

The rule or the exception?

# Meanwhile, Back At The Ranch...

Extreme risk, extreme consequence, extreme time pressure?

Place for skilled intuition in what we do?

Huge!

...but rarely as a stand alone.

Skilled & nuanced mentoring & debriefing

Bring intuition into the light

(More later!)

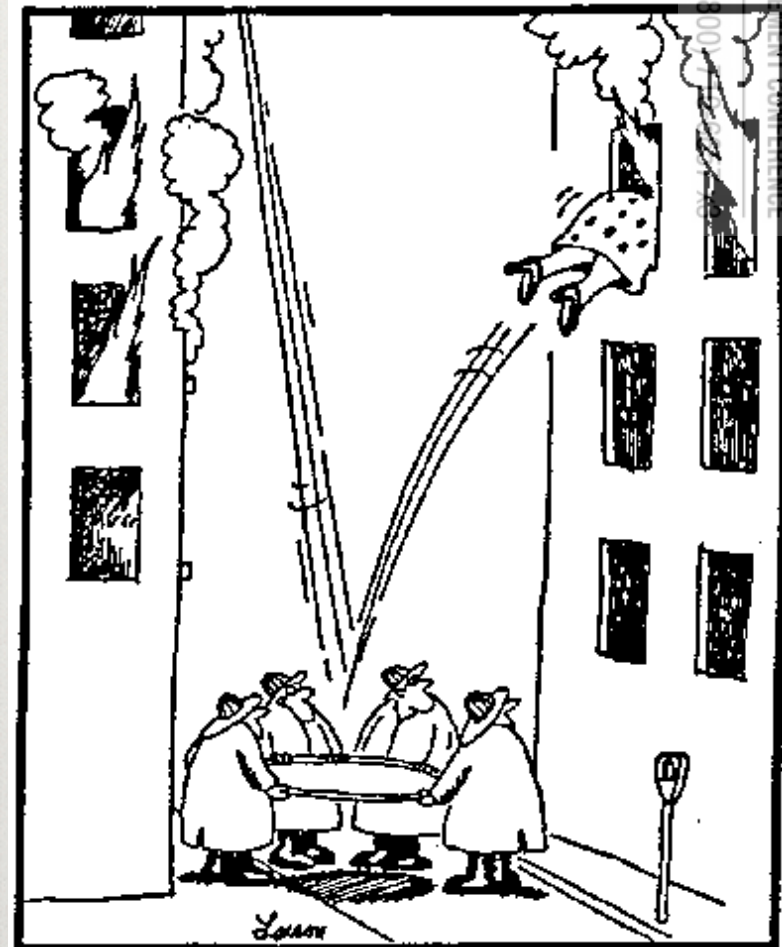
# Scenario

The Pre-Mortem

Imagine your plan being  
executed perfectly

And failing

What did you miss?



# Heuristics

Don't stand up in a canoe

Measure twice, cut once

Bend your knees!

Generalized or domain

Pneumonics:

ABCDE's

WORMS

SERENE

# Heuristics

In many situations, offer a more consistent alternative to intuitive reasoning

Eg: Spinal Assessment Protocol

“Expert Status” not necessary

Room for expansion, especially in novice and intermediate training (eg Avalanche Education)

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# Decision-Making Traps

Familiarity

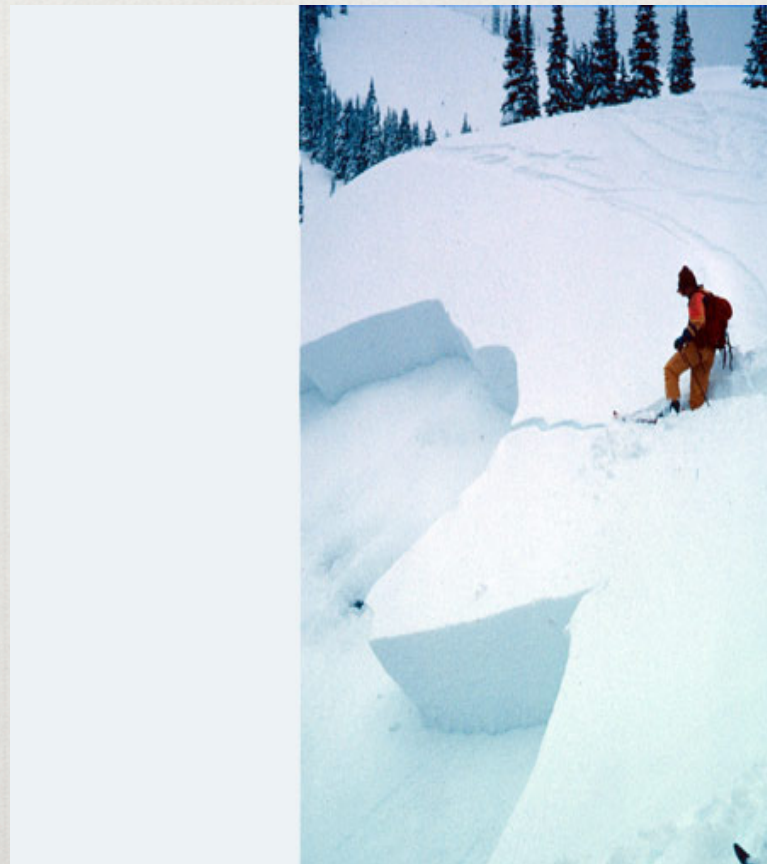
Acceptance

Commitment

Expert Halo

Tracks (Scarcity)

Social Proof





# Familiarity

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# Acceptance

We behave in ways that we believe will get us accepted by people we like or respect, or that we want to like or respect us.

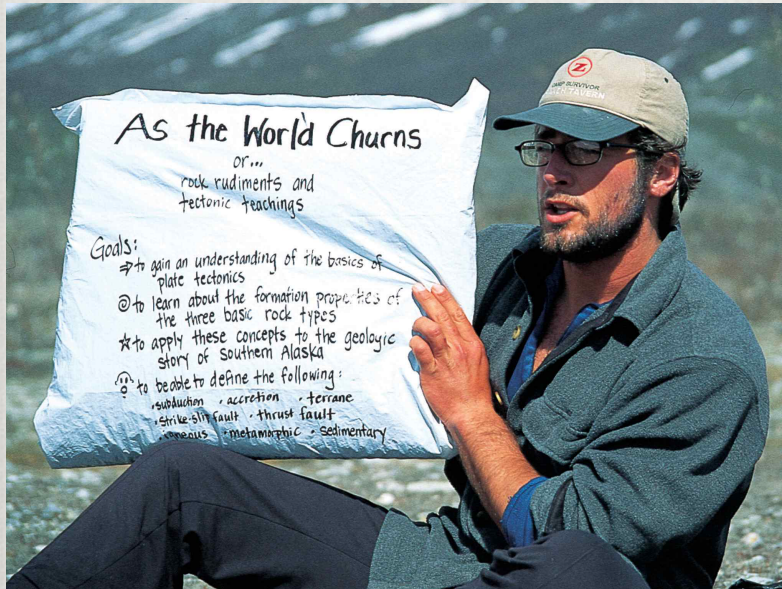


# Commitment

A plan is correct if it fulfils a previous commitment



# Expert Halo



Ascribing skills and knowledge to someone in one domain when they show expertise in another

# Scarcity



The tendency to take bigger risks when there isn't much to go around.

Eg: "I know it looks more dangerous than we thought, but this is our vacation: it's our only chance"

# Social Proof

We see others doing it, so perceive the risk to be less.



# FACETS

It's important to realize that most of the time, these shortcuts don't result in bad decisions

However

These six “FACETS” traps may be central to many mistakes in decision making.

# FACET TEST

Count how many FACETS are present. This gives you an idea how objective you are really being

**F**amiliarity

**A**cceptance

**C**ommitment

**E**xpert Halo

**T**racks (Scarcity)

**S**ocial Proof



# Scenario

*Familiarity if it's familiar it's probably safe*

*Acceptance the tendency to make a decision that will be accepted*

*Commitment a behavior is correct to the extent that it is consistent with a prior commitment we have made.*

*Expert Halo if one has expertise in one genre, one will be expert in others*

*Scarcity (Tracks) hurry! For a Limited Time Only!*

*Social Proof a behaviour is correct to the extent that other people are engaging in it*

# Intuition, Heuristics and.....

The System

...of training and mentoring field staff

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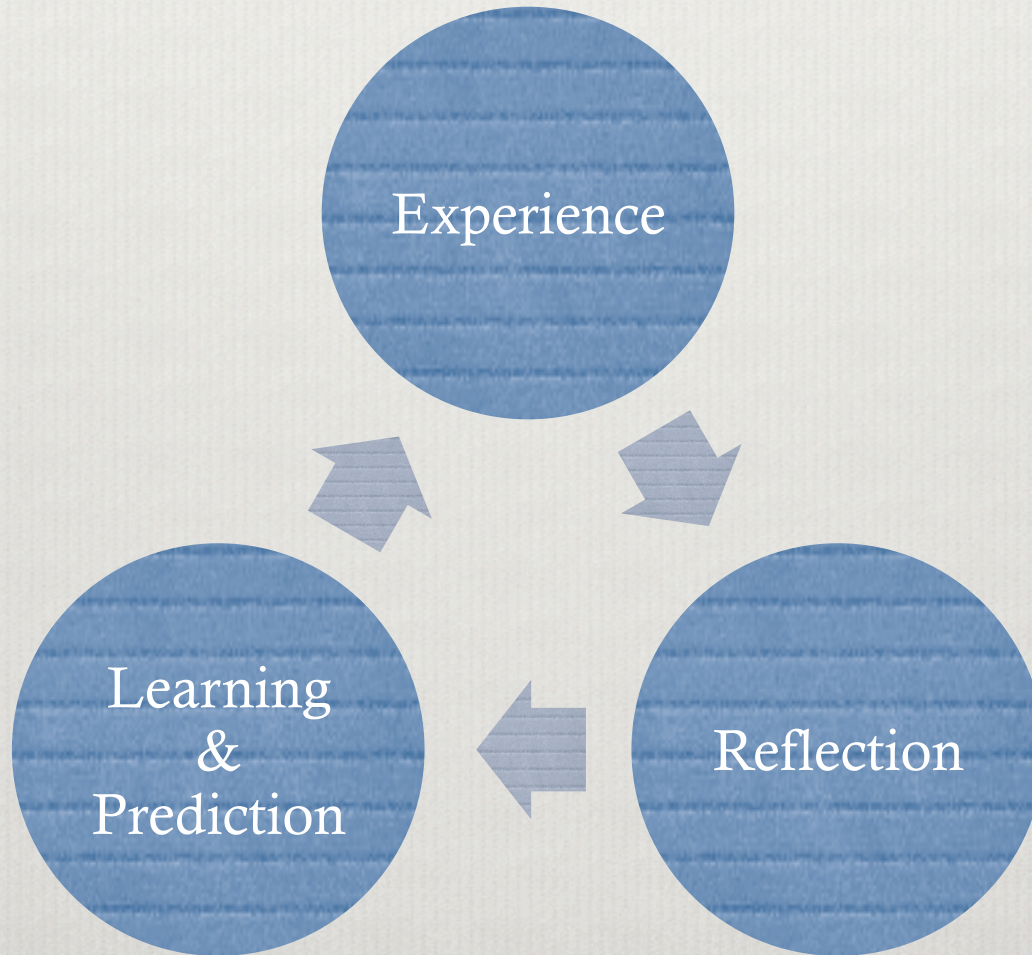
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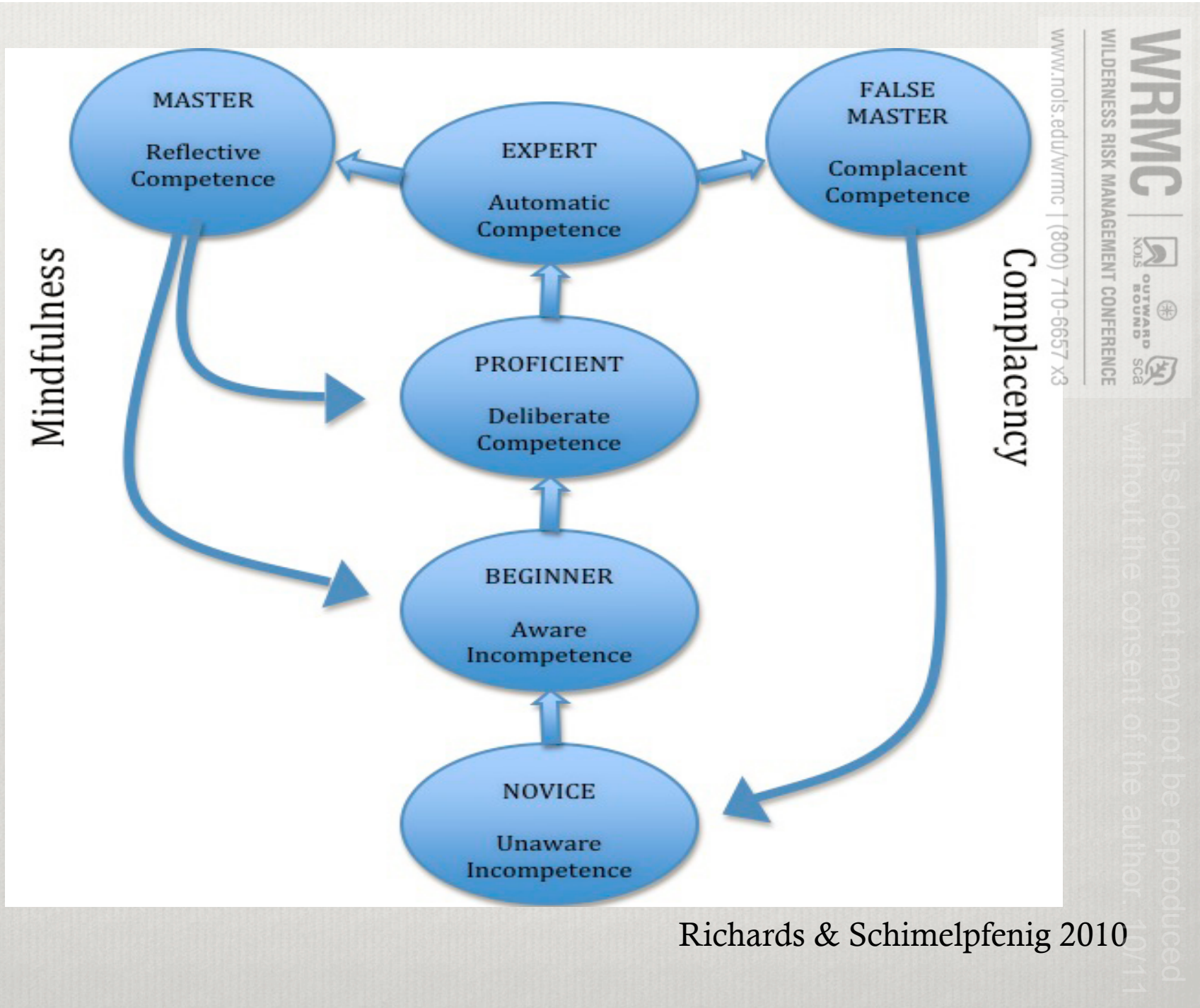
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# Old School



# New School





Richards & Schimelpfenig 2010

# A Tale of Two Camps II

Research in decision making is moving beyond  
entrenchment

Based on emotion as much as logic

Exploration of our ability to move gracefully and  
effectively between intuitive and rule-based decision  
making modes.

A New Frontier

Never underestimate  
Your own ability  
To be completely wrong!



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