

Training to Failure and Other Unlikely and Highly Effective Training Strategies

WRMC 2018

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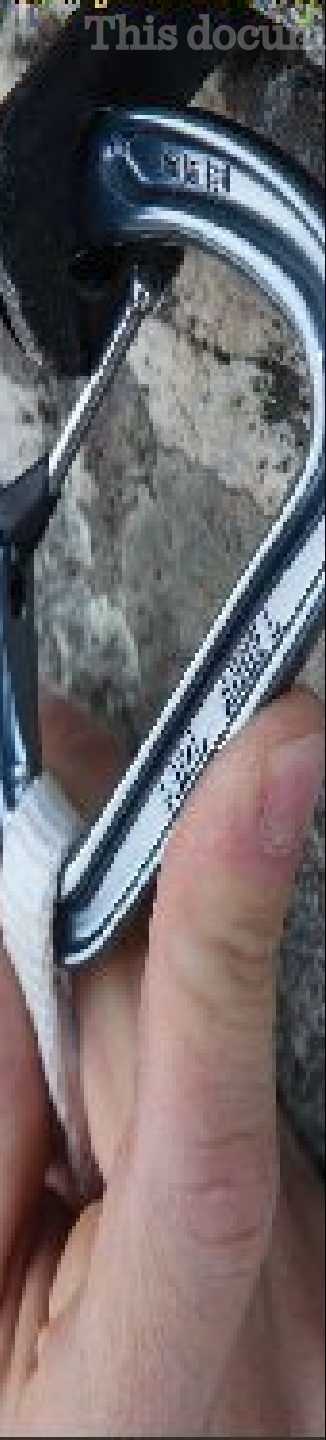
**Managing
Risk**

Systems Planning
for Outdoor
Adventure
Programs



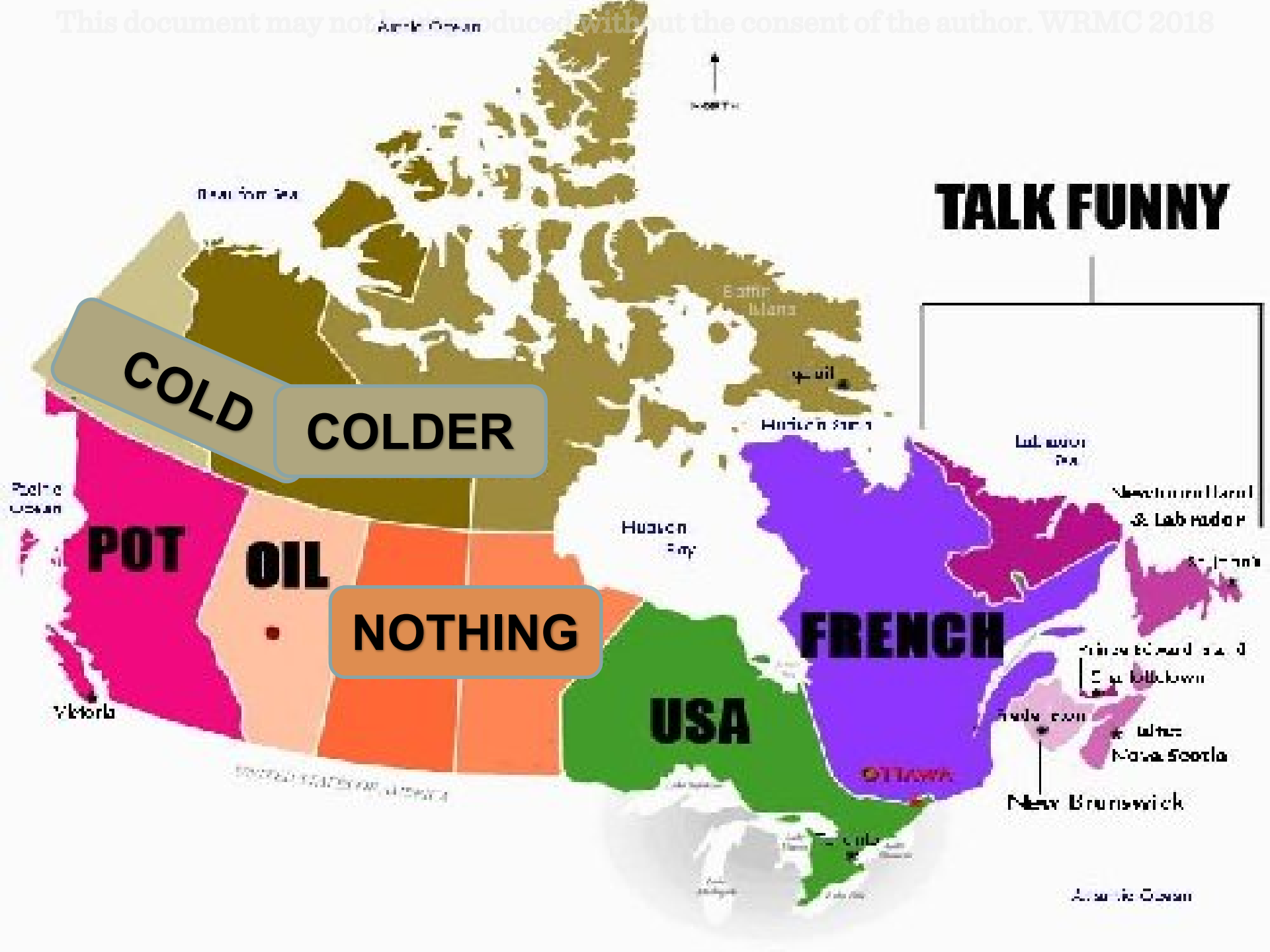
Agenda

1. Varied vs. Specific safety performance
2. Schema and sensemaking
3. Training principles for building competency fast:
varied and specific



Bottom line:

- Varied safety performance needs varied training / specific S.perf. needs specific training
- Spending training time in 'normal' in no way prepares one for non-normal
- Safe failure over fail safe operations



COLD

COLDER

POT

OIL

NOTHING

USA

FRENCH

TALK FUNNY



Pair/Share Question:

- What is your biggest challenge in training staff? (2 minutes per partner)



Pair/Share Question:

- What is your biggest challenge in training staff? (2 minutes per partner)

4:30

to go

Introduce and
get going!

Partner 1
share

4:00

to go

Partner 1
share

3:00

to go

Partner 1
share

2:00

to go

Partner 2
share

1:00

to go!

Partner 2
share

Time's up!!

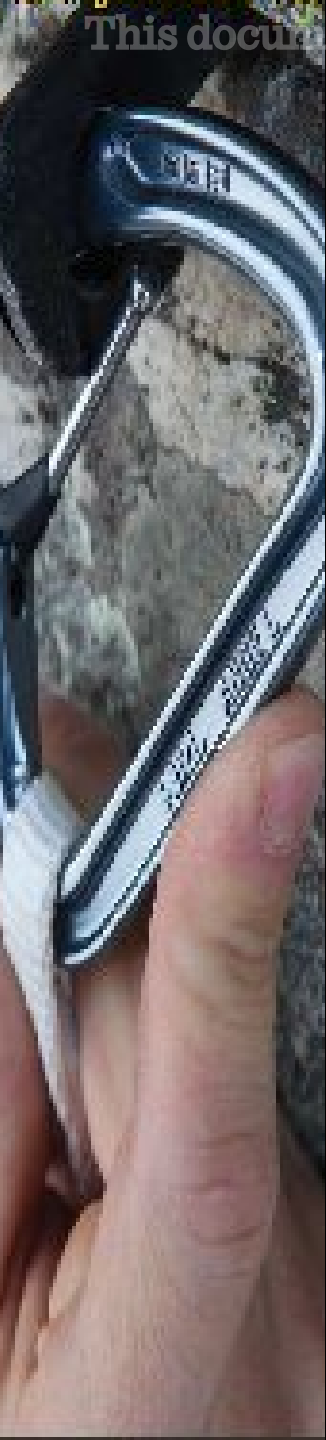


Pair/Share Question:

- What is your biggest challenge in training staff?



Question: How do you train for safety critical skills?



Varied S.perf. needs varied training / specific S.perf. needs specific training

Safety critical skills

Varied Perf. Req's:



Varied S.perf. needs
varied training

Specific Perf. Req's:



Specific S.perf. needs
specific training

Safety critical skills

Varied Perf. Req's:

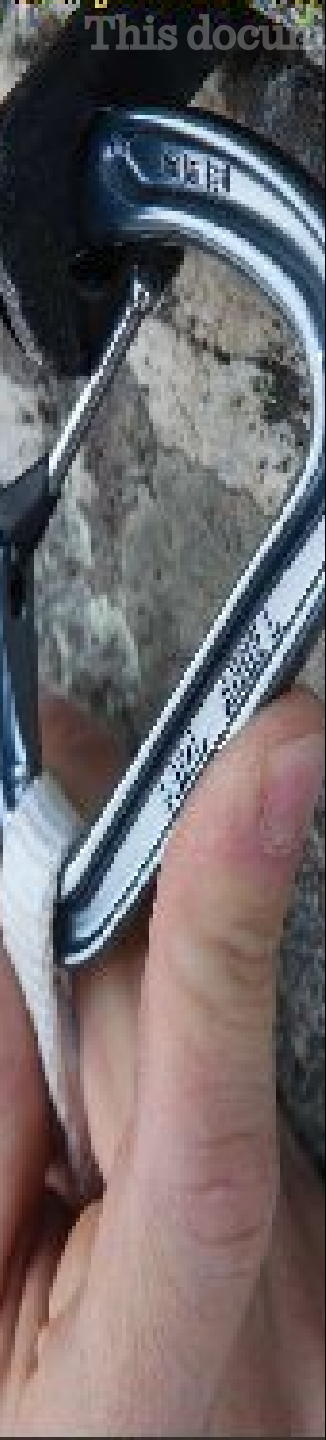
1. Belay: "demonstrate appropriate behavioral reaction to a fall"
2. Limit exposure given present hazards
3. Swiftly intervene when necessary

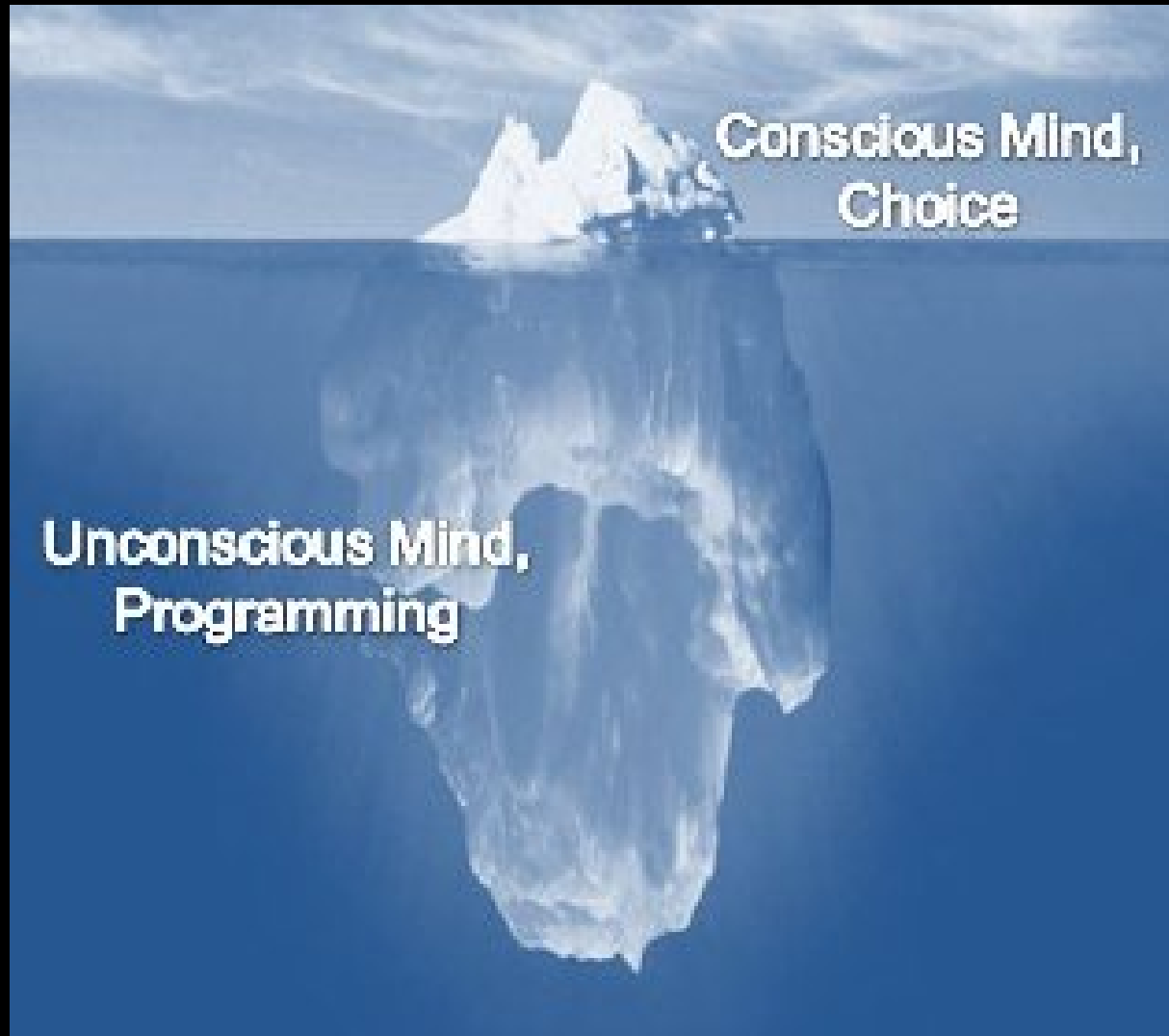
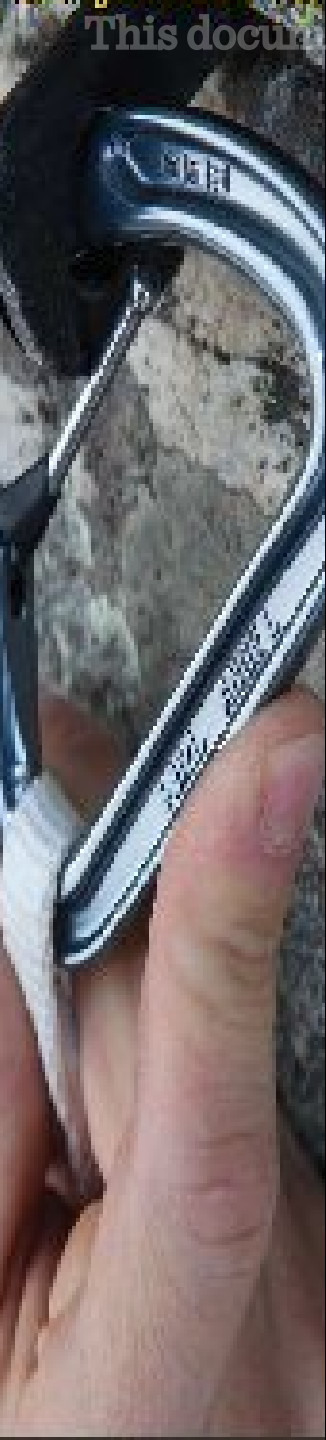
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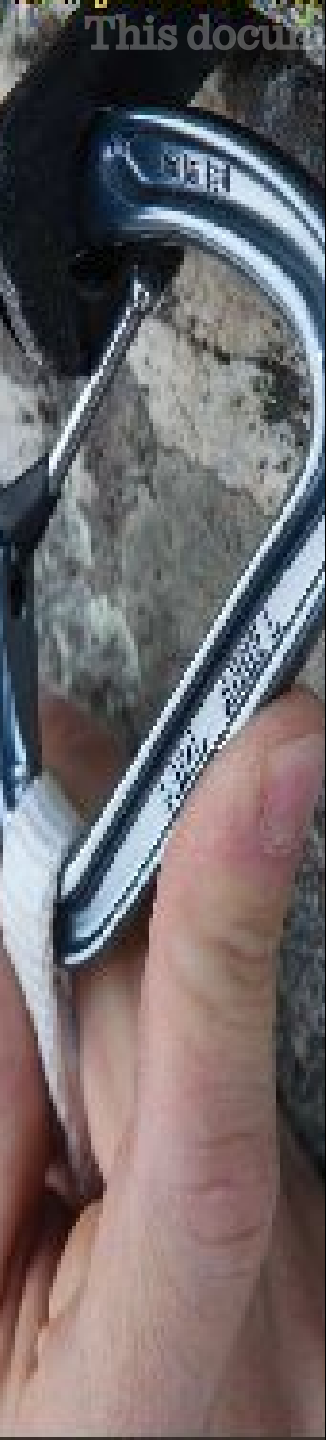
4. Safety briefing
5. Van / facility inspection
6. Waiver (RM?)

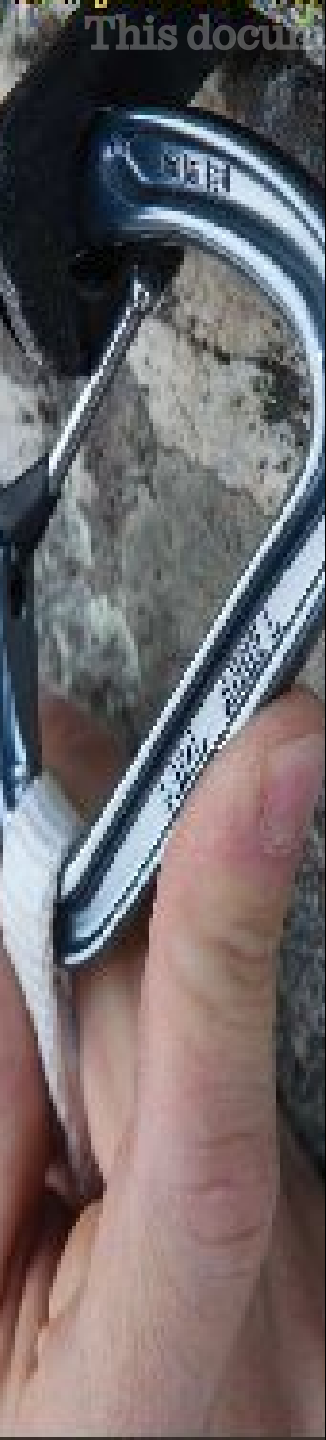
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varied and specific









17 x 24

2 ways of thinking



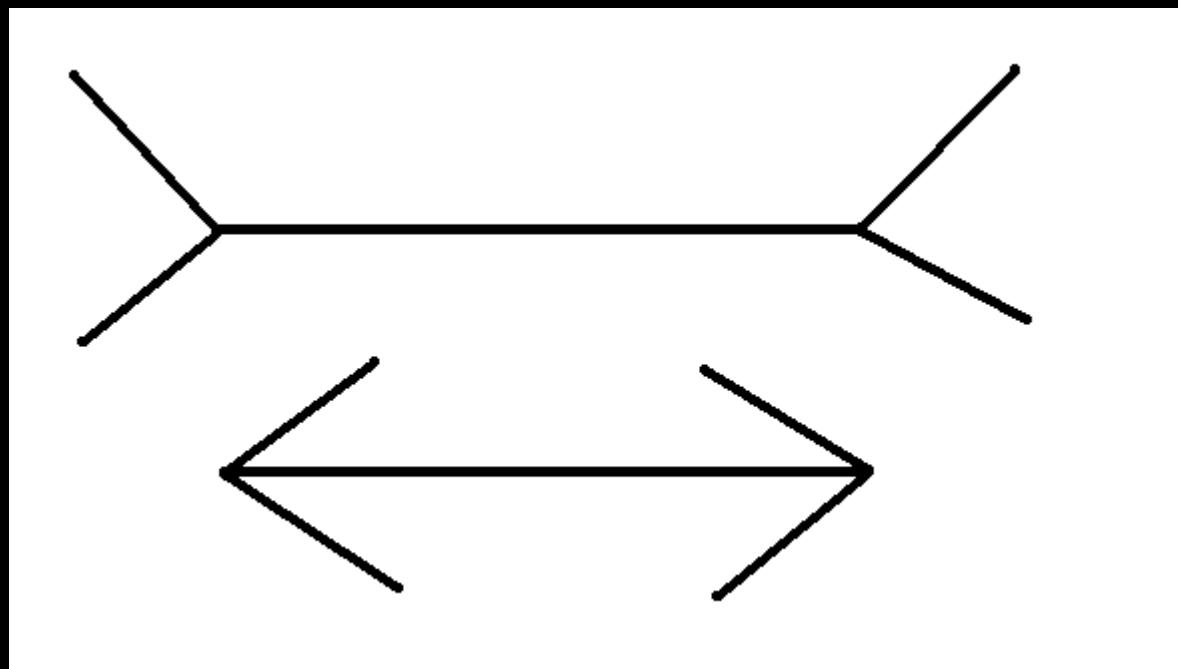
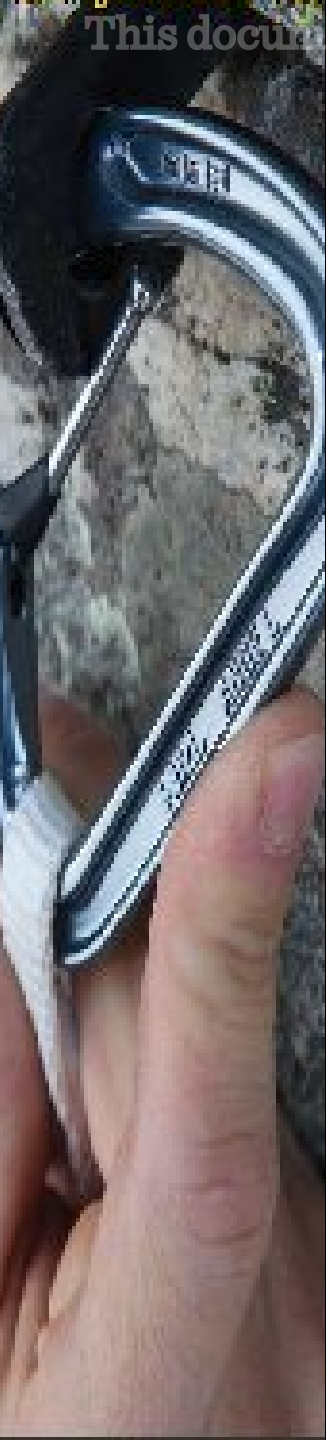
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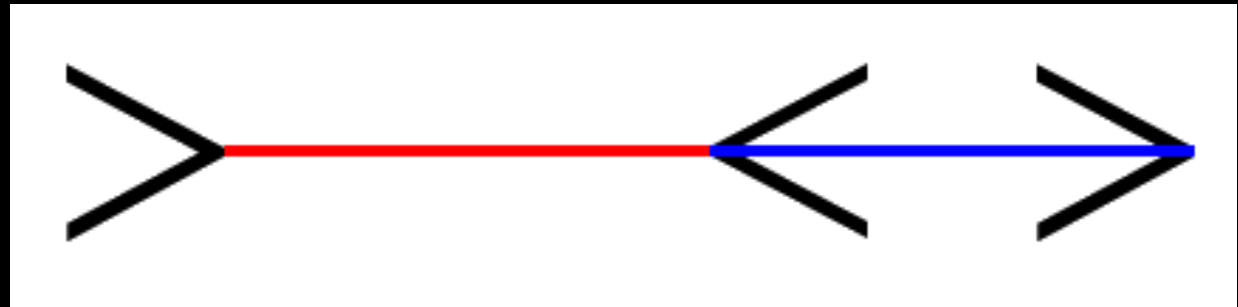
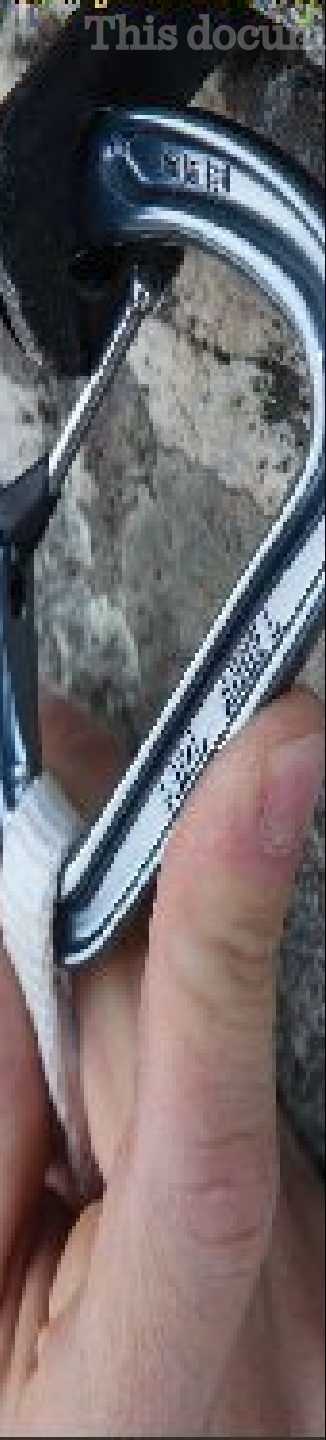
Fast & slow

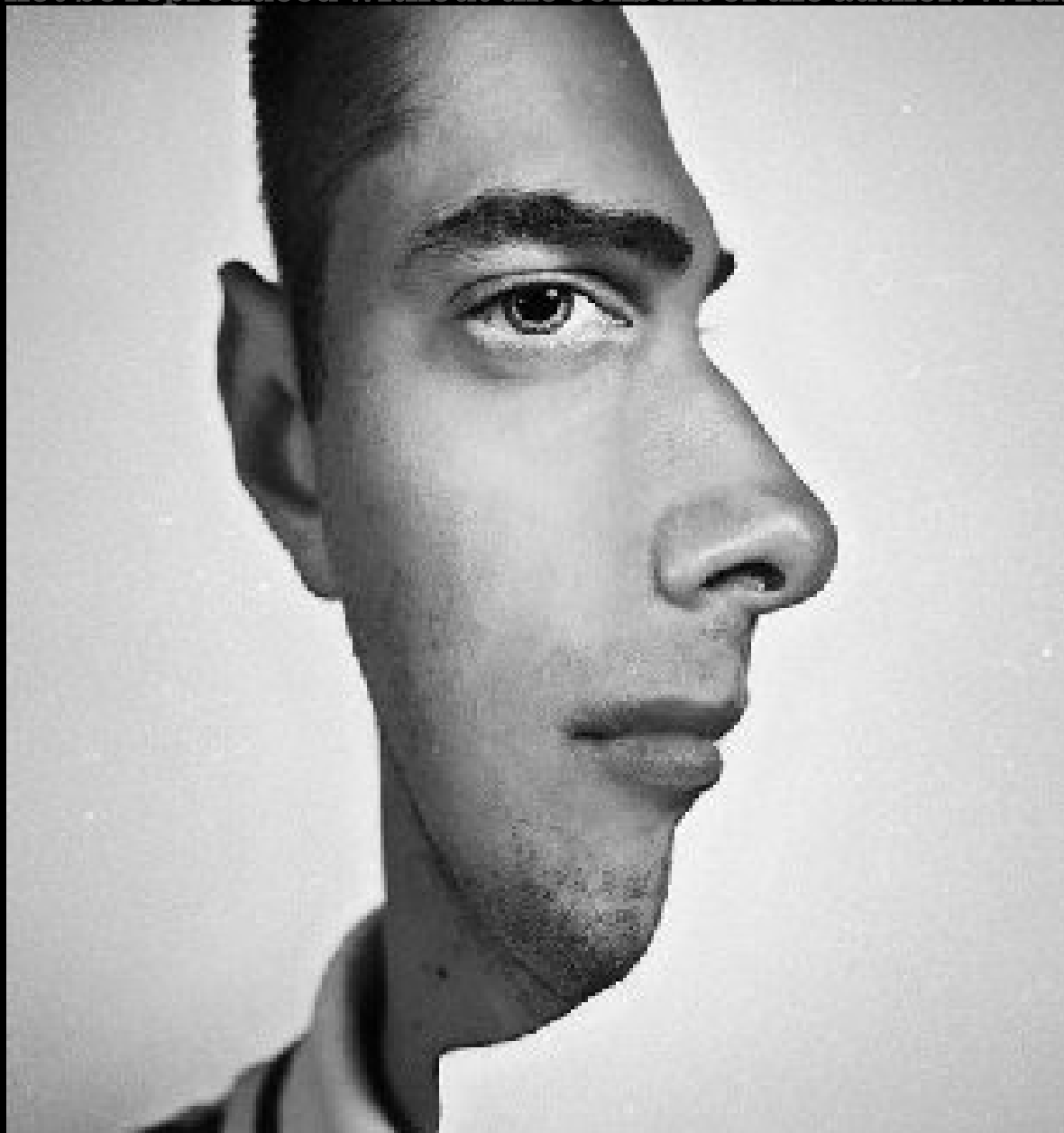
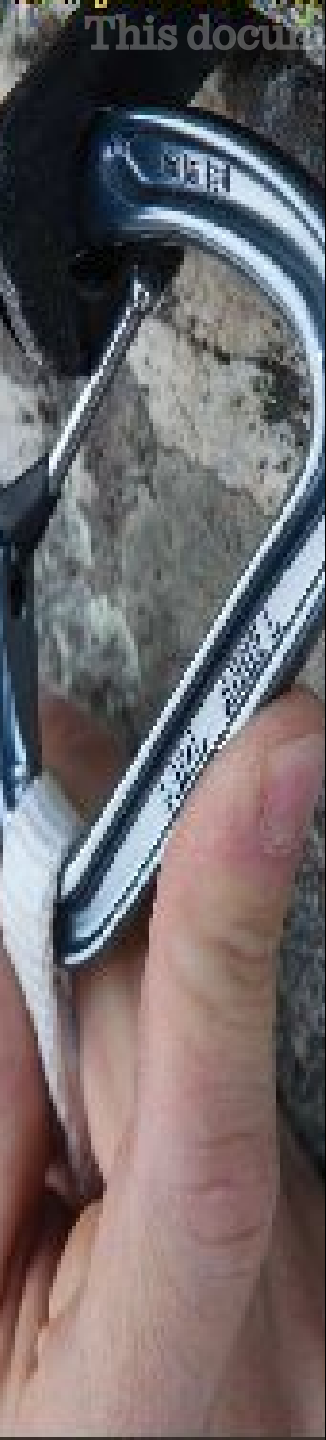
Intuitive & rational

System 1 & system 2

Varied v. specific performance

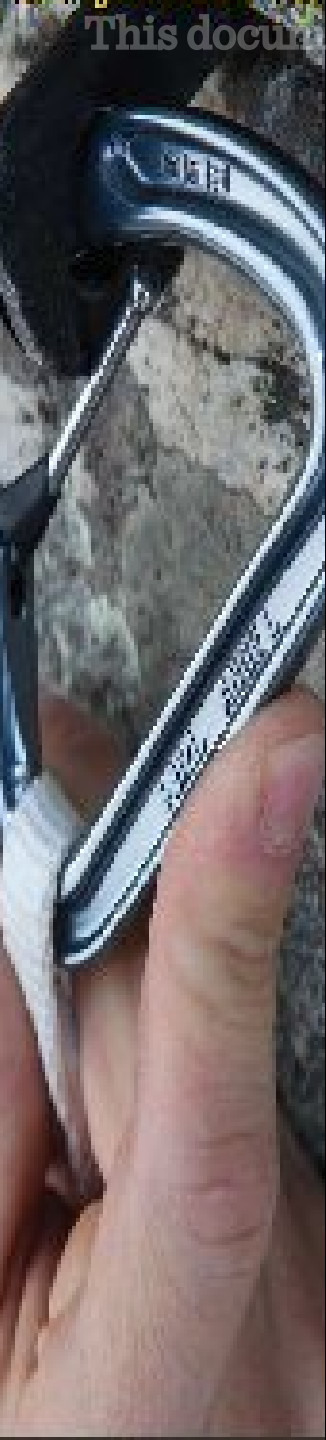


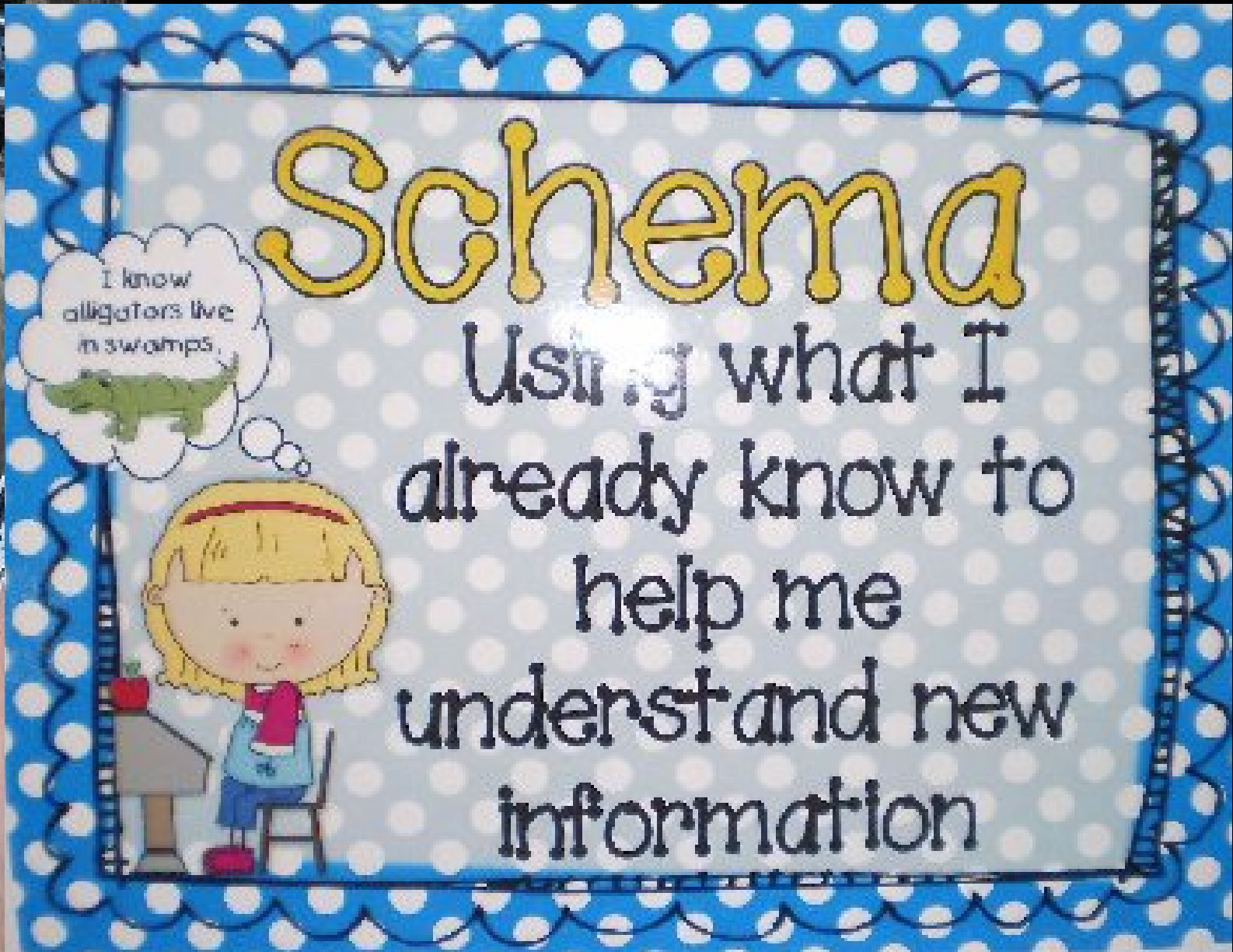


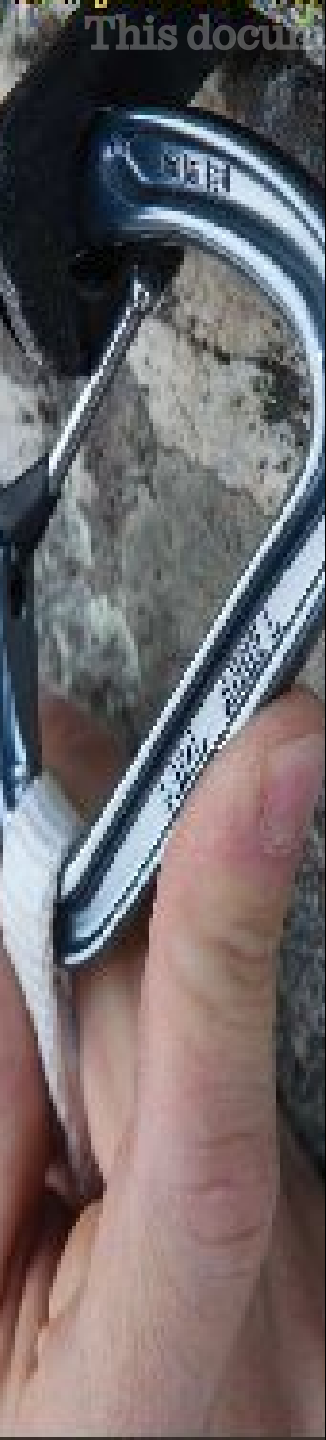


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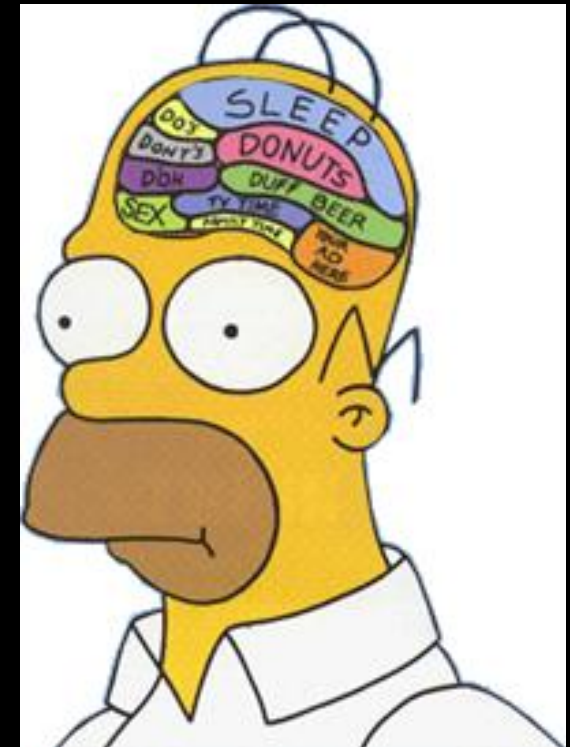






Schema

- template for recognizing a particular class of relevant environmental threats or opportunities





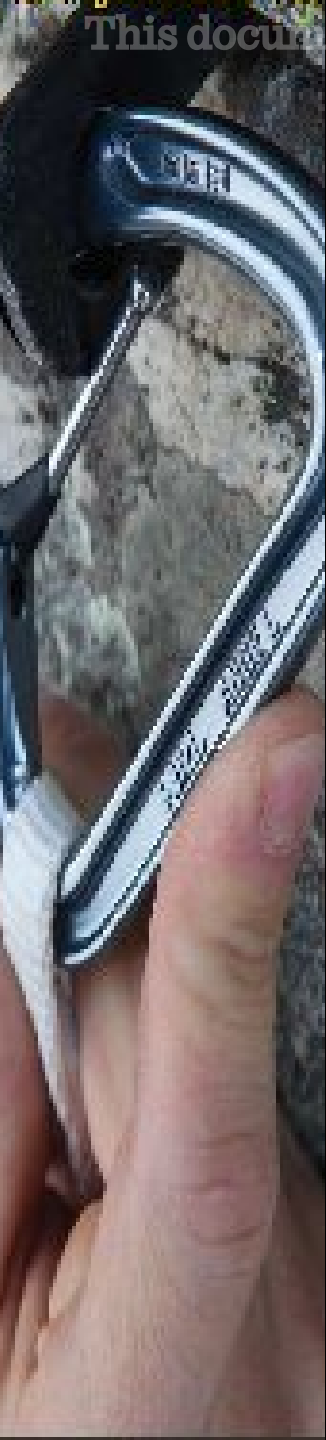




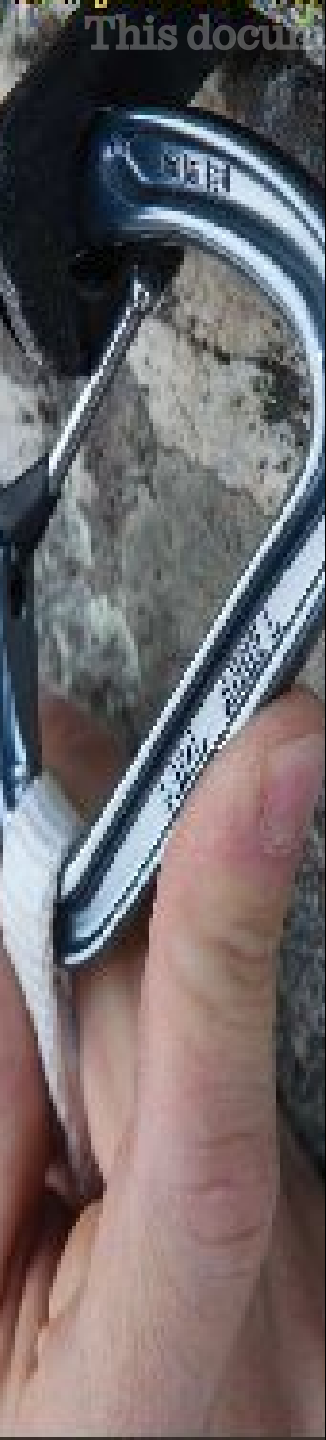


Schema v. Sensemaking

- Schema:
 - Categories (of memory?)
- Sensemaking
 - Ongoing process to categorize ambiguous cues







Motivated Behaviour Model:

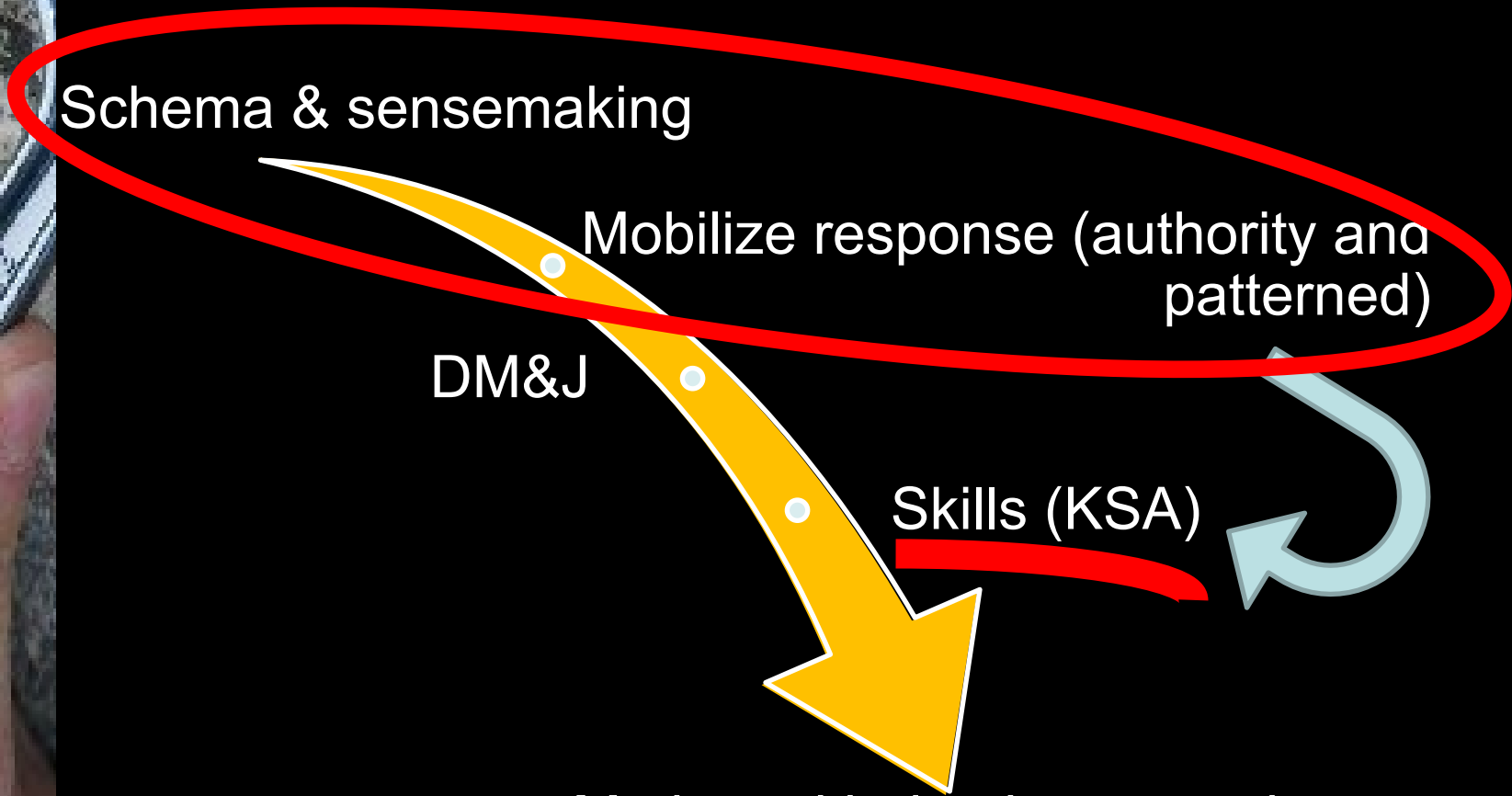
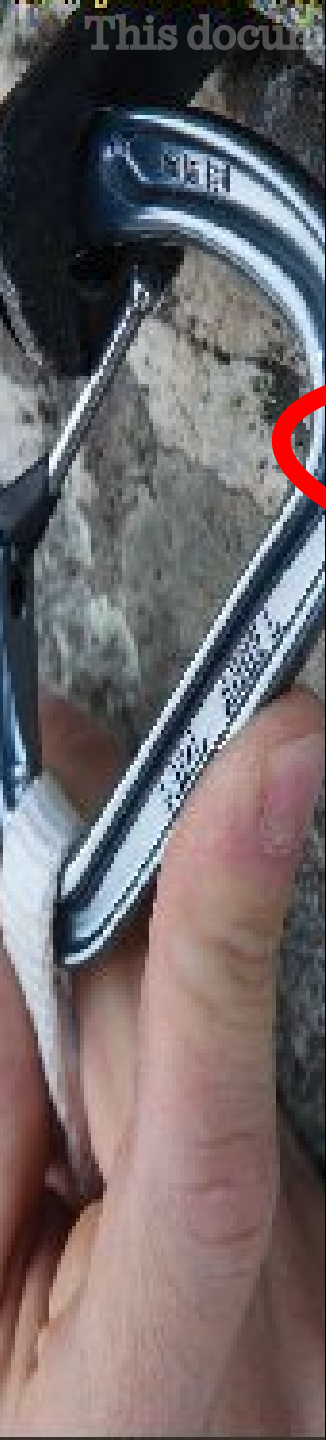
Schema & sensemaking

Mobilize response (authority and patterned)

DM&J

Skills (KSA)

Motivated behaviour or action





Can you find the
the mistake?

1 2 3 4 5 6 7 8 9

Motivated Behaviour Model:

Schema & sensemaking

Varied S.perf.

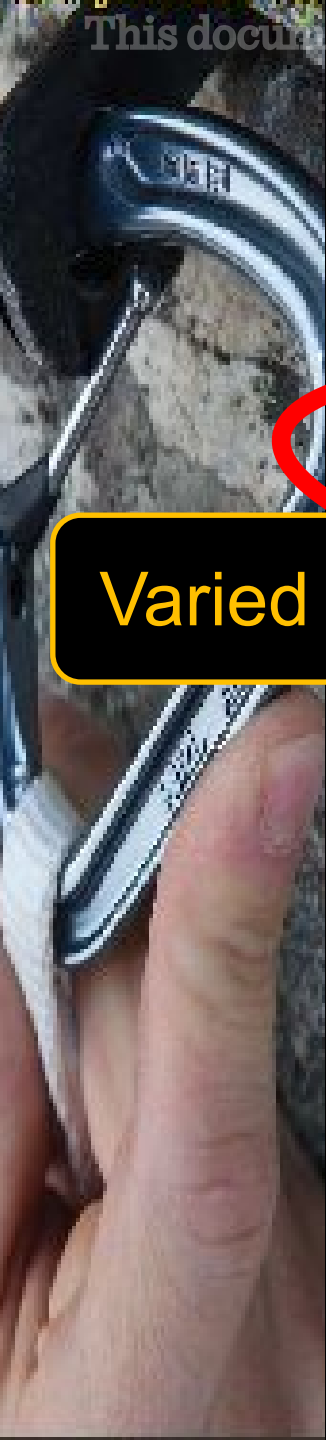
Mobilize response (authority and patterned)

DM&J

Specific S.perf.

Skills (KSA)

Motivated behaviour or action



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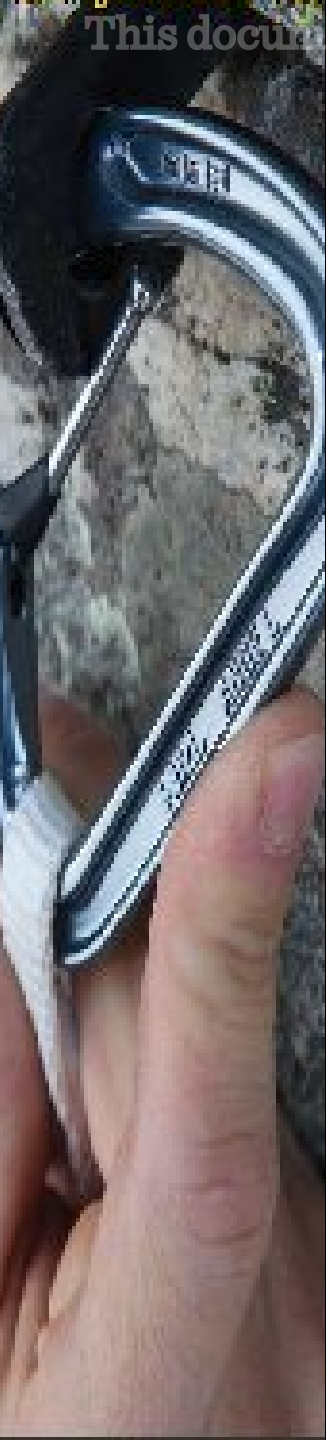
Safety critical skills

Varied Perf. Req's:

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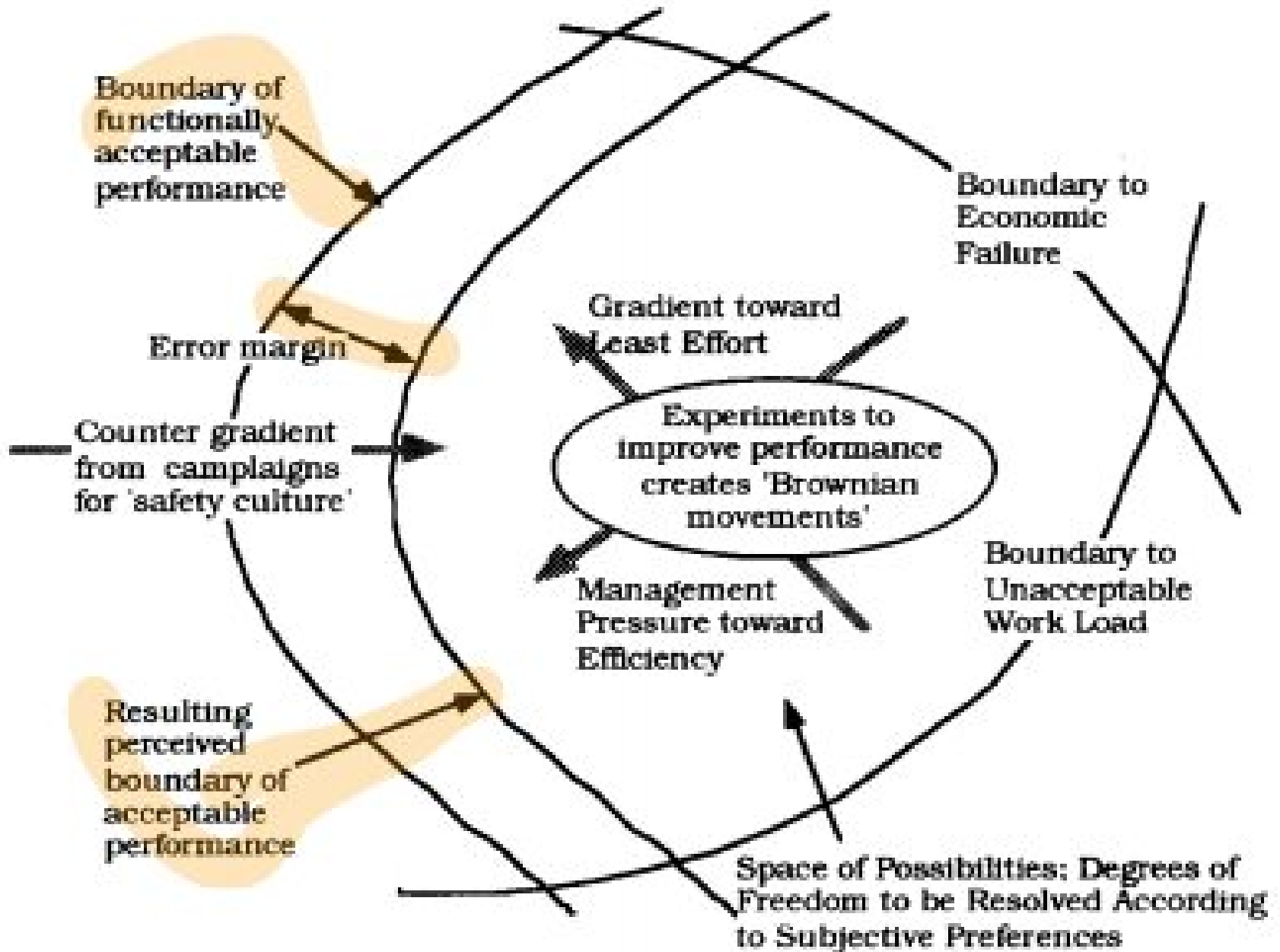
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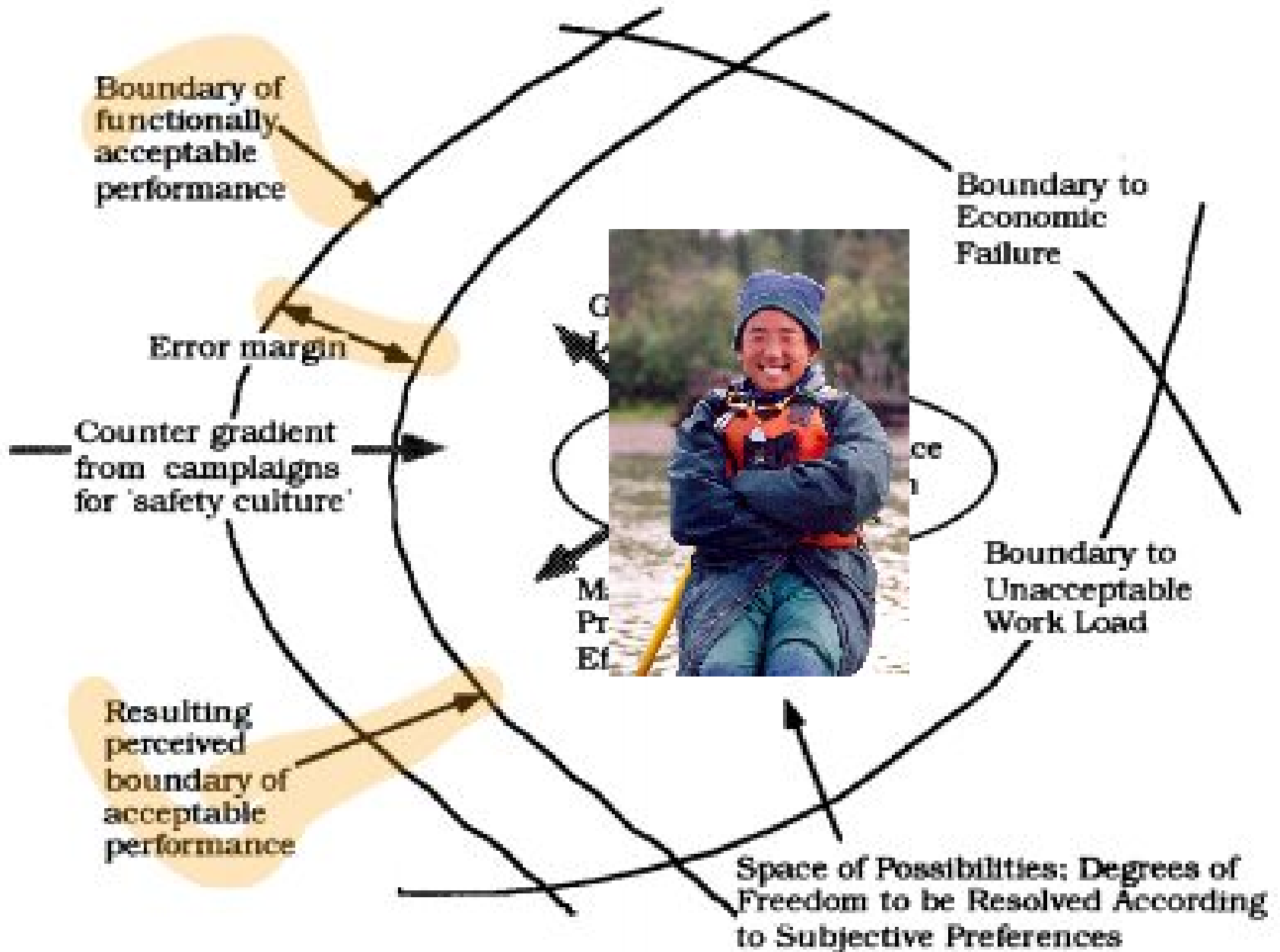
4. Safety briefing
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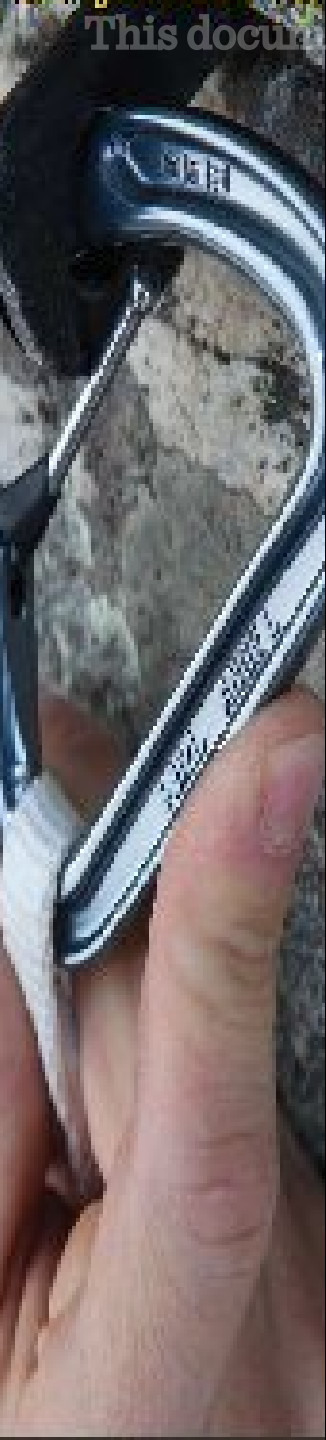




<https://www.youtube.com/watch?v=V9hsWjA3SmU>



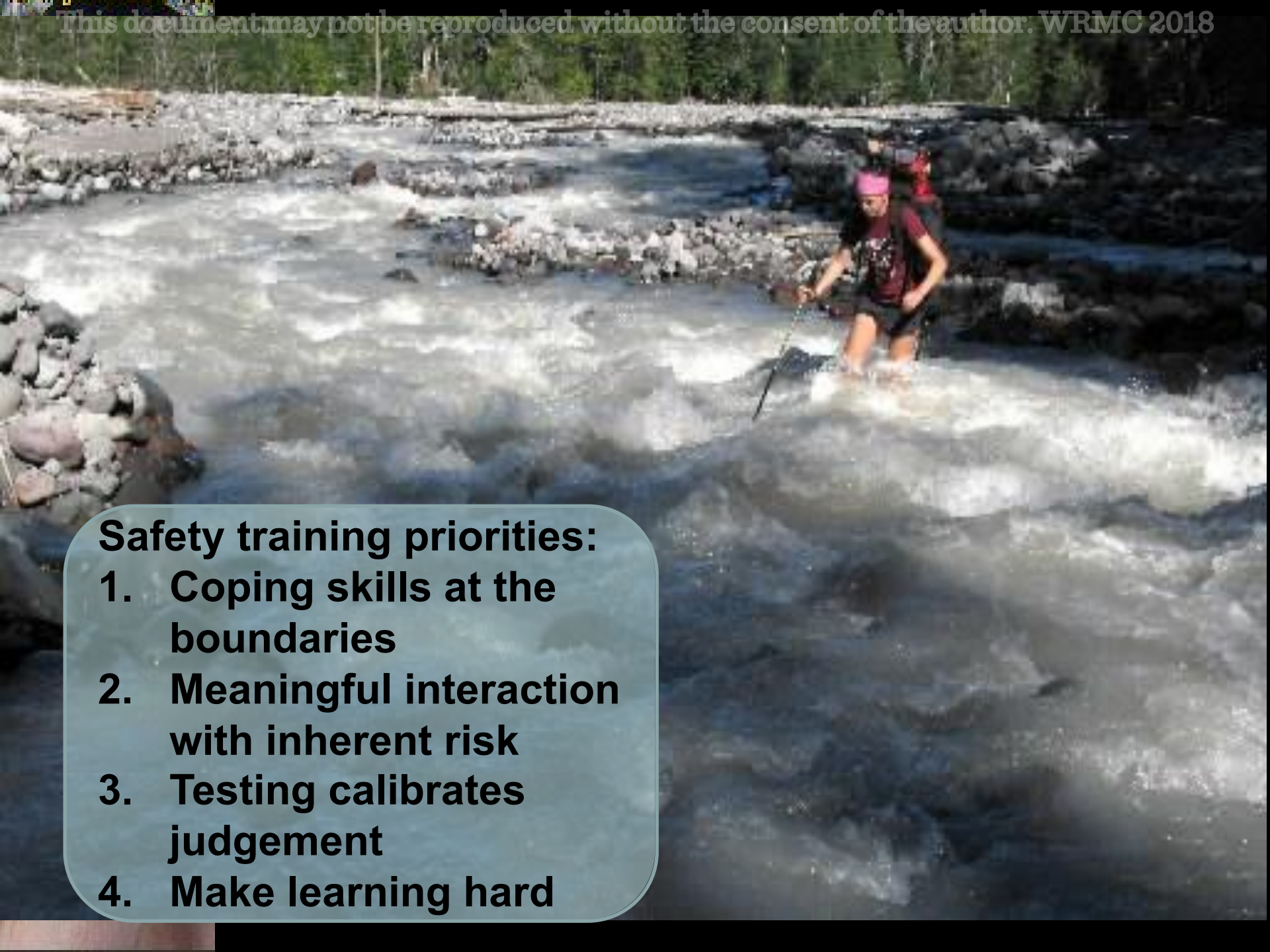




“...rather than striving to control behaviour by *fighting deviation*...

Control behaviour by *making the boundaries explicit and known* and by giving opportunities to develop *coping skills at boundaries.*”

Rasmussen (1997)

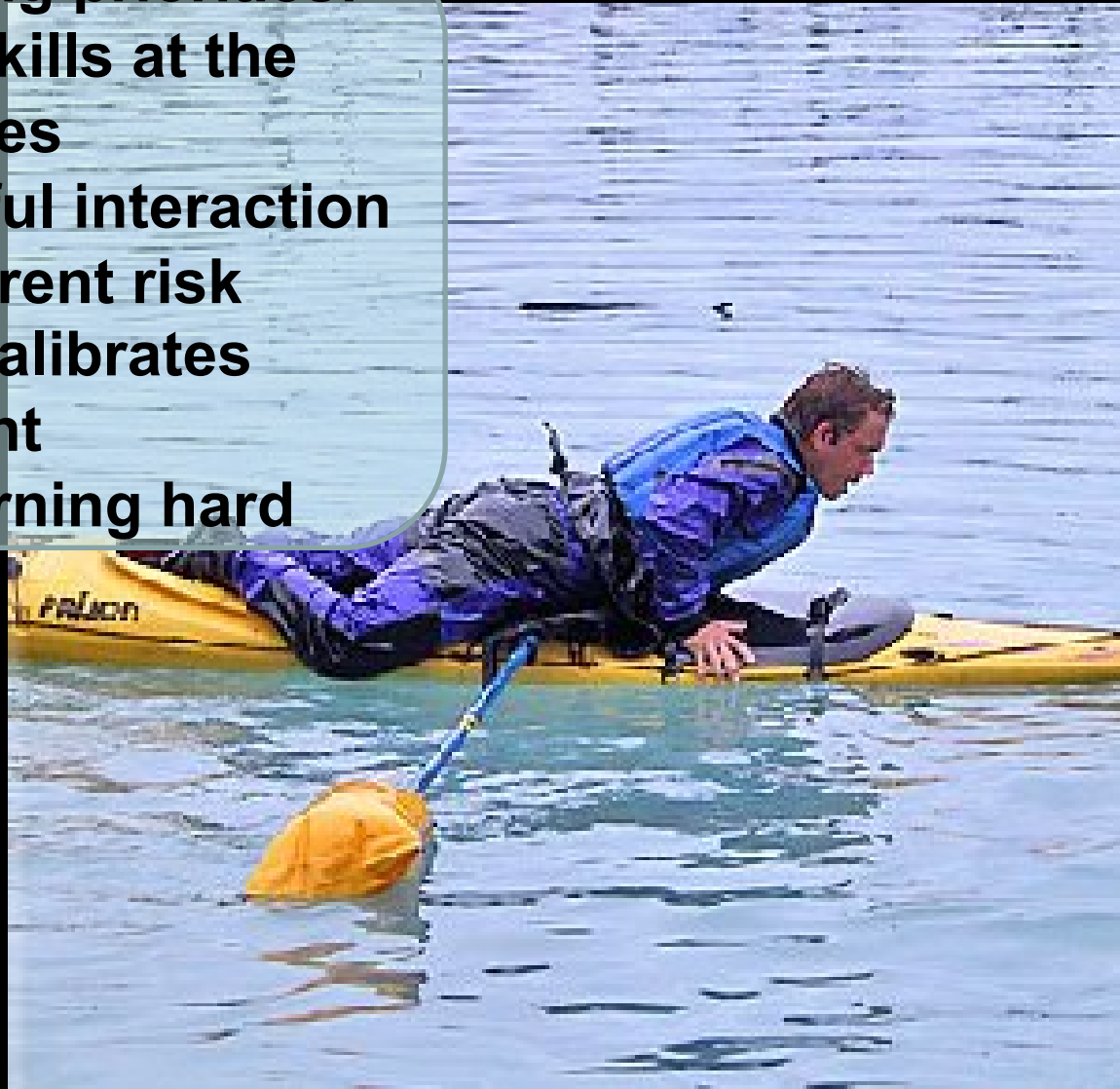


Safety training priorities:

- 1. Coping skills at the boundaries**
- 2. Meaningful interaction with inherent risk**
- 3. Testing calibrates judgement**
- 4. Make learning hard**

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1. Coping skills at the boundaries
2. Meaningful interaction with inherent risk
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4. Make learning hard

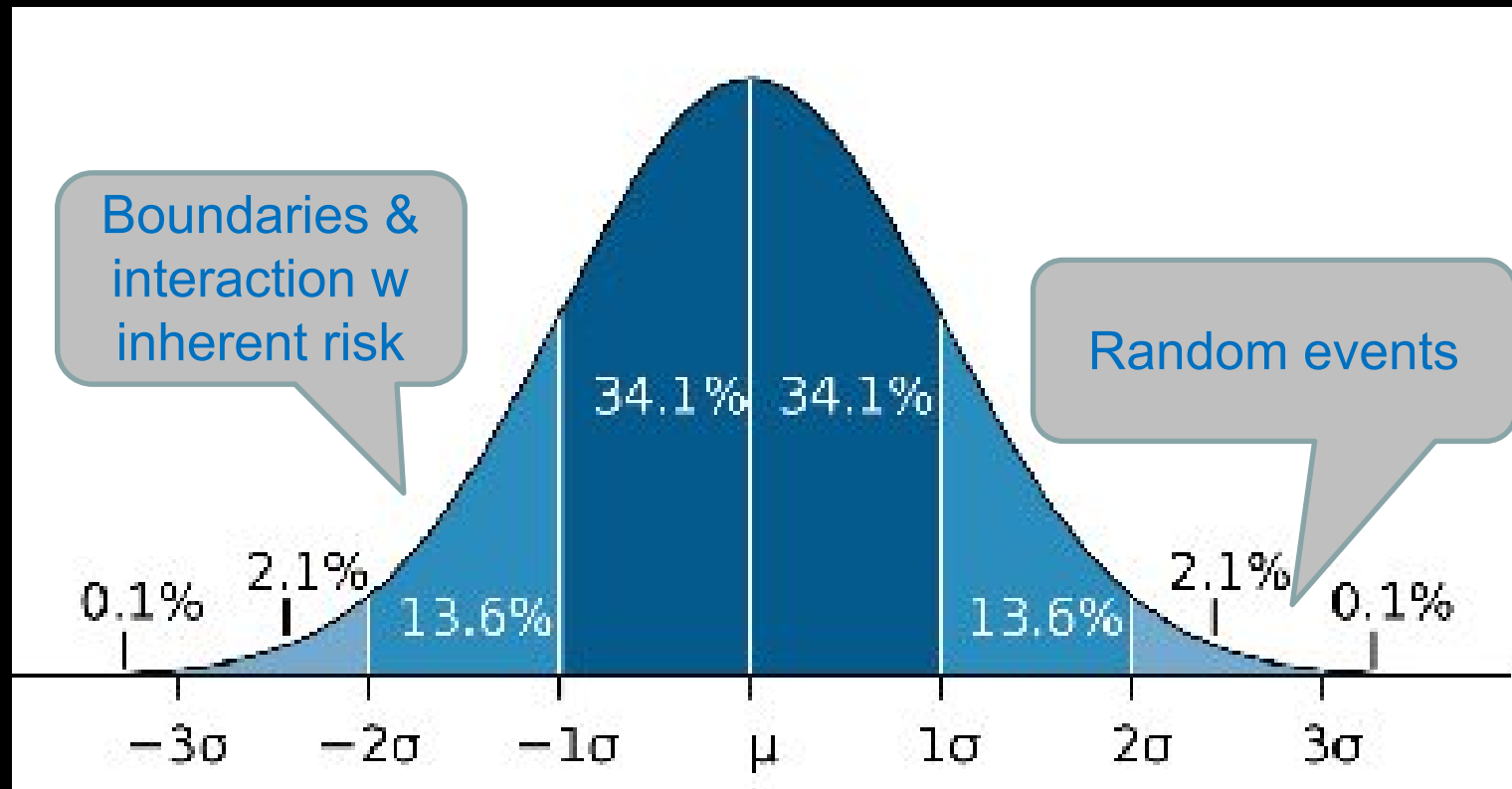


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1. Coping skills at the boundaries
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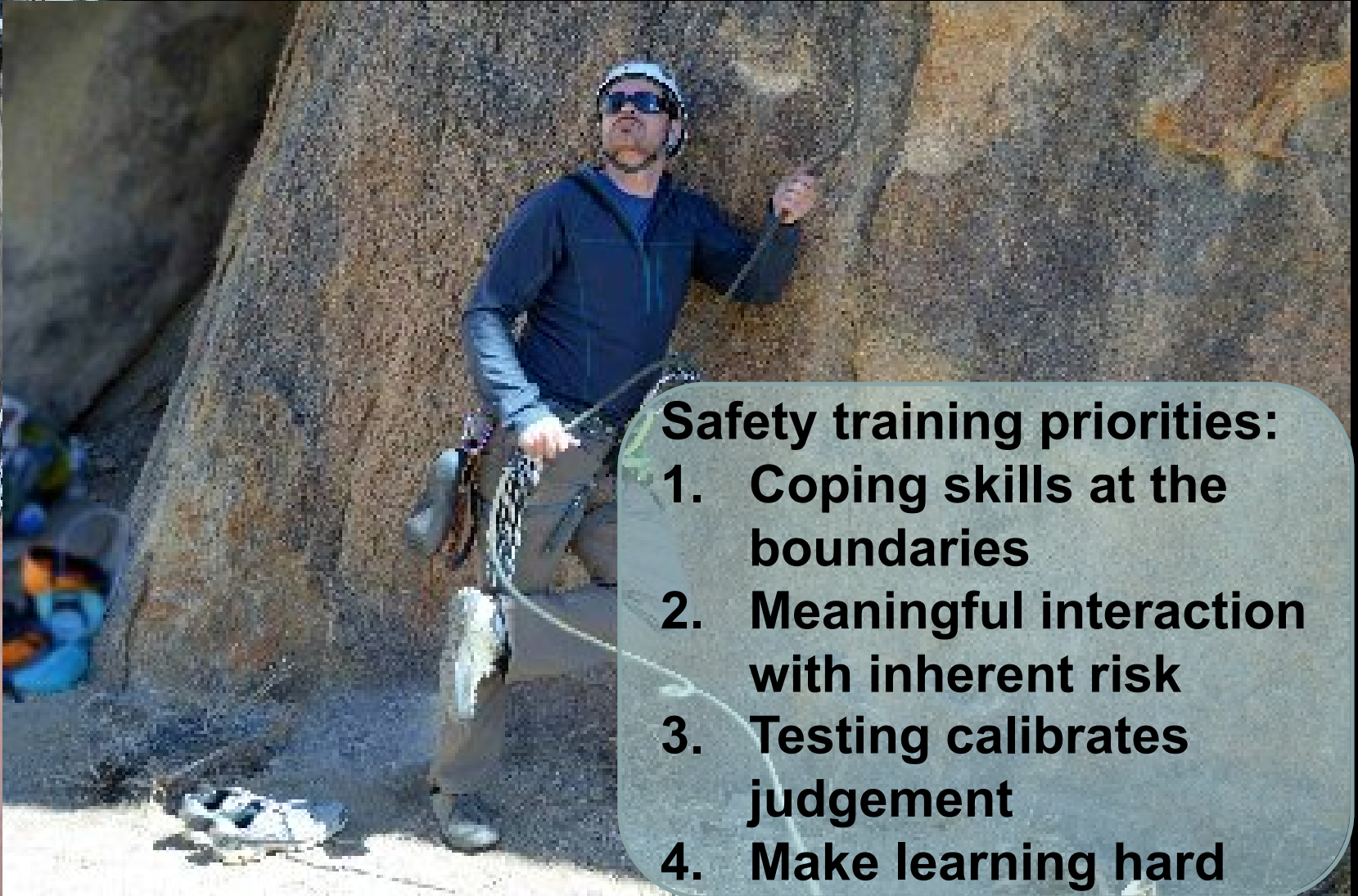


Normal vs Non Normal



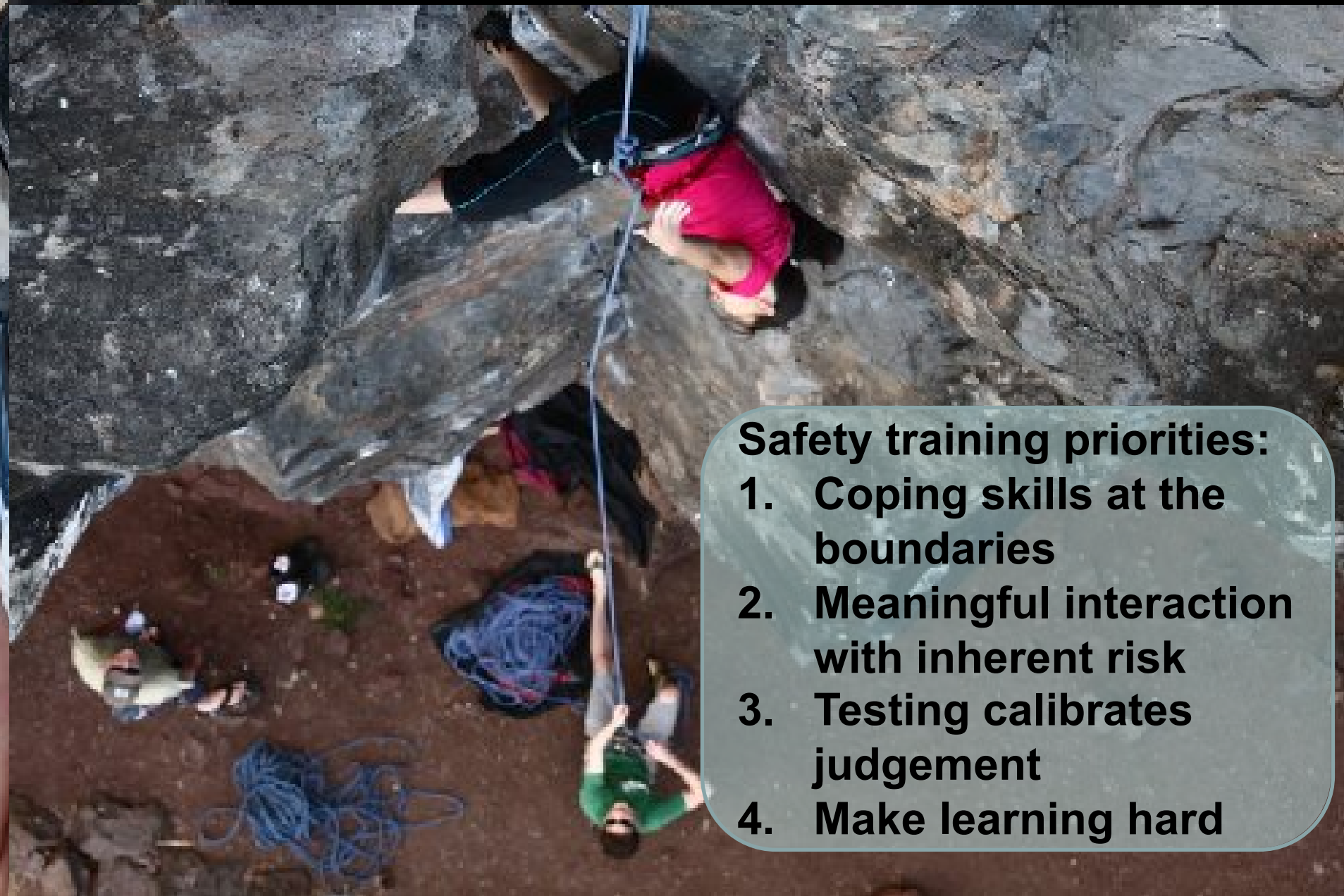






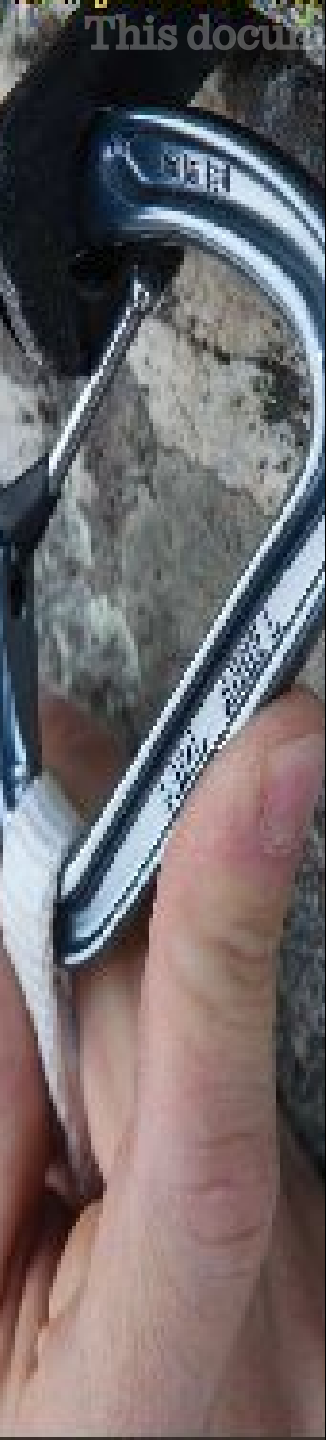
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Training for varied S.perf.

- Meaningful interaction w inherent risks
- Illuminate failure points
- Define boundaries

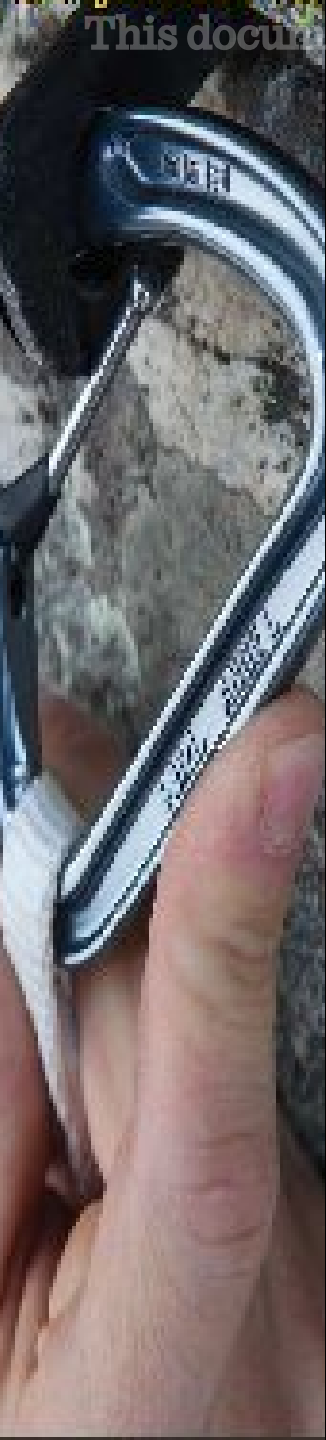
Normal via Non Normal

Coping skills at boundaries

Sensemaking

Multiple schema





Key ideas:

Varied S.perf. training priorities:

1. Coping skills at the boundaries
2. Meaningful interaction with inherent risk
3. Testing calibrates judgement
4. Make learning hard

Safety critical skills

Varied Perf. Req's:

1. Belay: "demonstrate appropriate behavioral reaction to a fall"
2. Limit exposure given present hazards
3. Swiftly intervene when necessary

Specific Perf. Req's:

4. Safety briefing
5. Van / facility inspection
6. Waiver (RM?)

Specific S.perf.



Safety training priorities:

1. Role model & replicate
2. Checklists
3. Testing calibrates judgement
4. Make learning hard

Specific S.perf.

- Testing calibrates judgement
- Make learning hard



Key ideas:

Specific S.perf. training priorities:

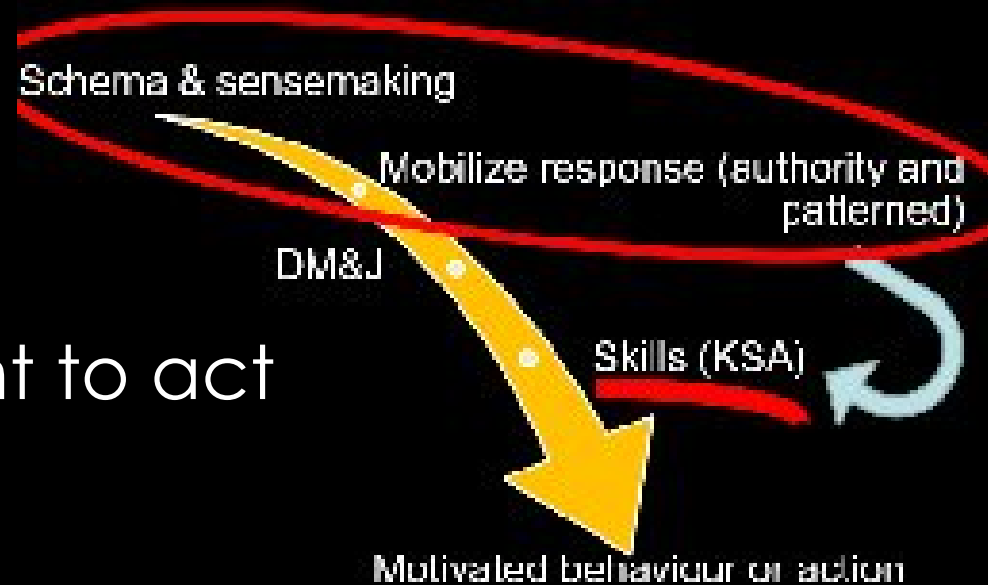
1. Role model & replicate (R&R)
2. Checklists (or iAuditor app)
3. Testing calibrates judgement
4. Make learning hard

Kahoot!!!

- On phone or laptop
 - Network:
 - User:
 - Wifi password:
- Go to www.kahoot.it
- Game pin and name

Accelerated Training

- Situational awareness
- Recognize patterns
- Defined roles
- Empowerment to act





Safety training priorities:

- 1. Coping skills at the boundaries**
- 2. Meaningful interaction with inherent risk**
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- 4. Make learning hard**

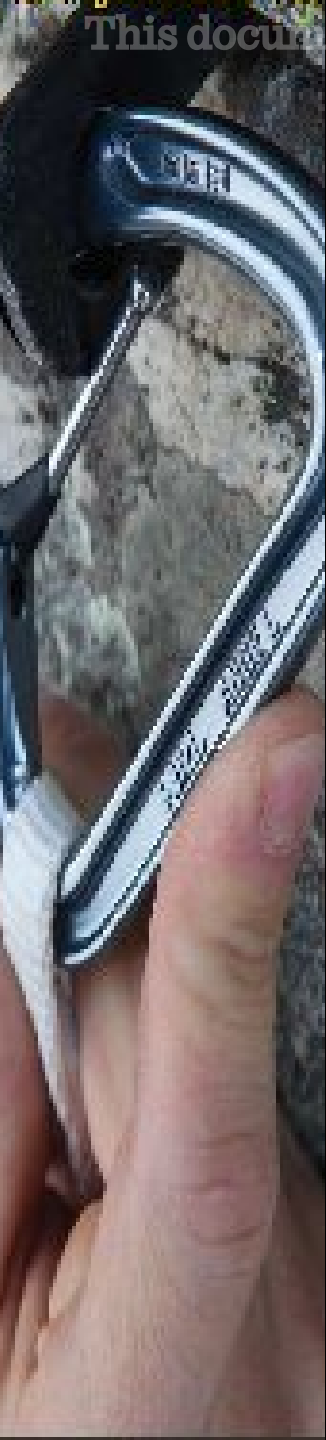


Safety training priorities:

- 1. Role model & replicate**
- 2. Checklists**
- 3. Testing calibrates judgement**
- 4. Make learning hard**

Ends vs Means

- Structure meaningful interaction with inherent risks
 - Case study org IRF's
 - Crux points on routes
 - Reasonably foreseeable hazards



Take away points:

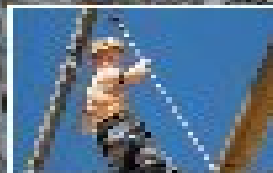
1. Identify varied v. specific performance expectations
2. Multiple schema > a single durable
3. Define roles and authority to act
4. Meaningful interaction with inherent risk
5. Safe failure over fail safe

References / further reading

- 
- Brown, P. C., Roediger, H. L., & McDaniel, M. A. (2014). *Make it stick*. Harvard University Press.
- Gawande, A., & Lloyd, J. B. (2010). *The checklist manifesto: How to get things right* (Vol. 200). New York: Metropolitan Books
- Jackson, J. & Heshka, J. (2010). *Managing Risk, Systems Planning for Outdoor Adventure Programs*, Direct Bearing Inc., Palmer Rapids, ON.
- Kahneman, D. (2011). *Thinking, fast and slow*. Macmillan.
- Rasmussen, J. (1997). Risk management in a dynamic society: a modelling problem. *Safety science*, 27(2), 183-213.
- Weick, K. (1988). 'Enacted Sensemaking in Crisis Situations'. *Journal of Management Studies* 25:4

Managing Risk

Systems Planning for Outdoor Adventure Programs



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Jon Hashiz



Book info:

TheManagingRiskBook.com

Adventure
Risk Report

AdventureRiskReport.blogspot.com

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