Training to Failure and Other Unlikely and Highly Effective Training Strategies

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Agenda

1. Schema and sensemaking
2. Theoretically anchored behaviour model
3. Training for non normal and failure
Bottom line:

• Spending training time in ‘normal’ in no way prepares one for non-normal

• Meaningful interaction with inherent risk defines non normal and builds coping skills at the boundaries

• Safe Failure needs to replace Fail Safe
Key ideas:

Safety training priorities:
1. Coping skills at the boundaries
2. Meaningful interaction with inherent risk
3. Testing calibrates judgement
4. Make learning hard
Pair/Share Question:

• What is your biggest challenge in training staff? (2 minutes per partner)
Question:

- Do you train decision making?
  How?
2 ways of thinking

Fast & slow
Intuitive & rational
System 1 & system 2
Schema

Using what I already know to help me understand new information.

I know alligators live in swamps.
Schema

- template for recognizing a particular class of relevant environmental threats or opportunities
APPLE
Schema v. Sensemaking

• Schema:
  – Categories (of memory?)

• Sensemaking
  – Ongoing process to categorize ambiguous cues
Agenda

1. Schema and sensemaking
2. Theoretically anchored behaviour model
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Motivated Behaviour Model:

- Schema & sensemaking
- Mobilize response (authority and patterned)
- DM&J
- Skills (KSA)
- Motivated behaviour or action
Can you find the mistake?

1 2 3 4 5 6 7 8 9
Motivated Behaviour Model:

1. Schema & sensemaking
2. Mobilize response (authority and patterned)
3. DM&J
4. Skills (KSA)
5. Motivated behaviour or action

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“Human error is a consequence, not a cause.”

Reason (1997)

...decision making as “continuous control task”

Rasmussen (1997)
Question:

• Do you train decision making?
  How?
• Do you train for failure?
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“…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)
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Normal vs Non Normal

Boundaries & interaction w inherent risk

Random events

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Safety training priorities:
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Training for critical events

• Meaningful interaction with inherent risks

• Illuminate failure points

• Define boundaries

Normal via Non Normal

Coping skills at boundaries

Sensemaking

Multiple schema
DIGRESSION ALERT!!

- Testing calibrates judgement
- Make learning hard
Training for critical events

• Meaningful interaction with inherent risks

• Illuminate failure points

• Define boundaries

Normal via Non Normal

Coping skills at boundaries

Sensemaking

Multiple schema
Accelerated Training

- Situational awareness
- Recognize patterns
- Defined roles
- Empowerment to act
Motivated Behaviour Model:

Schema & sensemaking

Mobilize response (authority and patterned)

DM&J

Skills (KSA)

Motivated behaviour or action

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Safe failure v. fail safe
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. multiple schema > a single durable
2. define roles and authority to act
3. train from boundaries inwards
4. Safe failure over fail safe


