Mindfulness in Action:

Discovering How U.S. Navy SEALs Build Capacity for Mindfulness in High-Reliability Organizations (HROs)

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- **High-Reliability Organizations (HROs)**
  - Definition:
    - Organizations that must continuously perform in a near error-free manner despite their complex, unpredictable and dangerous operating environments

      (Roberts 1989; Weick, 1987; Weick & Roberts, 1993)

  - Early studies included aircraft carriers, nuclear power plants, air traffic control, etc.
  - Other 'reliability-seeking' organizations adopted HRO terms & concepts
    - Yet, recent studies called most recent work 'theoretical abstractions of original HRO concepts'
    - Very few new empirical studies of high-risk industries

      (Vincent, Benn, & Hanna, 2010)

- ## *HROs 'Hallmarks of Mindfulness'*
  - Important for this study, Weick and Sutcliffe (2001, 2006) observed HROs share five *'Hallmarks of Mindfulness'*:
    1. Preoccupation with failure;
    2. Reluctance to simplify;
    3. Sensitivity to operations;
    4. Commitment to resilience;
    5. Deference to expertise (2001) /structural (2006)

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  4. Commitment to resilience;
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  – Mindfulness
    - Definition: A "rich awareness of discriminatory detail" coupled with a "capacity for action"

    (Weick & Sutcliffe, 2006: 516)

  Yet, how frontline people working in HROs develop mindfulness is not often investigated.

'Hallmarks of Mindfulness'

- Led to study of US Navy Sea, Air & Land Commandos, called SEALs

- Research question:

  ➤ *What are some of the ways that HROs develop and sustain the mindfulness required by their complex, unpredictable and dangerous operating environments?*

Three phase multi-modal study (May 2013-Jan 2016):

➢ **Phase 1: Ethnographic**
  o Interviews with US Navy SEALs, SEAL instructors, SEAL candidates, & SEAL spouses/family; Observations of several training evolutions & graduation ceremony, Basic Underwater Demolitions & SEAL training (BUD/S) Coronado CA

➢ **Phase 2: Text-based**
  o Military studies; *Freedom of Information Act* (FOIA)

➢ **Phase 3: Videography**
  o Re-purposed online videos

Phase 1—SEAL Interview Quotes: Mental

SEALs' success depends **less on physical skills & more on mental characteristics:**

"People usually think being a SEAL is this intense physical challenge…But all the guys who I went through training with who were the fastest runner, the fastest swimmer, the strongest—all of the **really elite athletes**—college quarterbacks, Olympic athletes…Those guys usually **dropped out fairly early** in the program and it wasn't at all because they were physically exhausted or challenged…What I think that points to is **more mental characteristics than physical**".

[SEAL 3]

Phase 1—SEAL Interview Quotes: 'Unflappable'

Unpredictability and chaos have a calming influence, signaling a shift to immediate present:

"I can predict that **something will unpredictably happen here**...if it's going to be outrageously bad then you have to deal with it [now]...Suddenly it **rockets you into this chaos** but it's [comforting]...I have **nothing else to worry** about. There's no other priority. I don't have to worry about getting my taxes done on time [laugh] because it doesn't matter."

[SEAL 2]

Phase 1—SEAL Interview Quotes: 'Thriving'

"In Yemen [during the Arab Spring]…You had no idea what was going to happen next….I don't know how to characterize this but ***I thrive on change***. I would **prefer** to be in an **environment that is chaotic or changing or uncertain** because I think that it presents an **opportunity** to do something, **to excel**, or to respond probably in a place where a lot of people are going to struggle and be frustrated with it".

[SEAL 3]

Phase 1—SEAL Interview Quotes: Failing

A senior SEAL training officer explained how **comfort with uncertainty was paradoxically developed through repeated exposure to failing:**

"The way we inculcate a [SEAL] mindset and ethos is through failure. We are **allowed to fail, in a controlled environment**. You know the old expression: you **learn** more from your failures than your successes? That's very much part of the culture. **You fail a lot [laugh**]. And you're intended to fail. Because part of it is, how do you measure up? Can you **bounce back** from it?"

[SEAL 10]

"I'm **not afraid of failure** if I did the best I could....And if I do fail, am I going to have **done the best** I could and **learn** from it?"

[SEAL 1]

Phase 1

Phase 2

Phase 3

May to December 2013

Aim: Investigate ways that HROs develop & sustain the mindfulness required by their complex, unpredictable & dangerous operating environments.

Data: 12 Semi-structured interviews with US Navy SEALs; Exploratory unstructured interviews with SEAL instructors, SEAL candidates, SEAL families; Observations SEAL training & graduation ceremony, Coronado CA

Findings:

• Hyper-foc
• 'Comfort with un
• 'Positive orientation towa failure'

We wondered: Is this an inherent trait of SEAL candidates or does SEAL training create—or at least heighten—these characteristics?

Phase 2:

- 27 FOIA documents; 614 pps of empirical material
- We found Post-2001, SEALs extensively deployed to Iraq, Afghanistan, Yemen in *Global War on Terror*
- Pentagon doubles Special Ops budget to $10.5 billion
- Aims to expand SEAL community by 15%
  - 900 candidates attend BUD/S annually
  - <25% pass to become SEALs
  - Costs approx. $350,000 per trainee (Taylor et al., 2006)

New SEAL mission—Identify & recruit right people

- FOIA revealed gov studies typically focus on age, weight, swim scores, run times, ASVAB scores, etc
  - Older, heavier recruits with faster run times/better swimming skills more likely to graduate BUD/S—but <10% (Aleton, at al, 2002)
- $500,000 Gallup (2010) study found successful candidates:
  - Typically from New England
  - Played water polo
  - Liked chess
  - Personally knew a SEAL

- New recruitment strategies, mentoring programs & marketing materials developed (Ferguson, 2012)

- However, only modest amount of investigation into mental skills required to succeed as SEAL:
  - None screen for attitudes towards uncertainty or failure, or characteristics identified in phase 1

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Findings: Two broad themes clearly emerged:
- 'comfort with uncertainty'
- 'positive orientation towards failure'

Phase 2

March 2014 to March 2015

Aim: Investigate whether SEAL comfort with uncertainty & positive orientation towards failure is inherent trait of candidates selected or does SEAL training create this characteristic.

Data: FOIA request to Naval Special Warfare Command; Naval Postgraduate School studies by military officers

Findings: Several SEAL candidate screening measures identified; None screen attitudes towards uncertainty or failure, or similar characteristics

If they don't screen or select for this characteristic— where does it come from?

Phase 3

Phase 3

- Capitalizes on Navy's marketing efforts
- Reviewed about 6 hrs of publically available documentary style SEAL recruitment videos
- Three categories emerged as critical:

1)   physical failure; 2) mental failure; 3) team failure.

- 18 mins
  https://vimeo.com/153223681
- 5 mins
  https://vimeo.com/257454941

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Phase 3

Oct 2015 to Jan 2016

Aim: Investigate ways uncertainty & failure might emerge during BUD/S training.

Data: 15 re-purposed videos obtained from internet sources; Over six hours of video footage

Findings: Three forms of failure identified:

--physical, mental, & team failure

By tolerating failure, SEALs learn comfort with uncertainty

Figure 2: Unpacking HRO Mindfulness at Individual and Collective Levels

Level of analysis	Link to attributes in extant literature	Inductive codes	Indicative quotations
Individual Mindfulness	**Attention to discriminatory detail** (Weick & Sutcliffe, 2006)	'Constant focus'	- 'One of the keys to being successful in the SEALs is a disciplined, constant focus' - 'A distracted SEAL is a great concern for our community and our instincts or intuition' - 'You're at work and all of a sudden you get a phone call, and somebody's been killed. All of a sudden you've got to drop what you're doing and get a focus on fixing that"
		Rapidly shifting focus	- 'Being able to process it, lay it out, make the call, shift and collect the problems as they're unfolding' - 'So then you shift, you click, and then you focus and you have to be tuned to your senses' - 'I guess it's a constant re-evaluation. So you're constantly trying to reorient and observe, how am I going to deal with this new piece of information'
		'Slow is fast'	- 'So telling them to slow down and keep an eye on what's going on and figure things out... one of the things that SEALs say in all these sorts of environments is 'slow is fast'. Slow it down'
	Actively engaged in present (Kabat-Zinn, 1994; Langer, 2000)	'Ability to switch/ compartmentalize'	- "The fact that your mind operates in such a way that you can compartmentalize concepts, ideas, information, relationships, people, events. How I act at home maybe different than at work and you can be almost a different personality" - 'And then suddenly it rocketed you into this chaos but it's very clear—people go oh it's chaos. Once again I have to bring it back to the same point. It's becoming clearer and clearer to me that I have nothing else to worry about. There's no other priority. I don't have to worry about getting my taxes done on time [laugh]'
	Creating new categories of meaning (Fiol et al, 2009; Langer, 1989)	'Changing your mindset & perception'	- '...When I'm talking about flexibility I'm not talking about oh we'll just change the plan. I'm talking about changing your mind-set, changing your perception' - 'So you have to have this constant play in this challenging environment to come up with a new idea. Just being determined, butting your head up against the wall with the same failing attempt every time isn't going to find success. You have to at some point be able to step back and figure out, have a new outlook and a new way to get around the problem'
	Flexible state of mind (Langer, 1989 and 2000; Levinthal and Rerup, 2006)	'Macgyver mentality'	- 'To differentiate SEALS from other special forces, what I refer to is a Macgyver mentality and they do have that. The guys have to be flexible. It's very rare that a big huge muscular guy makes it through training'

Table 3: Summary of Interview Data Analysis – Attributes of Individual Mindfulness Exhibited by Navy SEALs

Inductive codes	Indicative quotations	Extant literature
I just won't quit (even if I fail)	- 'In the training, when you go to the training, you have to know that you cannot quit. So I think that particular mindset has to stay with you. That you can never quit. I could never quit, no matter what's thrown at you' - '...I was cold but I didn't have another uncontrolled shiver, I was speaking properly and um. But that's just -- it's the attitude going in. Like quitting is not an option'	
Failure as learning opportunity	'You always want to win. No matter what you're doing and even if you know you're not the fastest runner you're going to run as fast as you can' 'The ability to look at a situation and say what can go wrong? Not what does the book say and this is where in aviation, you might have a protocol, steps to follow for a left engine failure. We don't have those exact steps. We deal with it 'well, here's the operation, here's the things we expect to encounter, here are the might not go so well things.' And then you have to go to another level if you want to maximize your chances for success. ... I believe that is inculcated from the earliest stages dealing with failures' - 'We got through it together and let's learn from that'—if it was a mistake. Or if things went as well as they could have, let's log that. Next time we won't make the same error. It's always an evolution'	**Preoccupation with failure** *(Weick, Sutcliffe & Obstfeld, 2008)*

Table 4: Summary of Interview Data Analysis – Attributes of Collective Mindfulness Exhibited by Navy SEALs

Key Findings

- Risky, chaotic, ambiguous environments signal SEALs to become mindful, shifting attention to immediate, heightening alertness for unanticipated & awareness of multiple, sometimes competing realities.
- Provides more nuanced conceptualization of one 'hallmark'—focus on *learning through failing and then moving on*—not preoccupation
- **Offers new sixth 'hallmark':**
  - ***Comfort with uncertainty and chaos***
- Opens up new avenues of research for wide range of reliability-seeking organizations.

THANK YOU—ANY QUESTIONS?

	Phase One	Phase Two	Phase Three
	May to December 2013	**March 2014 to March 2015**	**Oct 2015 to Jan 2016**
Data collection objective	• Investigate ways that HROs develop & sustain the mindfulness required by their complex, unpredictable & dangerous operating environments.	• Investigate whether SEAL comfort with uncertainty & positive orientation towards failure is inherent trait or does SEAL training create this characteristic.	• Investigate ways uncertainty & failure might emerge during BUD/S training.
Data Source	• Semi-structured interviews with US Navy SEALs • Exploratory unstructured interviews with SEAL instructors, SEAL candidates, & SEAL families • Observations of SEAL training & graduation	• Freedom of Information Act (FOIA) request submitted to Naval Special Warfare Command • Naval Postgraduate School studies by military officers • Newspapers, military magazines, & online sources	• Fifteen re-purposed videos obtained from internet sources
Outcome	• Twelve semi-structured interviews ranging from 56 minutes to almost two hours • Fifteen & a half hours of transcription data; 133,406 words • Extensive field notes	• Twenty seven FOIA documents; • 614 pages of empirical material • Dozens of secondary sources	• Over six hours of video footage
Analytic strategy	• Inductive coding using Nvivo • Interpretive thematic coding, drawing on elements of grounded theory	• Text-based analysis	• Inductive analysis

Results	• Two broad themes clearly emerged:
	  ○ 'comfort with uncertainty'
	  ○ 'positive orientation towards failure'
		• Several SEAL candidate screening measures identified
		• None screen for attitudes towards uncertainty or failure, or similar characteristics
			• Three forms of failure identified: physical, mental, & team failure
			• By tolerating failure, SEALs learn comfort with uncertainty

Overview of Multimodal Research Design

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