Safety Culture: Management levers that drive safety performance

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Agenda

1. Review: Variables on safety performance
2. Safety culture research and findings
3. Levers for changing safety performance
Bottom line:

• Safety Culture as ambiguity reduction
• Goal to align organization values and individual values
• Routines, social influence, and team structure as levers for safety performance
• Culture as a form of sensemaking and means of interpreting cues
Question: Do we produce risk or protect from risk?

- Production pays for protection (Reason, 1997)
- Org culture as complex “internal accommodations to deal with inconsistencies” (Schein, p. 223).
So what do we know about safety so far?

- Be at the right place at the right time, with the right people and the right gear, doing the right things.
So what do we know about safety so far?

- Safety as INPUT vs OUTCOME
  - (behaviours vs measures)

- Individual behaviours
  - multi-level variables:
    - Individual
    - Contextual
    - Organizational
Conscious Mind, Choice

Unconscious Mind, Programming
Work Motivation and Work Behaviour Influence Map

**Proximal influence**

- Situation strength determines extent to which context exerts influence on causal chain

**Distal influence**

- **Person/Env fit**: supplementary, complementary, job design
- **Self-regulation**: cognition, goal choice, goal striving
- **Personality**: FFM, self-efficacy, core self evaluations

**Context**

- **Situational Cues**
  - Environment
  - Task demands
  - Social demands

- **Needs**
  - Self concept
  - Social identity
  - Prevention/promo
  - Comp/related/auto

**Intention**

- **Goal selection**

**Level of aspiration**

- **Attention, effort, behaviour**

**Individual Behaviour & Organizational Outcomes**

- Task performance
- Organization citizenship behaviour

**Affect and Emotion**

- **Self-regulation**: emotion management, emotional intelligence

**Values**

- **principles vs. norms**
- **preference and attitudes**

**Feedback**
Motivated Behaviour System:

Schema & sensemaking

Mobilize response (authority and patterned)

DM&J

Skills (KSA)

Motivated behaviour or action
Sensemaking vs deciding

Fast & slow
Intuitive & rational
System 1 & system 2

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Schema v. Sensemaking

• Schema:
  – Categories (of memory?)

• Sensemaking
  – Ongoing process to categorize ambiguous cues
ANTecedents

DISTAL SITUATION-RELATED FACTORS

- Safety culture & climate
- Supervisory leadership
- Co-workers / co-leaders

DISTAL PERSON-RELATED FACTORS

- Personality characteristics
- Safety attitude

DETERMINANTS

PROXIMAL PERSON-RELATED FACTORS

- Safety motivation
- Safety knowledge

SAFETY PERFORMANCE
Agenda

1. Review: Variables on safety performance
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Describe your org’s Safety Culture as you see it
Safety culture
“Human fallibility, like gravity, weather or terrain, is just another foreseeable hazard...”

“... The issue is not why an error occurred but how it failed to be corrected.” (Reason, 1997)
Empirical Measures of Safety Culture

- Priority of safety (vs production)
- Top down vs participative DM
- Compliance v. Goal v. Process
- Errors: punitive v. Learning
- Communication re safety
- Personal responsibility re safety

1__________2_________________3_________________4_________________5
Low                                      High

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1984, Perrow (OB)
Operationalizing S. Cult

High Reliability Orgs (LaPorte & Roberts, Weick)

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High Reliability Orgs

1. preoccupation with failure
2. reluctance to simplify interpretations of problems
3. sensitivity to field level operations
4. commitment to and capabilities for resilience
5. resistance to over-structure systems. *(Weick, Sutcliffe, & Obsfeld, 1999)*
Resilience Engineering

How to cope with complex, underspecified & (partly) unpredictable work? (Hollnagel, 2007)

- Eliminate risk
- Constrain perf.
  “what not to do wrong”

- Sacrifice efficiency
- (time, output)
- Build adaptability
  “what can we do right”
Resilience Engineering

1. Past results don’t predict the future
2. Continually question risk exposure and safety systems
3. Look for opposing perspectives
4. Invest in safety & resilience
S.Cult: key findings

1. Org accident transcends individual error
2. S.Cult & Institutionalization
3. S.Cult vs S.Climate
4. Correlation is not causation
ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

MANAGEMENT / SUPERVISOR

COWORKERS

context

ROUTINES

Interpret org priorities

NORMS

INDIVIDUAL SAFETY MOTIVATION

(based on sensemaking)
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1. Review: Variables on safety performance
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Safety Culture: Mngt Levers

• Normal Accident Tx
  1. See beyond operator error
  2. Reduce complexity
  3. Reduce coupling – add slack
Safety Culture: Mngt Levers

• High Reliability Orgs
  4. Focus on failure and boundaries
  5. Focus on front line sensemaking
  6. Avoid simplification of problems
Safety Culture: Mngt Levers

• Resilience Engineering
  7. Focus on doing things right
  8. Accept trade offs
  9. Understand history does not predict future
“culture controls the manager more than the manager controls culture” (Schein, p. 314).
ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

MANAGEMENT / SUPERVISOR

COWORKERS

INDIVIDUAL SAFETY MOTIVATION
(based on sensemaking)
Routines:

“It is hard to change the attitudes and beliefs of adults by direct methods of persuasion.

But acting and doing, shaped by organizational controls, can lead to thinking and believing” (Reason, 1998).
Routines:

Change ind’s values by mandating new routines...

Cognitive Dissonance: inconsistency that results in psychological tension that the individual will act to relieve (Festinger, 1957)
ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

• New routines replace old routines
• Humans as short cut experts
• Humans as seekers of rewards
• Programmed response requires extensive practice/testing

INDIVIDUAL SAFETY MOTIVATION
(based on sensemaking)

Make visible and reward desired behaviours
Self Determination Tx

- **Amotivation**
  - Absence of intentional regulation

- **Extrinsic Motivation**
  - External Regulation
  - Introjected Regulation
  - Identified Regulation
  - Integrated Regulation

- **Intrinsic Motivation**
  - Interest and enjoyment of the task

- **Lack of Motivation**
  - Controlled Motivation
  - Moderately Controlled Motivation

- **Moderately Autonomous Motivation**
  - Importantly of goals, values, and regulations

- **Autonomous Motivation**
  - Coherence among goals, values, and regulations

- **Inherently Autonomous Motivation**
  - Interest and enjoyment of the task
ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

COWORKERS

ROUTINES

NORMS

INDIVIDUAL SAFETY MOTIVATION
(based on sensemaking)
How to build positive social influence:

- New staff ‘attachment’
- Leverage social leaders
- Make teams and keep together
- Reward desirable behaviours ie mentor of the year, staff nominated awards
- Encourage peer pressure: ‘we rely upon you to uphold our values…’
- Make norms explicit: ‘we believe..
- Share history; part of lineage
Safety Culture: Mngt Levers

• Routines
  10. Change values by imposing routine
  11. Train, test and measure routines

• Social influence
  12. Foster social ‘attachment’
  13. Make values part of language
  14. Create real teams
What is a real team?

- Defined roles
- Leader
- Tested
- Have history
- Real knowledge of co-w abilities
- Real knowledge of combined abilities

Psuedo-teams

- Strong v. weak
- ‘fallacy of social redundancy’
Motivated Behaviour System:

- Schema & sensemaking
- Mobilize response (authority and patterned)
- DM&J
- Skills (KSA)
- Motivated behaviour or action

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Safety Culture: Mngt Levers

- Structure ambiguity:
  15. Risk tolerance (espoused v. implied)
  16. Test at boundaries & failure
  17. Clear expectations
  18. Leads as field supervisors
  19. Provide authority to respond
Safety Culture: Mngt Levers

• Management functions

20. What gets attention, is measured or controlled (and what does not get attention and is therefore condoned or unimportant)

21. Reward and status allocation (noting potential conflict between espoused rewards and actual or political rewards)

22. Hiring as culture replication
ORGANIZATION CULTURE & SAFETY CULTURE

SAFETY CLIMATE: Policy and Procedure

COWORKERS

INDIVIDUAL SAFETY MOTIVATION (based on sensemaking)

- Make visible and reward desired behaviours
- Prime sensemaking by framing ambiguity
- Formalize social authority, team structure and ind. roles

ROUTINES

NORMS
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References / further reading


Schein’s culture

“learned product of group experience”

(Schein, 1985)
Experiments to improve performance creates 'Brownian movements'.

Boundary of functionally acceptable performance

Gradient toward Least Effort

Management Pressure toward Efficiency

Counter gradient from campaigns for 'safety culture'

Error margin

Resulting perceived boundary of acceptable performance

Boundary to Economic Failure

Boundary to Unacceptable Work Load

Space of Possibilities: Degrees of Freedom to be Resolved According to Subjective Preferences
Resilience Engineering

Anticipation
- Knowing what to EXPECT
- Knowing what to LOOK FOR

Response
- Knowing what to DO
- Knowing what has HAPPENED

Monitoring

Learning