



Safety Culture and Safety Leadership – Do they matter?

Kathryn Mearns



Overview

- Reflections on the nature of safety climate and safety culture
- How are the culture and climate created?
- At the end of the day, do they matter?
 - Evidence that they make a difference



Objective

- Try to tie together some of the themes discussed in conference
- Touch on paradigm issues
- Ask who sets the vision (Vision Zero)
- Future Directions



Safety climate: Conceptual issues (Zohar, 2007)

- *Safety climate reveals the perceived priority or value of acting safely, as assessed and mutually verified by employees (using leaders' daily actions as main cues)*
- Shared perceptions and assessments of what happens at the workplace, e.g. which behaviors are likely to be rewarded & supported
- Valuable in ambiguous situations, where there are competing operational demands
 - efficiency versus thoroughness
 - espoused policies versus enacted practices



Level-specific safety climate (Zohar, 2000; 2002a,b)

- Distinction between organizational level and group level climate
 - Top managers develop policies & procedures
 - Middle managers (supervisors) execute these policies & procedures
- Employees can discriminate between them using 2 sources of information
 - Degree of difference between sub-units
 - Degree to which senior management backs supervisory behavior



Does safety climate matter?

- Meta-analyses indicate a moderate relationship between safety climate and safety compliance and a weak relationship between safety climate and accidents/injuries (Clarke, 2006; Christian et al., 2009)
- Mediated by motivation, knowledge and skills
- Leadership (supervisor, middle management) shows positive relationship with safety climate (Barling, Loughlin, & Kelloway, 2002; Zohar, 2002)



Taming Prometheus: Talk About Safety Culture

- Susan Silbey (Ann. Rev. Sociol., 2009)
 - Safety culture as causal attitude
(Paradigm 1/2)
 - Culture as engineered organisation
(Paradigm 1)
 - Culture as emergent and indeterminate
(Paradigm 2)



Safety culture as causal attitude

- Senior manager commitment to safety
- Norms and rules for dealing with risk
- Safety attitudes (shared care and concern about for hazards and their impact)
- Reflexivity on safety practices (learning through monitoring, accident analysis and feedback)

(Pidgeon, 1991)



Engineering a safety culture

- Reporting culture
- Just culture
- Flexible culture
- Learning culture
- Informed culture
- Safety culture - more than a sum of its parts
(Reason, 1998)

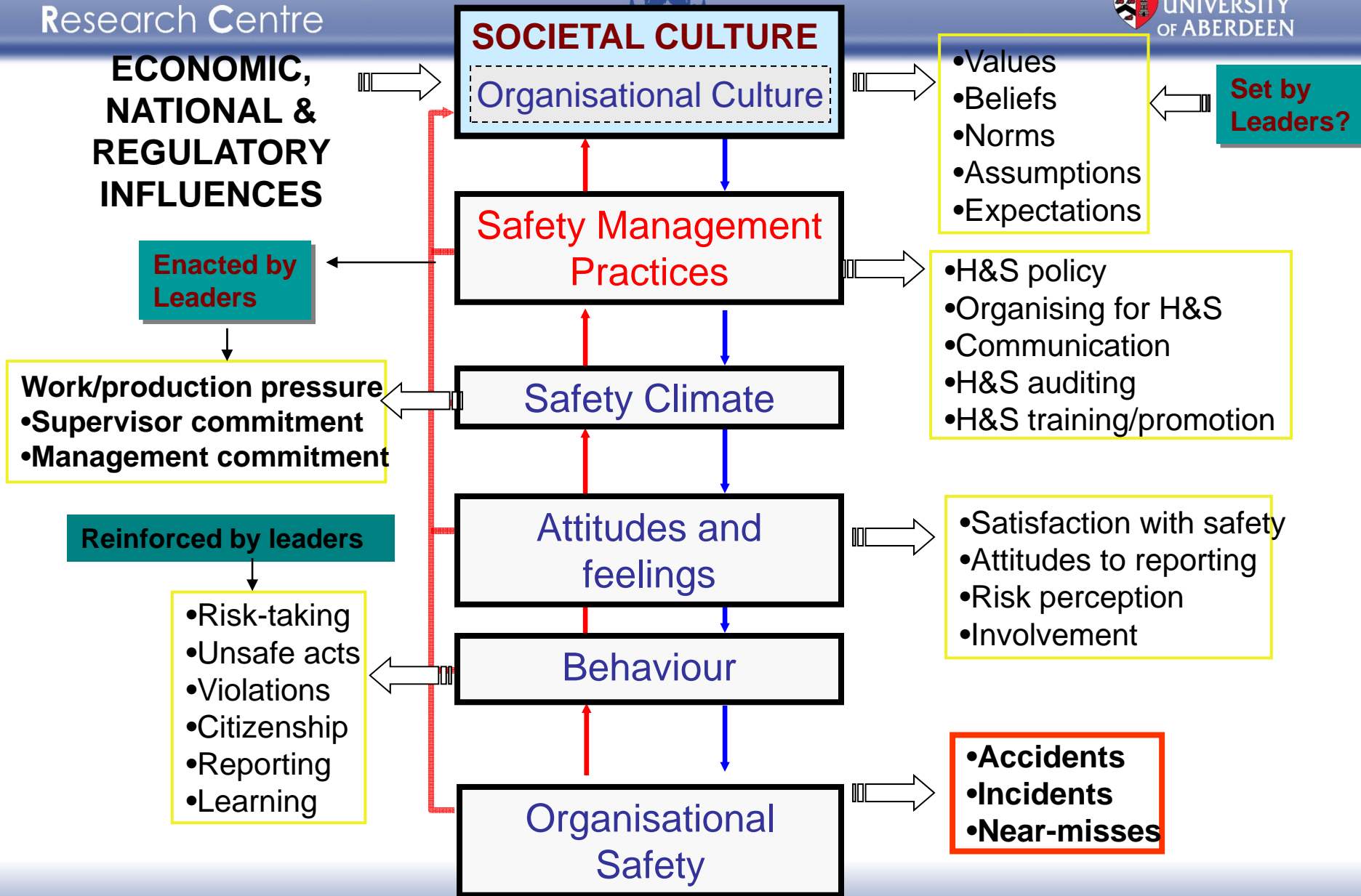


Culture as emergent and indeterminate

- Paradox (ways of seeing, yet not seeing)
- Complex and ill-structured hazardous situations
 - decision makers faced by uncertainty & incomplete knowledge
- Different ‘worlds of risk’
 - risk acceptability the outcome of a process of social negotiation
- Institutional politics and power critical determinants in achieving safety culture goals particularly organizational learning (Pidgeon, 1998)

MODEL OF SAFETY CULTURE

Industrial Psychology
Research Centre





Two approaches

- Bottom up (Interpretive)
- Top down (Functionalist)
- Both valid and useful

BUT

Leaders (senior managers) set the vision
e.g. Vision Zero

They are the controlling mind?



Safety Leadership Research

- Focused at the supervisor & middle management levels
- Using leadership models such as Transformational/Transactional & Leader-Member Exchange
- Senior managers a 'neglected species' (Flin, 2003)



Why senior managers?

- Public Inquiries and accident investigations have emphasised the role of senior managers and their leadership in safety:

| Incident | Comment Regarding Senior Management |
|-----------------------------------|---|
| Clapham Junction rail crash | “Reliance on lateral management is bound to produce a lack of teeth in getting to grips with problems and getting them sorted out. Large schemes need firm, positive and sufficiently senior control in order that they are carried through properly, which means safely, efficiently and economically.” (Hidden, 1989 p.161) |
| Herald of Free Enterprise sinking | “But a full investigation into the circumstances of the disaster leads inexorably to the conclusion that the underlying or cardinal faults lay higher up in the company . . . From top to bottom the body corporate was infected with the disease of sloppiness.” (Sheen, 1987, p. 14) |
| Piper Alpha fire | “The quality of safety management by operators is fundamental to offshore safety. No amount of detailed regulations for safety improvements could make up for deficiencies in the way that safety is managed by operators.” (Cullen, 1990, p. 301), |
| BP Texas City refinery explosion | “BP has not provided effective leadership on or established appropriate operational expectations regarding process safety performance at its U.S. refineries [and] the panel believes that the lack of effective leadership is systemic, touching all levels of BP’s corporate management having responsibility for BP’s U.S. refineries (Baker, 2007 p.66). |



Deepwater Horizon

‘As congressional hearings on the Deepwater Horizon disaster kick off today, lawmakers are likely to get a tangle of finger-pointing from the corporate leaders whose companies are being sued for negligence in connection with the disaster’ *Houston Chronicle*, May 10 2010.



“When you became CEO of BP, you promised to focus "like a laser on safe and reliable operations.””

"I clearly am the ultimate power...”

"We have begun to change the culture.”

"It is a thing that I talk about every time I talk internally or externally.”

"I wasn't part of the decision-making process... I wasn't involved in any of the decision making... I simply was not involved in the decision-making process”



Safety Intelligence of Senior Managers



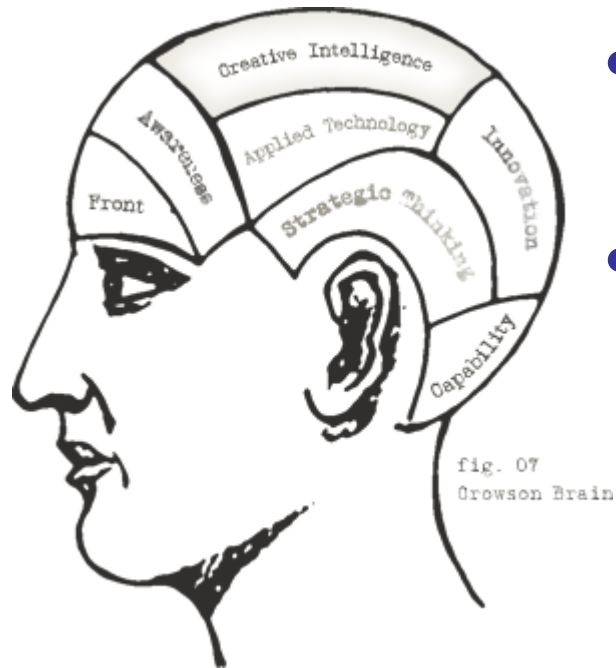
Laura Fruhen, PhD student

Kathryn Mearns
Rhona Flin
Barry Kirwan





What is Safety Intelligence?



- Skills and traits of senior managers in relation to safety
- Abilities and Understanding regarding
 - Information
 - Safety risks to the organization
 - Decision making



Why skills and traits...?

Interpersonal theories of leadership do not readily apply to executive forms of influence

Horn & Zaccaro (2003)

Strategic Leadership research should focus on the *substance in relation to leadership*

Day & Lord (1988)

Executive leaders operate at a system wide and indirect level and in some cases never meet all their followers

Zaccaro (2001)





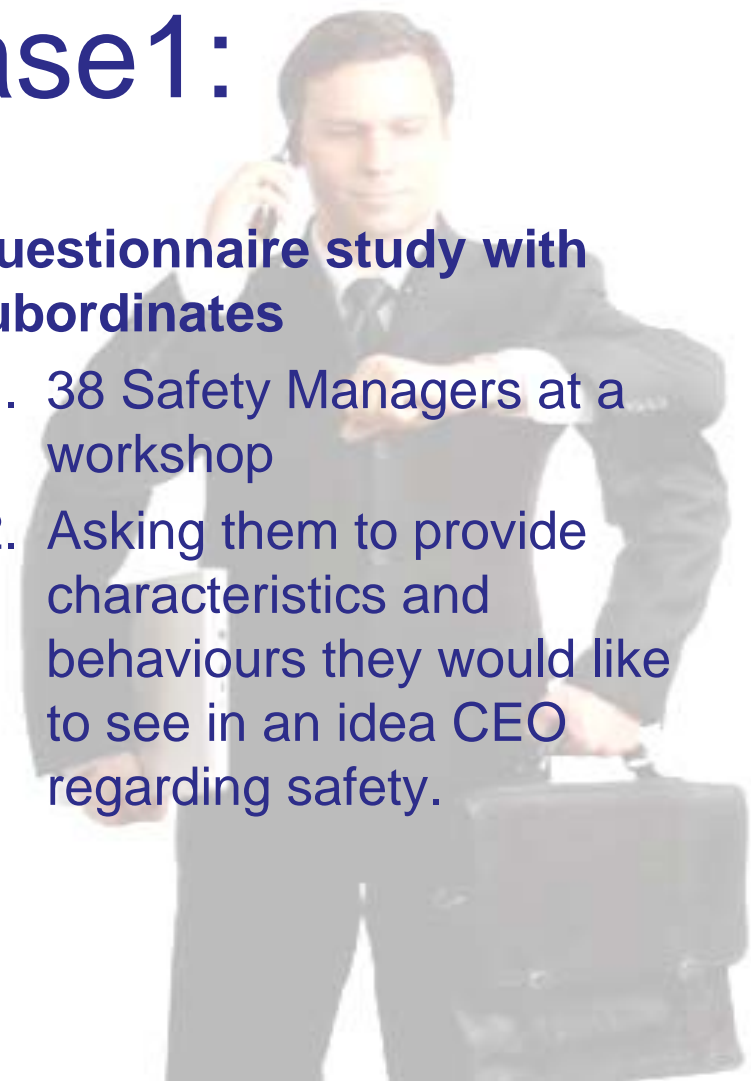
Results phase1:

1. Interviews with senior managers

- 3 ANSPs, n = 9
 - CEO, Safety Managers, COO, Director of OPS, Director of ATM
- Open Questions, scenarios and rating questions

2. Questionnaire study with subordinates

1. 38 Safety Managers at a workshop
2. Asking them to provide characteristics and behaviours they would like to see in an idea CEO regarding safety.





What do Subordinates value in a CEO?

- Social Competence
 - *‘asks questions’ and ‘good listener’*
- Problem Solving
 - *‘readiness to understand problems’ and ‘conditions, processes’*
- Safety Knowledge
 - *‘educated in safety problems’ and know*
- Personality
 - *‘open to suggestions’ and ‘approachable’*
- Motivation
 - *‘position safety high in the organisational domain’*
- Other - Leadership
 - *‘authentic’, ‘democratic’*





What do senior managers talk about, when asked about safety?

- Social Competence
- Problem Solving
- Safety Knowledge
- Responsibility
 - Legal
 - Moral





Lest we forget why we need a Vision Zero....



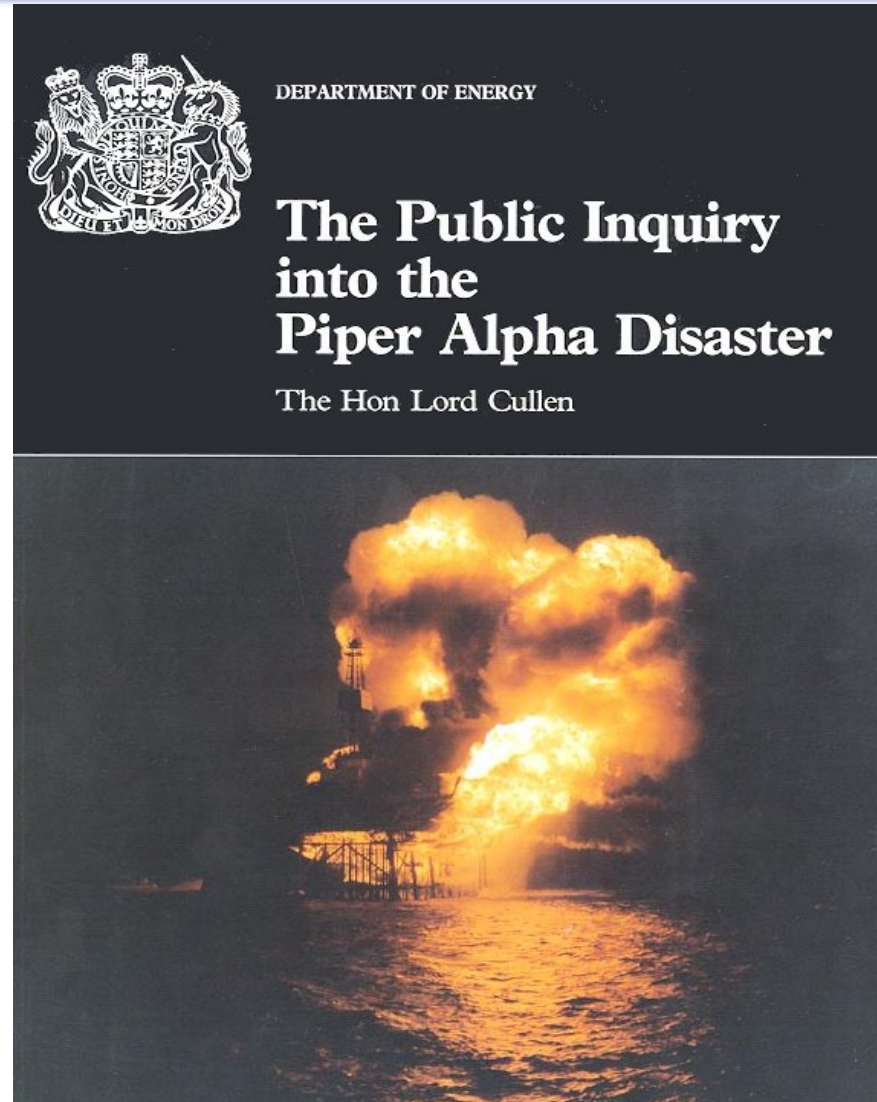




Failures of

- Communication
- Safety Leadership
- Regulatory oversight

‘It is essential to create a corporate atmosphere or culture in which safety is understood to be and is accepted as, the number one priority’.
(Cullen, 1990, p300)





As a senior manager do you...

- Know obligations and risks?
- Have a process that brings systems failure to your attention?
- Respond personally and in a timely manner to systems failures?
- Independently verify from time to time?



Conclusions 1

- Safety climate and safety culture DO MATTER
 - Evidence base for relationship between safety climate in safety performance well-established
 - Safety culture relationship more difficult to disentangle
 - Issues to do with trust, blame, responsibility and accountability



Conclusions 2

- Safety leadership DOES MATTER
 - Evidence base for role of supervisor and middle managers in influencing safety climate and safety behaviour established
 - Accident inquiries highlight importance of senior management in setting the culture of the organisation (controlling mind)



Future research

- Safety culture issues (Silbey, 2009)
 - Normative heterogeneity and conflict
 - Inequalities in power and authority
 - Competing sets of legitimate interests
- How do senior managers demonstrate commitment
 - Safety Leadership (Authenticity)
 - Safety Intelligence (Traits & Skills)



**THANK YOU FOR
YOUR ATTENTION**

