‘Nudging’ Behavioural Safety to the Next Level
Developing Safety Cultures, Food and Drink Networking Event, 29th March 2012

Jennifer Lunt, Principal Psychologist, Health and Safety Laboratory, United Kingdom
Delivering organisational efficiency

Health & Safety Laboratory

Human Factors

Health Improvement

Hazard Reduction

Less unplanned downtime

Higher productivity

Organisational efficiency

People

Plant
Objectives

• **What is Nudge?** Describe ‘Nudge’ (Origins, Rationale, Profile).

• **Why is Nudge relevant to Health and Safety?** Outline type’s of nudges and their relevance to behavioural safety and health and safety.

• **Can Nudge add value?** Comment on their ‘added value’ from the Health and Safety Laboratory’s perspective.
What is Nudge?
Origins

• From **Behavioural Economics**
  
  - Complements ‘rationale human’ assumptions of traditional economic theory (e.g. ‘selfish utility maximisation’)
  
  - Allows for ‘illogical’ decisions/risk miscalculation:
    
    (1) Selective attention/information processing (‘*bounded rationality*’).
    
    (2) Inconsistencies in decisions between people and by the same person over time.
    
    (3) Decisions motivated by co-operation (or punishment) rather than personal economic gain.
Rationale

• Nudging
  - Acts on the sub-conscious (‘automatic system’) as opposed to volitional decision making (the ‘reflective system’).
  - Observes ‘libertarian paternalism’.
  - Is a feature of the ‘choice architecture’ (range and structure of choices) that encourages them to choose options that makes them better off as ‘judged by themselves’.
  - Requires immediate feedback on effectiveness.
Profile

• Behavioural insights team (Cabinet Office)- new unit looking at alternative ways to influence public behaviour and choice using theories of behavioural economics
Behavourial insights team (Examples from Annual Update 2010-2011 and www.bbc.co.uk/news/uk-politics):

- Organ donation: required choice on driving licence (DVLA) website
- Reducing salt in prepared food
- Normative messages for missed NHS appointments (% patients that turn up on time)
- Neighbour discounts for ‘green products’ (e.g. B&Q.)
- Fraud, error & debt reduction: ‘Nine out of 10 people in Britain pay their tax on time’. Inland revenue - collected £160m extra tax revenues a year
Why is Nudge Relevant to Health and Safety?
Through…

1. Communicating choices & risk

2. Creating incentives/disincentives
1. Communicating choices/risk

- Heuristics (Rules of thumb)
  - Anchoring
  - Availability
  - Representativeness

- Optimism/overconfidence

- Defaults

- Framing

- Emotion

- Cues/prompts

- Trust in the messenger

- Discounting
Anchoring (Heuristic)

- Assuming that if ‘X’ is close to ‘Y’ then ‘X’ must be related to ‘Y’.

**Health and Safety Relevance?**

- Timing of H&S news or campaigns (e.g. UK riots and Health and Safety inferences)

- Potential inertia following introduction of choice into a regulated industry (e.g. stick with familiar suppliers) (HSE, 2010)

- Using advent of a new director to introduce change.
Availability (Heuristic)

- Assuming that if ‘X’ is easy to remember, then ‘X’ is likely to happen or more important. E.g. Avoiding flights following 9/11 and rise in road traffic accidents. Aftermath of Fukushima, Japan.

Health and Safety Relevance?

- Vivid campaigns: e.g. HSE’s shattered lives.
- Reminding of high profile incidents (e.g. Paddington Rail Disaster, Piper Alpha etc).
- Repetition: Repeat Training.

N.B. Don’t shock without explaining how to avoid harm
Representativeness (Heuristic)

- Assuming that if situation X seems like situation Y, then situation X must be treated in the same way as Y.

Health and Safety Relevance?

- Learning transfer to novel situations (e.g. air traffic disasters).
- Inspection frequency – complacency vs ‘on the ball’.
- High fidelity training simulators.
- Accident/incident history.
- Design.

Mobile Elevated Work Platform (MEWP): Control Panel
Cues/Prompts

• Use of reminders to raise situational awareness…

How?

• Improve situational awareness
  – Health and safety Signs
  – On the spot ‘risk assessments’ (e.g. STOP/SLAM)
  – Using colour coding to prompt awareness
Optimism/over confidence

• Assuming risk immunity (e.g. I’ve got away with it so far...) (fundamental attribution error)

Health and Safety Relevance?

• Complacency (e.g. in older workers)

• Denial of risk (e.g. if uncontrollable)
Defaults

- Making the safe and/or healthy way the only way.

Health and Safety Relevance?

- Dead mans switch
- Safety Interlocks
- Mandatory health screening, pre-placement health checks
- Hierarchy of control principles
- Reducing volume of health and safety information/guidance
Framing

- Framing messages either positively or negatively to modify impact (positive or negative).

Health and Safety Relevance?

- 1 in 5 staff have been involved in an accident versus 80% are accident free

- Behavioural safety programme failed to achieve its zero tolerance target vs achieving a 95% reduction in accidents
Discounting

• Underestimating current risks that may harm in the future. E.g. long latency occupational diseases

Health and Safety Relevance?

• Long latency occupational diseases
  – Biomarkers – early warning indicators
  – Real time feedback of exposure
  – Evocative risk communication (e.g. impact on family)
2. Incentives/disincentives

- Loss Aversion
- Fairness
- ‘Herd’ mentality (social norms, peer pressure)
- Commitment & involvement
Loss Aversion

- Disliking a loss more than the same amount of gain is liked. E.g. a fine of £100 is felt more deeply than a reward of £100.

Health and Safety Relevance?

- Loss need not just be financial, can be reputation, perceived fairness etc
- Potential ‘cost-recovery’ schemes
- Framing risk communication as adverse consequences of poor practice rather than as gains from good practice.
Fairness

- Do the right thing by an employee and they will do the right thing in their job (ie work safely)...

Health and Safety Relevance?

- Provide a safe work environment
- Psychological contract
- Rewards
- Health & Safety Climate

Just Culture Process

Social norms

• Behaving safely because everyone else does; or because it’s the right thing to do…

Health and Safety Relevance?

• Leadership ‘walking the talk’
• Use trusted role models in training
• Recruit ‘informal’ peer leaders
• Benchmarking
• Making H&S ‘trendy’
• H&S Forums
Commitment & Involvement

- Being committed by being involved in a cause (ie health and safety)

Health and Safety Relevance?

- Pledges (e.g. Make a Promise. Come Home Safe)
- Build H&S into contracts
- Worker involvement (enhancing self-efficacy)
How does nudge add value?
Benefits

• Directly relevant to subconsciously driven human error that can get overlooked by behavioural safety (e.g. peer observation)
• Intuitive
• Potentially boosts situational awareness
• Offers opportunity to affect behaviour where there is limited opportunity to ‘engage’ workers (e.g. in influencing a transient workforce, avoids language barriers etc).
• Low cost, practical solutions
• Potentially reduces regulation burden
Possible Drawbacks

• Libertarian paternalism & H&S?
• **Short-term** incremental changes (for the duration of the nudge)
• More applicable to **discrete**, one-off behaviours rather than complex behaviour
• **Context** dependent
• Limited capacity to affect **violations**
• **Mutually exclusive**??
• **Opt out** possible
• Habituation
An alternative

• Think! (John & Stoker, 2010)
  – Deliberative engagement (debate/discussion)
  – Affects values and attitudes
  – ‘Bridges gap between actions that are currently attractive and easy, and the actions we need to take’
  – Applicable to violations
  – Sustainability prospects
**Optimal approach?**

- Combining nudge & think

<table>
<thead>
<tr>
<th></th>
<th><strong>Nudge</strong></th>
<th><strong>Think</strong></th>
</tr>
</thead>
</table>
| **Strengths** | • Goes with the grain of decision making  
|             | • Low cost  
|             | • Wide application  
|             | • Human Error  | • Tackles root causes related to values, new ways of thinking  
|             |                | • Relevant to violations  |
| **Weaknesses** | • Does not address root causes, complex behaviour, violations, sustainability?  | • Time consuming, prone to manipulation & failure.  
|             |                | • Does not address human error  |

Adapted from: John, Smith & Stoker, 2009
Optimal Approach

Nudge + Shove + Think
Thank you for listening

jennifer.lunt@hsl.gov.uk