Nudging Health and Safety

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IIRSM EM Branch Committee Meeting 13th September 2017
Objectives

• What is Nudge? (Origins, Rationale, Profile).

• How is Nudge relevant to Health and Safety?

• Can Health and Safety be Nudged?
Two systems...
## Two systems...

<table>
<thead>
<tr>
<th>System 1: Sub-conscious</th>
<th>System 2: Aware</th>
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</thead>
<tbody>
<tr>
<td><strong>Automatic</strong></td>
<td><strong>Deliberated</strong></td>
</tr>
<tr>
<td><strong>Quick</strong></td>
<td><strong>Slow(er)</strong></td>
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<tr>
<td><strong>Effortless</strong></td>
<td><strong>Effortful/ ‘lazy’</strong></td>
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<tr>
<td><strong>Skill</strong></td>
<td><strong>Rule following</strong></td>
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<tr>
<td><strong>Associative – mental ‘short cuts’, ‘shot guns’</strong></td>
<td><strong>Deductive (problem solving)</strong></td>
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<tr>
<td><strong>Emotional/Intuitive</strong></td>
<td><strong>Rationale</strong></td>
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<tr>
<td><strong>Infers, assumes and invents, jumps to conclusions</strong></td>
<td><strong>Considers/scrutinises</strong></td>
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<tr>
<td><strong>Relevant to human error</strong></td>
<td><strong>Relevant to violations</strong></td>
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*Kahneman, 2011. Thinking Fast: Slow*
System 1 or System 2?

- Defeating a safety interlock for the first time
- Reacting to an alarm
- Driving a car on an empty road
- Following instructions for installing a new piece of equipment
- Lifting a visor to check the quality of a paint finish
- Challenging unsafe practices
System 1 or System 2?

- Defeating a safety interlock for the first time (2)
- Reacting to an alarm (1)
- Driving a car on an empty road (1)
- Following instructions for installing a new piece of equipment (2)
- Lifting a visor to check the quality of a paint finish (1)
- Challenging unsafe practices (2)
Nudging

• “Acts on the sub-conscious
• Observes ‘libertarian paternalism’.
• Designing the ‘choice architecture’ so that options are selected that makes individuals better off as ‘judged by themselves’.
Examples*

• Organ Donation( – DVLA opt-ins at tax renewal – 17 million per year):
  • Please join the NHS Organ Donor register AND (e.g.s)
  • Every day thousands of people that see this page register (NORMS), OR
  • Three people die every day because there are not enough organ donations OR
  • If you needed and organ transplant would you have one? (RECIPROCITY)
Examples*

• **Organ Donation** (– DVLA opt-ins at tax renewal – 17 million per year):

  • Please join the NHS Organ Donor register (+ 2.3%) AND (e.g.s)

  • Every day thousands of people that see this page register (NORMS) (+ 2.9%), OR

  • Three people die every day because there are not enough organ donations (3.1%), OR

  • If you needed an organ transplant would you have one? (3.2%), (RECIPROCITY)
Examples*

• **Health & Wellbeing:** “Informing doctors that they are prescribing more antibiotics relative to 80 per cent of their medical peers, reduces the number of unnecessary prescriptions by 3.3 per cent (more than 73,000 prescriptions)”

• **Further Education Colleges:** The two year ‘Alert’ trial showed that regular text messages designed to encourage learnersto keep going increased pass rates by 12 per cent.

• **HMRC:** “SMS messages that gave feedback to those who had been late with tax payments before increased subsequent payment rates by nearly 50 per cent.”

*The Behavioural Insights Team Update Report 2015-16*
Confirmation Bias

• Selecting information according to preexisting beliefs.

Counter through:

• Burst your bubble – seek counterarguments, assess veracity/source credibility, motives.

• Transparency

• Monitor how e.g. Yammer is used

• Beware of habituating – letting it become the norm

• Think before sharing

• Speak to hearts (system 1) and minds (system 2).

HSE 📡 @H_S_E · 12 Dec 2016
There are no h&s laws preventing the hanging of Xmas decorations despite what many festive tabloid writers may otherwise claim #bustedmyth
Through...

- Engineering and designing out unsafe options
- Raising situational awareness/vigilance
- Risk education & communication
- Incentivising and motivation
Through...

- Engineering and designing out unsafe options
- Raising situational awareness/vigilance
- Risk education & communication
- Incentivising and motivation
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
Through...

- Engineering and designing out unsafe options
- **Raising situation awareness/vigilance**
- Risk education & communication
- Incentivising and motivation
Cues/Prompts

- Use of reminders to raise situational awareness…

How?

- Signage
- On the spot ‘risk assessments’ (e.g STOP/SLAM)
- Using colour coding to prompt awareness
- Cues & prompt cards
- Mirrors etc
Through…

• Engineering and designing out unsafe options
• Raising situational awareness/vigilance
• **Risk education & communication**
• Incentivising and motivation
Anchoring (Heuristic)

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

How?

• Timing of H&S news or campaigns

• Using advent of a new director to introduce change.

• Negotiating H&S targets
Availability (Heuristic)

- Assuming that if ‘X’ is easy to remember, then ‘X’ is likely to happen or more important.

N.B. Don’t shock without explaining how to avoid harm

How?

- Vivid campaigns: e.g. HSE’s shattered lives.

- Reminding of high profile incidents

- Repetition: Repeat Training.

- Boss breaking the bad news.
Representativeness (Heuristic)

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

How?

• Learning transfer to novel situations (e.g. air traffic disasters).

• High fidelity training simulators.

• Design.

Mobile Elevated Work Platform (MEWP): Control Panel
Framing messages either positively or negatively to modify impact (positive or negative).

How?

• 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.
Optimism/over confidence

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

**How?**

- Explain the mechanisms underpinning harm
- Testimonies/case studies
- Wider consequences for workmates or families
- Being ‘mindful’ about health and safety

"I told him again and again not to lean over the shredder!"
Discounting

• Underestimating current risks that may harm in the future.

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)
Through...

- Engineering and designing out unsafe options
- Raising situational awareness/vigilance
- Risk education & communication
- Incentivising and motivation
Loss Aversion*

• Prospect Theory

STOP OR NOT?

Tversky and Kahneman (1974)
Fairness

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

How?

• Provide a safe work environment

• Psychological contract

• Rewards

• Health & Safety Climate

Social norms (‘Herd Mentality’)  

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

**How?**

- 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)

How?

• Pledges (e.g. Make a Promise. Come Home Safe)

• Build H&S into contracts

• Worker involvement
Benefits

• Directly relevant to *subconsciously driven* human error that can get overlooked by behavioural safety (e.g. peer observation)

• Potentially boosts *situation awareness*

• Contemporary challenges: *Transient workforce; supply chain management*

• **Low cost, practical** solutions

• Intuitive
Possible Drawbacks

- Short-lived effect
- **Discrete**, one-off vs complex behaviour
- **Context** dependent
- Violations
- Mutually exclusive??
- Habituation
- Capability building/Learning
- Ethics: Genuinely in the individuals best interest?
- Counter-nudges?
Optimal approach (to motivation)?

- Combining nudge & think

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<th><strong>Think</strong></th>
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<td><strong>Strengths</strong></td>
<td>• Goes with the grain of decision making</td>
<td>• Tackles root causes related to values, new ways of thinking</td>
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<tr>
<td></td>
<td>• Low cost</td>
<td>• Relevant to violations</td>
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<tr>
<td></td>
<td>• Wide application</td>
<td></td>
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<tr>
<td></td>
<td>• Human Error</td>
<td></td>
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<tr>
<td><strong>Weaknesses</strong></td>
<td>• Does not address root causes, complex behaviour, violations, sustainability?</td>
<td>• Time consuming, prone to manipulation &amp; failure.</td>
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<td></td>
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<td>• Does not address human error</td>
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Adapted from: John, Smith & Stoker, 2009
Reading

Consultancy & training in behavioural health & safety, organisational culture change & wellbeing at work

Package 1: “All-in-one” workshops: assess & plan for smaller businesses

Package 2: Assess the causes (light touch, in depth, strategic) and tailored road-map development (what, where, when)

Package 3: Road map implementation. For example via:
• Resilient Leadership (coaching, Training, Workshops)
• Line management people skills training
• Buddy training
• Individual resilience training

Package 4: Continuous Improvement. For example via:
• Nudging Health & Safety workshops
• Health and Safety think-tanks for driving continuous improvement
• Profile raising (via a case studies, telling the story)
• Evaluation - did it work and how?

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