Controlled Cognitive Engagement (CCE)

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Overview

• Introduction to Controlled Cognitive Engagement (CCE)

• Why it is effective in portals contexts:
  • Border
  • Events
  • Aviation

• Aviation Security Context
Funding

• Research funded by:
  • UK Centre for the Protection National Infrastructure (CPNI)
• TSA & UK Dept. of Transport (DfT)
• AA & Delta Airlines
Truth Default Theory

Context

Consistency & Coherence

Diagnostic Utility

Questions

Decision
Problem 1: Context

- Customer service**
- Security
- Time critical
- Limited factual information
- Not known
- Consistant procedure/approach
- Real time decision
- Truth default & Lie Bias
Problem 2: Diagnostic Utility

US international flights - ‘Suspicious Signs’ approach:

- Documentation
- Travel
- Behaviour and appearance
  - Physical manifestations
  - Nervousness/aggressiveness etc.
  - Rushing security staff/covert links in queue, etc.
  - ‘Pax appears to be lying or withholding’

‘The question’...
Problem 3: Questions

Audio Example 1

Audio Example 2
Problem 4: Consistency and Coherence

- Known facts are documents
- Correspondence can be practiced
- Rely on coherence & Communication content
CCE In formal interrogation contexts

- 1980s shift from ‘interrogation’ to ‘interview’
- All audio recorded (typically videoed)
- 7 core principles:
  - Gain an accurate & reliable account
  - Investigative mind set
  - Act fairly
  - Ask a range of question to gain information
  - Recognize the positive impact of an early admission
  - Interviewer does not have to accept answers – persistent questioning
  - Right to silence BUT interviewer must continue to question
Psychology and the Interviewer mindset

- Social cognition: how people think and behave in a social setting
  - Non coercive
  - Information gathering – admission is not enough
  - Non accusatory
  - Provide interview objectives

- Psychological knowledge can assist you to manage the interview for more successful outcome
  - Expert questioning
  - Diagnostic utility
One Solution?

• CCE is...
  - A way of testing the truthfulness of accounts
  - Improve chances of making people lie
  - Applied equally to all
  - Unpredictable
  - Derived from an empirically validated method

• CCE does not ...  
  - Detect suspicious signs
  - Rely on passive observation of behaviour
  - Try to resolve suspicions
Controlled Cognitive Engagement

• **Controlled**
  • Questioner controls the conversation
  • Incremental phased questioning
  • Managed questioning approach

• **Cognitive**
  • Questioner decision-making skills
  • Asymmetric cognitive loading
  • Unpredictable for receiver

• **Engagement**
  • Customer service/covert/formal uses
  • Reducing stereotype biases
  • Structure & timeline to observe behaviour change
Stages of CCE

- **Stage 1: Control**
  - Build rapport and open a dialogue
  - Establish a behavioural baseline

- **Stage 2: Information gathering**
  - Gather information using open unpredictable questions
  - Commit passenger to version of truth

- **Stage 3: Veracity testing and/or correspondence testing**
  - Test the truth of the account using probe questioning
  - Observe behavior change (verbal & demeanor)

- After 3 cycles, make a decision
Example
Evaluation: Detection testing

- £750K field trials funded by UK & US Govt. (MI5 CPNI & Dept. Homeland Security: TSA)
  - Major EU airports & Major international carriers

- Aim
  - To compare detection rates for CCE and suspicious signs method
  - To test method under pressure

- Method
  - CCE training
    - 10 accredited CCE trainers & 80 accredited CCE screeners
  - Double-blind randomised-control trial
  - 200 participants per method, diverse participant sample
  - Participant-generated deceptions
  - Incentivized performance 1; 1000 (low base rate)

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## Results: Detection Rate

<table>
<thead>
<tr>
<th></th>
<th>January 2012</th>
<th>June 2012</th>
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</thead>
<tbody>
<tr>
<td>CCE</td>
<td>63.4%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Current method</td>
<td>2.7%</td>
<td>0%</td>
</tr>
</tbody>
</table>

- 3,000,000+ passengers CCE-screened to date
- Paedophile ring disrupted
- Covert targeting of potential HT victims

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But...

• Must be completed correctly

• Audio Example
What Might the ‘killer’ question be?

- Asked an information gathering question and I have answered
- What question would test the truth of my account?
- Test expected knowledge of EXPERIENCE rather than general knowledge.

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Audio Example
How does CCE help in portals context?

- Interview (formal or otherwise) - can be used to disrupt lie script.
- CCE helps ensure that every verbal interaction counts
  - Provides a structure/route map
  - Gathers information
  - ‘Clever’
- Unpredictable
References


