A Nudge in the Right Direction: Applying Behavioural Analytics

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New Horizons in Responsible Gambling
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1. Understand nudging and how it might complement current RG strategies.

2. Identify data sources that can be used to inform nudging strategies in a gambling context, and how to effectively leverage data from these sources.

3. Create nudging strategies to encourage effective use of precommitment tools across various touchpoints within gambling environments.
Complementing Traditional RG Strategies with Nudging
Traditional RG strategies

• Traditional RG strategies are rooted in an informed choice model

• These strategies assume that adequate information + support tools = safe behaviour

• Research shows that these RG strategies are fairly effective for low and moderate risk gamblers (Hing et al., 2016)

• Heuristics and bias may limit a player’s ability to effectively apply RG information to their gambling behaviour
Heuristics, bias, and gambling

- Research shows that people do not always make rational decisions about their behaviour.
- Instead, they use heuristics (mental shortcuts) to simplify judgement and decision making.
- Heuristics = bias.
- Common heuristics and biases in gambling:
  - The “sunk-cost effect”
  - “Mental accounting”
  - The “representatives heuristic” (or “gambler’s fallacy”)
  - An “Illusion of control”
  - “Othering”
Why nudging might help

- Nudging strategies:
  - Acknowledge that people do not always act in their own best interest
  - Consider real human behaviour in the development of policies and programs
- In other words:
  - Nudging strategies in gambling account for mental shortcuts and biases that are leading to gambling problems, and help people to play safely anyways
Understanding Nudging
The “dual process” model helps explain nudging

**System 1: Fast**
- Automatic intuitive, effortless
- 2x2
- Driving

**Daniel Kahneman**, Nobel Laureate

**System 2: Slow**
- Reflective deliberate, analytic
- 24x17
- Learning to drive

“It turns out that the environmental effects on behavior are a lot stronger than most people expect” *Daniel Kahneman, Nobel Laureate*
Imagine that you want to buy a subscription to The Economist and you can choose from the following three options:

1. **Online subscription (£59.00)**
   One-year subscription to Economist.com.

2. **Print subscription (£125.00)**
   One-year subscription to the print edition of The Economist.

3. **Online + print subscription (£125.00)**
   One-year subscription to the print edition of The Economist plus online access.

Which would you choose?
Which would you choose?

A group of MBA students were asked the same question and this is what they chose:
Which would you choose?

However, when presented with only two choices the proportion of students that choose the print and web option drops to 43%:
Irrelevant decoy information sways choice

Preferences can be influenced by context

- Print and web (£125) - 72%
- Print only (£125) - 28%
- Online only (£59) - Decoy
EAST: Our framework for generating behavioural change

If you want people to change their behaviour, make it…

Easy
- Defaults
- Friction costs
- Simplify messages

Attractive
- Attract attention
- Personalise
- Rewards & incentives

Social
- Social norms
- Peer networks
- Commitments & reciprocity

Timely
- Timely prompts
- Present bias
- Implementation intentions
Case Studies: Applying Nudging Inside and Outside of the Gambling Industry
Increasing credit card repayments

Minimum repayments are typically featured prominently on statements sent to card holders and are a regulatory requirement.

This minimum repayment can act as an anchor that leads to lower repayments. Over time this significantly increases the cost of credit cards.

We ran an online experiment allocating participants to different interface designs.
Changing the repayment interface

Question: When would you like your debt to be cleared?
Please use the slider to indicate your repayment period

Date when debt repaid: **March 2022**
If my monthly repayments continue to be: **£169**
Total amount I repay: **£8,718**
Total interest I will pay: **£3,718**
What we found

We are currently testing the idea in the field.

Note: The default repayment is £284 in the ‘slider + higher default’ condition and £169 otherwise.
So, you're reading *The Hunger Games* in class? Who's your favourite character?

Yeah, need to get started on that.

OK, don't forget to read a few chapters before next week's class!
Timely: Study Supporter impact on attendance

Pooled analysis: Effect of Study Supporter On Attendance

Control
58.9

Study Supporter
64.9

Total N = 854

*** p<0.001, ** p<0.01, * p<0.05, + p<0.1
Estimates controlling for gender, age and college fixed effects
"[Before] they didn't even know if I had exams... I think [our relationship] became closer [because of the messages]."
Helping young people save

Students were 27% more likely to pass their GCSEs or functional skills in maths or English when we texted progress updates to their 'study supporters'.
Helping young people save

settled

MyBnk

Hi Chris, thanks for signing up to Savings Supporter. It is great that you want to improve your financial security. We will be sending you and Harry weekly messages over the next three months to help you achieve your financial goal.

Hi Harry, Chris Wright would like your support. He asked us to send you weekly texts so you can help him reach a savings goal over the next three months. To start, why not ask Chris about his financial goal and how he plans to achieve it?
Can we boost applications for teaching posts in rural areas?
Simpler application plus prompts

1. Partially pre-filled forms
   - Professional Experience
     - Bachelor of Mathematics Education: 3rd yr □ 4th yr □
     - Bachelor of Science Education: 3rd yr □ 4th yr □
     - Bachelor of Health and Physical Education: 3rd yr □ 4th yr □

2. Prompt to select four rural schools

3. Postcard promoting rural placements
   - Don’t miss your opportunity to make a difference
   - Apply for a rural or remote professional experience placement by Wednesday's deadline
   - If you want to directly your teaching experience or help your CV, just the best of person who are encouraging to apply. To apply, just submit up to four rural or remote school in your area.
   - Good luck!
New process triples applications

Teacher applications for rural placements

- Standard form: 4.2%
- Simpler form + prompts: 12.6%

n=237
Informing Nudging Strategies with Data
Using data to inform our strategy

Data scientific models can look for patterns in existing data to help understand which factors might be most important.

This can steer which types of interventions we then trial.

Figure 8: Relative predictive importance of categories of data.

- 31% behaviours/manoeuvres
- 22% road characteristics
- 21% driver/casualty characteristics
- 19% vehicle type
- 7% journey purpose

The bars add up to 100 per cent and each one indicates the total amount of importance (similar to correlation, but more general) for all variables in that category. The colours are for cosmetic purposes only.
Using data to inform our strategy

Using available data helps us to figure out who to target, and how

Younger drivers (<25 years old)  Motorcyclists
What are data sources we can use to better understand our players and ground our nudging strategies?
Potential data sources

- Player account data (where available)
- Data on overall play patterns (online, in-venue, etc.)
- Financial data
- Research data (e.g. census, health surveys, etc.)
- Geo data (information on location)
## Example data BIT is capturing in ongoing work

<table>
<thead>
<tr>
<th>From operators</th>
<th>From banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Uptake of deposit limit</td>
<td>● Average monthly/weekly/daily gambling spend and standard deviation (online only and total)</td>
</tr>
<tr>
<td>● Dates, times, and amounts of deposits in 30 days after setting deposit limit</td>
<td>● Average number of monthly/weekly/daily gambling transactions (online only and total)</td>
</tr>
<tr>
<td>● Proportion of deposit limit met per day in 30 days after setting limit</td>
<td>● Average monthly spend on gambling (online only)</td>
</tr>
<tr>
<td>● Time taken (days) to hit limit</td>
<td>● Ratio of monthly gambling spend to income</td>
</tr>
<tr>
<td>● Total amount of deposits during observation period</td>
<td>● Total gambling spend (online only, and total) and standard deviation just before/after salary payment</td>
</tr>
<tr>
<td>● Value of each bet made during observation period</td>
<td>● Ratio of monthly gambling spend to contributions to savings accounts</td>
</tr>
<tr>
<td>● Total winnings/losses during observation period</td>
<td>● Use bank gambling block functions</td>
</tr>
<tr>
<td></td>
<td>● Use of credit / overdrafts to gamble</td>
</tr>
</tbody>
</table>
Creating our own Nudging Strategies
Creating nudging strategies

- In small groups, we are going to plan nudging strategies designed to help players make and adhere to pre-committed time and money limits.

- Brainstorm: What are touchpoints between players and gambling environment (online or in-person) that we could leverage in our nudging strategies?

- We’ll chose 2 or 3 to focus on.
BIT’s EAST framework

- EASY
- ATTRACTION
- SOCIAL
- TIMELY
Make it **Easy**

Set intelligent defaults

Reduce the hassle

Simplify
Make it **Attractive**

- Attract attention
- Personalise experience
- Provide incentives
Make it Social

Highlight helpful social norms

Leverage networks

Use reciprocity effects
Make it **Timely**

- Consider the immediate costs and benefits
- Help people plan their response to events
- Prompt people when they are likely to be most receptive
Generating your own ideas
Create a strategy.

- Self-select into a group based on your touchpoint of interest.
- Using the EAST cards, begin to brainstorm how you could use nudging to enhance use of precommitment tools at your chosen touchpoint.
- Deliverable in 20 minutes: a documented draft plan for a nudging strategy.
ROUND TWO

Time to cross pollinate.

- Select half/one-third of your group to switch to another touchpoint of focus.
- Those who remain with their original touchpoint should take new members through their plan/strategy.
- New members should be ready to ask questions/suggest changes to the strategy/plan.
- Deliverable after 20 minutes: an updated and enhanced plan for a nudging strategy and a presentation plan.
Presentations.

- Members from each group will present on their strategy.
- Audience members, GREO, and BIT will provide thoughts and insights on each strategy.
- GREO will take notes and provide all attendees with a summary of each strategy and any relevant feedback.
ON BEHALF OF GREO AND BIT

Thank You

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