



BIRMINGHAM UK

# Behavioural Economics and Nudge for Staff Engagement

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# Rational Choice Model

The model of Rational Choice:

1. People's aim is to maximize their long-term wealth
2. People have correct beliefs about the world and their own ability
3. People choose their most preferred option by careful deliberation

# Behavioural Critique of Rational Choice

1. Non-standard preferences
  - **loss aversion**
  - **present bias**
  - **other-regarding preferences**
2. Non-standard beliefs
  - **ignoring regression to the mean**
  - **ignoring the sample size**
3. Non-standard decision-making
  - **persuasion and social influence**
  - **decision fatigue**

## Loss Aversion

- Loss aversion: a phenomenon that a **loss hurts more** than an **equivalent gain** makes you feel good
  - About 2 times more near the “reference point”
  - As a result, people **tend to avoid losses more than they seek equivalent-size gains**
- Evidence of loss-aversion:
  - More consumers switch to a firm’s competitors after a price rise than after competitors’ price drop (reference point – **current prices**)
  - **150% increase** in reusable cup use when a **5p plastic cup charge** introduced by Starbucks (a 25p own mug discount had only been taken by 1-2% of customers)



# Reference Dependence in The Workplace

- Employees often **resist organisational change** and innovation because of the **status-quo bias**.
- A worker may be **unhappy about a salary increase** if it is **lower than her colleagues'** salary increase (because it is perceived as a **loss**).
- Hossain and List (2012) found that workers **worked harder to keep a “provisionally awarded” bonus**, compared to a potential bonus (because of the **endowment effect**).



## Present Bias

- Present bias is a **preference for immediate gratification** (rather than improved long-term well-being)
- People who are **present-biased behave in a time-inconsistent way**:
  - Buy gym membership and don't go
  - Pay for diet plans and then eat junk food
  - Do not save enough for retirement and regret it

## Present Bias in the Workplace

- Kaur et al. (2015) provides evidence of present bias at work and **demand for commitment**
  - Field experiment with data entry workers
  - Payment is by output at the end of the week
  - Workers could set themselves **daily targets** and get penalised if they fail to meet them
  - There was **NO reward** if you meet the target – hence it is a **dominated contract**
  - **36%** of workers chose to **impose those targets** (dominated contracts) on themselves!

## Other-Regarding Preferences at Work

- Bandiera et al. (2005) study productivity of workers at a UK fruit farm in 2002
- First 8 weeks **relative per-fruit piece rate**
  - the rate depends **negatively upon average productivity** (kg of fruit picked per hour)
- If workers were selfish, they'd work as hard as possible to maximise income
  - But this harms co-workers
  - Social preferences → slack-off a bit....





## Other-Regarding Preferences cont'd

- After 8 weeks announced a switch to **absolute piece rate** (which on average is lower than before):

→ over 50% **increase in productivity!**

& higher for workers with a large network of friends on the farm (based on self-reported survey evidence)

- The same effect was NOT observed at the other farm where the plants were too high for workers to see each other - supports reciprocity explanation over altruism

## Ignoring Regression To the Mean

- Managers are often unaware of **regression to the mean**
- Fluctuations in performance are to an extent due to chance:
  - **Extraordinary** performance by a worker is likely to be **followed by less good** performance.
  - **Disastrous** performance is likely to be **followed by less bad** performance.
- Suppose extraordinary performance is rewarded and disastrous performance is punished:
  - Then regression to the mean creates an **illusion that positive reinforcement does not work** while **negative reinforcement does!**

## Ignoring the Sample Size

- What makes a school successful?
- In a ranking of schools by performance, the best-performing schools are small
  - Following this finding, the Gates Foundation spent £1.7bn creating small schools (sometimes by splitting schools up)
- Why do small schools have best student scores?
  - More personal attention to pupils?
  - ... or mere statistics?
- In the same ranking of schools by performance, the worst-performing schools were also small!

## Ignoring the Sample Size cont'd

- When people ignore the sample size, they erroneously expect small samples to exhibit large-sample properties
  - In a large sample, average outcomes are very likely and extreme outcomes are very unlikely
  - You toss the coin 1000 times
    - All tosses are heads (or tails): extremely unlikely
  - If you toss the coin 2 times
    - All tosses are heads (or tails): 50% - NOT unlikely
- “Very high student scores” and “very low students scores” are both **extreme outcomes – more likely in small samples than in large samples**

## Ignoring the Sample Size at Work

- If an employee had several successes/failures in a row, it may be due to pure chance.
  - Indeed, in **small samples**, **extreme outcomes** are observed more often than one thinks!
- However, managers may attribute the streak of successes/failures to the employee's skills.
  - This is a familiar bias – the Law of Small Numbers
- Example: “hot hand” fallacy
  - a belief that a person who has just succeeded has a greater chance of success in further attempts



## Biased Decision-Making: Social Influence

- Two types of social influence at work:
  1. **Informational signals**: what your colleagues/superiors say can **change your own preferences** and opinions.
    - Ignoring own perceptions in favour of others' opinions leads to **herding** – irrational behaviour when individuals act like the majority around them.
  2. **Self-censorship**: if social costs of disagreeing with the majority are large, workers **won't voice their opinions**.
    - Lack of diverse dialogue leads to **groupthink** – irrational decision-making, which occurs when individuals prefer group harmony over their own rational cognitions.

# Biased Decision-Making: Decision fatigue

- Our mind has two decision-making systems:
  - **Automatic** decision-making (“**System 1**”): choosing by **instinct**, emotions and simple rules of thumb
  - **Controlled** decision-making (“**System 2**” which we think of as ourselves): choosing by careful **deliberation**
- Importantly, **controlled** thinking gets **depleted** (a phenomenon known as decision-fatigue).
- Hence, **after a challenging task**, or at the end of the working day, **worse decisions** are made.

## Example of Decision fatigue (1)

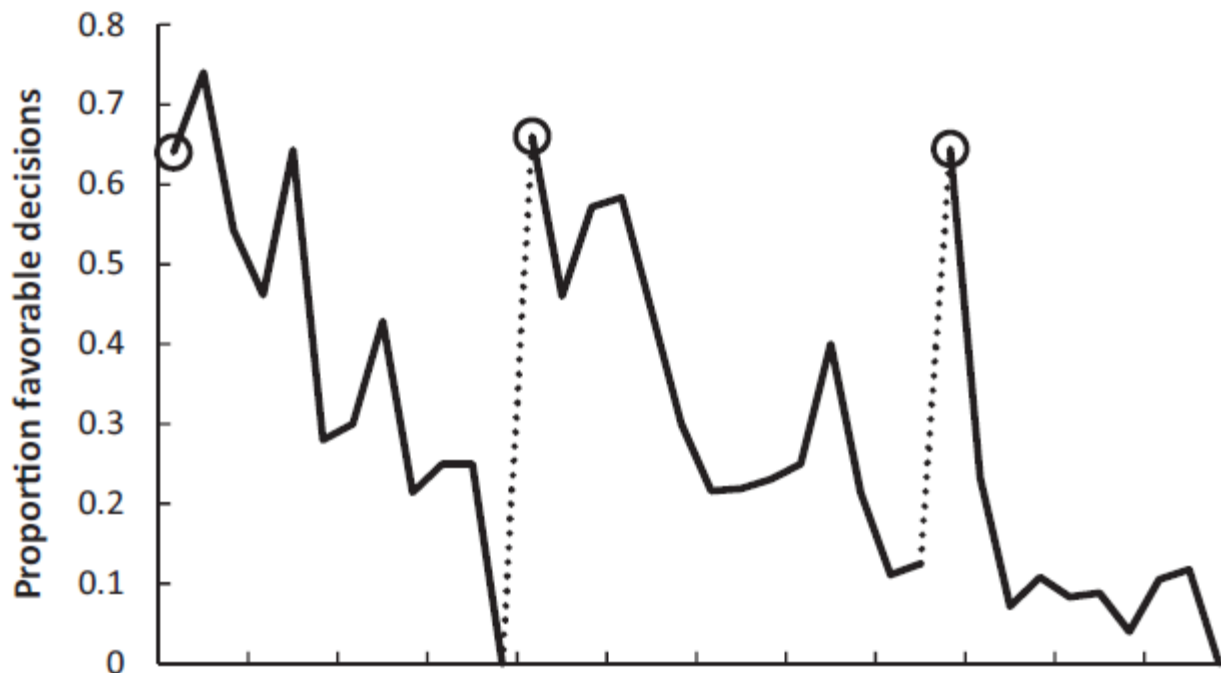
- Experiment participants in Shiv and Fedorikhin (1999) were asked to complete a cognitive task
  - Treatment 1: **easy task** (memorise a two-digit number)
  - Treatment 2: **difficult task** (memorise a four-digit number)
- During the task, they were offered a dessert (as a reward for participation): a fruit salad or a chocolate cake
  - Treatment 1: **41%** chose the cake
  - Treatment 2: **63%** chose the cake





## Example of Decision fatigue (2)

- Danziger et al. (2011) find that judges approve more parole requests after food breaks (dotted lines):



# Choice Architecture and Nudging

- **Choice architect** is anyone responsible for **creating context** in which people make decisions
  - Small details have large impact on choice
  - Moreover, there's no such thing as "neutral" design
  - Hence as a choice architect you may want to have a beneficial influence
- **Nudge** is an aspect of the choice architecture which **alters choices** in a predictable direction
- To qualify as a nudge, an intervention **shouldn't forbid any choices** or significantly change economic incentives

# Principles of Choice Architecture

- **iNcentives**
- **U**nderstand how each option affects welfare
- **D**efaults: choose them wisely
- **G**ive feedback
- **E**xpect error
- **S**tructure complex choices

## Nudging against Loss Aversion

- Employees often **resist organisational change** and innovation because of the status-quo bias.
  - Shift their reference point from the current outcome to the **expected outcome** by clearly communicating the result of the change and its benefits.
- A worker may be **unhappy about a salary increase** if it is **lower than her colleagues'** salary increase
- Workers **worked harder to keep a “provisionally awarded” bonus**, compared to a potential bonus
  - Shift their reference point **to their next step up the career ladder** by having forward-looking conversations and clearly outlining promotion requirements

## Nudging Against Present Bias

- Present bias gives rise to self-control problems.
- Workers procrastinate and then feel disappointed.
- Offer your employees commitment devices to help them overcome self-control issues:
  - Flexible working arrangements with **few simple options**, one of them coming to **the office** where their performance is monitored.
- Give **visual cues** about the **effect of workers' choices** on organizational goals
  - Display energy savings / customer satisfaction figures
  - Celebrate success e.g. “Wall of fame”

## Nudging Reciprocal Workers

- Employees may react negatively to a workplace environment where they are forced to compete with each other
  - Reciprocal workers will play against the organisation when played off against each other
- Align workers' incentives with your organisational incentives:
  - Emphasise the **positive effect** of desired workplace behaviour **on co-workers**

## Nudging Managers

- Managers may misattribute a purely random streak of successes/failures to the employee's skills.
  - Tie promotion criteria to long-term performance
- Managers may misunderstand that an outstanding performance is likely to be followed by a less good performance, and vice versa
  - Design employee appraisal schemes in a way which discount the extremes.

# Nudge against Biased Decision-Making

- Herding and groupthink:
  - Design feedback structures so that workers' opinions can't be easily swayed, e.g. ask them to **report their opinions privately**
- Decision fatigue:
  - Don't schedule important meetings at the end of the day or before lunch



Thank you for your attention!