

## Keynote Lecture 2: Applying Behavioural Science to the COVID-19 Response in Ireland By Professor Pete Lunn

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*Professor Pete Lunn leads the Behavioural Research Unit and his team consists of both behavioural economists and psychologists. They study decision making and behaviour to inform policy making in areas such as climate change and health outcomes. Last year, his team was tasked by various government agencies in Ireland including the Department of the Taoiseach and Department of Health to study people's decision making in the pandemic and their understanding of risk and compliance.*

### MEASURING BEHAVIOURS TO INFORM POLICY MAKING

Professor Lunn discussed the importance of measuring public behaviours to inform policy making, since responsible public behaviours are crucial in containing the spread of COVID-19. He went on to share his Social Activity Measure study<sup>7</sup> to measure and understand behavioural change.

#### Design of the Social Activity Measure study

- The Social Activity Measure study (*also known as a prompted recall study*) used behavioural science techniques inspired by Professor Daniel Kahneman to help people recall what they had done over the past couple of days by asking detailed questions to get participants to reconstruct their memories and feelings during those episodes.
- Participants were asked about the locations that they had visited in the past seven days, focusing on the past 48 and 24 hours. The prompt works by asking people to share their story for a particular day (*e.g. thinking about Monday morning/afternoon/evening, what kind of things did you do outside your home?*) before going into more detail such as asking about the locations they visited, the duration spent at each location and so on.
- Participants were also asked a series of diagnostic and psychological questions to determine the factors influencing their risk-taking behaviours. Questions included their level of fatigue associated with the adherence to public health guidelines and whether they placed more importance in preventing the spread of the virus throughout the community (*selfless*) or the personal inconvenience of restrictions (*selfish*).

#### Importance of measuring behaviours

- The Social Activity Measure study has been conducted once every two weeks since January 2021. The researchers then pieced together a movement picture of the Irish people during and after the lockdown, including areas of non-compliance, since visits to certain locations were not permitted under the health guidelines at that time.
- Policymakers could use this information to assess how the various policy levers influence respondents' participation in the following activities over time:
  1. Proportion of population that visited locations of interest such as café, pub or restaurant;

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<sup>7</sup> Publications on the Social Activity Measure behavioural study can be viewed here: <https://www.gov.ie/en/collection/a7ee4-see-the-results-of-the-social-activity-measure-behavioural-study/>

2. Proportion of population that had a close contact<sup>8</sup> interaction; and
3. Average number of people met from other households.

### Factors influencing risk-taking behaviours

- It was found that demographic factors such as socio-economic background and age had limited influence on respondents' likelihood to engage in risk-taking behaviours. Instead, psychological differences between respondents were found to have a significant impact on those behaviours<sup>9</sup>, specifically the following three:
  1. Level of worry about the disease. Respondents who were more worried about COVID-19 were less likely to engage in risk-taking behaviours.
  2. Level of willingness to overcome self-interest for the broader public good. Respondents who placed more importance on the personal inconvenience of restrictions (*self-interest*) over preventing the spread of the virus throughout the community (*greater good of the society*) were more likely to engage in risk-taking behaviours.
  3. Level of coherence around the government's regulations. Respondents who perceived the government's regulations to be more coherent were less likely to engage in risk-taking behaviours.

## BEHAVIOURAL INTERVENTIONS TO PROMOTE SOCIAL DISTANCING

Next, Professor Lunn shared an online study<sup>10</sup> involving 500 respondents to test the effectiveness of two public health messages on social distancing.

### Design of the study

- Respondents were randomly assigned to one of three conditions
  - Control poster: Encouraged a two-metre separation between people (*e.g. protect each other and stand two metres apart*).
  - Emotion treatment poster: Incorporated the 'identifiable victim effect' by highlighting the risk of transmission to someone specific (*e.g. will pass the virus on to his granny*).
  - Efficacy treatment poster: Helped respondents overcome their natural tendency to underestimate the virus's exponential growth by highlighting the infectiousness (*e.g. Will now infect three people. They will infect nine. Those nine will infect 27.*) of COVID-19.

### Results of study

- Both treatment posters were found to be more effective in promoting greater caution about social distancing among the respondents, as measured by respondents' intentions to engage in certain

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<sup>8</sup> A person was deemed to have 'close contact' interaction if he/she interacted with a person from outside their household for more than 15 minutes within two metres or two hours indoors without good ventilation.

<sup>9</sup> Respondents' likelihood to engage in the following risk-taking behaviours were tracked: (a) having a close contact interaction; (b) meeting people from another household; and (c) engaging in a social visit to another person's house.

<sup>10</sup> Lunn, Peter D., Shane Timmons, Cameron A. Belton, Martina Barjaková, Hannah Julienne, and Ciarán Lavin. "Motivating Social Distancing during the COVID-19 Pandemic: An Online Experiment." *Social Science & Medicine* 265 (2020): 113478. <https://doi.org/10.1016/j.socscimed.2020.113478>.

types of social interaction<sup>11</sup> over the coming days and their stated acceptability of other types of more ambiguous social interactions in which people were unsure whether they were advisable<sup>12</sup>.

### **A word of caution – Behaviours are driven by emotions and not rational information process**

- Interestingly, when asked, participants of the study did not think that the treatment posters would be as effective nor memorable when compared to the control poster. This contrasted with results obtained from the study, where the planned behaviours of those who saw the treatment posters indicated greater caution about social distancing.
- This highlights the limitations of relying on focus group engagements to evaluate message content, especially for messages that might make people feel uncomfortable or guilty, since behaviours are often driven by emotions and not rational information process. Hence, it is important to measure not only the respondents' perceptions towards a certain message but their actual behavioural intentions as well.

## **CHALLENGES AND OPPORTUNITIES BROUGHT ABOUT BY THE PANDEMIC**

Professor Lunn concluded the presentation by briefly covering the challenges, as well as opportunities, brought about by the pandemic.

### **(Challenges) Impact on mental health**

- Based on data collected in Ireland, COVID-19 has an outsized impact on the mental health of young adults as compared to their older counterparts. In normal times, due to optimism bias, when the general population is asked to rate the change<sup>13</sup> in their mental health over time, a larger proportion would rate 'better' as compared to 'worse'.
- This is in contrast with the current COVID-19 situation. Younger respondents, especially those aged 18 to 29, were more likely to indicate that their mental health had changed for the 'worse' rather than 'better' due to the pandemic.
- The hypothesis is that young adults were especially affected by the COVID-19 restrictions since their social life is the primary vehicle of well-being.
- The pandemic also affected 'prospective thinking' – the act of imagining the future that can facilitate preparing for upcoming events and promote well-being. During COVID-19, prospective thinking was dampened by the uncertainties and pessimism surrounding the pandemic and their near future. This seemed to have had a disproportionate impact on the younger population since prospective thinking might have a bigger impact on their mental well-being.

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<sup>11</sup> From a scale of one "Highly Unlikely" to seven "Highly Likely", respondents were asked to rate their likelihood to: (a) visit a friend or relative in their home; (b) meet up with friends or relatives in the open air; and (c) go for a walk in their neighbourhood.

<sup>12</sup> From a scale of one "Definitely Not Okay" to seven "Definitely Okay", respondents were asked to rate the acceptability for others to: (a) travel by public transport; (b) allow their children to play outside with friends; and (c) travel to a parent's house for tea and a chat.

<sup>13</sup> Respondents were given three options: (a) Better; (b) No Change; or (c) Worse.

### **(Opportunities) Galvanising collective action and communicating scientific findings**

- One silver lining of the pandemic is its potential to change our relationship with our environment. There is an increased awareness of how our actions are affecting the environment and the pandemic has demonstrated the effectiveness of mass collective action and the spirit of self-sacrifice in solving global public goods problems.
- The pandemic has also taught policymakers how to better communicate scientific findings to galvanise a collective response. Findings from studies exploring effective communication strategies during COVID-19 can also be applied to tackle other pressing issues such as climate change.

[Link to Prof Lunn's slides](#)