Herd Impunity

COVID:19

Time for behavioural scientists to break free from Confirmation Bias

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When the Herd falls for Confirmation Bias

The UK Behavioural Insights Team (BIT) warns policymakers on **Confirmation Bias**:

> *"A concerning effect of this bias is that it can make people less able to critically analyse information that conflicts with their beliefs".[2] The BIT has said: "In our view, confirmation bias is one the most pervasive and problematic cognitive biases that affects policy making".*

They warn that no-one is immune to "motivated reasoning".[3] Anyone self-describing as a "Behavioural Scientist" could be expected to be resistant to the lure of confirmation bias and the groupthink that reinforces it. They will have devised great tactics to avoid falling foul of this bias that binds and strengthens groups in polarised mutual rivalry. They should be able to think beyond automatic stereotypes and mental models, transcending or shunning the wisdom of crowds.

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[2] Hallsworth M, Egan M, Rutter J, McCrae J: "Behavioural Government", p8, Behavioural Insights Team Ltd https://www.instituteforgovernment.org.uk/sites/default/files/publications/BIT%20Behavioural%20Government%20Report.pdf

[3] Behavioural Insights Team Ltd "How confirmation bias stops us solving problems", BIT Blog, 25th May 2018. https://www.bi.team/blogs/how-confirmation-bias-stops-us-solving-problems/

It seems, however, that the behavioural scientists have developed no herd immunity to this particular contagion: The UK government and its many expert advisers look to have been mentally dumped by them in the "populist" box along with Boris Johnson. The cold analysis of policy is replaced with an assumption that policy (or any informal hint of policy) must be *"cooked up in the moment"*[4] and have some sinister motivation. This narrow viewpoint means that behavioural science could be missing huge opportunities to make a lasting difference to British society. Instead of the coronavirus challenge boosting the reputation of behavioural public policy it has, so far, undermined it[5]. Group letter-writing should be the antithesis of what behavioural science is about. Behavioural science has much to offer, but only when researchers learn to resist the pressure to run with a herd. Now is certainly the time to break free of confirmation bias.

Behavioural science is fast becoming a melting pot of multiple established academic disciplines. It is drawing increasing numbers of researchers into the realm of public policy. Psychologists, economists, sociologists, and many others have found a novel platform. This was demonstrated when a group of several hundred behavioural scientists wrote an open letter[6] on 13th March 2020[7] attacking the UK governments' pacing of the response to the coronavirus epidemic: This phased, adaptive **"Contain – Delay – Mitigate"** approach[8] stood in stark comparison to the more dramatic responses of most other countries. It took a long-view of the challenge ahead, rather than just leap with the rest, proposing to adapt as the data change.

The behavioural scientists' group letter focused on the 600 authors' shared view that the UK's more nuanced approach, delaying the use of the most demanding

[4] PA Media "Government Covid-19 plan 'cooked up in the moment' 23 march 2020 https://www.msn.com/en-gb/news/other/governments-covid-19-plan-cooked-up-in-the-moment/vi-BB11AhEz

[5] Yates T "Why is the government relying on nudge theory to fight coronavirus?" The Guardian, 13 March 2020 https://www.theguardian.com/commentisfree/2020/mar/13/why-is-the-government-relying-on-nudge-theory-to-tackle-coronavirus

[6] Available at: https://sites.google.com/view/covidopenletter/home

[7] https://behavioralscientist.org/why-a-group-of-behavioural-scientists-penned-an-open-letter-to-the-uk-government-questioning-its-coronavirus-response-covid-19-social-distancing/

[8] UK Governments: "Coronavirus: Action Plan. A guide to what you can expect across the UK" 3 March 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/869827/Coronavirus_action_plan_-_a_guide_to_what_you_can_expect_across_the_UK.pdf

and universal controls on social distance, **"seems to crucially involve the idea of 'behavioural fatigue'", and that "it appears" that the intention is to slow the spread of the virus until "herd immunity" is achieved.** Whilst the open letter carefully couched these two beliefs as the group's own presumptions, they have since been repeated many times as fact.

Others have built on this motivated reasoning. In one TV interview the Prime Minister rejected the suggestion that a *"do nothing"* approach would be an appropriate policy response. His mention of this approach was then cut out of context to misrepresent him on social media. This intentional manipulation has not stopped some academics repeating this episode in their articles[9] (with the truth left to a footnote). The polarised views of a group thus become self-reinforcing. The belief that UK policy rested on the twin concepts of behavioural fatigue and herd immunity is the focal point for much academic commentary on responses to the outbreak, as if these were proven facts.[10]

Hearing the words, not the story

Ironically, **these beliefs stem not from a government statement but from media commentary by one of their own: The head of the Behavioural Insights Team Ltd,** Professor David Halpern. His comments gave a central role for "**herd immunity"** in responding to COVID-19. These views were offered on 11th March 2020 in a BBC interview in which he listed several suggestions made to Government by the BIT[11]. But his comments on herd immunity struck an emotional chord with those who typecast Boris Johnson as dangerously impetuous at best, if not an alt-right eugenicist. Halpern played to an audience that had read much into Dominic Cummings' call for advisers amongst "weirdos and misfits", leading to the hiring (and firing) of a "super-forecaster" with an interest in eugenics. Halpern, probably unwittingly, played straight to the crowd. Of course, the letter writing group as good behavioural scientists, recognised this hot context for their claims, hence the wide appeal of the call for signatories.

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[9] Sibony A-L "The UK COVID-19 Response: A Behavioural Irony" European Journal of Risk Regulation (2020) https://www.cambridge.org/core/services/aop-cambridge-core/content/view/720899A7C7EE4228169E1B9CB3D20411/S1867299X20000227a.pdf/uk_covid19_response_a_behavioural_irony.pdf

[10] See, for example, Calnan M "England's response to the Coronavirus pandemic" Cambridge Core Blog, 6th April 2020 https://www.cambridge.org/core/blog/2020/04/06/englands-response-to-the-coronavirus-pandemic/

[11] Easton M "Coronavirus: Care home residents could be "cocooned" 11 March 2020 https://www.bbc.co.uk/news/uk-51828000

Anyone who has followed the development of the UK's official response to COVID-19 will have seen that neither "herd immunity" nor "behavioural fatigue" form part of the strategy. Herd immunity has only ever been mentioned by officials or ministers as something that may eventually arise in the long term (as for other viruses), and usually only when questioned specifically on this following Halpern's 11th March comments. The resistance to early introduction of a strong lockdown came not from a fear of widespread reactance, but to ensure that social isolation is used to maximum effect in the lifecycle of the outbreak, whilst minimising the significant social and economic harm involved. The health consequences, including excess deaths from all causes, from social distancing measures have been all but lost from commentary, as the debate anchors on COVID-19 alone.

When to end the lockdown may well prove to be a much harder and more complex decision to take than when to impose lockdown; yet many are already leaping to judgment.

Boris Johnson's 2016 decision to support Brexit, and his common portrayal as a right-wing populist in the mould of Donald Trump, seems to have placed an ideological block on many academics' capacity to observe all that has followed. They miss the fact that the Leave vote won by the use of data in place of political intuition. The same was true of the Conservatives' 2019 General Election victory. For all the bluster Boris Johnson has repeatedly allowed data to determine tactics. The UK's extraordinarily bold fiscal response to the epidemic also reflected a government unleashed from political ideology in favour of logic. It would be entirely understandable that he should be willing to adopt the same approach when faced with tackling another major challenge. The extraordinarily high profile and clear influence of the Chief Scientific Adviser (a reputable epidemiologist), and of the team at Imperial College, bear testimony to an exceptional adaptive, data-driven approach, and a commitment to follow the science as it develops. The UK government has resisted the populist temptation to follow the herd or the political norm of finding clear and simple policy solutions for every complex problem. This time it is may be the social scientists who are behaving irrationally, driven by emotion not evidence.

Harming Behavioural Public Policy, not the PM

The end result of this has been harm to the reputation of behavioural science as a contributor to effective public policy. Whilst behavioural science was written

off as just a "nudge"[12], the government rode high in public satisfaction of its handling of the crisis[13]. After a series of media interviews by the Government Chief Scientific Adviser following the Halpern debacle, the BBC's Evan Davis (a respected economist) commented that:

> ***"Sir Patrick Vallance's interviews make clear that it's not the behaviourists who are in control of policy. Many feared social scientists were running the show…"***[14]

Halpern's overconfidence, straying nonchalantly into sensitive issues of epidemiology, and the response of so many of his counterparts to his comments has overshadowed the positive contribution of behavioural science to multiple other aspects of COVID-19 policymaking.

Behavioural Fatigue

Anyone who has followed official UK statements of policy carefully and dispassionately will have heard the repeated concern for the social and economic impact of prolonged isolation. On 19th March the Chief Medical Officer stated that any interventions would balance the:
"significant health and social downsides … if you do things too early, you could get the negative consequences without affecting the flow of the pandemic".

The 25% rise in calls to the National Domestic Abuse helpline in the first two weeks of the UK lockdown was, perhaps the earliest warning signal of the reality of the social impact of social distancing controls[15].

On 13th March the Prime Minister announced a requirement for 7-day self-isolation of anyone with symptoms, and pre-announced the extention of this to whole households, alongside further possible controls with everything *"under review"*. He spoke of the Government's concern to maintain public *"trust and confidence"* in the steps taken. At the same press conference the Chief Scientific

[12] Yates T "Why is the government relying on nudge theory to fight coronavirus? The Guardian 13 March 2020 https://www.theguardian.com/commentisfree/2020/mar/13/why-is-the-government-relying-on-nudge-theory-to-tackle-coronavirus

[13] YouGov survey 3rd April 2020 https://yougov.co.uk/topics/politics/survey-results/daily/2020/04/03/abf13/2

[14] Davis E, Twitter, 13 March 2020
https://twitter.com/EvanHD/status/1238397081947168768?s=20

[15] "Coronavirus: Domestic abuse calls up 25% since lockdown, charity says". BBC News, 6th April 2020

Adviser, explained that the UK appeared to be four weeks behind Italy and that the intention was to *"protect people during the most infectious period"*. The Chief Medical Officer made the case for doing the **"right things at the right time"**, explaining the balance of evidence on the impact of school closures. He said:

"If people go too early they become very fatigued. This is a long haul. It is very important that we do not start things in advance of need".

He warned that social distancing of the elderly and vulnerable people will be introduced, but that this has:

"big, practical implications for them, and it may lead to loneliness and other issues which are clearly very undesirable for them".

The Chief Medical Officer spoke of the need for people to:

"maintain their energy and enthusiasm to get through what will be quite difficult things to do … It is important that we do not ask our fellow citizens to do them for longer than makes sense from the epidemiology".

The Chief Scientists added that:

"We're not talking about measures that you're going to do for a week or two. These are measures that we have to have in place over the whole course of the epidemic".

In response to questioning on this he said:

"Even to cover the peak you're trying to make sure that those sort of measures are in place for **13-14 weeks or so***"*[16]*.*

Those who deny that this length of isolation is of any great concern for its consequences show very little understanding of people's circumstances and the balance of risk between the consequences of this and those of the virus.

Herd Immunity

On immunity the Chief Scientific Adviser said at the 13th March press conference:

"It is not possible to stop everybody getting it, and it is also actually not desirable, because you need some immunity in the population. We need some immunity to protect ourselves from this **in the future***"*.

This perspective on the future was repeated that evening by a government pandemic influenza adviser, Professor Graham Medley on BBC Newsnight. He argued that after this epidemic COVID-19 would become endemic: *"and join in*

[16] https://www.youtube.com/watch?v=xRadMzCKnCU

with all the other coronaviruses that we all have all the time but don't notice. We are going to have to generate what we call herd immunity …" Medley said that the hope was that, rather than a short epidemic: *"If we keep transmission rates down, so we end up with an epidemic that is much lower, but much longer. At the end of it we still end up with herd immunity."*[17] As the media focus on "herd immunity" continued Medley later explained: *"People have misinterpreted the phrase 'herd immunity' as meaning we're going to have an epidemic to get people infected'.*

He argued that the UK had the same goal as every other country, to flatten the curve of infection:
"As a consequence, the nation may achieve herd immunity; it's a side effect, not an aim"[18]*.*

Medley later criticised the UK for an excessive desire to prevent the acquisition of herd immunity. It had, he said, *"painted itself into a corner"* with no exit strategy to prevent a resurgence of the epidemic when the control measures are eased[19]. A clear demonstration of the truth of politics; advisers advise, but ministers decide.

Anyone who spares the time to listen to the Chief Scientific Adviser's lengthy 13th March interview with Sky News will hear again that the discussion related to potential **future outbreaks** of the virus, and certainly not a strategy to meet the current challenge by attempting to achieve herd immunity with no knowledge of either infection rates or the duration of any immunity. He also categorically rejected the suggestion that behavioural scientists were playing a dominant role within advice to ministers. Indeed, in the list of scientists given at the outset of the interview they did not even warrant a mention[20].

A 16th March report from the Imperial College COVID-19 Response Team accelerated the Government's phased response. By applying micro-modelling to the UK and US it showed only aggressive social distancing measures could

[17] https://www.bbc.co.uk/programmes/p086hjgc

[18] Yong E, "The UK's Coronavirus 'Herd Immunity' debacle. The Atlantic, 16 March 2020
[19] Smyth C "Boris Johnson's coronavirus adviser calls for a way out of lockdown" The Times, 4 April 2020 https://www.thetimes.co.uk/edition/news/boris-johnsons-coronavirus-adviser-calls-for-a-way-out-of-lockdown-rd58g6tc9

[20] "UK needs to get COVID-19 for 'herd immunity' Sky News, 13 March 2019 https://www.bbc.co.uk/news/uk-52157620

reduce case numbers to sustainable levels; using new data on COVID-19 ICU demand from Italy and the UK in the preceding weeks. Questions remained over the health system impact of school and university closures. The researchers noted that:

> *"While experience in China and now South Korea show that suppression is possible in the short term, it remains to be seen whether it is possible in the long-term, and whether the social and economic costs of the interventions adopted thus far can be reduced"*

The Imperial team recommended an adaptive triggered suppression strategy maintained over many months until a vaccine is available. The authors warn that:
"The more successful a strategy is at temporary suppression, the larger the later epidemic is predicted to be in the absence of vaccination, due to the lesser build-up of herd immunity".[21]

Nevertheless, the UK Government accelerated to the next phase of its strategy in response to the forecasts from Imperial College. In Sweden, which was also pursuing a phased response with a view to long-term impacts, the state epidemiologist expressed surprise at the UK response to a *"pessimistic"* report that had not been peer-reviewed[22]. The only judgment that can be made now is that no-one will know which has been the right strategy until sometime in the distant future.

A Work Programme for Behavioural Science

Many people seem to be leaping to premature judgement on the management of the COVID-19 pandemic. All expert analysis suggests that this is a lengthy battle, until a vaccine is developed and made widely available. Much will be learnt from the variety of strategies deployed using non-pharmaceutical interventions, and it will be a very long time until the final health outcome is known, in which the direct and indirect health impacts will become apparent. A 4th March statement from the government's own advisory group on behavioural

[21] Ferguson N et al: "Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand" Imperial College, London. 16 March 2020 https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf

[22] Orange R, "As the rest of Europe lives under lockdown, Sweden keeps calms and carries on" The Observer, 28 March 2020

and social interventions raised more questions than it answered[23]. There is clearly considerable behavioural work to be done on a number of important issues and this is the time when behavioural scientists could step up to the plate. Behavioural challenges requiring solutions include:

Isolation

The very term "social distancing" is perjorative, and belated proposals to change this will be difficult to achieve in practice[24]. Isolation will be a significant, but important challenge as the year progresses. To date there has been little guidance on how people can best cope with prolonged physical isolation from colleagues, friends and family, and the risks of domestic abuse and other harms.

Division. The demands of social distancing fall differently on young and old, on different ethnicities, on rich and poor, those in flats and houses, urban and rural, the employed and self-employed. These sources of inequality and tension will need to be addressed to support social cohesion and trust amidst the shared need to combat COVID-19. As time progresses the divisions are becoming more apparent.

Exit Strategy

Once the (first) peak of infection is past communities will need to decide how best to relax (and possibly) reimpose social distancing measures. This "downgrade" accompanied by falling mortality figures may fundamentally shift risk attitudes, so that a limited relaxation in policy becomes a total relaxation in practice. A targeted relaxation will also heighten the problems of social division.
Hygiene. Impressive work has been done in the effective communication of good hygiene as the most effective measure against viral infection. If the impact of this urgent work could shift habits it could have a significant impact on future influenza outbreaks. There is a crucial role for experts on habit formation.

NHS Reform

The 2020 pandemic has brought about NHS innovations that have been discussed, but not delivered, over many years. This is particularly true of

[23] SPI-B insights on combined behavioural and social interventions 4 March 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873726/04-spi-b-insights-on-combined-behavioural-and-social-interventions.pdf

[24] Loewenstein G "Replace the term social distancing with spatial distancing" A behavioral economist on the psychological toll of endless waiting during the coronavirus pandemic Marketwatch 3 April 2020 https://www.marketwatch.com/story/people-find-waiting-incredibly-unpleasant-a-behavioral-economist-on-why-doing-nothing-during-the-coronavirus-pandemic-is-so-hard-and-how-to-make-it-easier-2020-04-01

telemedicine. It has also generated a huge reduction in A&E attendances. Considerable effort will be needed to analyse these shifts and, where appropriate, develop incentives to build on them. Government spokesman recognised very quickly that lessons should be learnt from the German health system's capacity to scale-up and deliver testing very rapidly.

Volunteering

One of the most significant aspects of the public response to COVID-19 has been an epidemic of altruism. Indeed this was predicted by the government's behavioural advisers[25]. This has developed both from individual acts and governments calls to action. The opportunity to sustain this level of civic engagement is substantial. Ironically, it appears that the charitable sector could be a major victim of social distancing.

Which of the enforced behaviour changes during COVID-19 could and should have lasting effects? Will work, travel, exercise, and engagement with nature ever be the same again?

There is so much that the diverse community of behavioural science could apply itself to and achieve real impact. Some are, of course, already engaged in this effort[26][27][28]. But it will require all hands to the challenge. Going repeatedly over past decisions and attacking policies that vary from the mainstream will produce little benefit. It is time for behavioural scientists to break free from confirmation bias.

[25] SPI-B return on risk of public disorder, 25th February 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873736/08-spi-b-return-on-risk-of-public-disorder.pdf

[26] Lunn P et al., Using Behavioural Science to help fight the coronavirus ESRI Working paper 656, Dublin, March 2020 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873736/08-spi-b-return-on-risk-of-public-disorder.pdf

[27] https://docs.google.com/document/d/11GLhX7hLf64Bxkdpv5hvYHqOjS1imlcMQFjJBJ-9oUM/edit

[28] Van Bavel J et al "Using social and behavioural science to support COVID-19 pandemic response" Preprint 24 March 2020 (updated 9 April 2020) https://psyarxiv.com/y38m9