## Finding the 'Goldilocks Zone' is both a challenge and an opportunity: A reply to Soon

Annalese Bolton<sup>1,2</sup>, Ben R. Newell<sup>1\*</sup>

## **Abstract**

We are in agreement with most of the insightful points raised by Soon (2017) and note the importance of identifying the strengths, weaknesses, challenges and threats of applying behavioural science to government policies.

## **Keywords**

behavioural insights — government policy — good science

<sup>1</sup> School of Psychology, UNSW, Sydney, Australia

<sup>2</sup>NeuRA, Sydney, Australia

\*Corresponding author: ben.newell@unsw.edu.au

We thank Soon (2017) for responding so readily to our call for a debate, and for his valuable insights from the BI perspective. Soon's views are, in many respects, complementary to our own. Our intent was to raise awareness and point out that these issues are serious as they impact the very heart of what gives scientific knowledge its credibility. We have never viewed our engagement with policy makers as an 'obligation' (as Soon asserts). Our only 'obligation' is to safeguard the credibility of scientific knowledge by raising and wrestling with these issues and to assist our partners to understand the limits of our work so that these can be incorporated appropriately into government 'announceables'. Ensuring the credibility of knowledge is undoubtedly as important to policymakers, governments, and the general population as it is to scientists. Soon acknowledges these challenges and has provided examples of how Behavioural Insights Units have dealt with some of these issues. We do, however, diverge from Soon's views in the following ways.

We do not intend to imply any malevolence in regards to inappropriate power assertions. We concur with Soon that underlying such concerns within BI is likely an uncertainty regarding the boundaries of the working relationships between the scientist and the policymaker. From a scientist's perspective, we are cautious about the idea that science can be slotted into an already existing process, a mindset reflected in Soon's comment "it can be challenging to know how best to get scientific involvement into a process" (p. 17). This same idea is more broadly reflected in the position of Behavioural Insights Units within overall organizational structures. Approaching evidence-based policy making with this mindset may have helped build a greater scientific ethos in policy making, but it leaves scientists with an uphill battle. Science is at its core, a methodology – a way to gain knowledge. As such, organizations need to be prepared in advance that a commitment to evidence-based policy making likely requires a change in both

the policy making process and the organizational infrastructure (from the top down) to facilitate scientific investigation. A change which BI may indeed help to precipitate.

Soon's response to the issue of replication seems to evidence confusion between generalization, replication, and the impact of sample size. Generalization concerns the extent to which a study's findings are applicable to situations outside of the study itself. The closer a study matches the situation for which inferences are to be made, usually the better the generalizability. This is indeed a strength of trials run within the policymaking context. However, replication is different. When an experiment is re-run, the exact results differ each time. The more we replicate the same study the better we understand how widely the results vary. It is within this margin of variation that the "true" result (i.e. the true population statistic) lies. Yes, the larger the sample size the greater the power to detect a real result. But detection of a result is also inextricably tied to the methodological design and its ability to rigorously control for all possible confounding variables. For research involving human behaviour, controlling for all confounding variables is near impossible to achieve even in tightly controlled lab experiments, let alone in the inherently noisier settings in which BI trials are run. As such, BI trials come with a trade-off – often a larger sample size, but less control, and fewer opportunities to conduct direct replications.

As Soon points out, the publication of failed trials and null results is indeed much broader than the field of BI. However, many other scientific fields are publicly wrestling with this issue and devising and calling for commitment to multiple strategies to address it, such as the pre-registration of trials, pre- and post- publication review, registered reports, rigorous training in statistics and research methods and so on (e.g. Munafo et al. (2017)). Such strategies go well beyond providing the right incentives for publication as Soon suggests. Publishing the existence of null results – even if it is just a

handful (e.g. see Halpern & Service (2016)) - is a step in the right direction, but it is far from demonstrating a true commitment to addressing the issue, particularly given that the OECD (2017) found no information about approximately half the surveyed BI studies (i.e. no information was published about the studies in government or institutional reports, online reports, internal documents, academic documents, working papers, or forthcoming reports).

We agree with Soon that within the BI field, there are many opportunities to address some of these challenges, and many that have been brought to light precisely because of the widespread adoption of the BI approach. However, to ensure that the explosion of interest translates into improvements in societal wellbeing we need to be ever mindful of the strengths, weaknesses, opportunities and threats of conducting such work. We hope that as a field we can continue debating such issues and come closer to the 'Goldilocks Zone'.

## References

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