Behavioural Public Policy (2025), **9**, 338–344
doi:10.1017/bpp.2024.21

CAMBRIDGE UNIVERSITY PRESS

PERSPECTIVE

The narrative that should guide applied behavioural science

Malte Dold

Economics Department, Pomona College, Claremont, CA, USA
Email: malte.dold@pomona.edu

(Received 22 March 2024; accepted 25 March 2024)

Abstract

This article serves as a commentary on Michael Hallsworth's 2023 piece, 'A manifesto for applying behavioural science,' featured in *Nature Human Behaviour*. The manifesto was prompted by methodological, practical and normative critiques directed at behavioural science and its role in public policy. In this commentary, I argue that the manifesto presents numerous insightful and constructive reform proposals regarding the scope, methods and values in behavioural science, which can help advance the field of behavioural public policy. While there is much to agree with, I contend in this commentary that applied behavioural science can and should delve deeper into the study of socially and culturally embedded processes of *goal formation*. Additionally, it should explore the institutional conditions necessary for individuals to formulate their goals competently and in a self-determined manner.

Keywords: agency; context-dependence; goal formation; self-determination

A timely manifesto

Michael Hallsworth's 2023 'A manifesto for applying behavioural science' (Hallsworth, 2023) comes at an opportune time. In the last decade, applied behavioural science has experienced tremendous growth. Governments around the world have implemented units dedicated to the implementation of behavioural insights. The OECD has labelled the creation of these public entities a 'paradigm shift' (OECD, 2015a) that illustrates that applied behavioural science has 'taken root in many ways across many countries around the world and across a wide range of sectors and policy areas' (OECD, 2015b). While the initial momentum of behavioural public policy (BPP) was driven by the popularity of nudging, particularly in consumer protection, an overarching ambition has emerged to extend the application of behavioural insights to a broader spectrum of societal and organizational challenges in areas such as regulation, taxation, strategy and operations. Many think that behavioural insight have led to better policy-making in the wake of pressing issues, e.g., in the context of efforts to reduce impacts of the COVID-19 pandemic (Ruggeri *et al.*, 2023).

As the level of activity in BPP has increased, a series of critiques has surfaced. Some of those critiques targeted the methodological foundation of earlier behavioural studies pointing out, among other things, that experimental results could not be reproduced, observed treatment effects tended to neglect the heterogeneity of the subject pool, and the approach focused too much on listing individual cognitive biases and overlooked the ecological adaptedness of much of human behaviour. Other critiques have focused on the application of behavioural insights in policy-making and pointed out, among other things, that BPPs dealt mainly with easily manageable and quantifiable policy adjustments at the cost of addressing more substantial structural issues, that they assumed static background conditions and ignored spillover effects, and that they overpromised but underdelivered since they often produced only temporary local effects and were difficult to scale up. Finally, a number of ethical concerns have been raised that accused BPPs of being elitist and paternalistic in that they didn't pay sufficient attention to people's own goals and strategies.[1]

Hallsworth's manifesto takes these and other points of criticism seriously. While he defends behavioural science and its application in politics and organizations against simplistic versions of those critiques, Hallsworth takes them as a starting point for ten reform proposals that 'aim to provoke debate as well as agreement' (p. 311). His proposals fall into three categories: *scope* (range and scale of issues in behavioural sciences), *methods* (techniques and resources of behavioural sciences) and *values* (principles and standards of behavioural scientists). Hallsworth's proposals extend beyond suggestions for technical or methodological advancements; they encompass inquiries into epistemology, identity, politics and praxis of the behavioural sciences. A recurring theme of his manifesto is 'the need for self-reflective practice that is aware of how its knowledge and approaches have originated and how they are situated. In other words, a main priority for behavioural scientists is to recognize the various ways that their own behaviour is being shaped by structural, institutional, environmental and cognitive factors' (p. 317). Hallsworth concludes that there 'needs to be a change in the narrative about what the field does and could do – a new set of ambitions to aim for.' (p. 317).

A call for more and different theorizing

The manifesto is concise, yet it is impressive in its breadth, referencing nearly 180 articles. Hallsworth is an expert in applied behavioural science, well-versed in the ongoing debates of the field. The middle part of the manifesto deals with methodological issues and is particularly rich and insightful. Here, Hallsworth argues convincingly for a perspective in the applied behavioural science that 'sees the system': 'Many important policy challenges emerge from complex adaptive systems, where change often does not happen in a linear or easily predictable way, and where coherent behaviour can emerge from interactions without top-down direction. There are many examples of such systems in human societies, including cities, markets and political movements (see, e.g., Boulton *et al.*, 2015). These systems can create "wicked

[1]See Rizzo and Whitman (2019) for a summary of the aforementioned points of criticism.

https://doi.org/10.1017/bpp.2024.21 Published online by Cambridge University Press

problems" – such as the COVID-19 pandemic – where ideas of success are contested, changes are nonlinear and difficult to model, and policies have unintended consequences' (p. 312). Ideally, complexity thinking can help 'improve behavioural science so that it can exploit leverage points, model the collective implications of heuristics, alter specific features of systems to create wider changes, and understand the longer-term impact on a system of a collection of policies with varying goals' (p. 313). I agree with Hallsworth that incorporating insights from complexity theory has the potential to challenge the prevailing behavioural science approach, including a simplified application of RCTs that may encounter challenges in complex adaptive systems whose many shifting connections can make it difficult to keep a control group isolated. 'Seeing the system' can prevent policymakers from hastily concluding that individuals are acting irrationally and subsequently attempting to correct perceived biases by disrupting the system. Acknowledging complexity also has relevance for conversations about heterogeneity in the results of behavioural scientific studies. Hallsworth correctly points out that 'the complexity of human behaviour creates so much statistical noise that it is often hard to detect consistent signals and patterns. The main drivers of heterogeneity are that contexts influence results and that the effect of an intervention may vary greatly between groups within a population' (p. 314).

Hallsworth's call for more or a different type of theory in behavioural sciences extends to advances in connecting and systematizing the many biases that have been listed in the literature over the past few decades. He argues convincingly that '[examples] of individual biases are accessible, popular and how many people first encounter behavioural science. These ideas are incredibly useful, but they have often been presented as lists of standalone curiosities in a way that is incoherent, reductive and deadening. Presenting lists of biases does not help us to distinguish or organize them. Such lists can also create overconfident thinking that targeting a specific bias (in isolation) will achieve a certain outcome.' (p. 315). Importantly, 'focusing on lists of biases distracts us from answering core underlying questions. When does one or another bias apply? Which are widely applicable, and which are highly specific? How does culture or life experience affect whether a bias influences behaviour or not?' (p. 315). I concur with Hallsworth on the practical significance of these questions, especially when confronted with the challenge prevalent in BPP of extending an intervention to different contexts.

Behavioural science as a lens

In the remainder of this comment, I avoid further summarizing the many positive proposals Hallsworth makes in terms of the scope and values of behavioural science. Instead, I want to focus on what I found missing – or at least underemphasized – in the manifesto. Hallsworth argues that we need to 'replace the dominant metaphor of behavioural science as a tool. Instead, behavioural science should be understood as a lens that can be applied to any public or private issue' (p. 311). Agreed. But what should be the guiding narrative if we use behavioural science as a lens? To answer this question, we need to zoom in and identify the core contribution of behavioural science to academic discussions and practical discourse. Here, I again agree with Hallsworth's characterization that behavioural science has collected convincing

https://doi.org/10.1017/bpp.2024.21 Published online by Cambridge University Press

'empirical evidence of the importance of non-conscious drivers of behaviour,' showing that '"heuristics and biases" influence judgement and decision-making,' and this suggests that 'rapid, intuitive and non-conscious cognitive processes sit alongside deliberative, reflective and self-aware ones'; taken together, behavioural science challenges 'explanations that foregrounded the role of conscious attitudes, motivations and intentions in determining actions' (p. 310). To this list, I want to add that behavioural science suggests that it is the situational, social, and cultural context that we are embedded in which influences our decisions in subtle ways we are mostly unaware of.

In applied behavioural science, particularly in BPP, it has been standard to follow the logic of traditional welfare economics: assume a given policy goal X, then identify (ideally) efficient means to achieve X, with the means being a mix of bans, regulation, taxation, and subsidies that change incentives and thus affect people's behaviour. While standard welfare economics applies mainly to questions of externalities, behavioural welfare economics – whose logic permeates much of the BPP discussion today – addresses internalities, i.e., unaccounted for costs an individual imposes on her future self (Oliver, 2023). The same type of 'static' thinking applies here (Dold and Rizzo, 2021): assume a given individual (or group) goal Y, what are efficient means to achieve Y, with the means being policies that change the choice architecture by making use of incentives or psychological cues in the decision environment (such as the framing or the ordering of items). The behavioural approach thus understood 'can enhance the use of standard policy options (for example, revealing new ways of structuring taxes) rather than just acting as an alternative to them.' (p. 311). One might call this the pragmatic route of applied behavioural science (Chetty, 2015).[2]

I don't doubt that this pragmatic route can lead to the identification of more efficient policies; yet, I believe that there is a danger that it misses some deeper implications of the core contribution of behavioural science. Both approaches, the standard approach and the behavioural approach aim at changing behaviour given a goal X on the political level or a goal Y on the individual level. Both approaches remain largely silent on the question where those goals come from. The standard approach typically neglects a deeper analysis of the quality of the political process that led to X; and the behavioural approach largely sidesteps the discussion of how individuals form and select Y in the first place. This is striking since the behavioural sciences, in particular psychology, have a lot to say about goal formation (see, e.g., Sheldon, 2014, Dold *et al.*, 2023). In line with the core contribution of behavioural science identified above, studies suggest that non-conscious priming effects play a key role in goal formation and selection (Bargh and Ferguson, 2000). Moreover, goal formation and selection are socially and culturally conditioned. Prevailing customs, norms, and institutions shape our cultural mental models, i.e., our shared interpretive frameworks that include social identities, narratives, and worldviews, which in turn affect the

[2]To be fair, Hallsworth doesn't argue that this pragmatic perspective exhausts the behavioural lens; he also doesn't reduce the behavioural approach to the achievement of individual goals. However, I give this stylized summary to make a point that I think still holds in the context of Hallsworth's more nuanced understanding of applied behavioural science, *viz.*, the implications of the context-dependent nature of people's goal formation and selection are more far-reaching than his manifesto is willing to admit.

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process of goal formation and selection (Dold and Lewis, 2022). Cultural mental models 'shape the way we attend to, interpret, remember, and respond emotionally to the information we encounter and possess' (DiMaggio 1997, p. 274). We possess a range of mental models that we utilize to interpret specific situations (Swidler 2001); the selection of a particular model in a specific context is 'guided by cultural cues available in the environment' (DiMaggio 1997, p. 275). Crucially, we are (mostly) unaware of the goal-shaping power of those mental models and of the cues that activate them in any given situation (Hoff and Stiglitz, 2016, p. 39).

Referring to DiMaggio and Markus (2010), Hallsworth notes that 'norms, rules, practices and culture itself can emerge from aggregated social interactions; these features then shape cognition and behavioural patterns in turn' (p. 313). My point is *not* to show that Hallsworth isn't cognizant of this body of literature; he surely is when he says, referring to Lamont *et al.* (2017), that 'cognitive processes are shaped by specific contexts, thereby unlocking new ways for behavioural science to engage with values and culture' (p. 316). Instead, I want to argue that its implications for the discussions in applied behavioural science, particularly policy discussions, are more far-reaching than his manifesto is willing to admit. If it is true that mental models are lenses through which we see the world, they are crucially relevant to our goal formation and selection, but we are largely unaware of them, then shouldn't a core takeaway be that applied behavioural science launches a debate about subtle social and cultural influences and ways of making people aware of their cultural mental models? There are good arguments that liberal societies built on the ideals of individual freedom and autonomy have a responsibility to create conditions for individuals to form goals in a competent and self-determined way (Christman, 2009). Together with others (see, e.g., Hargreaves Heap, 2023, Dold and Lewis, 2023, Lecouteux and Mitrouchev, 2023), I have argued that this perspective shifts the policy focus away from outcome considerations (how to change individuals' behaviour to achieve Y) to process considerations (how to empower individuals to formulate Y in a self-determined way). The crucial difference is that BPP thus understood is not about behaviour change, at least not *prima facie*. Instead, it is about targeting the quality of people's goal formation processes by increasing their awareness of the context-dependent nature of said processes and the agentic capability of selecting goals in a self-determined manner (Dold *et al.*, 2023).

In the manifesto, Hallsworth mentions that boosts, self-nudges, and nudge+ are forms of agency-enhancing interventions (p. 316). Referring to Lorenz-Spreen *et al.* (2021), Hallsworth argues that current approaches 'need to be complemented by attempts to increase agency (the "how" factors), as in a recent study that showed how boosts can be used to help people to detect micro-targeting of advertising.' (p. 317). While being a step in the right direction, it is important to note that boosts are interventions that help people achieve given goals more competently and become aware of *situational* context effects, but they largely sidestep more intricate discussions of social and cultural influences (Dold, 2023). Behavioural science can and should do more to study socially and culturally embedded processes of goal formation and the type of institutional conditions, including the *material resources* and *civic freedoms* needed for people to form their goals in a competent and self-determined way (Ryan and DeHaan, 2023). This doesn't mean that the aim of applied behavioural

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science is to turn citizens into self-reflective philosophers. As Hallsworth rightly notes, 'people make rational use of their limited cognitive resources. Given that there is a cost to thinking, people will look for solutions that balance choice quality with effort' (p. 315). As academics and practitioners of behavioural science, we don't know where people will land on this trade-off. However, to make the trade-off between quality and effort in a self-determined manner, citizens need to be given a chance to become aware of the situational, social, and cultural influences on their goal-formation processes. I believe that such an agentic perspective should be stressed more and be a crucial part of the narrative that guides applied behavioural science.

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Cite this article: Dold, M. (2025), 'The narrative that should guide applied behavioural science', *Behavioural Public Policy* **9**, 338–344. https://doi.org/10.1017/bpp.2024.21