Assumptions of irrationality can lead to bad behavioural science

Studies in psychological and behavioural sciences are often framed around understanding why the subjects of research deviate in irrational ways from a preferred outcome when making decisions. **Jens Koed Madsen** *and* **Lee de Wit** *argue that this core assumption requires re-examination if the field is to design effective and contextualised interventions.*

Psychological and behavioural studies try to understand how and why people act the way they do – how do fishers decide where and what to fish, what are the psychological underpinnings of polarisation, what are the conditions for societal welfare and well-being? Theories and findings from the field are in turn used to guide interventions meant to influence behaviour.

These interventions are profoundly shaped by how we conceptualise and evaluate human decision-making. It is important we get these assumptions right, for as Herbert Simon argued inaccurate perceptions can lead to solutions that either fail, or have unintended consequences. Evaluations of behaviour in psychological and behavioural sciences have typically relied on the model of 'homo economicus', by which people are assumed to act as consistently rational beings who are narrowly self-interested and have perfect information about the choice context.

While homo economicus is a caricature, it is a tremendously useful way to abstract away the messiness that is human behaviour. Instead of considering individual variation, socio-cultural differences, or competing aims, it provides a simple template for evaluating behaviour. This model has underpinned much of the psychological and behavioural sciences. For example, Daniel Kahneman's foundational work and a flurry of follow up studies identifying and categorising and listing 'cognitive biases' that deviate from this norm.

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However, basing the evaluations on the normative assumptions of homo economicus may demonstrate a different caricature of humanity: homo irrationalis. The idea that people are fundamentally and predictably irrational who often and systematically deviate from the normative standards set out by homo economicus. Accompanied by a rich and seductive vocabulary offering the appearance of comprehensive explanation, homo irrationalis functions as a retrospective framework that provides a misleading impression of explanatory power.

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In line with a growing number of critiques of psychological and behavioural sciences we argue it is time to reassess these core assumptions and reject an approach that simply lists biases and ignores social context.

First, as ‘discovered’ heuristics and biases can be mutually exclusive. For example, different biases point in contradictory directions, such as “optimism bias” and “negativity bias” or “recency bias” and “anchoring bias”. If standard assumptions can produce contradictory explanations after the fact, it is difficult to see them as anything but descriptive. This interpretative flexibility also becomes very difficult to falsify and thus it cannot be said to be scientific.

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Second, several studies indicate that supposed biases are reasonable when understood from the subjective perspective of the people who make the decisions. Anchoring bias can be entirely reasonable given bounded choices. This may also be the case for other heuristics and for classic reasoning ‘failures’, such as Wason’s Selection task. That is, if we understand what people are trying to do and the resources they have at their disposal, many departures from rationality diminish or disappear. Further, experimental tasks in psychological research often use artificial scenarios that underestimate people’s ability to reason in everyday situations. Researchers and practitioners should therefore avoid assuming irrationality as the primary explanation for observed behaviours and instead explore alternative causes.

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The response to COVID-19, particularly in the United Kingdom, illustrates the pitfalls of assuming human irrationality. Early in the pandemic, the UK government was warned about “behavioural fatigue”—the idea that people would not comply with lockdowns for extended periods. This assumption, based on a rhetoric of irrationality, contributed to delayed lockdown measures. However, subsequent compliance with lockdowns and high vaccine uptake demonstrated that people could adapt their behaviours when actions were clearly linked to pandemic control.

Third, we should consider the broader ethical and moral apparatus surrounding the setting of normative standards. It is a deeply moral issue, as it enables researchers to pass judgment on whether an action is reasonable and rational. In line with this, it is worth reflecting on the extent to which normative standards rely on cultural assumptions. Psychological and behavioural sciences has been critiqued for sampling from and basing theories on people from so-called WEIRD (Western Educated Industrialised Rich, and Democratic countries), although this definition itself may be subject to debate. We suspect that psychological and behavioural sciences may find itself in need of similar discussions, much like Philippa Foot has initiated in philosophy in trying to tackle issues of normativity in ethical and moral philosophy.

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So, what do we do instead? We do not claim that we have a perfect solution to the challenge of findings appropriate normative standards against which behaviour can be evaluated. We argue that behavioural science should begin with the assumption that humans are fundamentally reasonable – at least, until it has been proved otherwise after consideration of composite goals, affordances, and socio-cultural context has been taken into consideration.

This means recognising that people’s actions can be seen as satisfactory ways to achieve goals within specific contexts, even if they are not optimal. This has significant implications for the application of behavioural science, suggesting that interventions

should be developed with a deep understanding of the contexts in which people operate and should involve the participation of those affected by these interventions. Moreover, it suggests that psychological and behavioural sciences should engage with the people we are studying and co-create explanations, rather than simply evaluating from afar. This opens many exciting opportunities, while also pointing toward some deep conceptual challenges for the field.

Critically, this discussion of normative standards and invitation to co-collaboration with subjects should not be seen as an invitation to epistemic relativism. It is vital that psychological and behavioural sciences provide normative standards that can be used to gauge behaviour – such a standard should measurable, falsifiable, and testable. Without such a standard all behaviour could be seen as equally reasonable. This is clearly not what we intend. Instead, we hope the discussion will inspire a philosophical, methodological, and normative discussion of how we should evaluate behaviour and a shift from treating the subjects of behavioural science as targets to partners. By doing this, we will be better able to produce effective and contextually relevant theories and interventions. Ultimately this is as a core challenge for the field.

This post draws on the authors' paper, Behavioral science should start by assuming people are reasonable, published in Trends in Cognitive Science.

Image credit: Theodore Lane, Theatrical Pleasures, Plate 1: Crowding to the Pit, via The Met (Public Domain).
