Where behavioural biases STEM from

Behavioural biases are not that simple to grasp. One problem is that many frameworks categorise them but ignore what is driving specific behaviours. **Dima Sayess**, **Fatima Koaik**, **Simran Saraf**, **Shaaref Shah** *and* **Paul Dolan** *present the STEM framework, which captures the four drivers of human behaviour: society, thoughts, emotions and motivation. They encourage decision-makers to use the framework to consider biases and solutions in ways that are fit for purpose.*

In the realm of decision-making, it is well established that behavioural biases can undermine the effectiveness of even the best intentions. While many frameworks categorise the different types of biases, they are agnostic to the context in which these biases occur. But context matters. The very same type of bias can arise from different drivers of behaviour, which will have important consequences for how best to overcome that bias. We therefore present the STEM framework, which encourages decision-makers to consider the biases and their solutions in ways that are fit for purpose.

The acronym STEM captures the four drivers of human behaviour: **society**, **thoughts**, **emotions**, and **motivation**. Consider risk aversion. This could result from fearing the social consequences associated with a bad outcome, the thoughtful compartmentalisation of a potential loss in comparison to a reference point, the anticipation of emotional intensity associated with a certain outcome or the lack of motivational perspective in setting long-term goals. We here explain the four drivers of biases in detail and develop the example of risk aversion. The descriptions will help decision-makers to identify the contextual drivers that might fuel their biases, and which actions and solutions they could take to counteract them.

Society

Some biases can arise from our ingrained tendencies to change or adapt our behaviours based on social norms or impression management concerns, that is, the impression you make on others. We may do what others are doing and be afraid of standing out. We might avoid risky yet potentially highly profitable assets for social reasons if others are opting for safer but lower-yielding bets. Questions that can help decision-makers identify

whether a certain behaviour is affected by social concerns include: Is the decision influenced by social expectations around what other people do and/or approve of? To what degree are group dynamics influencing the chosen behaviour? Does the need for social connection and social acceptance influence the decision to engage in the behaviour?

To combat biases arising from the social dimension or, analogously, to make use of social elements to drive desired behaviour, solutions can focus on making behaviour visible or invisible to others (triggering or alleviating social image concerns); highlighting the behaviour of others (descriptive norms) or others' approval (injunctive norms); and enabling actions as a collective or group. To overcome risk aversion in making investment decisions, then, people could join groups of investors to establish supportive norms.

Thoughts

Some biases have thoughtful drivers that stem from our mental shortcuts (errors in judgments) and cognitive limitations. Cognitive drivers can act as barriers when individuals, influenced by limited cognitive resources, exhibit resistance or reluctance to adopting new behaviours or perspectives. For instance, when driven by cognitive processes, risk aversion can influence decision-making by emphasising the pursuit of safer options and can lead to suboptimal investing. Questions that can help decision-makers identify whether biases affecting behaviour can be attributed to thought-based barriers include: How often are decisions reassessed based on new information or changing circumstances? To what extent does the complexity of the decision overwhelm cognitive capacity? How thoroughly has information been processed before arriving at the decision?

To mitigate such a behavioural pitfall associated with the cognitive dimension of the STEM framework, individuals and organisations must understand the power of cognition to induce more rational thinking. This can be done by increasing cognitive reflection and debiasing individuals in ways that allow them to reflect on their financial decisions and challenge their initial instincts.

Emotions

Emotions often cloud judgement. In the case of risk aversion, emotions play a significant role in shaping risk perceptions, influencing decision-making and leading individuals to prefer options that minimise negative emotional experiences. The fear of negative emotions, such as anxiety or regret, can contribute to extremely cautious behaviour, where individuals prioritise emotional comfort over potentially greater gains associated with riskier decisions. Questions that can help decision-makers identify that emotions are the main influencer in a particular context include: How might emotions and anticipated emotions shape the way a situation is perceived and approached? Are any identifiable recurring emotional patterns affecting decision-making?

To overcome this barrier, behavioural solutions could equip individuals with the anticipated emotions after engaging in a certain behaviour. For example, a solution that frames information in a positive and optimistic light can help counteract the negative emotional associations with risk. Highlighting the potential gains, personal growth and positive outcomes associated with taking measured risks could lead to more substantively rational decisions.

Motivations

Motivational barriers are deeply rooted in our desires and aspirations, which can lead to suboptimal decisions when individuals are hesitant to step outside their comfort zones and engage in activities that involve uncertainty. Understanding motivational drivers behind risk aversion is crucial for designing strategies that effectively balance the desire for achievement with the avoidance of exaggerated anticipated loss. Questions that can help decision-makers identify if biases within a particular context are motivational in nature include: Are there external incentives or rewards associated with a particular behaviour? How might personal motivations influence the direction of the behaviour?

To address such behavioural barriers, solutions could focus on leveraging the power of motivation. In the context of risk aversion, a potential solution could be to provide immediate rewards or recognition for engaging in desired behaviours. Tailoring context-specific behavioural solutions entails creating an environment that fosters motivation and stimulates a more deliberate and goal-oriented decision-making process.

Conclusion

Context not only shapes behaviour, but also affects how well-established biases and barriers play out. The effectiveness of interventions will depend on understanding and addressing biases that are more alert to the nuances of each situation. By focusing on the four drivers of human behaviour – social, thoughtful, emotional and motivational – the STEM framework empowers decision-makers to tailor behavioural solutions to the intricacies of the context. In a world where adaptability is paramount, embracing the dynamic nature of human behaviour through frameworks like STEM fosters a more informed and effective decision-making process.

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