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**A NEW
MANIFESTO
FOR
BEHAVIOURAL
SCIENCE**



1. INTRODUCTION

Behavioural science appears to have come from almost no-where, to a topic that is dominating the business of how we understand human behaviour. The last few years have seen a huge increase in interest in behavioural science, championed of course by Daniel Kahneman, but with a wide range of other voices including Richard Thaler, Cass Sunstein, Dan Ariely and Gerd Gigerenzer.

But just what is behavioural science? The reality is that there is no single clear definition that is widely accepted. But, as is often the case in these circumstances, there are a range of generally agreed assumptions about the discipline. This report pieces together guidance on what behavioural science is commonly accepted to cover. Importantly, we also provide the case for a radical manifesto for a new school of thought for behavioural science.

Why a new school of thought? Because the current market is in danger of taking a very narrow view of human behaviour, which does not fully reflect the breadth and depth of human experience. We consider there is a need to disrupt the current thinking in this space, and propose a much more creative, diverse and rounded school of applied behavioural science.

To get there, we go through each of the elements that are commonly (but not always explicitly) assumed to underpin the discipline of behavioural science and outline a new perspective. This is then used to articulate an emerging school of thought for behavioural science which can be used to shape the practice.

The different elements and the associated manifesto for a new thinking are outlined in turn below.

2. THE PSYCHOLOGY OF JUDGEMENT AND DECISION MAKING IS CORE

At the heart of the discipline of behavioural science is the well-documented psychology discipline of judgement and decision making. Its founder can be considered to be psychologist Herbert Simon, who was among the first to challenge the dominant model of 'economic man'.¹

This was the notion that consumers are equipped to make rational, optimal choices. Instead we all operate in the realms of 'bounded rationality', using 'rules of thumb' (heuristics) to make decisions rather than following strict rules of optimization. We do this because of the complexity of situations and our inability to process all the available data that would be required to calculate the utility of every alternative action.

About 15 years after the publication of Simon's Nobel prize winning work, Tversky and Kahneman started to produce a huge (and ultimately also Nobel prize winning), body of work which provided detailed evidence of systematic and predictable biases that influence judgment. The work of these psychologists provided the basis for the modern understanding of judgment and decision making.

This area has come to routinely be called 'behavioural economics'. Of course, the effort to incorporate more 'psychological' elements into economic models is not new. There has long been a recognition by economists that economic models do not always properly reflect human behaviour. For example, in 1898 Norwegian-American economist and sociologist, Thorstein Veblen, criticized economics for excessive use of the notion of rationality. The description of this effort as 'behavioural economics' has come into use to describe this sub-genre of economics only in the last decade or so.

Daniel Kahneman himself suggests that the extent to which the term behavioural economics is used is a misnomer:

The "culprits" in the appropriation of my discipline are two of my best friends, Richard Thaler and Cass Sunstein. Their joint masterpiece Nudge is rich in policy recommendations that apply psychology to problems — sometimes common-sense psychology, sometimes the scientific kind. Indeed, there is far more psychology than economics in Nudge. But because one of the authors of Nudge is the guru of behavioral economics, the book immediately became the public definition of behavioral economics. The consequence is that psychologists applying their field to policy issues are now seen as doing behavioral economics. As a result, they are almost forced to accept the label of behavioral economists, even if they are as innocent of economic knowledge as I am. Furthermore, these psychologists are rewarded by greater attention to their ideas, because they benefit from the higher credibility that comes to credentialed economists.

The psychology of 'judgement and decision making' has effectively now been relabelled behavioural economics. This is often regarded to be at the core of 'traditional' behavioural science.

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There are a number of key points which frame our new manifesto. First, we assert that behavioural science is effectively psychology. Whilst the core of behavioural science is the sub-topic of judgement and decision making, we absolutely have the freedom to draw on the wider body of psychology literature to solve client problems.

Second, within Behavioural Science there are different points of emphasis and belief systems. There is no single heritage or agreed understanding of what behavioural science is, as exists in the natural sciences such as physics and biology. This supports the notion that it is perfectly reasonable to draw on a wide cross section of psychology literature, rather than a narrow subset.

Further, it is the practitioner's responsibility to determine how much value any of the academic literature has for a given client challenge. Part of this evaluation is determining the balance between explanatory value [of more interest to academics], versus the opportunity for generating tangible action and change. Whilst much of the work on heuristics and biases (from judgement and decision making) helps to explain behaviours, but as we know, can be difficult to apply this in a practical way.

Much market research work can be informed with the use of psychology frameworks that detail our mental processes, helping us to frame the design and analysis of the research programmes. As with literature, it is the task of the practitioner to determine what academic insights and frameworks can be used to solve a client challenge. Therefore, we need to cast our nets wide rather than be limited to relatively small subset of the literature.

3. WE HAVE TWO MODES OF PROCESSING

A commonly accepted principle of behavioural science is dual process theory. This is the notion that humans make judgements and decisions using either an implicit, unconscious process or an explicit (controlled), conscious process.

This is nothing new. More than a century ago the founder of psychology William James, proposed that there were two kinds of reasoning (which he labelled 'associative' and 'true' reasoning).ⁱⁱ Even earlier than that, economist Adam Smith wrote that an individual's behaviour was characterised by a struggle between what he called the 'passions' and the 'impartial spectator'.

More recently, Daniel Kahneman further differentiated the two styles of processing, calling them intuition and reasoning. Intuition (or System 1), was determined to be fast and automatic. He considered this to be based on formed habits and, as such, difficult to change or manipulate. Reasoning (or System 2), he considered slower and more volatile, as it is subject to conscious judgments and attitudes.ⁱⁱⁱ

Dual process theory is a critical part of the philosophical and empirical basis for 'judgement and decision making', as it provides the explanatory basis for how we use 'mental shortcuts' to make decisions. The lack of rational engagement of 'System 1' means we are able to operate in a semi-conscious (or non-conscious) way, as otherwise we would struggle to process all the different information inputs.

It should be noted that dual process theory is not without its critics. Psychologist Professor Jonathan Evans, for example, has challenged the degree that this provides an adequate explanatory framework for human behaviour.^{iv}

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Whilst it is tempting to think that some decisions are purely 'System 1', this is in danger of creating a real over-simplification of human behaviour. Most consumer behaviour clearly moves between System 1 and System 2, and there is not a simple distinction between these two processing modes. The nature of applied work is such that we are often looking at behaviours holistically, rather than examining the way in which individuals respond to very particular types of information and questions in laboratory conditions. So, for example we may be less conscious when we buy toilet cleaner, rather than choosing a school for our child (one would hope anyway). But even when buying toilet cleaner, we may engage a more reflective mindset (is it environmentally friendly, is the price right and so on).

Our new manifesto considers that some buying situations engage a more System 1 than System 2 mindset – but we cannot guarantee that all consumers will operate in the same way or that any individual will operate only using a particular mindset. Each situation needs to be judged on its own merits, with the ‘ecological validity’ of how we expose consumers to an artificial choice environment evaluated accordingly.

In summary, dual mode processing is one among many ways we have to account for human behaviour. It’s a particularly useful framework for some areas such as low involvement purchasing behaviour. However, it is important not to overstate the importance and to recognise the nuances of the framework.

4. WE LACK INSIGHT INTO OUR OWN MENTAL PROCESSES

One of the key principles in traditional behavioural science is that there are limits to the ability of humans to provide accurate accounts of their own mental processes. The touchstone for this was an influential paper by Nisbett and Wilson (1977)^v who argued that people have “little or no introspective access” to their higher order cognitive processes. Their paper was based on a wide-ranging review of evidence indicating that people cannot correctly report on the processes underlying behaviours such as judgment, choice, inference, and problem solving. Despite this, when people are asked to report on their mental processes, Nisbett and Wilson claim that people offer a plausible explanation, and in so doing “seem” to be “unaware of their unawareness”.

More recent work has questioned such a stark assessment of limits of human self-reporting. A recent critical review^{vi} has queried the evidence from these studies arguing that they cannot be taken as strong evidence that decision-makers are not conscious of their own decision-making processes, as they are effectively a product of the experimental design rather than a real effect. Nevertheless, a generally accepted principle of behavioural science is that much of our decision-making is outside of the limits of conscious awareness.

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This is potentially one of the most important issues for us to account for, as it has often been used to criticise market research. If people are not able to give an account of their mental processes, then we cannot ask them to do so in surveys.

However, it is easy to think of awareness of mental processes in a very binary way. Much of cognitive science is based on the assumption that mental processes cannot be accessed, yet there is an increasing evidence base that it is not as straightforward as that. The market research industry has long known that carefully constructed research design and innovative techniques can help consumers provide a coherent and legitimate account of why they acted in a certain way.

Second, we need to make the distinction between mental processes (harder to access) and lived experience (easier to access). Market research focuses on the latter, not the former. Some market research approaches use indirect techniques to get there (e.g. regression analysis, conjoint). There is certainly value in using both lived experience and mental processes to shape consumer strategy. Both have value and fulfil different roles.

Finally, it's important to note that survey tools have been shown to relate to behavioural outcomes. Ipsos, for example, has a strong track record in identifying the relationship between product, copy advertising testing and subsequent behaviour. We need to know when to ask consumers questions and when to use other means at our disposal; for example, asking consumers to evaluate something in terms of their liking for it is perfectly reasonable. Establishing *why* they like it may require may require additional tools for a valid response. The point is that we need to use integrative techniques to get to consumer behaviour and understanding.

5. THERE IS A BIOLOGICAL BASIS TO BEHAVIOUR

The concept of neuromarketing (the application of neuroscience to marketing research) uses a broad range of tools to measure physiological response. These include functional magnetic resonance imaging (fMRI) to measure changes in activity in parts of the brain; electroencephalography (EEG); steady state topography (SST) to measure activity in specific

regional spectra of the brain response; sensors to measure changes in physiological state, also known as biometrics, including heart rate, respiratory rate, and galvanic skin response; facial coding to categorize the physical expression of emotion; and eye tracking to identify focal attention.

The discipline is underpinned by two key assumptions. First, that our behaviours are explainable through an understanding of our biological composition. French physician Pierre Broca played a major role in this through his seminal work on brain-damaged patients, identifying localisation of language processing, speech production, and comprehension. The principle of localisation is important for neuroscience as a tool to be able to act as an explanatory basis for behaviour. If we understand brain function, then we understand behaviour.

The second (related) assumption is that our behaviours are largely the result of non-conscious processing of information in consumers' brains.^{vii} In fact, there is a strong sense that much, if not all, of our behaviour is determined by our neuronal activities and that this has primacy over our conscious 'rationalisation' of what underpins our behaviours. The evidence for the primacy of the brain as a determinant of our behaviours is often attributed to the work of Benjamin Libet.

In a famous series of experiments, Libet seemed to show that our brain makes decisions to act before the mind is aware of them, so they are effectively not our decisions at all. As ever, there continues to be significant debate as to the veracity of these claims. Increasing evidence of the plasticity of the brain questions the premise

of localisation. The Libet experiments can be considered to be a very limited conception of what constitutes an action in everyday life.

Nevertheless, the notion that consumers do not have insight into their own mental processes is, perhaps, what makes neuroscience so attractive for behavioural science. It appears to promise access to an 'objective' measurement of our preferences, beliefs and attitudes without recourse to our conscious (and therefore subjective) selves.

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We are at a very early stage in the evolution of neuroscience and there is general agreement that we have much to learn. Our new manifesto considers that neuroscience can be helpful in terms of measuring micro-responses to small changes in the environment. These may be difficult for consumers to be aware of, or accurately self-report, but can be picked up using a variety of implicit measurement tools.

This means that neuroscience tools are helpful to determine consumer response to different elements of an item – such as a product, pack or advertising copy. Further, by linking their response to behavioural science based explanations we can start to interpret the reason for the reaction – e.g. if part of the advert was based on a particular heuristic or priming effect.

There is limited evidence of a relationship between neural measures and behavioural outcomes. This is unlike many explicit measures used across market research, which can have a very strong correlation with behaviour. Our new manifesto suggests that we carefully use explicit (or indirect) measures when we are asking

consumers to evaluate something, but use neural measures to explore small changes in the environment that may influence attention and arousal.

6. BEHAVIOUR IS KEY

Traditional behavioural science practitioners generally consider it to be more important to measure what people 'do' rather than what people 'say'. This is due to a concern about a gap between these two things.

To this end, ethnography is often used as the key means for capturing a very granular understanding of behaviour. Behavioural science is then typically used as an 'analysis framework' for those behaviours. Experts will typically undertake an inductive analysis of the collected data to create hypotheses of the underlying 'heuristics and biases' which appear to be determining the behaviours of interest.

Of course, as technology becomes an increasing part of consumers' lives, so there is more data than ever capturing a wide range of behaviours. It is possible to capture behaviours in a wide range of ways – from fitness devices and social media, to more intentional data collection such as measurement of online behaviours across devices and via the attachment of sensors to everyday household objects.

Questionnaires are also often used to capture behaviour (market sizing and share studies) but care is taken that these are not used for low involvement/poor recall activities.

The focus on behaviour is part of a wider debate about the relationship between attitudes and behaviours. Market researchers would generally consider that the former shape the latter, and traditional behavioural scientists would suggest that behaviour is really all that matters.

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As Matthew Salganik of Princeton University points out,

“Researchers who study dolphins can’t ask them questions. So, dolphin researchers are forced to study behaviour. Researchers who study humans, on the other hand, should take advantage of the fact that our participants can talk.”

He goes on to point out that some of the most important social outcomes and predictors are internal states, such as emotions, knowledge, expectations, and opinions. Internal states exist only inside people’s heads, and sometimes the only way to learn about internal states is to ask.

We might eventually be able to derive that a customer was unhappy about their recent experience by observing the way in which they stop spending money and take their business elsewhere. But it may be quicker, easier and more profitable to simply ask them. We will not get there by observation alone.

The point we make in our new manifesto is that there is a complex relationship between attitudes (and cognitions) and behaviour. There are some instances where attitudes shape behaviours, and others where behaviours shape attitudes. The role of the practitioner is to understand the subtlety and complexity of this dynamic and, through this, determine what the right tool is to measure and understand.

7. A NEW VISION FOR BEHAVIOURAL SCIENCE

Many of us have read and been fascinated by the popular behavioural science literature (such as Kahneman’s *Thinking Fast and Slow*) and sense the value of it, but are unclear what we *actually do with it*. It is a classic case of academic discipline struggling to move beyond the confines of the laboratory. This is where practitioners need to step up and define the discipline of Applied Behavioural Science in a way that offers tangible value to help us solve client challenges. Equally, this is only going to offer tangible value if we can do this at scale for clients, because their needs are both diverse and global. This means we cannot leave it to a small group of highly qualified quasi-academics, it needs to be in the hands of a competent practitioner workforce.

There have clearly been some successes by applying a traditional model of ‘behavioural economics’ to consumer behaviour, particularly in the public policy arena. But how much of this is really the rigorous result of experimental methods based on hypotheses from the academic literature? As Tim Hartford pointed out *“There is something faintly unsatisfying about how these policy trials have often confirmed what should have been obvious. One trial, for example, showed that text message reminders increase the proportion of people who pay legal fines... It is obvious stuff. Unfortunately, it is obvious stuff that is often neglected by the civil service.”*

The danger, it seems, is that a small group of highly educated individuals use a veneer of academic literature to create hypotheses to describe consumer behaviour, but it quickly dissipates into something very normal and familiar when we start to apply it. If this is the case, then the value of behavioural science as an applied discipline will quickly fade away as the value will be limited.

Instead, what is needed is a new manifesto for behavioural science. We need a behavioural science that:

Offers real tangible value for organisations:

Practitioners need to step up and start dissecting what is valuable and what should be left to the academics.

Scalable: Organisations operate at a global scale – any practice concerning consumer behaviour needs to reflect this. Behavioural science, as it is commonly practiced, is limited in the scale it can operate, limiting the potential for any global brand that needs to be able to empower teams across product lines, business units and geographies.

Operationalisable: There is little point of practitioners in a discipline that cannot be operationalised. There are many aspects to this, but crucially behavioural science needs to be something that practitioners across the business (and at all levels) can both understand and readily integrate into their client work.

Is bold: There are certain orthodoxies related to the way in which behavioural science is currently practiced in applied settings which play a little too much homage to particular academic schools of thought concerning human behaviour. Given that market research is the only discipline that focuses on consumers' 'lived experience', we need to agree what the boundaries and conditions are, not only for the existing repertoire of techniques but also for the new assets of behavioural science.

8. A NEW MANIFESTO

At our hearts we are practitioners, applying and adapting academic understanding to make a difference to our clients. We respect the role of academics but also have self-respect for our ability to take the best of the advances in human understanding from these academics and apply that to our client work. Not everyone will agree with this manifesto, but we are interested in making a difference to our clients' business, not quasi academic plaudits.

The core principles that form the core of our behaviour science manifesto are quite simple:

- Our conscious and unconscious minds or, indeed, our automatic and reflective mind-sets, are not qualitatively different from each other. It is a matter of degree and not a binary issue
- It is important to understand both our 'mental processes' (e.g. heuristic and biases), but also our 'lived experiences'

- We draw on the huge psychology literature to develop a set of tools that can offer real value to our clients' business – we do not limit ourselves to a small subset of cognitive psychology
- We have an integrative approach, using our practitioner skills to use the right tools to answer the right questions – we are not quasi academics
- We also have a wide range of products that help to access less conscious aspects of consumer behaviour; we put these in the hands of our practitioners to augment existing consumer insight techniques
- We are enthusiastic adopters of technology to help us to both measure and influence behaviour, and to develop new and innovative means of accessing consumers' inner lives

What this means in terms of a new manifesto for Behavioural Science is as follows:

- We focus on the business issues that require an understanding of the less conscious aspects of human behaviour, informed by psychology
- We still have propositions that operate at the more consultancy end of the spectrum, exploring the mental processes that are underpinning consumer behaviour in any given situation and identifying some potential interventions to change that behaviour

So, I urge you to join the revolution with our new manifesto for behavioural science. Let's challenge the orthodoxy of traditional thinking in this discipline and promote a new school of thought. Practitioners have the right to lead on how to apply this discipline to client challenges, rather than meekly follow academics.

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