







Not all nudges are equal

A strategic approach to understanding and setting expectations for the impact of nudging

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THE BEHAVIOURAL ARCHITECTS

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A strategic approach to understanding and setting expectations for the impact of nudging

This short book written by The Behavioural Architects aims to help you apply behavioural change interventions, or nudges, more effectively, using a simple two-step strategic framework that helps set clear expectations of the potential impact of any nudge.

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Part 1 Misunderstandings

Why we need a more strategic approach to nudging Part one outlines the most common misunderstandings around nudging and sets out the need for a framework.

Nudging has become widely recognised and adopted

The central, highly attractive proposition at the heart of nudging is that with small, low cost tweaks and adjustments in environment or communications, behaviour can be altered, hopefully for the better. This simple promise, driven by behavioural science, has meant that, in little more than a decade, 'nudging' has taken root in governments and organisations around the world. There are now over 200 public institutions applying behavioural insights to their policies and a recent survey found that there are more than 800 behavioural science teams around the world, and this is likely an underestimate¹. After over 15 years in the mainstream it is a good time to reflect on the application of behavioural science.

Its popularity has brought some misunderstandings and misuse

A common misunderstanding is thinking of a nudge as binary- it works or it doesn't. In reality, it has become clear that not all nudges are equal and we need to think more strategically about this.

 First, popular books have often made nudges feel overly simple to apply. There is a temptation to rush to action which can often lead to disappointment and the wrong conclusions around effectiveness. It is vital to take time to understand the context which we seek to influence or change; whilst also acknowledging what people are doing or not doing already, and why. Neela Saldhana, behavioural scientist and Executive Director at the Yale University's Research Initiative on Innovation and Scale, notes the immense task of applied behavioural science in different contexts together with the importance of fully understanding cultural influences before designing any intervention. She says:

"Behavioural interventions seem so simple when you read the books. The biggest lesson I learned was how hard it was to apply even simple interventions when they have not been tried out in a particular context. You have to understand the culture deeply before you can think about working towards behaviour change solutions²."

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The beauty of behavioural science lies in the understanding, and in the action this understanding inspires.

• Second, we all know that context is king in behavioural science, yet when applying nudges, people may often overlook what can be controlled or changed. The extent of impact from

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The extent of impact from a nudge may be limited by what we can control, or what is possible for us to change in a given context.

2 https://earlychildhoodmatters.online/2022/behavioural-interventions-seem-so-simple-when-you-read-the-books/

a nudge may be limited by what we can control, or what is possible for us to change in a given context. More often than not, the context drives what you can do.

- Third, we've seen many blinkered approaches in which clients and practitioners test only a single nudge, when research has shown more significant success can often come from cumulative marginal gains, perhaps better described as a ripple of interconnected nudges applied throughout the entire consumer journey. Behavioural scientist Dilip Soman notes there may be a number of bottlenecks throughout the consumer journey leading to drop-out. Nudging at only one of the bottlenecks may not be enough for success; ideally, all the bottlenecks need addressing. There is a need to understand how nudges can interact, in combination with one another. The collective whole is often greater than the sum of its parts.
- Last, and perhaps most significantly, 'nudge' has become a wraparound term for leveraging myriad cognitive biases in the brain and, as a result,

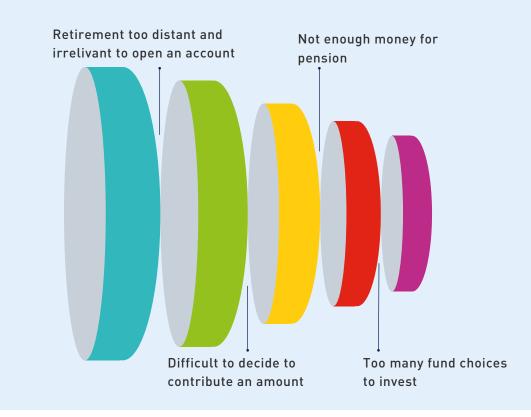
the considerable impact of nuance can be lost. We know that some nudges have the potential for eye opening impacts- changing the default option for example; others, like how we frame information, or make known what someone's close peers are doing, are likely to have more nuanced or varied impacts. This variance can define what level of behavioural change we can reasonably expect.

Taking this as our context we have developed a strategic framework for setting expectations for nudging and behavioural change interventions

Each of the points above lay out the need for a strategic framework for nudging, a framework based on 12 years of working in applied behavioural science and seeing the same misunderstandings and mis-practices occur again and again.

Multiple nudges are sometimes needed to reduce multiple bottlenecks in the consumer journey

Example: for opening and engaging with a pension



PART 2 Variation in Nudging

Acknowledge the fact that not all nudges are equal impacts can be marginal as well as major

In part two, we illustrate how the impact of a nudge might be marginal as well as major and how variation is to be expected depending on the context.

The latest behavioural science research has consistently found that the impact of any nudge actually falls along a spectrum; meaning not all behavioural interventions will have the same impact- some are more powerful, others more marginal, and in some contexts, some can have no or even a negative impact. A single one-point-in-time nudge may also be limited in its impact compared to a more holistic, multi-pronged strategy for behaviour change, changing multiple aspects of the context or nudging at multiple points of time during the consumer journey.

This is partly because a nudge is a wraparound term for a multitude of tools. The word 'nudge' is actually quite loosely defined; in their 2008 bestseller '*Nudge: Improving Decisions about Health, Wealth, and Happiness'*, Richard Thaler and Cass Sunstein defined the term as "choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives". Whilst some tools result in micro-impacts, others make more radical changes.



A nudge is choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives.

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These tools include changing the default, emphasising peer behaviours and social norms, leveraging concepts such as anchoring and framing, making information simpler and easier to read, or asking people to make a simple plan of action (known as implementation intentions). These have all been put into action in different contexts with a wide range of people with the goal to change behaviour. Even a concept that can have radical impacts on choice and behaviour in one space may be marginal in another; it's out of our control.

In addition, the impact of any intervention is often given as an average where, in reality, it may have changed the behaviour of some consumers a lot, some a little, and some perhaps not at all. It may even have backfired. For example, in a recent field trial, messaging which emphasised saving for retirement to help "secure your family's future" increased contributions by 89% for those 28 and over, yet for younger individuals it backfired and led them to reduce contributions by 53%, likely due to them being in a different life stage³. The messaging felt irrelevant to them.

Some recent reviews have pointlessly sought to calculate the average impact of a nudge by looking at hundreds of behavioural change trials altogether. But experts say that the average effect tells us nothing, highlighting that the real message is the wide variations in impacts, from very small to sizeable. They question why anyone would try to seek an average in such a mixed contextual arena. As statistician Beth Tipton of Northwestern University says, "The heterogeneity IS the story" and we should expect it.

Illustrating the wide range of impacts of a nudge

To help illustrate this idea of variation we look at the variation in impact for four well-known behavioural science concepts in the tables below. Some behavioural science concepts are better researched than others, so we have selected those with a broader and stronger

^{3 &#}x27;Shah, Avni and Osborne, Matthew and Lefkowitz, Jaclyn and Fishbane, Alissa and Soman, Dilip, Can Making Family Salient Increase Retirement Savings? Evidence from a Large-Scale Field Experiment (November 12, 2020)'Shah, Avni and Osborne, Matthew and Lefkowitz, Jaclyn and Fishbane, Alissa and Soman, Dilip, Can Making Family Salient Increase Retirement Savings? Evidence from a Large-Scale Field Experiment (November 12, 2020)'

research base- namely defaults, social norms, anchoring and framing.



Defaults: We tend to stick with what has already been selected for us – the 'default' – rather than think harder to make our own decision



Social norms: We like to do what others are doing and look to other people to guide us – valuing their opinions and emulating their behaviours.

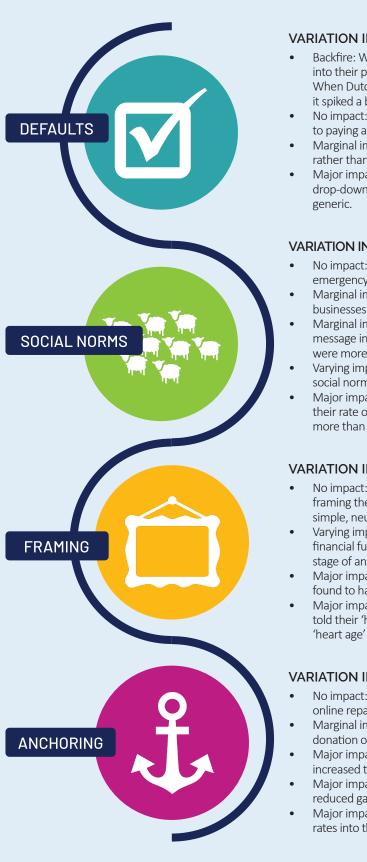


Framing: The way information is presented – ordered or framed – has a significant impact on decision making. For example, it might focus on what people might gain or lose.



Anchoring: We look for reference points (anchors) that we can rely on and adjust our judgements and decisions from We look at findings from a range of studies which found varying impacts on behaviour, from marginal to major impacts, or even zero to negative impacts in different contexts. The lists are not exhaustive, but designed to give a picture of the breadth of impact. For example, in one case, defaults had no impact in boosting savings when employees were automatically opted into paying some of their tax refund into savings bonds – people simply opted out as they had other items they needed to fund. But changing the default order of a drop down menu had a major impact in clinicians prescribing generic drugs rather than the more expensive branded option. And anchoring shows a wide range of impact too - removing the minimum payment on a credit card bill – a number consumers often anchor to when making repayments – did not lead consumers to repay their debt any faster. But anchors did have major impacts in reducing the size of gambling deposits and increasing the size of pension contributions.

VARIATION IN THE IMPACT OF NUDGES



VARIATION IN THE IMPACT OF DEFAULT SETTINGS

- Backfire: When employees were opted into paying more of their monthly income into their pension, the majority opted out, shifting to much lower contributions. When Dutch citizens were automatically signed up to the organ donation register, it spiked a backlash and thousands opted out.
- No impact: Researchers found no impact from automatically opting employees in to paying a fraction of their tax refunds into savings.
- Marginal impact: When parcel pick up from a local hub was the default option rather than home delivery it led to only a slight uplift in pick ups.
- Major impacts: When generic drugs were listed first above branded drugs in a drop-down prescription menu, almost all clinicians switched to prescribing the generic.

VARIATION IN THE IMPACT OF SOCIAL NORMS MESSAGING

- No impact: A social norm message had no impact in increasing people's emergency savings.
- Marginal impact: A government initiative to increase uptake of vouchers for businesses found a social norms message led to only the slightest uplift in uptake.
- Marginal impact: The World Bank found only a slight uplift from a social norms message in the proportion of Polish citizens paying their taxes. Other messages were more successful.
- Varying impact: Whilst some employees enrolled in a pension after reading a social norms message, it actually deterred one cohort of employees.
- Major impact: When doctors were shown a social norms message showing how their rate of antibiotic prescriptions compared to 'top performing' doctors, it more than halved unnecessary prescriptions.

VARIATION IN THE IMPACT OF FRAMING

- No impact: When dental patients were sent reminder to get a dental check up, framing the reminder in a positive or negative way eroded the impact of a more simple, neutral reminder.
- Varying impact: Framing retirement savings as a 'way to secure your family's financial future' has varying impacts on enrolment depending on the age and life stage of an employee.
- Major impact: Framing the health impacts of smoking using 'lung age' has been found to have a large impact on quit rates and successful smoking cessation.
- Major impact: Similarly, patients suffering from cardio-vascular disease who were told their 'heart age' made real changes to their lifestyle and their health and 'heart age' improved.

VARIATION IN THE IMPACT OF ANCHORING

- No impact: Removing the minimum repayment amount for credit cards from the online repayment screen did not help customers pay off their debt any faster.
- Marginal impact: When donors to a cancer charity were shown a range of donation options it led them to make slightly larger donations.
- Major impact: People who were set a high goal to increase their daily steps taken increased their activity levels by three times more than those given a low goal.
- Major impact: When online gamblers were offered a low standard deposit limit it reduced gambling deposits by 45% on average.
- Major impact: When employees were shown different suggested contribution rates into their pension all rates resulted in significantly higher contributions.

DEFAULT EFFECT



In many countries hundreds of thousands of people die every year waiting for organ donations. One strategy to increase organ donations has been to automatically register people to donate in the event of their death, but allowing people to opt out if they want to. Yet in 2018, when the Dutch government attempted to increase organ donation registration rates by autoenrolling people onto the register. It unexpectedly backfired. The number of residents who registered as non-donors spiked to roughly 40 times the number observed in previous months as a backlash to the mandate

People often do not save enough money towards their retirement meaning they will lack financial security in old age. A UK trial tried to encourage employees to save more into their pension, by setting the default contribution rate at 12%. For a take home income of £2000 this would mean putting £240 of it into a pension. The strategy backfired; 60% of employees shifted to a much lower contribution rate and only 25% stayed at that rate.



Some people fail to save money for emergencies and have no 'rainy day' fund. When emergencies do occur, it makes paying for them difficult. How could they be encouraged to save? In the US, individuals receive annual lump sum tax refunds if they overpay their taxes. The lump sum can be considerable. Researchers thought it could offer a good opportunity to encourage people to put some of the lump sum into savings. Researchers tested to see if automatically paying a fraction of employees' tax refunds into US savings bonds would help people to build up their savings. Instead, they found that 80% of employees opted out of the proposition, often because they had definite plans on how they would spend their refunds; almost spending it before they received it.

MARGINAL IMPACT

Many consumers now order goods online and get them delivered straight to their door. This carries environmental and social costs - more delivery vans on the road increasing congestion, a bigger carbon footprint and less footfall on high streets. A recent trial attempted to increase the number of parcels picked up from a local hub, rather than be delivered direct to consumers' doors- an active last mile which is better for the environment and the local high street. In the research there were four groups; the control group where parcels were delivered to the door as usual, a group where parcel pick up was the default, a group who received a message emphasising the environmental gains of pick up; and a group who received a message emphasing the convenience of pick up. Making pick up the default option was the least effective solution, raising pick up rates by only 7 percentage points.

VARYING IMPACT

The Covid-19 pandemic saw all nations scrambling to get their populations vaccinated quickly. In Sweden, setting a default appointment for a Covid-19 vaccination had varying impacts by age group. The region of Uppsala gave residents aged 16-17 and over 50 pre-booked appointments, whereas in the other 20 regions they had to phone to book. The default had no impact on vaccination rates for people aged 50-59, but a large and significant effect on people aged 16-17. The finding is consistent with defaults being most effective at changing behaviour when the individual is ambivalent about change

MAJOR IMPACT

Generic drugs are notably cheaper than branded versions, yet almost always equally effective, so they can save healthcare systems and consumers considerable amounts of money. A team of researchers ran a long-term trial to test whether they could encourage a higher rate of prescription of generic drugs. Researchers made a tiny tweak to the prescription order system on the University of Pennsylvania Electronic Health Record system. When doctors select the drug they want to prescribe, they click on a drop-down menu. Previously, branded drugs were listed at the top of that menu and generics at the bottom. The researchers flipped the order so that generic drugs were listed first- effectively making them the default choice. It had an astounding effect. Before the trial began, the generics prescribing rate was around 75%. Immediately after the change to the drop-down order, the generic prescribing rate increased rapidly to 98.4% and remained there for the entire 2.5-year evaluation period

Children often perform better in school if their parents are engaged and supportive. Schools wanted to be able to keep parents informed of their child's progress but struggled with low rates of sign up to updates. In a trial in schools in Washington D.C., researchers tested how to increase the number of parents signing up to text message alerts about their child's academic progress. They hypothesised that automatic sign-up would mean few would opt-out. Only 1% of parents who were asked whether they wanted to sign up to receive the alerts signed up. With a simplified sign-up process, uptake rose to 8%. But if parents were automatically signed up, participation rates jumped to 96%.

SOCIAL NORMS





People often do not save money for a rainy day. Researchers partnered with a Dutch retail bank ING to design an initiative to boost emergency savings among its customers by using a social norms message. The social norms message said 'You have a lower buffer with us than most other ING clients in your neighborhood'. Whilst the initiative boosted intentions to save and customers often read the communication, it had no impact on increasing savings.



The UK Department for Business, Innovation and Skills (BEIS) wanted to encourage businesses to access a growth voucher. Businesses could apply for a voucher to gain partial payment for business advice. BEIS and HMRC sent five different messages to 600,000 SMEs. The social norms message said 'Thousands of businesses are applying for growth vouchers' but it only increased click through rates by 0.16 percentage points- from 1.56% in the control to 1.72% in the social norms messaging.

A trial conducted by the World Bank in Poland testing a series of different nudge messages to encourage people to pay their taxes found many other messages performed better than a social norms message. The most effective message had a threatening tone: "So far, we have thought of your payment delay to be accidental. However, if you disregard this notice, we will consider it an intentional choice of yours and we will treat you as a dishonest taxpayer. As part of the execution procedures, we can, for example, block your bank account, salary, and, in addition, you will have to cover all execution expenses that arise.' This message prompted over 48% of recipients to pay their taxes, compared to just 40% in the control group who received the standard letter. The social norms message which said "According to our records, [8] out of 10 residents in [region of taxpayer] have already paid their income tax for 2015. You are part of a minority that has not yet fulfilled that duty." Whilst this message led to a 3 percentage point uplift in the proportion of people paying, it was the second least effective message.

VARYING IMPACT

Employees often fail to set aside money every month for their retirement. A Fortune 500 company wanted to increase enrolment and contributions into retirement savings plans using a social norms message: "Join the 87% of 25-29 year old employees at our company who are already enrolled in our 401(k) plan." Although these mailings led to a dramatic increase in enrolment overall, the effects were unequal across employees. Low wage workers on the shop floor were discouraged by the information about their peers; they found it demotivating to know that so many of their peers were already saving for retirement.

MAJOR IMPACT

Antibiotics are often over-prescribed. Over half of prescriptions are for conditions such as viral infections that antibiotics do not effectively treat. Over-prescribing antibiotics not only increases healthcare costs, but can also increase antibiotic- resistant bacteria. An initiative to reduce unnecessary prescribing among doctors leveraged social norms messaging. Doctors within a particular region were ranked according to an "inappropriate antibiotic prescribing rate." A monthly email informed doctors whether they were a "top performer" (those with the lowest rates of unnecessary prescriptions) or "not a top performer" (everyone else). The email to those who weren't considered top performers compared a doctor's proportion of inappropriate prescriptions to that of the top performers. Those shown how they compared to top performers decreased inappropriate prescription rates from 19.9% to 3.7%.

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FRAMING





Health check-ups are important for preventative health and can flag early warning signs. This includes dental checks where problems can be fixed before they get worse. Yet people are not always good at booking and attending check-ups. Researchers in Germany sent reminders using different frames to encourage people to make a dental appointment. Yet neither positive nor negative framed reminders had any impact on the likelihood of making a dental appt. The messages said either 'keep your nice smile tomorrow' or 'don't lose your nice smile tomorrow.' A simple neutral reminder had the best uplift. It said 'time for dental prevention... Please make an appointment for your next check-up.' 8.9% of patients scheduled a check-up with no reminder, 19.3% scheduled a check-up with a neutral reminder.

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Employees often do not set aside enough money for when they retire during their working life. A large trial in Mexico attempted to increase retirement savings by framing them as a "way to secure your family's financial future" in text reminders. Whilst these texts increased pension contributions by 89%, with rates staying higher even two months later, the initiative backfired for younger people under the age of 28, who decreased contributions by 53%, showing the importance of understanding nuance against different groups

Research shows that smoking is bad for our health but, whilst most smokers are aware of this, many still don't quit. Framing the health impacts of smoking using 'lung age' is one strategy to encourage quitting. In a test, some smokers were told the figure for their lung function (expressed as their FEV1 or forced expiration volume), while others had their FEV1 number converted into their 'lung age'. For example, a light smoker aged 57 might be informed either that her FEV1 is 2.36 or that her 'lung age' is 72. Researchers found double the quit-rates in smokers who were told their 'lung age' (6 % vs 14 %), and this led to recommendations to routinely use this concept.



Patients suffering from cardio-vascular disease often need to make lifestyle changes, but don't. In one trial, when patients at risk of cardio- vascular disease were told their 'heart age' the information frame had a positive impact on their lifestyle and their health improved. One trial gave 3000 patients either conventional medical advice, a risk score, or Heart Age. Twelve months later, levels of metabolic parameters had improved significantly in both the risk score group and the Heart Age group, with improvements much stronger in the Heart Age group.

ANCHORING





People often struggle to pay off credit card debt, making only the minimum repayment amount. Studies have shown that the credit card repayment amount consumers choose can be influenced by the minimum repayment amounts displayed on the bill. It acts as an anchor or reference point, prompting consumers to make only the minimum repayment shown, or close to that amount. These low repayments mean consumers end up paying more in debt service costs overall, and facing a long repayment period, as well as triggering negative impacts on credit scores and poor financial well-being. In an attempt to encourage higher repayments, the UK's Financial Conduct Authority partnered with four credit card providers to remove the 'anchoring' minimum repayment amount from the online manual repayment screen. Whilst some consumers increased their direct debit repayment, others did not set up a direct debit at all. Credit card debt also did not decline because people made smaller ad-hoc payments to pay off their debt than before.

VARYING IMPACT

MAJOR

IMPACT

Encouraging repeat donations and higher repeat donations is important for increasing a charity's overall revenue. A major Italian Cancer Research charity ran a large trial to test how different donation anchors would impact the next donation amount. They sent 150,000 existing donors a letter with either no anchor, or 'donation menu' anchors showing a range of suggested figures. After six months the average donation made by those who received the 'donation menu' letter were significantly higher at ≤ 20.27 , compared to ≤ 18.40 euros from those who received a letter with no anchor. However, there was a small backfire effect amongst regular donors who 'anchored down' and decreased their donation by ≤ 3.50 on average- a reminder that it can be important to personalise your anchors.

People know they should do more exercise and often intend to but lack motivation or time. Setting a daily goal of walking 10,000 steps has helped many people to increase their walking. Researchers tested the impact of different step goals for university staff, determined by each person's current (baseline) daily steps. Typically, pre intervention, staff walked around 6700-7000 steps per day. Staff received a low, medium, or high walking goal (10%, 50%, or 100% increase over baseline). Participants walked far more when given a high goal compared to a medium or low goal-around 3500 additional steps per day (or an extra 25-30 minutes typically) compared to around 1200 extra steps in the medium goal.

Around 20% of British people regularly gamble online, but two million experience some form of gambling harm and many often overspend. Researchers looked at how they could prevent people from gambling too much. They reduced deposit limits on betting sites which can be up to £100,000 on some sites, as people often anchor to these. Deposit limits are set by drop down menus that show the maximum deposit limit first. The control group saw the usual drop down menu, with denominations from £5 to £100,000, and an optional no limit. Those in the low anchor group saw an upper amount of £250 from a drop down menu (and could similarly choose no limit, or free text for a higher limit), whilst a no anchor group saw only a free text box. The low anchor group set deposit limits of £231 on average, whereas the control group set a deposit limit of £1601 on average. This intervention reduced gambling deposits by 45% on average.

People often do not plan and save money for their retirement. Researchers tested different anchors or reference points to encourage employees to pay larger amounts into their 401(k). Showing employees anchors of 3%, 10%, or 20% of income in a letter all resulted in significantly higher average contributions, although with some delay. Between 5 and 11 months after receiving the email, the individuals who received an email with one of the anchors increased their contribution rates by 1.0-1.1% of income. All three anchors had equal impact.

PART 3 A Strategy for Nudging

Analyse the context in which change is sought, not only to understand the opportunities, but also to manage expectations.

Our final part looks at how to analyse and approach a behavioural challenge given the context and what is in our control to change. A careful initial analysis of context can help manage expectations.

Once we have established these contextual parameters we look at the 'how', identifying which behavioural science tools and concepts are best suited to apply in that particular context, by looking at some of the factors which can affect the impact of behavioural science concepts.

Assessing the scope of possibility

Experts say it's important to manage our expectations by asking the right questions. The most important question to ask is:



How much behavioural change is possible, assuming we do everything right?'

For example, could we increase those doing a particular behaviour from the minority to a vast majority? Or is it more likely that we can increase the numbers of people doing something very occasionally to every week or every day? Or are the impacts likely to be more marginal?

We can assess the scope of possibility with two further questions:

Within the established context, what variables do you own or have a direct influence upon? Even the most effective nudge may be limited by what can be controlled, or what it is possible to change. For example, companies may be limited by regulation or ethics; or environments not in their control: policymakers may be limited in what they can change by funding, existing legislation and systems and, of course, political will. By asking this question we might find we only have the opportunity, freedom, or control to seek marginal gains – we might have one hand tied behind our backs. For example, are you trying to change a big behaviour like reducing food waste where there are multiple stakeholders? Asking the question around control and influence can help define how much is realistically possible and what you can reasonably expect.

What is the minimal impact that would make a meaningful difference? In certain contexts small changes make a big difference.

Whilst we'd all love to achieve a 100% uplift, that's rarely feasible, yet that does not mean smaller uplifts are not worthwhile. However, it is important to find a minimum threshold for a meaningful difference; and to ask what amount of change is realistic and worthwhile. Impact could be an uplift in the number of people participating, people doing a behaviour more frequently, more intensely and/or more correctly. Morningstar, the financial services provider set a "Minimum Meaningful Effect" (MME) for any behavioural intervention. What minimum impact is needed for your organisation?

Different contexts can create different requirements – sometimes we need what we might call a 'behavioural revolution', a complete switch in behaviour across the majority of a population. For example, in the Covid-19 vaccine roll-out, countries needed as close to 100% take-up as possible to prevent deaths, hospitalisations and long covid, and they had large budgets and resources to help achieve this. In other contexts, smaller tweaks in behaviour might lead to a one or two percentage point gain in market share or participation, which, while it sounds small, often converts to meaningful impact for customers or revenue and is a worthy return on investment. We should also ask 'are people leaning into the change or nudge'? To be honest, many behaviours are simply really hard to shift so even a tiny uplift is a big achievement and worthwhile. This strategic frame can help define what is actually possible in a realistic way. And factoring in the return on investment here is useful. If it costs very little in time and money and there are no company politics (an easy win) even a small change is worth pursuing. Even with a hard challenge, where only small changes are possible, making a series of marginal gains could be productive and cost effective. In its initial two years, the UK's Behavioural Insights Team achieved more than £300m of gains across its projects by focusing on small, inexpensive changes where the impacts on decision-making and behaviour all added up.

We can now think more strategically about the 'how': How can we optimise behavioural science tools and concepts for our context?

Deciding which cognitive biases or behavioural science concepts to leverage in the targeted context is best approached strategically using the framework above. It's also important to consider the impact of concepts both in isolation and in combination with others.

As some behavioural science concepts have been more widely tested and well-understood than others, there is an ever evolving hierarchy, where concepts including framing, anchoring, social norms, default effects and implementation intentions are some of the more deeply explored concepts (some of which we explored in our New Frontiers article series). At The Behavioural Architects we base our work on a core collection of around 40 concepts and cognitive biases which, over the last decade, we have found to be consistently relevant and applicable to our clients' behavioural challenges and which also draw on a strong evidence base. Other concepts like hot hand fallacy and pareidolia are a little more niche and are usually less relevant for addressing the challenges and opportunities our clients tackle most often. A few concepts, like dynamic norms, are relatively new and, whilst they show promise, they are, at present, little tested. This means we don't have a wealth of evidence to draw on across contexts and application would have to be explorative.

Beyond these considerations, it's important to ask which behavioural science concepts it is feasible to apply in the context in order to change the target behaviour using the strategic framework above. By now, of course, you will have researched the context, and will know what you can or cannot influence and have set expectations with other stakeholders.

As we saw in the second part of this series, nudges can vary hugely in their impact. Often this can be down to subtle nuances in application and the characteristics of the context. Over the last decade behavioural scientists have learnt a lot about these nuances and every day we increase our understanding of which factors can influence outcomes.

Below, we illustrate this learning across four concepts – again looking at the nuances around default settings, social norms, framing and anchoring.



Defaults: We tend to stick with what has already been selected for us – the 'default' – rather than think harder to make our own decision



Social norms: We like to do what others are doing and look to other people to guide us – valuing their opinions and emulating their behaviours.



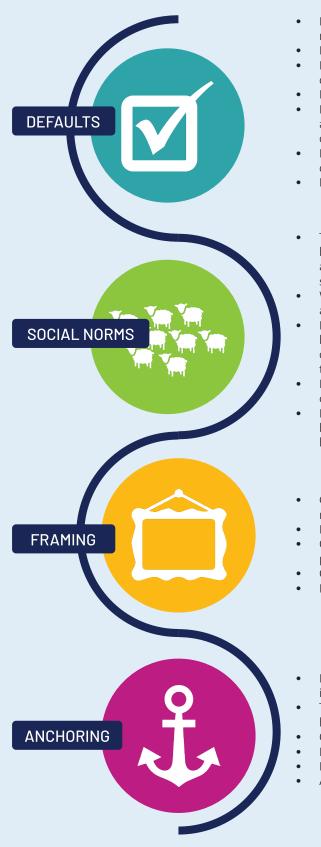
Framing: The way information is presented – ordered or framed – has a significant impact on decision making. For example, it might focus on what people might gain or lose.



Anchoring: We look for reference points (anchors) that we can rely on and adjust our judgements and decisions from

Taking the time and investment to fully explore and understand the evidence base around these nuances before designing any intervention will increase the likelihood of its effectiveness. Such nuances also mean you may need to segment your target audiences and apply different nudges to different groups, customising and personalising to some degree.

FACTORS INFLUENCING THE IMPACT OF A NUDGE



- Default effects are stronger when a default is seen by people as an implicit recommendation
- Default effects are stronger when the default is perceived as the status quo
- Ease of opt-out impacts participation rates: if opting out is a hassle or complicated, participation rates tend to be higher
- Past experience with defaults can impact our future acceptance
- Purpose and effect of a default matters: whilst defaults that are seen as legitimate are widely accepted, people reject defaults they view as manipulative that could conflict with their values
- Being defaulted into something may not mean someone is fully engaged, committed, motivated and informed
- People will override defaults when it matters
- The closer and more concrete the reference group is, the more influential it can be. We are more likely to respond to norms in our immediate context; is if the action is practised by our peers, our neighbours, or by those of the same sex, same ethnicity, same age group or life stage etc
- Whilst in general vie all like to conform to some extent, teenagers and young adults are more sensitive to being excluded by their peers than older adults are
- Descriptive social norm messages tend to have a greater effect on behaviour than injunctive social norms. However, messages and information communicating injunctive norms have a greater effect on people's attitudes than do descriptive social norms
- Norms messaging has a stronger influence on our behaviour when it is being observed publicly, when a behaviour or action is visible
- Norms messaging has a stronger influence when it is a socially responsible behaviour e.g. where there are societal benefits from an individual doing a behaviour but fewer personal gains for them.
- Gain framing versus loss framing- if there is more at stake, personally. loss frames may be more effective
- If we are under time pressure vie might be more susceptible to framing
- Older people 160+1 may be more drawn to positive frames due to their perspective on life
- Cognitive decline may affect how susceptible to framing effects we are
- People who are less numerate may be more affected by numerical framing
- Relevant and personalised anchors and reference points are more likely to be impactful
- There is a fine line between price anchors that are too high and those that are high enough to be effective
- Consumers are not influenced by anchors that are unrealistically high
- High anchors may be considered demanding or even offensive
- Low anchors are effective since consumers want to avoid paying too much
- Anchors can also be used to put an experience into context

SUMMARY

This three part series has offered a strategic framework to set expectations for nudging and behavioural change interventions. It has sought to correct misunderstandings and mis-use and prevent them occurring in the future. Adopting a strategic approach to nudging - a set of pragmatic questions to ask - can help to set clear expectations of the potential impact of any nudge. Acknowledging the fact that not all nudges are equal, with considerable range in the size of impacts, allows us to set more realistic expectations. By analysing the context where we are seeking change we can better understand the opportunities available to us and manage expectations so stakeholders are happy with the final outcomes. And by asking ourselves about the feasibility of different concepts in the context in which we are working, we can carefully reduce the chances of failure and error and maximise chances of success.

Strategic framework – a decision checklist

Analyse the context in which we are seeking behaviour change:



Overarching question: How much behavioural change is possible assuming we do everything right?



Within the context, what variables do you own or have a direct influence upon?

What variables could you obtain control of together with other stakeholders?



What is the minimal impact that would make a meaningful difference? This could be uplift in participation, people doing a behaviour more frequently, more intensely and/or more correctly.



Which factors in your context could influence the impact of a nudge? How can you optimise a nudge so it works most effectively?

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