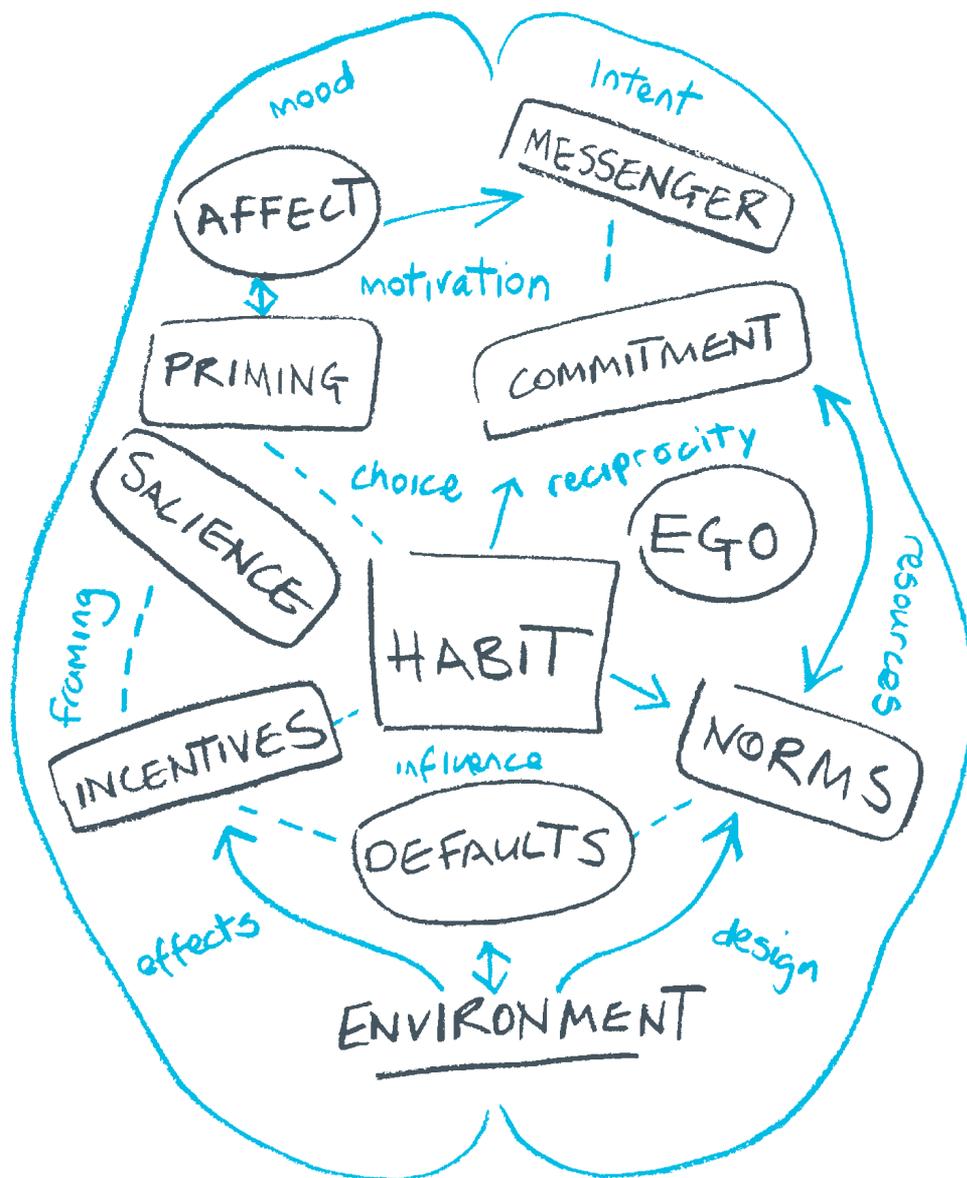


MINDSPACE

Influencing behaviour through public policy



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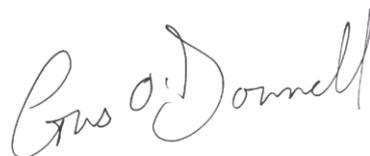
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Foreword

Influencing people's behaviour is nothing new to Government, which has often used tools such as legislation, regulation or taxation to achieve desired policy outcomes. But many of the biggest policy challenges we are now facing – such as the increase in people with chronic health conditions – will only be resolved if we are successful in persuading people to change their behaviour, their lifestyles or their existing habits. Fortunately, over the last decade, our understanding of influences on behaviour has increased significantly and this points the way to new approaches and new solutions.

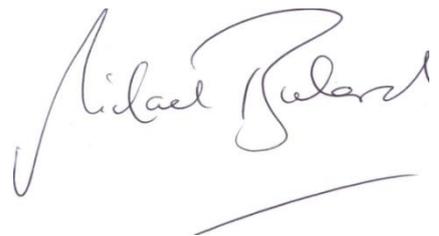
So whilst behavioural theory has already been deployed to good effect in some areas, it has much greater potential to help us. To realise that potential, we have to build our capacity and ensure that we have a sophisticated understanding of what does influence behaviour. This report is an important step in that direction because it shows how behavioural theory could help achieve better outcomes for citizens, either by complementing more established policy tools, or by suggesting more innovative interventions. In doing so, it draws on the most recent academic evidence, as well as exploring the wide range of existing good work in applying behavioural theory across the public sector. Finally, it shows how these insights could be put to practical use.

This report tackles complex issues on which there are wide-ranging public views. We hope it will help stimulate debate amongst policy-makers and stakeholders and help us build our capability to use behaviour theory in an appropriate and effective way.



Sir Gus O'Donnell

Cabinet Secretary and
Head of the Home Civil Service



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This report represents a truly collaborative effort between the five of us and, in the economists' tradition, we are listed alphabetically.

About this report

In 2009, Sir Gus O'Donnell, Cabinet Secretary and Head of the Home Civil Service, asked Matt Tee, Permanent Secretary for Government Communication, to review the implications of behavioural theory for policy-making. The Cabinet Office commissioned the Institute for Government to produce this report, exploring the application of behavioural theory to public policy for senior public sector leaders and policy-makers. It is a key part of a programme of work designed to build capacity and capability in this area across the Civil Service.

We have approached the topic collaboratively. The programme began with a behaviour change summit in May 2009, which brought together senior policy, strategy and insight officials from across government, alongside a number of external experts.

We approached the report by first developing an understanding of how and where behavioural theory is currently being used in public services, and the challenges it presents. The report is grounded in a series of interviews with senior civil servants, academics and behaviour change experts but the views expressed in the report are those of the authors and Institute for Government. Our thanks go to the many people we interviewed as part of our research. We would also like to thank Dr Robert Metcalfe for his work analysing the effects that underpin MINDSPACE.

This is the full version of the report. Those looking for a summary of the main practical applications may wish to consult the Short Version, also available at www.instituteforgovernment.org.uk.

Executive summary

Influencing behaviour is central to public policy, and government can draw on a potentially powerful new set of tools

Influencing behaviour is central to public policy. Recently, there have been major advances in understanding the influences on our behaviours, and government needs to take notice of them. This report aims to make that happen.

For policy-makers facing policy challenges such as crime, obesity, or environmental sustainability, behavioural approaches offer a potentially powerful new set of tools. Applying these tools can lead to low cost, low pain ways of “nudging” citizens - or ourselves - into new ways of acting by going with the grain of how we think and act. This is an important idea at any time, but is especially relevant in a period of fiscal constraint.

Recently, many books and reports have highlighted the potential benefits that behavioural approaches can bring to public policy. This report is not just an overview of theory; it addresses the needs of policy-makers by:

- Condensing the relevant evidence into a manageable “checklist”, to ensure policy-makers take account of the most robust effects on our behaviour
- Demonstrating how behavioural theory can help meet current policy challenges, including full case studies of its application in the UK
- Showing how government can build behavioural theory into its current policy-making practices
- Exploring important issues around the need for public permission and the role of personal responsibility

Policy-makers are interested, but need help in applying insights in practice

This report has emerged from many discussions with senior civil servants and ministers. All indicated that there was a real appetite to absorb and apply the latest thinking, in order to equip the civil service to meet the pressing challenges ahead. But they also felt that more help was needed to translate this appetite into action. In practice, how can these ideas actually help government make policy better? They are interesting effects but, fundamentally, “So what?”

This report tries to answer the “so what?” question for policy-makers.

MINDSPACE: a checklist for policy-makers

The vast majority of public policy aims to change or shape our behaviour. And policy-makers have many ways of doing so. Most obviously, they can use “hard” instruments such as legislation and regulation to compel us to act in certain ways. These approaches are often very effective, but are costly and inappropriate in many instances. So government often turns to less coercive, and sometimes very effective, measures, such as incentives (e.g. excise duty) and information provision (e.g. public health guidance) – as well as sophisticated communications techniques.



MINDSPACE is a checklist of influences on our behaviour for use when making policy

Why, then, is there a need to change anything? Behavioural theory suggests two reasons. First, the impact of existing tools such as incentives and information can be greatly enhanced by new evidence about how our behaviour is influenced (some of which has already been incorporated into government communications). Second, there are new, and potentially more effective, ways government could shape behaviour.

Tools such as incentives and information are intended to change behaviour by “changing minds”. If we provide the carrots and sticks, alongside accurate information, people will weigh up the revised costs and benefits of their actions and respond accordingly. Unfortunately, evidence suggests that people do not always respond in this ‘perfectly rational’ way.

In contrast, approaches based on “changing contexts” - the environment within which we make decisions and respond to cues - have the potential to bring about significant changes in behaviour at relatively low cost. Shaping policy more closely around our inbuilt responses to the world offers a potentially powerful way to improve individual wellbeing and social welfare.

With this in mind, we set out nine of the most robust (non-coercive) influences on our behaviour, captured in a simple mnemonic – MINDSPACE – which can be used as a quick checklist when making policy.

Messenger	we are heavily influenced by who communicates information
Incentives	our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
Norms	we are strongly influenced by what others do
Defaults	we ‘go with the flow’ of pre-set options
Salience	our attention is drawn to what is novel and seems relevant to us
Priming	our acts are often influenced by sub-conscious cues
Affect	our emotional associations can powerfully shape our actions
Commitments	we seek to be consistent with our public promises, and reciprocate acts
Ego	we act in ways that make us feel better about ourselves

Meeting policy challenges

We show how this framework can help tackle challenges in three major areas of policy: crime and anti-social behaviour; pro-social behaviour, such as voting and volunteering; and healthy and prosperous lifestyles. For each policy area we give case studies of innovative evidence-based interventions, including:

- How the logic of gang membership was used to combat gang violence (Norms)
- How inertia helped us save more for retirement (Defaults)
- How giant bananas reduced littering (Salience)

We also show how MINDSPACE can generate new approaches to specific policy problems.

MINDSPACE builds on existing methods of policy-making

Building MINDSPACE into policy-making

Applying MINDSPACE in practice builds on existing methods of policy-making. To illustrate this, we have drawn on the “4Es” policy framework, originally developed by DEFRA. The 4Es are four actions that should underpin government’s attempts to change behaviour: Enable, Encourage, Engage and Exemplify. MINDSPACE requires two supporting actions: Explore, which takes place before policies are implemented, and Evaluate, which judges the success of the policy.

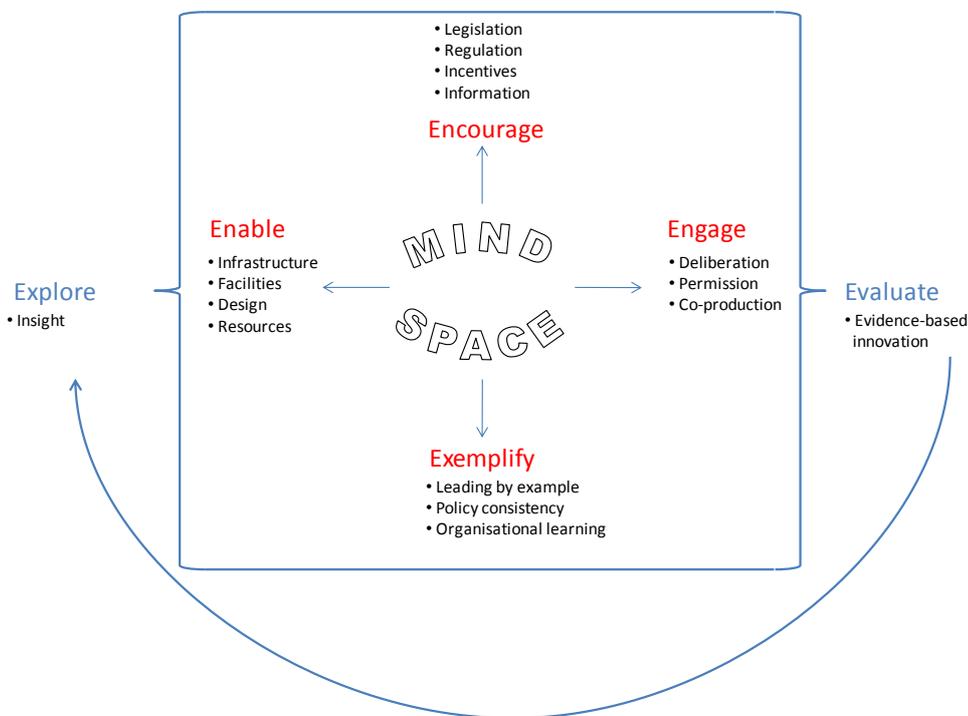


Figure 1: The 6 Es framework for applying MINDSPACE

In basic terms, MINDSPACE represents the tools for changing behaviour, and the 6 Es constitute the framework within which they can be applied. Bringing them together allows policy-makers to address the over-arching “so what?” question in practical ways.

Civil servants need to better understand the behavioural dimension of their actions

But when applying MINDSPACE in practice, it should not simply be seen as an alternative to existing methods. “Behaviour Change” is *part of* policy-making, rather than a novel alternative that can be bolted onto policies. Therefore, civil servants need to better understand the *behavioural dimension* of their policies and actions. MINDSPACE can help them do so in three different ways:

- **Enhance.** MINDSPACE can help policy-makers understand how current attempts to change behaviour could be improved, for example through a better understanding of how people respond to incentives and which types of information are salient. The logic here is that if government is already attempting to shape behaviour, it should do so as effectively as possible.
- **Introduce.** Some of the elements in MINDSPACE are not used extensively by policy-makers, yet may have a considerable impact. For example, there is room for more innovative use of social norms and commitment devices in policies. Of course, introducing new measures in this way may require significant efforts to ensure there is public permission for the approach.
- **Reassess.** Government needs to understand the ways it may be changing the behaviour of citizens unintentionally. It is quite possible that

government produces unintended – and possibly unwanted – changes in behaviour. The insights from MINDSPACE offer a rigorous way of analysing whether and how government is shaping the behaviour of its citizens.

The public need to give permission and shape how these tools are used

Public permission and personal responsibility

The use of MINDSPACE (or other ‘nudge’ type policy tools) may require careful handling – in essence, the public need to give permission and help shape how such tools are used. With this in mind, we consider issues around gaining democratic permission for behaviour change policies. We explain how three factors are particularly useful for understanding controversy around behaviour change: **who** the policy affects; **what** type of behaviour is intended; **how** the change will be accomplished.

Behaviour change is often seen as government intruding into issues that should be the domain of personal responsibility. However, it is possible for government just to supply the trigger or support for individuals to take greater personal responsibility. And we suggest that evidence from behavioural theory may, in some areas, challenge accepted notions of personal responsibility.

MINDSPACE complements and improves conventional policy tools, rather than replacing them entirely

Conclusion

New insights from the science of behaviour change could lead to significantly improved policy outcomes, and at lower cost, than the way many conventional policy tools are currently used. For the most part, however, MINDSPACE powerfully complements and improves conventional policy tools, rather than acting as a replacement for them. MINDSPACE may also help identify any barriers that are currently preventing changes in behaviour.

But there is still much that we do not know. There remains uncertainty over how lasting many of the effects are; how effects that work in one set of circumstances will work in another; and whether effects that work well with one segment of the population will work with another, including their potential impact on inequalities – though there are grounds to think that going with the grain will help to reduce them.

There are also questions about how far such techniques should be employed by central government or left to local policymakers, professionals and communities. One of the most important roles for central government in the coming years will be to ensure that local and professional applications of behavioural approaches are rigorously evaluated, and the results made available for communities to debate and adopt as they see fit. When the cost-effectiveness for an application is clearly shown, and the public acceptability has been established, central government might them move to national implementation – be this to reduce crime, strengthen communities, or support healthy and prosperous lives.

Whether reluctantly or enthusiastically, today’s policymakers are in the business of influencing behaviour, and therefore need to understand the various effects on behaviour their policies may be having. MINDSPACE helps them do so, and therefore has the potential to achieve better outcomes for individuals and society.

Introduction: Understanding why we act as we do

There's no such thing as a free lunch

"Want to grab some lunch?" ask a couple of colleagues as they walk past your desk.

"Sure," you say, as you save the Healthy and Green document you're working on and join them as they head to the lifts. The lifts are busy, and you think about walking over to the stairs - but you're already standing there, so you just wait.

Down in the canteen you pick up your tray and join the line. It smells good. You smile to the man behind the counter and he puts the beef stew on a hot plate and hands it to you. You move along past the vegetarian option, and add a heap of potatoes and carrots to your plate. Putting your plate back on the tray, you pause briefly at the salad bar before adding a bowl of pudding to your tray. As you head to the till, you glance at the bit of space left on your tray and add a can of drink.

"Here you go," your colleague says, as he puts some cutlery and a glass on your tray and you join the queue together. "Damn, I left my card upstairs."

"Here, use mine," you say.

Finally, you make your way towards an empty table. You spot the Perm Sec. It would be great to ask her about that new job. She's at a table for four with just one other person, but somehow you just walk on by and join your colleagues. "I'll catch her another day," you mumble to yourself.

Whether we like it or not, we are continually buffeted by a myriad of influences that shape our behaviour. Some of them are obvious, but many go largely unnoticed. There were many gentle effects on behaviour at your lunch in the canteen. Here are just a few:

- **Social influence and norms.** You joined your friends, of course. You also stood with them by the lifts and waited – but if they headed for the stairs you'd probably have followed (or they would have followed you, if you led).
- **Salience and priming.** The food you chose and how much you took was substantially shaped by what happened in the canteen. The smell primed your hunger, but so too did the size of your plate and the fact that you had a tray. Larger plates can make us take larger portions, and trays substantially increase the total of volume of food we take. And perhaps there is slightly more chance that you would have chosen the vegetarian option if it had come first.
- **Commitment and reciprocity.** One of the factors that kept you and your colleagues at the lift was that you had already psychologically committed to

the idea. A related effect is how readily you paid for your colleague once he had shown you the kindness of getting your cutlery.

- **Incentives and choice environment.** The psychological barrier of joining the four-person table with your boss was too great – despite the potential gains, you were worried about making a fool of yourself. In other words, you were loss-averse, and stuck with the familiar company of your friends. But if the table had eight places or more, with just the two occupied, you might have joined her. The physical environment often subtly shapes our behaviour and the ways in we interact with others.

Many of these influences are now well understood. Others have been demonstrated in experiments, but their impact in everyday contexts is still unclear. For example, we tend to like people more if they give us a hot drink rather than a cold drink – did the warm plate make us feel more positively about the person who gave us our lunch?

There is much more that we need to find out, but we do know enough to set out the main effects on behaviour and to show how they can help policymakers in practice. This report does not just explain theory; it offers tools for government.

Behaviour change and policy

In fact, influencing behaviour is central to public policy. As citizens, communities and policymakers, we want to stop ‘bad behaviours’: people vandalising our cars, stealing our possessions, or threatening our children. We want to encourage ‘good behaviours’: volunteering, voting, and recycling. We even sometimes want a little help ourselves to ‘do the right thing’: to save a little more, eat a little less, and exercise a little more – though we may be ambivalent about how aggressively we want the state intervene in these behaviours.

Sometimes we can agree on how we would like policymakers to change our behaviour – and sometimes they ‘nudge’ in those directions. But other times those nudges have unintended consequences. Information about how many people are obese may actually encourage more people to join a “club” of which there are many members, while introducing financial incentives to behave a certain way could actually make people less likely to behave that way for free.

Over the last decade, behavioural economics, which seeks to combine the lessons from psychology with the laws of economics, has moved from a fringe activity to one that is increasingly familiar and accepted.¹ More generally, there is increasing understanding across the behavioural sciences about the factors that shape and affect our behaviour.

Drawing on the most recent evidence, this report sets out the most robust effects that influence individual behaviour; demonstrates how these have been applied to major policy issues – and what more can be done; and considers the practical implications and political concerns about applying these methods. By applying these advances to the real challenges that government faces today, it tries to answer the ‘so what?’ question for policy-makers.

This report complements the Government Social Research guide to Behaviour Change (which outlines various models for understanding and applying different models of behaviour), the Central Office of Information’s Communications and Behaviour Change (which focuses specifically on the implications for Communications), and the Cabinet Office’s Guide to Segmentation.²

One obvious answer to the ‘So what?’ question concerns value for money. Fiscal challenges may sharpen interest in behaviour change further, as policymakers and public service professionals wrestle with the challenge of how to achieve ‘more

Influencing behaviour is central to public policy

There is increasing understanding about the factors that shape our behaviour

“Doing nothing” is never a neutral option

with less’ – though it could also lead to some services and local areas abandoning more innovative approaches to behaviour change altogether.³

Whether we like it or not, the actions of policymakers, public service professionals, markets and our fellow citizens around us have big, and often unintended, impacts on our behaviour. ‘Doing nothing’ is never a neutral option: we are always busy shaping each other’s behaviour. For example, if governments keep a distance, markets may emerge to satisfy our preferences. While this often does not cause major problems, it can do – markets rarely account properly for the good and bad spill over effects of our own behaviour on others.⁴

This picture shows the need to recognise that government is just one influence on our behaviour amongst many others. And, indeed, commentators have been sceptical about government’s abilities in this area: most famously, David Hume argued that ‘all plans of government which suppose great reformation in the manners of mankind are plainly imaginary’.⁵

Such sweeping scepticism is unfounded, since there have been many policy successes in changing behaviour: for example, reducing drink driving, preventing AIDS transmission and increasing seatbelt usage. Nevertheless, some behaviours – such as antisocial behaviour and lack of exercise - have remained resistant to policy interventions. We need to think in more integrated and innovative ways about how policymakers can intervene in ways that help people help themselves – and that also help society reduce inequalities in health and wellbeing that are avoidable and considered unfair.

The most effective and sustainable changes in behaviour will come from the successful integration of cultural, regulatory and individual change

We recognise that the most effective and sustainable changes in behaviour will come from the successful integration of cultural, regulatory and individual change – drink driving demonstrates how stiff penalties, good advertising and shifting social norms all combined to change behaviour quite significantly over a couple of decades.⁶ Here we focus on the role that behavioural economics can play in shaping individual behaviour, rather than on the ways in which the legal and regulatory systems can be used to compel us to behave in particular ways. We are interested in the soft touch of policy rather than its heavy hand: going with the grain of human nature, rather than rubbing us up the wrong way.

The basic insight from behavioural economics

Drawing on psychology and the behavioural sciences, the basic insight of behavioural economics is that our behaviour is guided not by the perfect logic of a super-computer that can analyse the cost-benefits of every action. Instead, it is led by our very human, sociable, emotional and sometimes fallible brain. Psychologists have been studying these characteristics for more than a century, and writers and thinkers for much longer.⁷

Skimming the titles of recent best-sellers on the topic gives a rapid sense of what this century of research, and particularly that of the last 30 years, has concluded. The Noble Prize winner Daniel Kahneman’s ideas around *Heuristics and Biases – the psychology of intuitive judgement* – has been especially influential, though few policymakers have read his work in the original. We are *Predictably Irrational* – prone to reliable misjudgements.⁸

Often the decisions we make in the *Blink* of an eye serve us well in everyday life.⁹ But for some of the more complex decisions we face in the modern world, our unseen patterns of thought leave us puzzling and frustrated over our own decisions - *Stumbling on happiness* rather than confidently making choices that get us there.¹⁰ These insights can be used by marketers and others to *Influence*¹¹ or *Nudge*¹² what we do and what we choose.

In a nutshell, the sophisticated mental shortcuts that serve us so well in much of life can also get us into trouble, both as individuals and as societies as a whole.

Changing behaviour

Broadly speaking, we can focus on 'changing minds' or 'changing the context'

In broad terms, there are two ways of thinking about changing behaviour. The first is based on influencing what people consciously think about. We might call this the 'rational' or 'cognitive' model. Most traditional interventions in public policy take this route, and it is the standard model in economics. The presumption is that citizens and consumers will analyse the various pieces of information from politicians, governments and markets, the numerous incentives offered to us and act in ways that reflect their best interests (however they define their best interests, or - more paternalistically - however policymakers define them).

The contrasting model of behaviour change focuses on the more automatic processes of judgment and influence – what Robert Cialdini calls 'click, whirr' processes of mind. This shifts the focus of attention away from facts and information, and towards altering the context within which people act. We might call this the 'context' model of behaviour change. The context model recognises that that people are sometimes seemingly irrational and inconsistent in their choices, often because they are influenced by surrounding factors. Therefore, it focuses more on 'changing behaviour without changing minds'. This route has received rather less attention from researchers and policymakers.

These two approaches are founded on two different ways of thinking. Psychologists have recently converged on the understanding that there are two distinct 'systems' operating in the brain:¹³

System	Reflective	Automatic
Characteristics	Controlled	Uncontrolled
	Effortful	Effortless
	Deductive	Emotional
	Slow	Fast
	Self-aware	Unconscious
Examples of use	<i>Learning a foreign language</i> <i>Planning an unfamiliar journey</i> <i>Counting calories</i>	<i>Speaking in your mother tongue</i> <i>Taking the daily commute</i> <i>Desiring cake</i>

The two systems have different capabilities: the reflective mind has limited capacity, but offers more systematic and 'deeper' analysis. The automatic mind processes many things separately, simultaneously, and often unconsciously, but is more 'superficial': it takes short-cuts and has ingrained biases. As one academic source explains, 'once triggered by environmental features, [these] preconscious automatic processes run to completion without any conscious monitoring'.¹⁴

In practice, this distinction is not so clear-cut: a mix of both reflective and automatic processes govern behaviour. When reading a book, for example, we can concentrate and ignore our surrounding environment – but if someone calls our name, we break off and look at them. Our *reflective* system is ignoring everything but the book, but our *automatic* system is not.¹⁵ Policy-makers attempting to change behaviour need to understand how people use these different systems and how they affect their actions.

This report focuses on the more automatic or context-based drivers of behaviour

This report focuses on the more automatic or context-based drivers of behaviour, including the surrounding ‘choice environment’. There are three main reasons for doing so. First, these automatic processes have been relatively neglected in policy discussions, perhaps because ‘environmental effects on behaviour are a lot stronger than most people expect’.¹⁶ Second, because of questions about the effectiveness and cost-effectiveness of interventions designed to change behaviour by changing minds. Third, because of the possible value for money that this type of behaviour change may offer. The following two sections address the latter two points.

The limits to information

Not all government communications focus on simple information provision; often they draw on more sophisticated techniques of persuasion. Nevertheless, giving out information has become a prominent part of the policymaker’s tool kit, and its importance is set to increase further.¹⁷ Across the world, policymakers are giving citizens more and more information about the performance of schools, hospitals and other public services, to be mashed and re-circulated in a myriad of innovative and personalised ways.

The increased availability of information has significant effects, most of them positive. For example, despite initial controversies, the wider availability of information on surgical survival rates has been shown to drive up outcomes.¹⁸ The release of public data could lead to a significant increase in economic growth.¹⁹ And information is obviously important in its own right, as it leads to more fully informed consumers and citizens - even if the information has no direct effect on behaviour.

Simply providing information often has modest and sometimes even unintended impacts

But we also know that providing information *per se* often has surprisingly modest and sometimes even unintended impacts when it attempts to change individuals’ behaviour – at least when viewed through the conventional rational model of behaviour, and perhaps also when viewed by a policy-maker charged with getting value for money and in reducing inequalities.

After public warnings of an ‘obesity epidemic’, New York State passed legislation that made restaurants post the calorific content of all regular menu items. Initial studies found no detectable change in calories purchased after the introduction of labelling.²⁰ The reason for this may be that to most New Yorkers this information does not mean anything much, or – according to one early analysis - they are not aware of what levels of calories are good or bad. New York City has subsequently initiated an educational campaign that informs residents that ‘2,000 calories a day is all most adults should eat’.

More generally, it has been found that existing ‘changing minds’ theories and methods leave a substantial proportion of the variance in behaviour to be explained.²¹ For example, one meta-analysis of pro-environmental behaviours reported that at least 80% of the factors influencing behaviour did not result from knowledge or awareness.²² And insofar as the better educated, higher income, more advantaged minds are the first and easiest minds to change, inequalities in health and wellbeing may be widened by information campaigns. We therefore need to see if accounting for and influencing the context – the ‘Automatic System’ – can help use resources more efficiently and fairly.

Value for money

“Behaviour Change” is often seen as attractive because it appears to offer similar or better outcomes at less cost. The obvious rationale for this is that, since government spends a considerable amount of money on influencing behaviour, its success in doing so will be maximised if it draws on robust evidence of how people

The money government spends trying to change behaviour will be maximised if it draws on evidence of how people actually behave

actually behave. Indeed, there is also some evidence to back up the view that changing the context, rather than people's minds, may be more cost-effective. For example, one study evaluating the cost effectiveness of physical activity programmes found that context-altering interventions had the potential to be more cost-effective than more information-based ones (such as phone or paper materials, consultations with an exercise development officer, counselling sessions).²³ Indeed, the most cost-effective intervention was one that introduced bicycle and pedestrian trails to encourage healthy behaviours.²⁴

This type of intervention is similar to the 'nudges' outlined by Thaler and Sunstein, which often involve apparently minor alterations to the choices and environment in which people act. For example, one intervention tried to provoke drivers to reducing their driving speed by painting a series of white stripes onto the road that are initially evenly spaced but get closer together as drivers reach a dangerous curve. This environmental design gives the sensation that driving speed is increasing (even when the speed does not really change), which in turn triggers the driver's natural instinct to slow down. The cost of sending such a visual signal is close to zero, but the effectiveness is very significant.²⁵

Perhaps the strongest argument for cost-effectiveness is that, quite simply, there is no neutral option for government interventions – government influences behaviour no matter what it does, and therefore it's likely that this ever-present behavioural dimension can be harnessed at little cost. Defaults are the most obvious candidates here: if government has to produce a particular form, it might as well be structured in a way that may benefit both the user and the state.²⁶ Such thinking has obvious value in a constrained fiscal climate.

The structure of this report

This report outlines some of the most reliable tools that policymakers may wish to use for what we have termed 'soft' behavioural change (as opposed to legislation and regulation). One weakness of the literature around behavioural economics is that there are now literally hundreds of different claimed effects and influences. Some of the claims in the literature are based on just one or two studies or interventions or may not translate well to different target audiences.

Outlining robust effects on behaviour

Chapter 2 highlights a cluster of the most robust effects that have been repeatedly found to have strong impacts on behaviour. We discuss these effects according to the acronym MINDSPACE (**M**essenger, **I**ncentives, **N**orms, **D**efaults, **S**aliency, **P**riming, **A**ffect, **C**ommitment and **E**go). We stress that this may not reflect an exhaustive categorisation, but it does reflect where most policy interventions are likely to focus. We give a graphical illustration of the effects underpinning MINDSPACE in Annex 1. There is considerable overlap between the effects and the most effective interventions will certainly combine different elements.

Relevance to policy

Chapter 3 applies the framework set out in Chapter 2 to policy. We focus on three important areas of policy: safer communities, the good society, and healthier and more prosperous lives. There have been many attempts to influence behaviour through cognition (changing minds) in these areas, sometimes with quite limited success. We therefore draw on case studies that are known to have worked, and also point to innovative pilots and more speculative ideas that follow from the elements of MINDSPACE.

Applying the framework in practice

Chapter 4 demonstrates how MINDSPACE could be applied in practice. Building on work by DEFRA, we show that there are six main actions that need to be taken: Explore, Enable, Encourage, Engage, Exemplify and Evaluate. We explain each of these actions and give examples to show how they fit together as a framework.

Public permission and personal responsibility

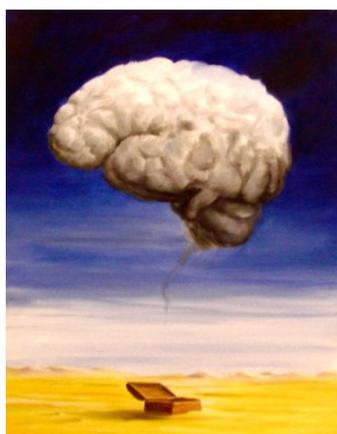
Chapter 5 considers the wider democratic and political implications of applying behavioural economic principles to policy. It discusses the value judgements of

Conclusions and future challenges

citizens and policymakers about the extents and limits of personal responsibility and the appropriate role of the state in influencing behaviour. As the profile of behavioural economics has grown in recent years, so too has controversy about its acceptability and application to public policy.

Chapter 6 summarises where we have got to and shows what more needs to be done. Perhaps the greatest impact of behavioural economics will be improving the effectiveness and acceptability of many of our existing policy tools. For example, it offers the promise of making information and incentives – communications, social marketing, fines, benefits and so on – more effective and cost-effective. Chapter 6 also provides some clear analysis of future challenges and likely developments.

MINDSPACE: A user's guide to what affects our behaviour



The elements described here are those that we consider to be the most robust effects that operate largely, but not exclusively, on the 'Automatic System'. They illustrate some of main tools at the disposal of individuals and policymakers in influencing behaviour. We do not claim to cover all of the possible effects on behaviour, and we do not deal with more traditional interventions that rely on providing information and education.

We outline nine robust influences on human behaviour and change. These principles are underpinned by considerable research from the fields of social psychology and behavioural economics. They are therefore presented as the most robust effects that policy-makers should understand and, if appropriate, use. The following sections briefly explain these effects, which we have arranged according to the acronym: **MINDSPACE**.

Messenger	we are heavily influenced by who communicates information
Incentives	our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
Norms	we are strongly influenced by what others do
Defaults	we 'go with the flow' of pre-set options
Salience	our attention is drawn to what is novel and seems relevant to us
Priming	our acts are often influenced by sub-conscious cues
Affect	our emotional associations can powerfully shape our actions
Commitments	we seek to be consistent with our public promises, and reciprocate acts
Ego	we act in ways that make us feel better about ourselves

Some of the elements have been developed to explain largely automatic effects on behaviour (e.g. N, D, S, P, A) while other effects relate to elements that draw more on reflective processing (e.g. M, I, C, E).²⁷ We recognise there are important lessons for policy-makers coming from more traditional theories of behaviour change that relate to the Reflective System. But we can only understand how incentives work, for example, when we account for the automatic effects of loss aversion alongside the more considered weighing up of costs and benefits.

MINDSPACE is our judgment of how best to select and categorise the effects so policy-makers can use them. But it does not offer a clearly logical order, and there is some overlap between the effects. Annex 1 gives a diagram that maps the conceptual space underlying the elements in MINDSPACE and also presents the interrelationships between them.

The follow sections explain each effect in turn.



Messenger

We are heavily influenced by who communicates information

The weight we give to information depends greatly on the reactions we have to the source of that information. We are affected by the perceived authority of the messenger (whether formal or informal). For example, there is evidence that people are more likely to act on information if experts deliver it. One study showed that health interventions delivered by research assistants and health educators were more effective in changing behaviour compared with interventions delivered by either trained facilitators or teachers – and health educators were usually more persuasive than research assistants.²⁸

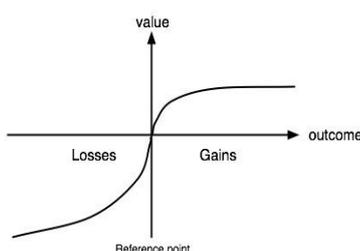
It has also been shown that demographic and behavioural similarities between the expert and the recipient can improve the effectiveness of the intervention. Importantly in relation to addressing inequalities, those from lower socioeconomic groups are more sensitive to the characteristics of the messenger, and this highlights the need to use messengers from diverse demographic and behavioural backgrounds.²⁹

Whilst expertise matters, so do peer effects. The 'Health Buddy' scheme involved older students receiving healthy living lessons from their schoolteachers. The older students then acted as peer teachers to deliver that lesson to younger 'buddies'. Compared with control students, both older and younger 'buddies' enrolled in this scheme showed an increase in healthy living knowledge and behaviour and beneficial effects on weight.³⁰ Another study found a 1,000% increase in smoking amongst teenagers if two of their peers smoke, compared to a 26% increase if a parent does.³¹

We are also affected by the feelings we have for the messenger: for example, we may irrationally discard advice given by someone we dislike.³² Feelings of this kind may override traditional cues of authority, so that someone who has developed a dislike of government interventions may be less likely to listen to messages that they perceived to come from 'the government'. In such cases, the most effective strategy for changing behaviour may be to use third parties or downplay government involvement in a campaign or intervention.

We also, of course, use more rational and cognitive means to assess how convincing a messenger is. For example, we will consider such issues as whether there is a consensus across society (do lots of different people say the same thing?) and the consistency across occasions (does the communicator say the same thing in different situations?).³³

As with other effects, combining the lessons from context with those from cognition will lead to the most effective behaviour change interventions. In particular, we should think more carefully about which messengers to mobilise,³⁴ in which circumstances, and whether they should focus mainly on the Automatic or Reflective ways of thinking.



Incentives

Our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses

Incentives are used across local and central government as a mechanism to motivate behaviour change. The impact of incentives clearly depends on factors such as the type, magnitude and timing of the incentive. Behavioural economics suggests other factors can affect how individuals respond to incentives, which can

allow us to design more effective schemes. We stress that although our examples mainly concern money, incentives often do not involve money but more generally change the costs and benefits of behaving in particular ways.

The five main, related insights from behavioural economics are that:

1. Losses loom larger than gains.

We dislike losses more than we like gains of an equivalent amount. Most current incentive schemes offer rewards to participants, but a recent review of trials of treatments for obesity involving the use of financial incentives found no significant effect on long-term weight loss or maintenance.³⁵ An alternative may be to frame incentives as a charge that will be imposed if people fail to do something. One recent study on weight loss asked some participants to deposit money into an account, which was returned to them (with a supplement) if they met weight loss targets. After seven months this group showed significant weight loss compared to their entry weight. The weight of participants in a control group was not seen to change.³⁶ The fear of losing money may have created a strong incentive to lose weight. Therefore, policy-makers could emphasise the money that people will lose by not taking an action, rather than the amount they could save.

2. Reference points matter.

Economic theory assumes that we care only about final outcomes. But, just as objects appear to be larger the closer they are, evidence suggests that the value of something depends on where we see it from – and how big or small the change appears from that reference point. If the utility of money is judged relative to very locally and narrowly determined reference points, a small incentive could have a great effect.³⁷ As possible evidence of this, incentives were used in Malawi to encourage people to pick up their HIV result (many do not otherwise): take-up was doubled by incentives just worth one-tenth of a day's wage. Although take-up did increase slightly when more money was offered, this was to a much lesser degree (and to a much lesser extent than would be suggested by standard models of diminishing marginal utility of income). This suggests that policy-makers could make effective use of incentives by framing the reference point.

3. We overweight small probabilities.

Economic theory assumes that we treat changes in probability in a linear way – the change from 5% to 10% probability is treated the same as the change from 50% to 55%. But evidence suggests that people place more weight on small probabilities than theory suggests.³⁸ There are some obvious implications of this for government: lotteries may act as a powerful motivation (since people overweight the small chance of winning), while people are likely to overemphasise the small chance of, say, being audited, which may lead to greater tax compliance than rational choice models predict.

4. We mentally allocate money to discrete bundles.

We think of money as sitting in different “mental budgets” – salary, savings, expenses, etc. Spending is constrained by the amount sitting in different accounts³⁹ and we are reluctant to move money between such accounts. Mental accounting means that identical incentives vary in their impact according to the context: people are willing to take a trip to save £5 off a £15 radio, but not to save £5 off a refrigerator costing £210.⁴⁰ This means that policies may encourage people to save or spend money by explicitly ‘labelling’ accounts for them, without removing their control over exactly how the money is used. The impact of particular expenditure could be boosted by linking it to one mental account rather than another.⁴¹

5. We live for today at the expense of tomorrow.

We usually prefer smaller, more immediate payoffs to larger, more distant ones. £10 today may be preferred to £12 tomorrow. But £12 in eight days may be preferred to £10 in a week's time. This implies that we have a very high discount rate for now compared to later, but a lower discount rate for later compared to later still. This is known as 'hyperbolic discounting' and it leads people to discount the future very heavily when sacrifices are required in the present – for example, to ensure improved environmental outcomes in the future.⁴² There is evidence that the immediacy of reward has an impact on the success of schemes to treat substance misuse disorders.⁴³ Understanding hyperbolic discounting will allow policy-makers designing incentive schemes to calibrate the size and timing of rewards offered more effectively.

Financial incentives and 'crowding out/in'

Behavioural economics can also provide arguments against using financial incentives. It is claimed that monetary compensation can lead to feelings that an activity is worthy in itself ('intrinsic' motivations) being 'crowded out' or partially destroyed. Once an activity is associated with external reward ('extrinsic' motivations), individuals are less inclined to participate with the activity in the future without further incentives.⁴⁴ An implication of this may be that if we provide an incentive for people to stop smoking, they may be unlikely to give up other damaging activities (e.g. alcohol misuse) without similar rewards.

Conversely, incentives could 'crowd in' desirable behaviour. The congestion charge, for example, may have acted as a signal not to use cars in the centre of London, and built up a cumulative behavioural response that extended beyond the financial incentive *per se*.⁴⁵ We need to develop a better understanding of where incentives have negative and positive spill over effects and design our research and policy efforts accordingly.



Norms

We tend to do what those around us are already doing

Social and cultural norms are the behavioural expectations, or rules, within a society or group. Norms can be explicitly stated ('No Smoking' signs in public places) or implicit in observed behaviour (shaking the hand of someone you meet for the first time). People often take their understanding of social norms from the behaviour of others, which means that they can develop and spread rapidly.

Some social norms have a powerful automatic effect on behaviour (e.g. being quiet in a library) and can influence actions in positive and negative ways. Their power may come from the social penalties for non-compliance, or the social benefit that comes from conforming. Behavioural interventions using social norms have been successful in a number of areas, and most are based on telling people what other people do in a similar situation. We draw out five lessons for policy-makers from norms.

1. If the norm is desirable, let people know about it.

In seatbelt use, the 'Most of Us Wear Seatbelts Campaign' used a social norms approach to increase the number of people using seatbelts. Initial data collection showed that individuals underestimated the extent to which their fellow citizens used seatbelts either as drivers or passengers: although 85% of respondents to a survey used a seatbelt, their perception was only 60% of other citizens adults did. An intensive social norms media campaign was launched to inform residents of the true proportion of people who used seatbelts. As a result of the campaign the self-reported use of seatbelt significantly increased.⁴⁶

2. Relate the norm to your target audience as much as possible.

In recycling, when a hotel room contained a sign that asked people to recycle their towels to save the environment, 35.1% did so. When the sign used social norms and said that most guests at the hotel recycled their towels at least once during their stay, 44.1% complied. And when the sign said that most previous occupants of *the room* had reused towels at some point during their stay, 49.3% of guests also recycled.⁴⁷

3. Consider social networks.

Norms may also have important effects in explaining 'contagious' behaviour. There is still controversy surrounding the idea that we are more likely to get fat, for example, if our friends get fat⁴⁸ – and get happier if they do⁴⁹ – but it is at least plausible that social networks are at play here to some degree. Combined with the appropriate messenger (and other elements of MINDSPACE too), social norms and networks could be used to bring about behaviour change that passes through groups and communities.

4. Norms may need reinforcing.

In energy conservation, a large-scale programme (80,000 homes) sent letters that provided social comparisons between a household's energy use and that of its neighbours (as well as simple energy consumption information). The scheme was seen to reduce energy consumption by 2% relative to the baseline. Interestingly, the effects of the intervention decayed over the months between letters and increased again upon receipt of the next letter.⁵⁰ In other words, if the norm is not immediately apparent to people, repeated efforts may be required for its effects to become self-sustaining.

5. Be careful when dealing with undesirable norms.

Sometimes campaigns can increase perceptions of undesirable behaviour. When households were given information about average energy usage, those who consumed more than the average reduced their consumption – but those who were consuming less than the average *increased* their consumption. This 'boomerang' effect was eliminated if a happy or sad face was added to the bill, thus conveying social approval or disapproval.⁵¹

Similarly, messages aimed at reducing bad behaviour can be undermined by the social norms they implicitly signal. For example, two signs were placed in different areas of a national park. One sign urged visitors not to take wood and depicted a scene showing three thieves stealing wood, while the second sign depicted a single thief – indicating that stealing is definitely not a social/collective norm. The first message, subtly conveying a norm, increased the amount of wood stolen by 7.92%, while the other sign increased it by 1.67%.⁵² Therefore, policymakers may actually validate and encourage harmful actions by making them appear the norm rather than the exception.



Defaults

We 'go with the flow' of pre-set options

Many decisions we take every day have a default option, whether we recognise it or not. Defaults are the options that are pre-selected if an individual does not make an active choice. Defaults exert influence as individuals regularly accept whatever the default setting is, even if it has significant consequences. Whilst we behave in crazy ways according to the laws of standard economic theory, we behave in predictably lazy ways according to the lessons of behavioural economics.

Many public policy choices have a no-action default imposed when an individual fails to make a decision. This default setting is often selected through natural ordering or convenience, rather than a desire to maximise benefits for citizens. Structuring the default option to maximise benefits for citizens can influence behaviour without restricting individual choice, as the following examples show.

Ventilators are frequently used to help very unwell patients who are breathing insufficiently in Intensive Care Units. Ventilators have settings that allow doctors to decide how much air to blow into the lungs per minute. Doctors usually determine the choice of volumes used and it is recognised that the lungs can be injured if volumes are too high. A research study changed the default setting of the ventilators to provide lower volumes of air into patients' lungs. The mortality rate was 25% lower with the new setting – such an improvement that the trial was stopped early.⁵³ In addition, there is evidence that the use of opt-out defaults can raise organ donation rates greatly (see Figure 2 below), although this remains a controversial issue.⁵⁴

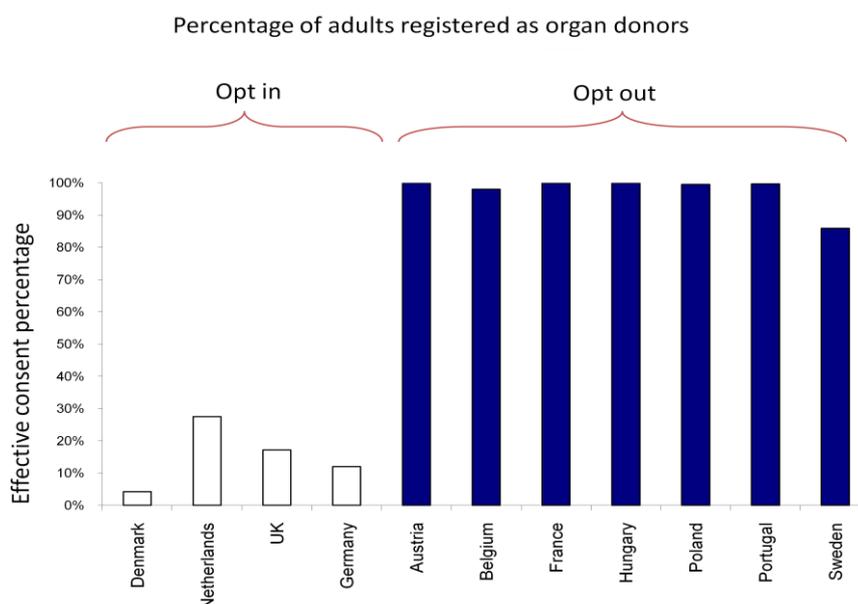


Figure 2: Comparison of organ donation registration in opt-in and opt-out systems⁵⁵



Salience

Our attention is drawn to what is novel and seems relevant to us

Our behaviour is greatly influenced by what our attention is drawn to.⁵⁶ In our everyday lives, we are bombarded with stimuli. As a result, we tend to unconsciously filter out much information as a coping strategy. People are more likely to register stimuli that are novel (messages in flashing lights), accessible (items on sale next to checkouts) and simple (a snappy slogan).

Simplicity is important here because our attention is much more likely to be drawn to things that we can understand – to those things that we can easily ‘encode’. And we are much more likely to be able to encode things that are presented in ways that relate directly to our personal experiences than to things presented in a more general and abstract way. For example, the size of the current NHS budget is more salient when expressed as an amount per tax payer than as the overall amount. Similarly, because we find losses more salient than gains, we react differently when identical information is framed in terms of one or the other (as a 20% chance

of survival or an 80% chance of death).⁵⁷ Here are just some examples of how salience plays out in our behaviour.

In a recent US experiment, researchers chose 750 products subject to a sales tax that is normally only applied at the till, and put additional labels next to the product price, showing the full amount including the tax. Putting the tax on the label, rather than adding it at the till, led to an 8% fall in sales over the three-week experiment. In addition, it has been shown that, over a 30-year period, taxes that are included in posted prices reduce alcohol consumption significantly more than taxes added at the register.⁵⁸ Salience may therefore offer a way of complementing traditional price levers in policy-making.

When making a decision, we often lack knowledge about a topic (for example, buying a DVD player). Experiments show that we look for an initial 'anchor' (i.e. a price for a DVD player) on which to base our decisions. It has been shown that the minimum payment amount on credit card statements attracts our attention and 'anchors' our decisions. When a credit card statement had a 2% minimum payment on it, people repaid £99 of a £435 bill on average; when there was no minimum payment, the average repayment was £175. In other words, presenting a minimum payment dragged repayments down.⁵⁹ Insights such as this may offer more sophisticated means of regulation.

The power of anchors is such that they work even if they are totally arbitrary. If people are asked to write down the last two digits of their social security number, this 'anchors' the amount they bid for items and their estimates of historical events – even though clearly there is no logical connection between the two.⁶⁰

Anchors endure over time, and continue to influence our decisions long after conditions change.⁶¹ This is related to the well-known 'confirmation bias': people tend to pay little attention to information that challenges an existing belief or hypothesis, and focus intently on any supportive information.⁶² Therefore, government advice may have extra power if it acts as an initial anchor, which may be easier to do at moments when people enter a new situation or life-stage (moving house, going to university, pregnancy etc.).

Finally, salience explains why unusual or extreme experiences are more prominent than more constant experiences. Our memory of experiences is governed by the most intense 'peak' moments, as well as the final impressions in a chain of events.⁶³ In other words, we may prefer the dentist that gave us three hours of steady discomfort over the one who gave us sharp pang of pain, because that pang is particularly salient. Peak effects can, for example, help us predict which medical treatments may be avoided by patients.



Priming

Our acts are often influenced by sub-conscious cues

Priming shows that people's subsequent behaviour may be altered if they are first exposed to certain sights, words or sensations. In other words, people behave differently if they have been 'primed' by certain cues beforehand. Priming seems to act outside of conscious awareness, which means it is different from simply remembering things. The discovery of priming effects has led to considerable controversy, not least to the slightly sinister idea that advertisers – or even governments - might be able to manipulate us into buying or do things that we didn't really want to buy or do.

Subsequent work has shown that primes do not have to be literally subliminal to work, as marketers have long understood. In fact, many things can act as primes, including:

1. Words

- Exposing people to words relating to the elderly (e.g. ‘wrinkles’) meant they subsequently walked more slowly when leaving the room and had a poorer memory of the room. In other words, they had been ‘primed’ with an elderly stereotype and behaved accordingly.⁶⁴
- Asking participants to make a sentence out of scrambled words such as fit, lean, active, athletic made them significantly more likely to use the stairs, instead of lifts.⁶⁵
- One group was asked to think about football hooligans for five minutes, and another about university professors. When they were then given 44 Trivial Pursuit questions, the first set got 42.6% right, the second 55.6%.⁶⁶

2. Sights

- If a happy face is subliminally presented to someone drinking, it causes them to drink more than those exposed to a frowning face.⁶⁷
- The size of food containers primes our subsequent eating. Moviegoers ate 45% more popcorn when it was given to them in a 240g container than a 120g container; even when the popcorn was stale, the larger container made them eat 33.6% more popcorn.⁶⁸
- Deliberately placing certain objects in one’s environment can alter behaviour – ‘situational cues’ like walking shoes and runner’s magazines may prime a “healthy lifestyle” in people.⁶⁹ In this way, priming can reinforce existing intentions to act in a certain way.

3. Smells

- Mere exposure to the scent of an all-purpose cleaner made significantly more people to keep their table cleaner while eating in a canteen.⁷⁰

These types of effects are real and robust: they have been repeatedly proved in many studies. What is less understood is which of the thousands of primes that we encounter every day have a significant effect on our behaviour.

Priming is therefore perhaps the least understood of the MINDSPACE effects, but has significant implications for policy. For example, it is likely that the environments that government constructs or influences are constantly ‘priming’ people to act in certain, perhaps undesirable, ways. Government should seek the ways it may be unintentionally priming people – or it may seek to ‘build in’ priming effects to its current attempts to change behaviour.



Affect

Emotional associations can powerfully shape our actions

Affect (the act of experiencing emotion) is a powerful force in decision-making. Emotional responses to words, images and events can be rapid and automatic, so that people can experience a behavioural reaction before they realise what they are reacting to. Moods, rather than deliberate decisions, can therefore influence judgments, meaning they end up contrary to logic or self-interest. People in good moods make unrealistically optimistic judgements, whilst those in bad moods make unrealistically pessimistic judgements.

It has been argued that *all* perceptions contain some emotion, so that ‘we do not just see a house: we see a handsome house, an ugly house, or a pretentious house’.⁷¹ This means that many people buy houses not because of floor size or location, but because of the visceral feeling they get when walking through the front door – and may make a better decision as a consequence.

Emotional, rather than deliberative, responses can drive financial decisions. In one experiment, direct mail advertisements for loan offers varied in the deal offered, but also in elements of the advert itself. It was found that the actual advertising content had a significant effect on take up of loans, rather than just prices. In particular, including a picture of an attractive, smiling female increased demand for the financial product by the same amount as a 25% decrease in the loan's interest rate.⁷²

Provoking emotion can change health behaviours too. Attempts to promote soap use in Ghana were originally based around the benefits of soap – but only 3% of mothers washed hands with soap after toilet use. Researchers noted that Ghanaians used soap when they felt that their hands were dirty (e.g., after cooking or travelling), that hand-washing was provoked by feelings of disgust. As a result, the intervention campaign focused on provoking disgust rather than promoting soap use. Soapy hand washing was shown only for 4 seconds in one 55-second television commercial, but there was a clear message that toilet use prompts worries of contamination and disgust, and requires soap. This led to a 13% increase in the use of soap after the toilet and 41% increase in reported soap use before eating.⁷³

Affect can be very powerful, but should be used with care by policy-makers. In particular, many interviewees suggested it was unhelpful to 'create fear without agency' – in other words, to create an emotional reaction without obviously connecting it to a change in behaviour. Otherwise, people may simply continue with the same actions but with increased anxiety. It has also been argued that people can build up an expectation of being shocked in relation to certain messages, which can make them less effective.⁷⁴ A better tactic may be to present these messages in a counter-intuitive manner instead, which points towards the importance of customer insight (see page 50).



Commitment

We seek to be consistent with our public promises, and reciprocate acts

We tend to procrastinate and delay taking decisions that are likely to be in our long-term interests.⁷⁵ Many people are aware of their will-power weaknesses (such as a tendency to overspend, overeat or continue smoking) and use commitment devices to achieve long-term goals. It has been shown that commitments usually become more effective as the costs for failure increase. One common method for increasing such costs is to make commitments public, since breaking the commitment will lead to significant reputational damage. Even the very act of writing a commitment can increase the likelihood of it being fulfilled, and commitment contracts have already been used in some public policy areas.⁷⁶

People may impose penalties on themselves for failing to act according to their long-term goals.⁷⁷ Students, for example, are willing to self-impose costly deadlines to help them overcome procrastination.⁷⁸ On a wider scale, it has been shown that people who know they tend to 'live for today' also desire commitment devices. One major study designed a commitment savings product for a Philippine bank, which was intended for individuals who want to commit now to restrict access to their savings. It turned out that Philippine women (who are traditionally responsible for household finances and in need of finding solutions to temptation problems) were significantly more likely to open the commitment savings account than men.⁷⁹

An innovative commitment product has been used to help smokers quit. Individuals were offered a savings account in which they deposited funds for six months, after which they took a test for nicotine. If they passed the test (no presence of nicotine) then the money was returned to them, otherwise their money was forfeited.⁸⁰

Surprise tests at 12 months showed an effect on lasting cessation: the savings account commitment increased the likelihood of smoking cessation by 30%.

To increase physical exercise, commitment to achieving a goal (such as 10,000 steps a day using a pedometer) appears to significantly increase success. An experimental study compared two groups; one group signed a contract specifying the exercise goals to be achieved whilst a control group were simply given a walking programme but did not enter any agreement or sign a contract. All participants recorded daily walking activity for 6 weeks and the contract group were significantly more likely to achieve their exercise goals.⁸¹



Figure 3: Comparative success in achieving a brisk walking goal for groups with and without contracts

A final aspect of commitment is the importance of reciprocity. We have a very strong instinct for reciprocity, which is linked to a desire for fairness that can lead us to act irrationally.⁸² We can see the desire for reciprocity strongly in the attitude of 'I'll commit to it if you do'. Reciprocity effects can mean that, for example, accepting a gift acts as a powerful commitment to return the favour at some point, which is why free samples are often effective marketing tools.⁸³



Ego

We act in ways that make us feel better about ourselves

We tend to behave in a way that supports the impression of a positive and consistent self-image. When things go well in our lives, we attribute it to ourselves; when they go badly, it's the fault of other people, or the situation we were put in – an effect known as the 'fundamental attribution error'.⁸⁴ We think the same way for groups that we identify with. Psychologists have found this group identification to be a very robust effect, and its power is so great that – like a number of the other effects above – it changes how we see the world.⁸⁵ The classic illustration of this effect is sports fans' memories of their team's performance in a match. Fans systematically misremember, and misinterpret, the behaviour of their own team compared with the opponents. A match in which both teams appear equally culpable of committing fouls to an impartial observer will be seen by a partial fan as one characterised by far more fouls by the opposing team than their own.⁸⁶

Advertisers are well aware that we view the world through a set of attributions that tend to make us feel better about ourselves.⁸⁷ Male respondents donate more to charity when approached by more attractive female solicitors for door-to-door fundraising, which suggests that giving is also the result of a desire to maintain a positive self-image (in the eyes of the opposite sex in this case).⁸⁸ This suggests that, for example, attempts to reduce smoking should consider if smoking is bound up with a desire for self-esteem and positive self-image, which means self-esteem may be an effective route for change (pointing out that smoking causes yellow teeth and impotence).⁸⁹ Of course, this is not a blanket prescription – for people with very low self-esteem, a more effective route may be to build their sense of self-efficacy. This reinforces the need to combine MINDSPACE effects with a nuanced understanding of the capabilities and motivations of the target audience (see Chapter 4).

We also like to think of ourselves as self-consistent. So what happens when our behaviour and our self-beliefs are in conflict? Interestingly, often it is our beliefs that get adjusted, rather than our behaviour.⁹⁰ The desire for consistency is used in the *foot-in-the-door technique* in marketing, which asks people to comply with a small request (e.g. filling in a short questionnaire for free), which then leads to them complying with larger and more costly requests (e.g., buying a related product).⁹¹ Once they have made the initial small change to their behaviour, the powerful desire to act consistently takes over – the initial action changes their self-image and gives them reasons for agreeing to subsequent requests (“I did that, so I must have a preference for these products”). In other words, small and easy changes to behaviour can lead to subsequent changes in behaviour that may go largely unnoticed.⁹² This approach challenges the common belief that we should first seek to change attitudes in order to change behaviour.

Similarly, it has been shown that the greater the expectation placed on people, the better they perform.⁹³ Thus, people with positive expectations internalise their “positive” label and succeed accordingly; but this influence can also be detrimental if a negative label is used.⁹⁴ A self-fulfilling prophecy is created, whereby people behave in a way that is consistent with the expectation of others.

Our desire for positive self-image leads to an (often automatic) tendency to compare ourselves against others and “self-evaluate”.⁹⁵ When we make these comparisons, we are biased to believe that we perform better than the average person in various ways: 93% of American college students rated themselves as being “above average” in driving ability.⁹⁶ This bias may require policymakers to go beyond what might be considered optimal in regulating some behaviours. For example, it might be necessary to enforce stricter working hour limits for professions that impose risk on others, such as long-distance drivers and medical staff, because people will overrate their ability to cope with fatigue and stress; or set very low levels of acceptable alcohol consumption when driving, because drivers will overestimate their driving skills.

Conclusion

The MINDSPACE framework provides a brief overview of some of the most robust and powerful automatic effects on behaviour, which can be used as tools for behaviour change (in addition to more traditional interventions). These principles are underpinned by laboratory and field research from social psychology, cognitive psychology and behavioural economics. In the next section, we consider how these tools can be applied to several key policy areas.

Examples of MINDSPACE in public policy

The MINDSPACE framework provides a quick overview of some of the most robust and powerful tools that can and have been used to influence behaviour. Here we consider how these tools can be applied to three broad policy areas:

1. **“Safer Communities”**. Challenges include: preventing crime, reducing anti-social behaviour, preventing degradation of surroundings
2. **“The Good Society”**. Challenges include: promoting pro-environmental behaviours, increasing voting, encouraging responsible parenting
3. **“Healthy and Prosperous Lives”**. Challenges include: stopping smoking, reducing obesity, promoting responsible personal finances, encouraging take-up of education and training

We focus on these relatively broad policy areas to reflect some important distinctions that the public and policy-makers may draw between behaviour that affects others and ourselves, and between harms and benefits.⁹⁷ Following John Stuart Mill and liberal thinkers ever since, we have often been most concerned about the impact of people’s behaviour on others – especially when that behaviour causes harm.⁹⁸

Challenges in relation to **safer communities** fall largely into this category. The most obvious example is the reduction of crime and offending, but it also covers issues such as littering and polluting the environment. In essence, the policy brief is to *stop a behaviour that is harming others*. This is a relatively non-contentious type of behaviour change for governments to take on, and has long been accepted, and even demanded, by citizens. It covers much of the activity of the Home Office, but also that of departments such as the Ministry of Justice and the Department of Energy and Climate Change.

Challenges around the **good society** also relate largely to the impact on others, but typically in relation to benefits rather than harms. Individual citizens may be less able to capture the benefits of such actions, and will tend to ‘under-invest’ in such behaviours, making a strong case for governments and communities to try to actively encourage them further. Classic examples include behaviours with positive spill-overs such as volunteering, paying taxes and recycling. This involves a big part of the activities of departments such as Communities and Local Government, but also that of Department for Food, Environment and Rural Affairs, Department for Culture, Media and Sport, and several others.

Challenges in **healthy and prosperous lives** also have some effects on others but relate more directly to harm and benefits to the self. This is where the support for government involvement may be weaker, since these types of behaviour are often seen as more within the realm of personal responsibility. Nevertheless, there may be strong financial reasons for acting, such as the Wanless Review’s claim that the cost of a population ‘unengaged’ in its health could be £30 billion more by 2022 than a population actively engaged in taking responsibility for its own health.⁹⁹ Classic examples include reducing smoking, preventing obesity and encouraging savings. This type of behaviour change is a major focus of the Department of

Health, but also of departments such as the Department of Work and Pensions and Department for Children, Schools and Families.

Combining a) the goal of the behaviour change, b) the citizens who are affected, and c) the perceived legitimacy of government action creates a flexible framework that covers the major areas of government policy, as can be seen in Figure 4.

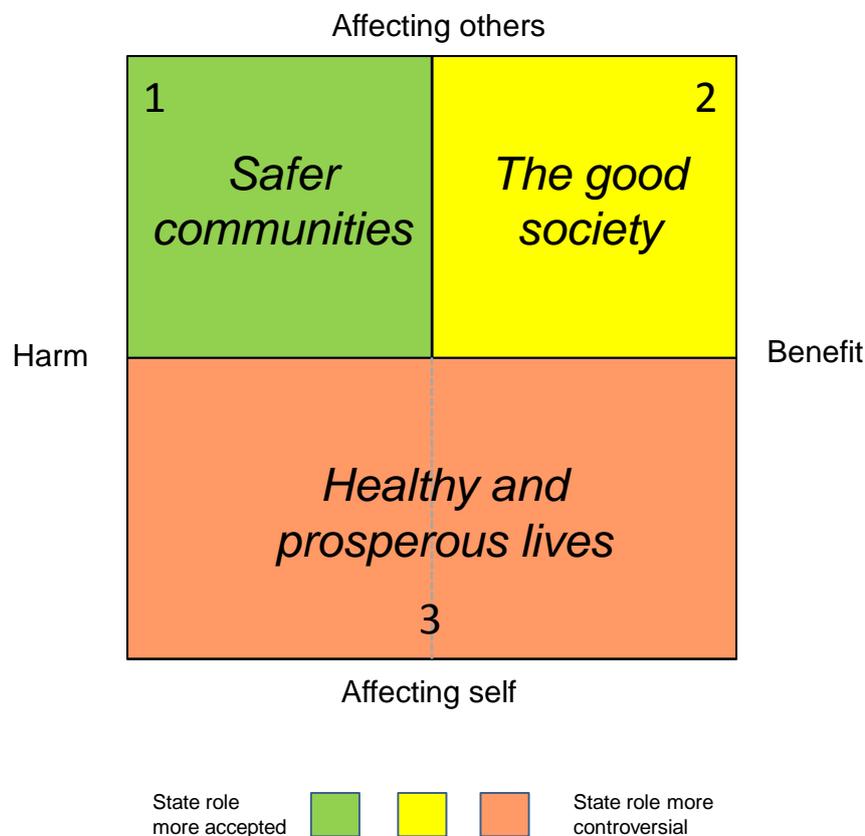


Figure 4: Broad policy areas viewed in terms of behaviour

The following sections show how the behaviour change effects from MINDSPACE can tackle common or pressing challenges under the three broad policy areas of safer communities, good society and healthy and prosperous lives.

We provide a range of case studies that demonstrate how some of the MINDSPACE effects have already been used to change behaviour and cite evidence of their effectiveness. We follow this with an exploration of how other elements of MINDSPACE can be used to influence behaviour in that policy area. These may be evidence-based examples, or suggestions for future policies.

The MINDSPACE framework can also show how policymaking can have unintended and perverse effects on behaviour. Such insights can be as important, if not more so, than the positive examples of MINDSPACE we provide.

In some of the case studies, it may be evident that more than one MINDSPACE effect is influencing behaviour at any one time. While it may be easier to conceptualise these effects as if they work in isolation, in practice significant overlaps will exist. If interventions are well designed, these overlaps are likely to enhance the effectiveness of attempts to shape behaviour.

Safer communities

A key and legitimate role of government is to discourage people harming each other. Much of our legislation and system of justice is aimed at achieving exactly this. We pass laws precluding unacceptable behaviour and look to the courts and criminal justice system to catch and punish citizens who break these laws. But

legislation is far from perfect at affecting behaviour change. Crime and fear remain major concerns in most Western countries and – even in the context of the country's current economic problems – remain one of the British public's top concerns.¹⁰⁰ The following case studies show how thinking differently about criminal behaviour may tackle the pressing challenges it presents.

Case study: reducing gang violence in Strathclyde

The policy issue

The latest British Crime Survey (BCS) reports that violent crime has fallen by 49% since 1995, with provisional data showing 648 murders recorded by the police (the lowest in 20 years). The use of knives in all violent crime has remained fairly stable over the last decade.¹⁰¹ Although gun crime remains very rare, the number of recorded crimes involving firearms (excluding air weapons) doubled between 1998/9 and 2006/7.¹⁰² And there is considerable public concern about knife and gun crime: 93% of BCS respondents thought knife crime had risen nationally, with 86% thinking the same for gun crime.¹⁰³

Many of these concerns have related to the activities of 'gangs'. It is extremely difficult to measure gang membership, but a 2004 Home Office study estimated that 6% of young people aged 10-19 belonged to a delinquent youth group.¹⁰⁴ Offending rates were significantly higher for members of these groups than for non-members, and 51% claimed to have taken illegal drugs with other members.¹⁰⁵

Using norms and messengers to change behaviour

It has been shown that people are strongly influenced by the behaviour of others, particularly by those who are similar to themselves. If delinquent behaviour is seen as 'normal' and widely practised by peers, this creates a strong attraction for gang members to join in and conform to the norm.

Scotland's Violence Reduction Unit has taken an innovative approach to tackling Glasgow's gang culture, which is founded on turning the power of social norms *against* gangs. Previous initiatives – including foot patrols and crackdowns on knife crime – had achieved only short-term success.¹⁰⁶ Then Scotland's Violence Reduction Unit turned to a US programme called the Cincinnati Initiative to Reduce Violence (CIRV). A central plank of CIRV's approach is to make one gang member's actions affect all his/her peer group. So, if a gang member commits a murder, then the entire gang is targeted for offences: drug activities, weapon possession, and parole and probation violation. In other words, punishment is replicated in the same way as the delinquent behaviour was – through the social norm of gang membership.

The American programme adopts other tactics for 'changing operative norms regarding violence'. Gang members were summoned to face-to-face forums as a condition of their parole. One purpose of these forums was to show how the gang's 'rules' or 'code' was based on illusion and rarely operated in reality. The other main purpose was to draw on wider social norms, by getting members of local communities, victims' relatives and ex-offenders to speak about the impact of the gang's violence on their area.

The messages have proven most effective when coming from figures that gang members may respect, or to whom they can relate – as when the mother of a dead gang member warned: 'If you let yourself get killed, your mother will be standing here. She will be me.'¹⁰⁷ As one of the American scheme's architects has noted, 'We're finding all of this matters more if you can find someone who is close to the offender, who they respect, who will

reinforce these values.¹⁰⁸ This points again to the power of the ‘Messenger’ effect, explained above.

Evaluation

There have been a series of gang violence initiatives, all based on a similar model from the United States. One of the first programmes, Ceasefire, has been well evaluated. When first launched in Boston in 1996, an evaluation for the US National Institute of Justice found that the intervention reduced the average number of monthly youth homicides by 63%.¹⁰⁹

A more recent evaluation of a programme based on the Boston project found that shootings and killings dropped between 41% and 73% in Chicago and Baltimore; declines of between 17% and 35% were attributable to Ceasefire alone.¹¹⁰ In Cincinnati, gang-related homicides fell by 50% in the first nine months.¹¹¹ These improvements appear to be enduring – once a new social norm has been embedded, it becomes self-sustaining.

Scotland’s Violence Reduction Unit secured £1.6 million of funding for their own CIRV (Community Initiative to Reduce Violence) project in 2008, which has brought together workers from many different agencies (including housing, education, social work and justice). The first face-to-face forum was only held in October 2008, with the first year’s results published at the end of 2009.¹¹² The Home Affairs Select Committee recently praised Scotland’s Violence Reduction Unit’s ‘innovative’ strategy in its report on knife crime.¹¹³

Thinking through the MINDSPACE framework offers many possible ideas for policy to reduce crime and make our communities safer.

M

Messenger

Our reaction to information that specifies what is, and what is not, socially and legally acceptable is often influenced by the messenger delivering it. In reducing criminal activity, some people will respond better to authority figures, whilst others are more sensitive to messages delivered from people with similar backgrounds. The messengers used by the London borough of Brent to deliver information successfully to youngsters about the risks of becoming involved in gun crime were youth officers who were previously in street gangs.¹¹⁴ BAC-IN, based in Nottingham, is run for and by people from African/Caribbean and South Asian backgrounds that have drug and alcohol problems. It provides culturally appropriate peer support to address and treat substance misuse problems in communities where abuse is often hidden and denied.¹¹⁵

There is strong evidence that the persuasive impact of close personal relationships on behaviour and family and friends can be used to deliver messages that seek to reduce criminal activity.¹¹⁶ The Ceasefire programme, for example, uses mothers to deliver messages to gang members. One idea, raised at a recent Prime Minister’s Strategy Unit seminar, is the practice of local mothers joining the police on the beat in housing estates blighted by anti-social behaviour. Such interventions not only strengthen the messenger (on both sides), they also help strengthen the establishment of stronger local social norms.

I

Incentives

Behaviour shaping, such as in relation to troubled youth, is often best done through positive incentives – in other words, rewarding and encouraging pro-social and adaptive behaviour rather than negative incentives (penalties) for bad behaviour. Hence effective parenting programmes focus heavily on helping the parents of troubled youngsters to praise and encourage sometimes quite small steps towards

positive behaviour (such as not leaving shoes lying around, or clearing plates from the table).

Whether using incentives as a reward for positive behaviour or as a penalty for bad behaviour it may be useful to consider loss aversion (the phenomenon that individuals prefer to avoid losses than acquiring gains). It is likely that sanctions, such as fines, are likely to be more effective when framed as losses. For example, the threat of crushing an offender's car (as represented in DVLA adverts) or taking their new TV could be more powerful than a fine of the equivalent level.

N

Norms

Social norms are a very powerful driver of both minor and more serious forms of crime. Essentially, we often take our cues for 'what goes' from those around us. Hence if one or two people start vandalising an abandoned car, others are likely to join in.¹¹⁷ Even amongst highly educated members of society, the propensity to cheat is influenced by pervasive local norms.¹¹⁸

As noted in the case study, Ceasefire uses norms extensively, in this case partly trying to lever the social capital of the gang to less negative ends. This can work in the other way, however, with custodial sentences in certain circumstances being associated with higher rates of recidivism. It may be that custodial sentences break an individual's remaining exposure to mainstream social norms and instead immerse them in a crime-based set of norms and social networks. A more positive example may be youth or teen courts, where young volunteers serve in various capacities within the programme. There is evidence from the USA that these can be highly effective. These seem to rest on several factors, a key one being that young people are especially sensitive to the social norms and influences of their peers.¹¹⁹

D

Defaults

"Target hardening" – for example, making products harder to steal - offers an increasingly familiar and effective form of harnessing the power of defaults. For example, ensuring that mobile phones come with security passwords already enabled or building cars that automatically immobilise the engine make successful crimes more difficult. Such phones can still enable users to override the default, but the chances are that most users will be happy with the default extra security in place, just as they would have been without it. Speed limiters in cars (that could be actively overridden) could work in the same way.

S

Salience

In general, the more the message or signal is specific and salient to us as individuals, the more powerful it is likely to be. For example, campaigns to encourage people to drive more carefully or lock up their houses will be more effective if they are segmented to match the audience. Hence, a speeding campaign is more likely to be effective when tailored to young drivers and other at-risk segments, and 'lock-up' campaigns when rooted in statistics about burglaries on your own street. Again, the recent Cabinet Office report on segmentation provides practical advice in this area.¹²⁰

Salience can also be applied to help public policy in more indirect ways too. For example, recent evidence in the UK suggests that visible jackets and salient 'unpaid work' can boost confidence in community punishment.¹²¹ This increased confidence may provide a platform for policymakers to move the UK criminal justice system away from use of custodial sentences towards the greater use of community sentences that appear to work well, and be publicly acceptable, in our Northern European neighbours.¹²²

P

Priming

Criminal activity can be made more likely by factors in the environment that ‘prime’ an offender’s behaviour. The ‘Broken Windows’ theory suggested that if a few windows of a derelict factory were not repaired, the tendency was for vandals to break a few more. As such ‘one example of graffiti or littering, can indeed encourage another, like stealing’.¹²³ Further work has shown that the sight of guns can induce aggressive ideas and ‘can function as a conditioned stimulus, eliciting both the thoughts and motor responses associated with its use’. As a result, it has been said that whilst ‘the finger pulls the trigger, the trigger may also pull the finger’.¹²⁴ Hence, policy-makers should consider how the wider visible environment in which people live may actually prime crime.

A

Affect

Restorative justice is a process where parties with a stake in a specific crime work together in dealing with the aftermath of the offence and its future implications. Bringing offenders face-to-face with their victims can evoke a strong emotional response – such as anger and guilt - in participants. The youth offending team in Caerphilly believe that their restorative justice scheme empowers victims and can reduce crime.¹²⁵

Of course, much of the impact of crime comes from the powerful negative emotions it generates, not just directly for victims but because of the pervasive sense of fear that it can engender. It can be challenging to value the psychological cost of crime¹²⁶ but we know that fear of crime can affect our behaviour, which can lead to withdrawal into the home and abandonment of public space. Community building – getting to see and know your neighbours – can be an effective way of reducing fear. A common response of fearful residents brought together is the relief when they discover they are not alone.

C

Commitment

Policy-makers and those working in the criminal justice system should consider how the power of commitment could reduce or prevent undesirable activities. Acceptable Behaviour Contracts (ABCs) are a good example of the use of commitment devices in relation to crime. A meeting is held between the offender, their parents (if applicable) and the police and all agree what is and is not acceptable behaviour. Though there is no legal sanction, ABCs can nevertheless be effective in reducing antisocial behaviour.¹²⁷

Although reciprocity can sometimes be a powerful negative force, such as tit-for-tat exchanges between rival gangs, commitment contracts could be enhanced by strengthening their reciprocal element. It may be useful for the partners of the agreement to recognise when the contract has been successful and respond, with positive feedback or reward.

E

Ego

The quest for a positive self-image is important for most of us but may be particularly so in persistent criminal offenders. Research into the causes of violent acts has traditionally focussed on risk factors rather than perpetrators’ perspectives on their actions. Violent crime in particular, is often entangled with a struggle for ‘respect’, and there is evidence that violence often relates to (arrogant or aggressive) protection of low self-esteem.¹²⁸ The recent, and much quoted, Australian campaign to reduce speeding by young men openly plays on this desire for respect: an attractive young woman raises and bends her finger to signal that she thinks speeding a sign of having a small penis.¹²⁹ Similar campaigns could be launched to reduce the drink-related violence seen in many town centres at night, often carried out as a sign of machismo.¹³⁰

In contrast, the ever-popular but highly ineffective practice of ‘scaring straight’ by taking young people to prison may fail because it makes it easier for the young person to think of themselves as an offender, and to incorporate this into their identity. The evidence indicates that it actually increases subsequent offending.¹³¹ Similarly there are concerns that anti-social behavioural orders (ASBOs) are sometimes treated as a ‘badge of honour’ in some social groups and may cue bad behaviour rather than restrain it.¹³²

Case study: Reducing littering in Southwark

The policy issue

Citizens consider the appearance of their local area as a major issue, and litter is perceived as the second biggest blight on the local environment.¹³³

Government attempts to alleviate these problems are considerable: the estimated cost of street cleaning was £547 million in 2005-06.¹³⁴ At a local level, polling data in the London Borough of Southwark has indicated that residents considered street cleanliness to be the council’s main priority. By 2007, the council was spending approximately £20 million cleaning streets and housing estates.¹³⁵

Using norms and salience to change behaviour

Given public concern and government spending, littering presents a strong case for attempting to change behaviour to prevent harm to others.

Southwark applied incentives to reduce littering by introducing £75 fixed penalty notices (FPN). These notices are obviously more effective if people are aware of them – which is why Defra recommends they are preceded by an awareness-raising campaign.¹³⁶ But, just as concern about litter in general may not translate to changed behaviour in practice,¹³⁷ there are some real challenges to making the abstract threat of a fine ‘real’ to citizens.

Starting in 2004, Southwark adopted ‘Stalking Litter’, an innovative approach to making the issue of litter, and FPNs specifically, more salient to citizens. In order to attract attention, the council hired actors in giant litter costumes to ‘create a scene’ in busy streets throughout the borough. The actors (later replaced by staff members) explicitly aimed to engage with the public, for example by cheering and thanking passers-by who put litter in nearby bins.

There are three main advantages to exploiting salience in this way:

a) The novelty and amusement of the giant litter provides a salient opening for the serious messages about litter problems and FPNs. As one participant argued, ‘It’s hard to get your message across if you have a leaflet in your hand. Dressing as a giant banana gives you a 10 to 15 second window where people listen to you.’

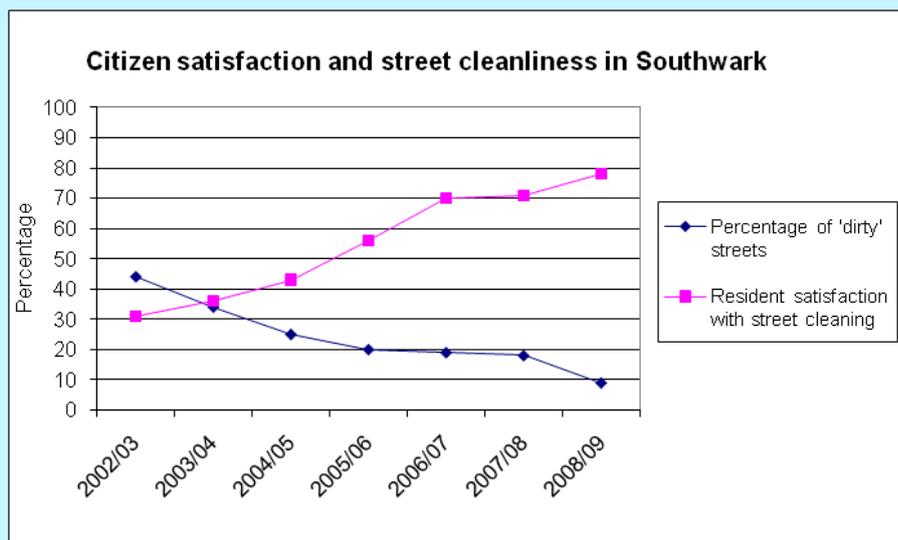
b) The costumes connect the issue of litter and FPNs with distinctive visual images. Not only do the images exploit non-verbal means of communication, their novelty makes it more likely that the accompanying message will be retained.¹³⁸



c) The costumes were explicitly designed to represent the most common types of litter found in Southwark (for example, coke cans, fast food, and cigarettes). These similarities are likely to make the actual litter that citizens encounter more noticeable, and to make them more aware of their own littering behaviour.

Evaluation

The programme has not been formally evaluated. There are informal reports that the novel approach was successful at tackling the apathy surrounding littering, while the use of humour appealed to groups who may have not responded to traditional information campaigns. The campaign was cited in Southwark's 'Overall Winner' title at the Cleaner Safer Greener Network Awards in 2006.¹³⁹ Naturally, it is very difficult to make a causal link between the use of Stalking Litter and the incidence of littering, since the initiative took place as part of a wider programme aimed at improving the cleanliness of Southwark. Nevertheless, holistic programmes to change littering behaviour can achieve significant effects, as indicated in the graph below.¹⁴⁰



The good society

Nearly everyone wishes to live in a 'good society', even if different people tend to emphasise different things when defining it. Government often intervenes to promote a better society, and may be seen to have legitimacy to do so if people believe civil life has deteriorated. Although very few people when questioned want the state intervening more in their lives, they are likely to give permission for new policies in this area if the benefits are made salient to them.

Case study: Education-Related Parenting Contracts

The policy issue

Most people agree that parents need to be able to guide and nurture their children and discipline them when necessary. As part of this, parents are expected to support schools in making sure their children attend class regularly and behave appropriately whilst there. In the Autumn 2008 and Spring 2009 terms, unauthorised absence statistics show that 1.03% of the half day school sessions were missed without permission. In the 2007/8 academic year, there were 8,130 permanent exclusions from primary, secondary and special schools in England, which represents 0.11% of the number of pupils in schools. The most common reason for exclusion was persistent disruptive behaviour.¹⁴¹

Using commitment contracts to change behaviour

Education-related Parenting Contracts and Parenting Orders were introduced in February 2004 to promote and reinforce parental responsibility

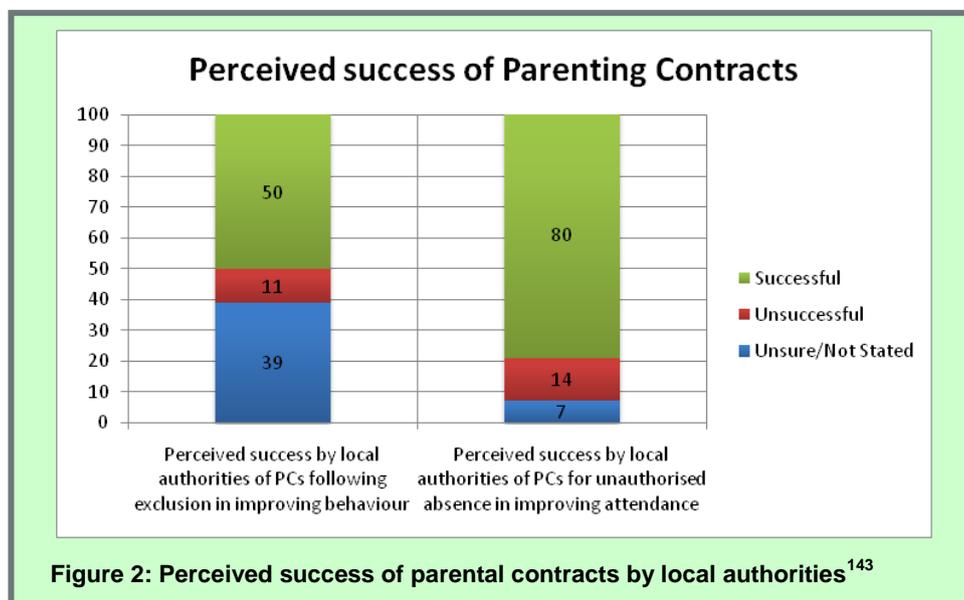
for school attendance and behaviour. An education-related Parenting Contract is a voluntary, written agreement between a parent and either the governing body of a school or a local authority. Parents cannot be compelled to enter into a Parenting Contract and there is no obligation for local authorities and schools to offer them. The contract includes a statement and a commitment by the parents that they agree for a specified period of time to comply with the requirements set out in the agreement. Parents in many cases are encouraged to suggest their own solutions as to what measures would be most effective. The school or local authority provides a statement and similar commitment agreeing to provide support to the parents to improve the child's behaviour and/or attendance. Support ranges from the family being bought an alarm clock to parents being offered a place on parenting skills courses.

After the Parenting Contracts have been signed off, an initial period of time is usually given for the pupil's behaviour or attendance to improve. If there is little or no improvement then the period of the contract can be extended, with both sides' agreement. There is no sanction for a parent's failure to comply with or refusal to sign a Parenting Contract. However, if the pupil's misbehaviour or attendance continues or worsens and the school or local authority applies for a Parenting Order (a civil order), then the Court can take non compliance with the Contract into account when considering whether to grant an Order. In the case of poor school attendance the local authority may consider prosecuting the parent, but this should be the last resort.

Evaluation

In 2008, a DCSF-commissioned evaluation of education-related Parenting Contracts assessed their role in improving children's behaviour and reducing unauthorised attendance.¹⁴² The evaluation showed that there was a greater use of Parenting Contracts for attendance problems rather than for bad behaviour. The trigger for contracts due to poor attendance usually occurred when unauthorised absences dropped below a specific level. For bad behaviour, parenting contracts were often used as a last resort attempt when other interventions had failed.

Schools, local authorities and parents were generally positive about the role of Parental Contracts in reducing non-attendance and improving behaviour (see Figure 6). The majority of schools involved in the evaluation saw attendance improve as a result of using these agreements. Although a fewer number of contracts were used for bad behaviour, it was considered very difficult to isolate their effectiveness, as a number of other interventions were often running concurrently. However schools and local authorities did feel that Parenting Contracts had helped to avoid the child in question being permanently excluded and that generally, their behaviour had improved.



M

Messenger

Although much of the new legislation enacted in the last few years is uncontroversial and would have widespread support, some people may not approve of government interventions to encourage pro-social behaviours. Therefore, in delivering messages that seek to create a good society, it may be more effective to use messengers that are not seen as agents of the state. Currently, there are a number of public campaigns, such as those for filing tax returns or increasing recycling, that currently use public – and non-governmental - figures to get the message across.

Peer to peer programmes can be used to target youngsters who are often hard to reach, with messages intended to enhance pro-social behaviours. As part of the Aimhigher programme, a scheme has been established in which secondary school pupils are mentored by university students to support them in continuing into higher education programmes.¹⁴⁴ Peer education programmes have also been used to increase the youth vote, with organisations like ‘Rock the Vote’ using the power of peer messengers to increase voter turnout recent American elections.

I

Incentives

Providing incentives to promote pro-social behaviours can risk reducing people’s intrinsic motivation to make the right decisions in other areas of their lives. Intrinsic motivations come from the reward from carrying out the task itself, the feeling of satisfaction or self-worth that comes from an act of altruism. Extrinsic motivation comes from outside and usually takes the form of coercion or a financial reward or penalty. It has been shown that extrinsic incentives relate to how people see themselves and are therefore less effective in public than in private. For policy-makers, this would suggest that monetary incentives are more likely to be counterproductive for public pro-social activities than for private ones.¹⁴⁵

One area in which communities have grown in strength over recent years is online. Wikipedia is an example of a social resource that has come together with the help of a community of hundreds of thousands of editors who are not rewarded for their contribution financially. So what incentivises these people to contribute? It has been suggested that the motivations for contributing to such websites was not always strictly altruistic, but relied on increased recognition, a sense of efficacy and anticipated reciprocity.¹⁴⁶ Incentives may have a role in many areas of public policy making, but other factors may be as or more important than financial rewards or

penalties. Policy-makers should therefore try to identify whether there are any intrinsic, altruistic motivations that could be harnessed for behaviour change.

N

Norms

People have been seen to contribute more to society and public goods when they see others contributing as well.¹⁴⁷ This behaviour may be due to the specific norm of 'responsibility' generated when people recognise the impact their personal behaviour has on creating a better society. The theory of responsibility-orientated contribution to society differs from other explanations of pro-social behaviour, such as reciprocity and conformism, which also influence actions. In the setting of a Norwegian recycling programme, perceived responsibility was found to be a major determinant for reported recycling: an individual less certain that their neighbour was recycling was less likely to accept responsibility for their own recycling.¹⁴⁸ It seems that people determine appropriate pro-social contributions by looking at their peers' actions.

Encouraging voter turnout is a priority for healthy democracies. The 'Voter Paradox' describes the fact that in spite of the economic prediction (rational model) that very few people would turn out to vote, significant numbers continue to do so. There are a number of reasons for observed voter behaviour but a strong social influence certainly exists. The British Election Survey found that, controlling for all else, if a person believes that his or her peers think that voting is a waste of time, that person is less likely to vote.¹⁴⁹ To boost voter numbers, postal voting has been introduced in many countries. When optional postal voting was introduced in Switzerland, it reduced voting costs substantially but did not increase turnout. Interestingly, voter turnout actually decreased in smaller communities.¹⁵⁰ It has been suggested that this reduction was because the social norm of being seen to vote was lost. This implies that policy-makers should pay particular attention to encouraging or enabling a *visible* pro-social norm to take root in communities.

D

Defaults

Default payments or top up fees can be added to products which are then donated to projects promoting a 'good society'. The change of default from one in which the customer has to opt into making the additional payment to one in which they must opt out can dramatically influence behaviour. To maintain public parks in Washington State, drivers renewing their licenses are charged an additional \$5 donation unless they opt-out of not paying the fee. This has increased the amount donated compared to the old system, where people were not charged the fee unless they chose to pay it. In the previous model, only 1.4% of people donated, with the State collecting just over \$600,000 dollars a year. The state has reported making over \$1million dollars a month from the scheme since the change.¹⁵¹

Some organisations (for example, the ZSL London Zoo) now include a Gift Aid contribution as a default in their standard prices, and this technique could be encouraged for other causes promoting a 'Good Society'. Or optional payments could be added to products that lead to external costs to society: for example, some airlines already operate an opt-out default payment to offset the carbon footprint associated with flying. This has implications for policy-makers either concerned with raising revenues in a non-compulsory manner, or with more nuanced ways of regulating and adjusting for market failures.

S

Saliency

Choice overload refers to the problem some consumers face when they are presented with too many options. Too many choices can lead to people making poor decisions and may even lead to people refraining from making any choice at all.¹⁵² As an example, people can sometimes be overwhelmed by the range of options they have for recycling their waste and may consequently choose not to

recycle at all. Better design could simplify the process by making recycling choices more salient. Colour coded container lids increased the recycling rate by 34% in one experimental study, suggesting that the lids colour communicated information effectively through salience, thereby improving recycling compliance.¹⁵³

P

Priming

Original research on priming and social behaviour found that exposure to songs with 'pro-social lyrics' increased altruistic helping behaviour.¹⁵⁴ Further studies have shown providing participants with a picture of a library caused them to speak more quietly.¹⁵⁵ Features of our environment may be able to prime pro-social behaviour; however, more research evidence is needed before such interventions could be recommended.

A

Affect

Social marketing is the application of commercial marketing techniques to influence the voluntary behaviour of target audiences and improve personal and societal wellbeing.¹⁵⁶ Many social marketing campaigns have used the power of affect or emotion to stimulate behaviour change. Drink driving and seatbelt awareness campaigns are good examples of where social marketing campaigns have played a part in significantly changing behaviour. Social marketing that draws on the power of affect could be used to encourage other pro-social behaviours such as blood donation and community volunteering.

C

Commitment

The internet site www.stickk.com enables users to form commitment contracts to help them achieve personal goals such as losing weight and stopping smoking. The internet also provides a forum for people to make commitments to enhance their local community. Pledgebank.com is a site where people are able to commit to doing things in their community. Users set up pledges and other people are encouraged to sign up to them. If the pledge attracts enough people then the group is encouraged to go forward with the idea. Current examples include 'I will start recycling if 100 people in my town do the same' and 'I will organise a love music, hate racism event in South London, but only if 10 other people will help out'.

Reciprocity can be used as a mechanism to improve social cooperation through citizen-to-citizen support schemes. The basis for such programmes is that people can earn credits for pro-social behaviour in their local community. The idea comes from Japan, where a cashless currency (*fureai kippu*) or 'caring relationship tickets' has been established. In the scheme, people are able to earn credits for looking after an elderly neighbour, which can then be used to purchase similar care for elderly relatives who live a significant distance away. A similar programme could be established in the United Kingdom.¹⁵⁷

E

Ego

Community improvement needs strong involvement and support. Enhancing the status of individuals who contribute to enhancing their local communities may encourage more people to take an active part. 'Community Champions' is an umbrella term, used by a number of organisations to describe people that work to improve the environment in which they live or work in. For example, 'Community Champions' in Braintree inform the council about abandoned vehicles, graffiti, vandalism and street lights that have gone out.¹⁵⁸

The Honours system has been used in recent years to recognise people who have made significant contributions to their local communities. It may be beneficial to create a more formal national award for young people and recent immigrants who have already made a substantial contribution to their communities, but who may not currently be recognised by the Honours system.

Case study: Increasing recycling through deposit schemes

The policy issue

The United Kingdom consumed approximately 14 billion litres of soft drinks in 2007, equivalent to around 234 litres per person. In the same year nearly 24 billion beverage packaging units were sold.¹⁵⁹ Recycling rates of such products is markedly less in the United Kingdom compared to other countries in Western Europe.¹⁶⁰ In Denmark, a combination of a bottle deposit scheme with a network of Reverse Vending Machines (RVMs) has seen return rates of 84% for cans, 93% for plastic bottles and 91% for glass bottles.¹⁶¹

Using incentives and loss aversion to change behaviour

There is no doubt that better facilities have contributed to improved household recycling. One area where recycling rates remain poor, however, is in the recycling of products purchased 'on the go' (e.g. soft drinks containers). Deposit schemes are used in many countries to encourage people to return empty packaging, and there is evidence they can reduce littering.¹⁶² The basic principle of the scheme is that consumers pay an additional fee to the retailer when purchasing a bottle or associated packaging. The deposit is refunded when the consumer returns the empty packaging. In a recent survey, 82% of people in the United Kingdom polled said they would support a scheme whereby at least five pence was included in the price of every drink container, with the deposit returned for recycling.¹⁶³

There are a couple of examples of incentive schemes that have been used in the United Kingdom to improve recycling rates. IrnBru, which is manufactured by AG Barr, is available in refundable glass bottles. Empty bottles can be returned to retailers, who provide either cash refunds or a credit voucher. The current deposit value is 30p, and an impressive 70% of bottles are returned for cleaning and reuse.¹⁶⁴

Reverse Vending Machines (RVM's) are devices that accept empty beverage containers and can return money to the user. RVMs vary in size and their price ranges from a few thousand pounds for smaller receptacles to tens of thousands of pounds for larger units that can handle many thousands of bottles a day. An organisation called Recoup have been involved in a number of trials of RVMs, including one in Milton Keynes. Initially no incentive was offered to encourage the public to recycle using the RVM but an incentive has recently been introduced. These voucher-based incentives have not been seen to cause a significant effect on recycling behaviour. Another scheme by The Body Shop offered its customers a 10% price reduction if they returned containers to the shop for refilling. The scheme was dropped because only 1% of shoppers were using it.¹⁶⁵

There may be a number of reasons why IrnBru and other bottle deposit schemes have been effective, whilst other programmes have been less so. Behavioural economics provides us with one potential answer - loss aversion. Loss aversion is the theory that states that losses loom larger than corresponding gains and subsequently have a greater effect on preferences. It is likely that part of the success of deposit schemes lies in generating loss aversion in consumers. When customers hand over their deposit, loss aversion predicts that failure to return the bottle and collect the payment back will trigger a larger psychological cost than the monetary value of the incentive would suggest. For this reason, deposit schemes may have a more powerful effect on consumer behaviour than simple incentives alone.

Evaluation

Environmental Resources Management Limited (ERM) was commissioned by DEFRA in 2008 to investigate whether a bottle deposit scheme should be introduced in the United Kingdom. The findings of the evaluation were that deposit schemes increase return rates in countries using them (often reaching rates of over 85%) and that they may also contribute to reductions in littering. ERM summarised that whilst it is not disputed that a deposit scheme would increase recycling, alternative schemes may achieve similar or better results at less cost.¹⁶⁶

A subsequent report from DEFRA suggests that there is unlikely to be a national deposit scheme rolled out in England in the foreseeable future.¹⁶⁷ Such a scheme may be seen elsewhere in the United Kingdom, however, and The Climate Change (Scotland) Bill contains powers to introduce deposit and return schemes.¹⁶⁸ It may also be that retailers themselves take on the responsibility for establishing bottle deposit schemes, and both Sainsbury's and Tesco have already tried this in various guises.

Healthy and prosperous lives

A central goal of policymakers is to make citizens healthier and more prosperous. Countless years of life continue to be lost as a result of the disease burden from unhealthy choices. Similarly, the penalties of poor financial decision-making can adversely influence individual and societal well-being, in the short and long term.

People should be encouraged and supported in making healthier choices if they wish to, but there can be opposition to government involvement with these issues.¹⁶⁹ Altering the choice environment with no restriction placed on individual choice may provide an accepted way for policy-makers to influence behaviour in these areas.

Case study: increasing contraceptive use

The policy issue

There are currently more than 33 million people living with HIV globally. Sub-Saharan Africa remains the region most heavily affected by HIV worldwide, accounting for over two thirds (67%) of all people living with HIV and for nearly three quarters (72%) of AIDS-related deaths in 2008. Women are significantly more likely to contract HIV: throughout the region, women account for 60% of all HIV infections.¹⁷⁰ HIV clearly has important consequences for those infected and for wider society in terms of carer burden, lost output, etc. In an attempt to stem the epidemic, DfID has committed £6 billion over seven years to 2015 to improving health systems in developing countries.¹⁷¹

As the UK's AIDS strategy for developing countries notes: 'Successful HIV prevention is about enabling individuals, couples and communities to make healthy choices about personal aspects of their lives – particularly sexual behaviour. These are not just based on information and rational choice; they are also influenced by complicated drivers of human action, including gender roles, inequality, norms around sexuality...'¹⁷² A key plank of the strategy is increasing awareness and use of condoms. But DfID has also recognised the need to incorporate the 'complicated drivers' around how we deal with information – in particular, the importance we attach to the *messenger*.

Messengers

The weight we give to information depends greatly on the feelings and thoughts we have about its source. This principle is the foundation of the DfID-funded 'Get Braids Not Aids' campaign in Zimbabwe, which is one of the countries that has been worst hit by the virus.¹⁷³ The scheme trains hairdressers in low-income areas in informing their clients of the benefits of female condoms, how they are used and how to introduce them into a relationship.¹⁷⁴ This means the information is being provided by a familiar person in a friendly, supportive and safe environment, which helps overcome the stigma attached to female condoms and means the women feel freer to talk about their personal issues. Also, associating female condoms with a friendly person or enjoyable experience may lead them to be perceived in a more positive light as a whole.¹⁷⁵

Evaluation

By 2005, 'Get Braids Not Aids' had a network of 1,000 hair dressers in 500 salons, which sold 450,000 female condoms.¹⁷⁶ This represented over half of total sales of female condoms in Zimbabwe, which have increased dramatically since 1997.¹⁷⁷ A DfID-funded study amongst 400 hair salon clients found that women who had seen a female condom demonstration by a hairdresser were 2.5 times more likely to use the product than those who had not.¹⁷⁸

The study found that 28% of respondents reported using the female condom (called *Care*), compared to only 15% in 2002. 35% of respondents spontaneously reported hair salons as a source of information about *Care*, while 47% said they had specifically talked about *Care* with their hairdresser.¹⁷⁹ There are questions, however, over the sustained use of female condoms, since it appears that half of the women who purchased the female condom only used it once.¹⁸⁰

Given the various complicating factors, it is not possible to draw a causal link between this programme and AIDS prevalence. However, a recent United Nations report attributes the significant decline in HIV prevalence in the last decade to mortality and 'a decline in HIV incidence due to behaviour change'.¹⁸¹

M

Messenger

We usually think of parents moulding or influencing their children's behaviour, but children similarly influence parents and other family members. A series of Department of Health adverts have been used featuring children conveying the health risks of smoking to their parents. There may be a wider role for personal health messages to be delivered by family members to other relatives. Teenagers learn about healthy living as part of the social and health education programmes that form part of their school curriculum. Teenagers of a certain age could be encouraged to provide health information to relatives (e.g. grandparents).

I

Incentives

Payments for gym membership leave many people's bank accounts without a foot stepping on the treadmill. A Danish chain of gyms is offering a new way of encouraging its members to visit the gym regularly.¹⁸² The gym offers free membership, with the only condition being that if you fail to show up once per week you will be billed a monthly membership fee. Traditional gym subscriptions (annual subscriptions) can be considered in many ways as 'sunk costs'. In economics,

sunk costs are those that have already been incurred and cannot be recovered. Whilst these costs will still motivate the gym member, the Danish scheme is likely to be more successful (in terms of increasing usage, if not profit), since it will generate continuing feelings of loss aversion for failure to go to the gym.

General Practitioners are now prescribing a variety of exercise programmes to their patients, including gym memberships and golf lessons.¹⁸³ The rationale is that this will offer preventative health benefits, but it has generated controversy and the effectiveness of such schemes is not yet proven. A system that allows people to access similar free facilities could use the Danish model that only results in costs to participants if they do not keep to their targets.

N

Norms

The decision to smoke or drink alcohol is heavily influenced by the choices of those around us. Recent evidence suggests that the outside forces that make one person's smoking less likely will also decrease the probability that close friends or family will also smoke. It was demonstrated that individuals whose spouse was faced a workplace smoking ban were less likely to smoke themselves and that a spouse quitting can lead to a 40% reduction in the probability of spousal smoking. This evidence suggests that policy interventions affecting an individual's behaviour (e.g. workplace smoking bans) may have an additional indirect effect on their peer group.¹⁸⁴ This may increase the legitimacy of policies that are used to target other unhealthy behaviours.

D

Defaults

Nudges can also use technology to deliver desired changes in behaviour. Statistics suggest that there may be a group who repeatedly flout drink driving laws.¹⁸⁵ A new approach may be needed to deal with this group of persistent offenders. In certain American states, those convicted of drunk driving have to install breath-monitoring gadgets in their car, which prevents engines from starting until drivers blow into alcohol detectors.¹⁸⁶ There is of course the risk that drivers get their sober friends to blow into the device, but strict penalties have been introduced to counter this tactic. Such a scheme (acting as a default) could be used in the United Kingdom to reduce the damage done by these repeat offenders to themselves and others.

S

Saliency

Traditional economic theory tells us that price is supposed to capture, rather than shape, value. Recent behavioural research suggests that preferences can be affected by how a price is presented or framed.¹⁸⁷ The most obvious example is that consumers are affected by setting prices just one penny below the nearest pound value, since the pound value comes first and is thus more salient.¹⁸⁸

In recent years firms are increasingly displaying their prices not in terms of a single price, but as a breakdown of separate charges. Examples include online retailers who provide their price separated into product cost and handling and postage fees and airlines who now routinely itemise fuel fees, baggage charges and landing fees.¹⁸⁹ Consumers are often confused as to what products offer the best value. This has been seen in the travel industry, where there are increasing complaints about the transparency of prices for airline flights. Where confusion exists in pricing structures, it may be necessary to require companies to present their prices in structured formats that allow consumers to make the choice that is best for them.

P

Priming

Inappropriate and unhealthy alcohol use is a source of significant concern in the United Kingdom. There are a number of factors that may prime people into excessive drinking. We know that people's portion sizes vary according to the container size and so people who use larger glasses will tend to pour themselves

larger measures.¹⁹⁰ Other elements of the environment in which we drink – music, lighting, atmosphere - may also change our behaviour in relation to how much we drink and how we subsequently act: we ‘go with the grain’ of our environment.

A

Affect

Our general mood can affect cognitive processes and choices. If we are in a good mood we tend to make unrealistically optimistic judgements, and the opposite applies.¹⁹¹ We will often make important decisions in such ‘hot’ or ‘cold’ states and the choices taken may not always be in our long-term interests. Where it can be predicted that our emotional state may affect our judgment, it may be useful to have a formal ‘cooling off’ period that allows us to come back and reconsider our decision at a later date. Examples include the purchase of insurance policies and agreement of personal loans. Government policies could better recognise the power of these ‘hot’ states and build in greater safeguards for people to ameliorate the consequences of decisions taken under their influence.

C

Commitment

1-2% of the population in many developed countries suffer from pathological gambling. For those with such problems, some casinos (particularly in North America) have offered self-exclusion programmes to limit an individual’s gaming opportunities. Self-exclusion provides the opportunity for gamblers to sign an agreement to ban them from gaming venues. This agreement may hold for a limited time or even a lifetime. An evaluation of people who had signed contracts in Quebec showed many positive effects. The urge to gamble significantly reduced while the perception of control increased significantly for participants.¹⁹²

Casinos in the United Kingdom could be encouraged (or forced) to make self-exclusion agreements more accessible to problem gamblers. In addition, there are increasing concerns about the number of people who are developing serious problems as a result of online gambling. Online casinos operating in the United Kingdom could similarly be forced to offer self-exclusion contracts. Of course, with the plethora of sites available it may be necessary to have a single agency to which individuals can sign a self-exclusion agreement.

E

Ego

In recent years, health promotion strategies have focused attention from targeting adult smokers into preventing smoking among children. There are a number of proven determinants of smoking behaviour including socioeconomic status, peer pressure, and cigarette advertising. It is well recognised that smoking, self-image and self-esteem are inextricably linked.¹⁹³ Adolescents can see smoking as a means to deal with stress and worry and there are particular problems with teenage girls whose smoking habits appear particularly resistant to change in many countries. A significant number of teenage girls think smoking makes them look experienced and sophisticated and they have concerns that if they quit that they will gain weight.¹⁹⁴ Targeted programmes to raise the self-esteem of specific at risk groups may be necessary to prevent the long-term consequences of continued smoking.

Case study: An ‘opt-out’ system for private pensions

The policy issue

As the Pensions Commission made clear, the current system of pensions is insufficient and ‘will deliver increasingly inadequate and unequal results’. Not only are private pension contributions failing to rise as expected, but increasing life expectancy will create pressures that cannot be alleviated by raising the pensionable age alone.¹⁹⁵ There are currently around 7 million

people in the UK who are not saving enough to generate the income they are likely to want in retirement.¹⁹⁶

Using defaults to change behaviour

The Commission pointed out that ‘initiatives to stimulate personal pension saving have not worked’, and pointed to ‘the limited impact of providing better information and generic advice’.¹⁹⁷ Indeed, in 2003 an estimated 4.6 million employees had not joined employer-based pension schemes to which they had access.¹⁹⁸ Strictly speaking, this failure is irrational, since joining such a scheme would bring considerable benefits to these employees.

There are many reasons for the low level of pension saving. Joining a scheme requires an active decision, but people often display inertia when confronted with such decisions. For example, many banks and credit cards tempt people to open accounts with attractive introductory offers, knowing that they will fail to move even when these offers elapse.¹⁹⁹ The problem is especially acute for pensions because they deal with a far-off future scenario: since people find it difficult to imagine old age, the decision to act does not seem to be a high priority and apparently can always be deferred.²⁰⁰ Finally, people are more likely to defer decisions that are complex and confusing, and thus require significant mental effort – like selecting a pension scheme.

Information provision alone fails because people may not act on this information, for all the reasons given. In the words of one interviewee, ‘we know we should be contributing to a pension plan, but it’s never the right day to start’.²⁰¹ In such a situation, should government just compel people to save more? The Pensions Commission noted that ‘while many people say they want to “have to save”, many respond adversely to the idea of compulsory savings’.²⁰² How, then, should government take stronger action without removing freedom? The answer from behavioural economics: use people’s inertia to actually *encourage* saving.

Currently, the onus is almost always on employees to make the effort to join their company’s pension plan or buy a personal pension. In other words, the ‘default’ option when employees join a company is for them not to join. The concept adopted by the Pensions Commission was to change this default: employees would automatically join the pension plan, but still have the opportunity to opt-out if they wish. Changing the default means that inertia is now working *in favour* of savings – but preserving an opt-out means that the government avoids introducing a compulsory saving system. The reform also introduces a compulsory “matching” contribution from the employer, obliging them to contribute to an employee’s pension (unless the employee opts out).

It is an attractive position that has been labelled ‘libertarian paternalism’.²⁰³ Indeed, one interviewee explained that having a simple and intuitive governing concept like ‘changing the default’ has helped maintain focus and momentum during the long process of implementing the Commission’s findings. Nevertheless, having a compelling theory alone is rarely enough when creating policy; a crucial factor in gaining support for an opt-out default was the compelling evidence of its effects in real life.

To take one of many examples, a study assessed the changes in pension uptake when a large US corporation switched their default from active to automatic enrolment. As the graph below shows, enrolment increased significantly after the change in default.²⁰⁴ Interestingly, introducing automatic enrolment also eliminated most of the previous differences in

participation due to income, sex, job tenure and race – the increase in take-up was particularly large for low and medium income workers.

The graph below shows pension participation rate by years worked in the company. For employees hired prior to automatic enrolment, participation increases with tenure. But the highest participation rates are for the employees hired under automatic enrolment.

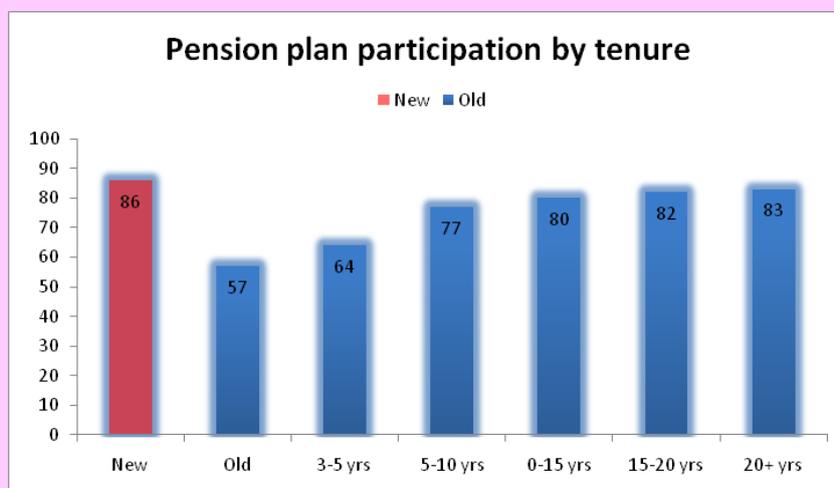


Figure 8: Change in enrolment in pension plan, by length of employment²⁰⁵

As well as sound theory and strong evidence, the movement to joining by default, with an opt-out, was aided by support from stakeholders: for example, pension providers can gain business and cut marketing costs, while small businesses' pension contributions are in line with their employees' desire to save. As a consequence, the Pensions Act 2008 requires employers to automatically enrol all eligible workers over the age of 22 into the relevant workplace pension (with minimum total contributions of 8% of salary) from 2012.²⁰⁶

Evaluation

Naturally, an evaluation of this policy does not exist as this change in the default does not come into force until 2012. Nevertheless, the practical steps of translating an interesting concept into practice are worth reflecting on. Changing default settings may be easy on a small scale and in informal contexts, but there are challenges when national governments are required to legislate:

- The power of inertia means that the nature of the default pension fund needs to be chosen very carefully. As a result, the Personal Account Development Authority has just consulted on developing guidelines that will be used as investment principles for the fund managers of the proposed National Employment Savings Trust.²⁰⁷
- The use of legislation to compel employer contributions means that the Pensions Regulator will need to take on considerable new powers to ensure employers are complying with the new arrangements.
- Finally, the setup needs to reflect the motivations of the different parties. For example, the question of who provides the opt-out (i.e. who the messenger is) needs to recognise that employers may have an incentive to encourage employees to opt out.

Changing defaults is seen as a relatively cheap way of encouraging beneficial behaviours. Of course, this depends on a) costs associated with the actual change of the default; and b) the costs arising from more people

choosing the new default option. In terms of changing the default, the DWP has estimated there will be a one-off transition cost of £0.3 billion.²⁰⁸

The average monetised costs and benefits of people choosing the new default are roughly equal at approximately £15 billion a year, although they accrue to different parties (combined individual and employer contributions are offset by £15 billion of higher income for individuals in retirement). However, the DWP believes that there will be additional non-monetised benefits of £40 billion of social welfare benefit over 43 years (as a result of smoothing citizens' income over their lifetime), as well as a long-term increase in UK incomes due to additional savings.²⁰⁹

Applying MINDSPACE to policy-making

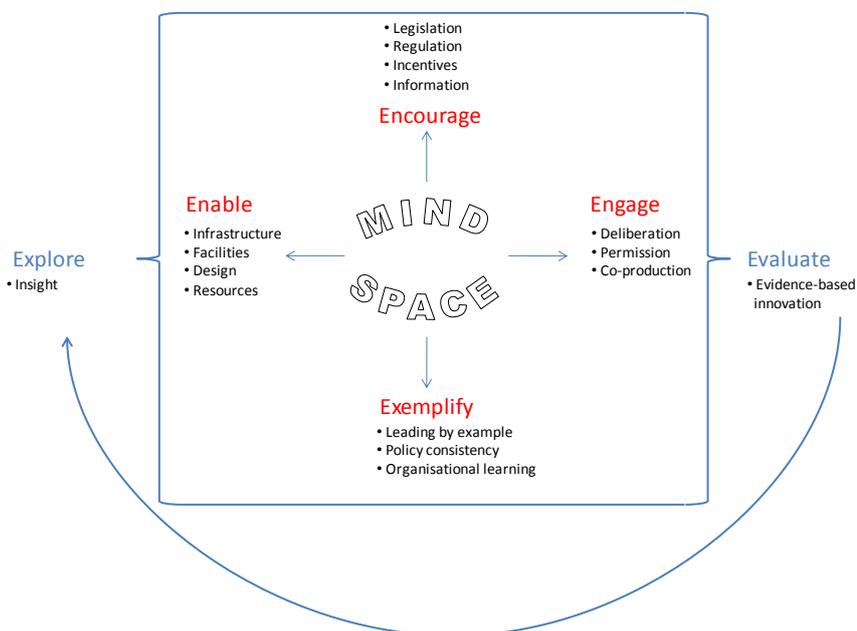
So far, we have explained MINDSPACE and shown its applications in the real world. This chapter explains how policy-makers can put MINDSPACE into practice. It focuses purely on *how* government *could* apply MINDSPACE. Of course, ministers and policy-makers also need to consider fundamental questions around whether government *should* attempt to change behaviour. We explain these normative issues in the next chapter; for simplicity and ease of exposition, we focus on practicalities first.

Traditional ways of changing behaviour, such as legislation, regulation, and incentives, can be very effective. MINDSPACE does not attempt to replace these methods. Rather, it extends and enhances them, adding new dimensions that reflect fundamental, but often neglected, influences on behaviour.

Similarly, applying MINDSPACE in practice builds on existing methods of changing behaviour. To illustrate this, we have drawn on the “4Es” policy framework, originally developed by DEFRA, which has been applied in various behaviour change strategies.²¹⁰ The 4Es are four actions that should underpin government’s attempts to change behaviour: Enable, Encourage, Engage and Exemplify. We have added two supporting actions: Explore, which takes place before policies are implemented, and Evaluate, which judges the success of the policy.

In basic terms, MINDSPACE represents the tools for changing behaviour, and the 6 Es constitute the framework within which they can be applied. Bringing these considerations together into a coherent narrative will allow policy-makers to address the over-arching “so what?” question in practical ways.

The diagram below shows how the various actions fit together, but it does not intend to offer a comprehensive overview of every element of the policy-making process. Rather, it highlights areas which need extra attention, or a modified approach, in order to change behaviour effectively.



1. Explore

Understanding whose behaviour you are changing

Our behaviour is also affected by conscious understanding of our needs and desires

Any attempt to change behaviour needs to understand the behaviour it wishes to change. MINDSPACE explains the robust effects that underpin human behaviour, derived from our increasing understanding of how the Automatic System and contextual cues affect us. However, our behaviour is also affected by a more conscious and considered understanding of our needs, desires and priorities. Recognising these various influences is crucial, given the complex environment in which people make decisions.

The discipline of 'Customer Insight' generates a "deep" understanding of people's experiences, beliefs, needs or desires.²¹¹ In order to develop a more sophisticated understanding of these factors, Insight often divides the citizens whose behaviour will be affected into different 'segments'. Naturally, there is considerable variation in attitudes towards a particular issue, and segmentation allows government to frame behaviour change to 'segments' of the population in ways they may find more appealing. For further information, please consult the recent Cabinet Office guide to segmentation.²¹² Figure 9, below, gives an example of Defra's work to segment the population by willingness and ability to act in 'green' ways.

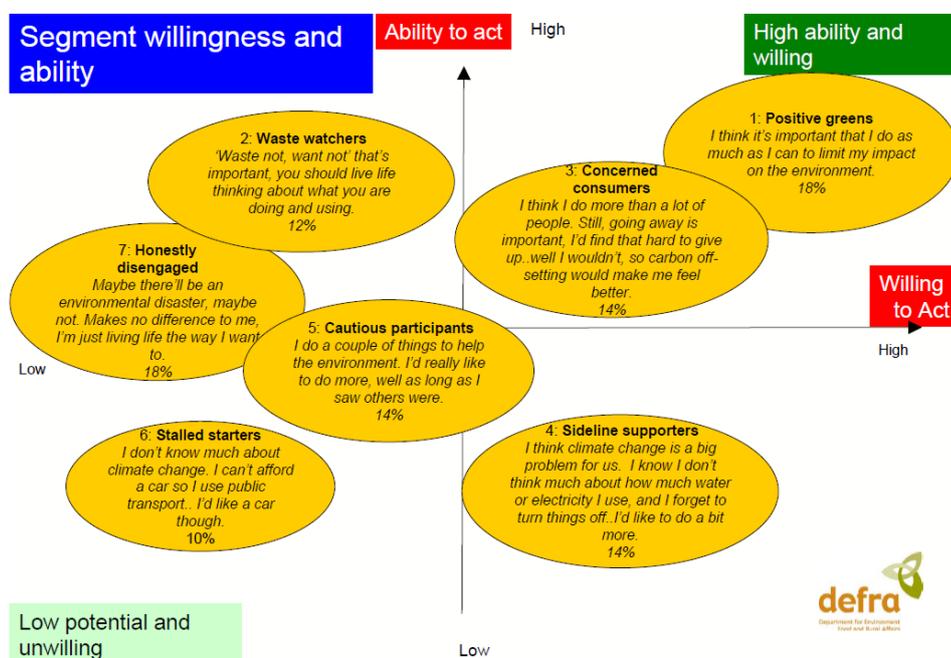


Figure 9: Example of customer segmentation²¹³

Whilst there may be debate about how best to represent and segment different groups in society, Insight explicitly recognises that the 'cultural ecology of rationality' – the collective way of assessing information and making decisions – may vary between groups and communities.²¹⁴ There is also great value in listening to those working on the frontline of public services, who can provide invaluable information on how individuals tend to make decisions in complex real world situations – the hopes they harbour and the frustrations they experience.²¹⁵

Insight helps create a more nuanced understanding of how MINDSPACE can be applied in practice

Insight therefore helps create a more nuanced understanding of how MINDSPACE can be applied in practice. The policy-maker can therefore draw on both the rich material from insight techniques and the generalisable effects of MINDSPACE. Indeed, Insight may offer useful indications about which of the MINDSPACE effects may be most appropriate for particular groups: if people express particular admiration for certain figures or roles, these may make effective messengers; if people show strong attachment to certain groups, then focusing on social norms

Exploring behaviour in this way requires a combination of different skills

may be appropriate. Insight could also draw on scientific research: for example, a recent study showed that the impact of MINDSPACE effects varies greatly between men and women in the context of encouraging hand-washing.²¹⁶

Exploring behaviour by drawing on both MINDSPACE and Insight is not easy. Our interviewees suggested that senior policy-makers have a particularly important role to play here. Ideally, they need to have a (rare) combination of analytical capacity based on behavioural economics, imagination from strategic marketing, and awareness of social science. To ensure this combination of skills is available, it may be profitable to bring together policy-makers with communications experts and psychologists in the early stages of behaviour change initiatives.

Key questions for policy-makers

- Whose behaviour are you attempting to change?
- How do attitudes and motivations vary between the different groups concerned?
- How are you combining Insight with the MINDSPACE effects?
- Does your team have the capacity to draw on both Insight and behavioural theory?

2. Enable

Start from 'where people are'

Recognise the practical and structural barriers people face

Government needs to “enable” behaviour change by recognising the practical and structural barriers that people face. Policy-makers should remember that the context in which people find themselves shapes the options that are available to them and affects their ability to select these options. Attempts to encourage behaviour change that do not recognise these contextual factors are likely to breed frustration only.

For example, government may decide to encourage people to wash their clothes at 15°C, since this brings benefits for the environment. The purpose of the policy may be to influence people to choose 15°C rather than, say, 40°C – and using MINDSPACE may be very effective in encouraging people to do so. But the policy will have limited impact if most people’s washing machines simply do not have a 15°C option. Of course, the policy’s attempts to influence people may have been so powerful that people feel compelled to buy a washing machine with such an option. But suppose these washing machines are far too expensive for most people: the 15°C option effectively remains closed to them. In other words, contextual factors are preventing behaviour change, despite people’s best efforts.²¹⁷ Government can help people surmount these barriers, but only if they are recognised.

The availability of choices is an important factor

Any attempt to encourage new behaviours needs to consider the wider context and choices available to people, rather than focusing narrowly on the desired behaviour. Are there underlying, compelling reasons why people will not be able to change their behaviour? What can be done about them? The effects in MINDSPACE are powerful and are likely to handle most of the “heavy lifting” in behaviour change – but the very choices that exist are an important factor in themselves.

Key questions for policy-makers

- How does the wider context in which people act constrain or encourage the change you seek?
- What are the effective choices available to different sections of society?
- How do the choices that government presents affect behaviour?

3. Encourage

Applying MINDSPACE to change behaviour

Encourage covers the policies and government actions that (directly or indirectly) try to change how people act. The 6Es diagram features the main 'traditional' attempts to influence behaviour - legislation, regulation, incentives, and information – many of which are very effective. Given that this category includes coercive measures, the label of “encourage” is used in a broad sense.

Civil servants need to better understand the behavioural dimension of their policies

As shown in the last chapter, MINDSPACE can add a lot to these policies. But that does not mean that “behaviour change” can be understood as simply a novel alternative to, say, legislation. As noted before, the majority of what government does is intended to change behaviour in some way. Rather, civil servants need to better understand the *behavioural dimension* of their policies and actions. Therefore, when policy-makers attempt to encourage certain behaviours, MINDSPACE suggests there are three approaches that can be used:

- **Enhance.** MINDSPACE can help policy-makers understand how current attempts to change behaviour could be improved. For example, incentives are currently widely used to change behaviour, and are often effective – but MINDSPACE shows how their impact could be enhanced by a better understanding of how people respond. Similarly, the impact of information can be improved by considering salience effects. The logic here is that if the state is already attempting to change behaviour, it should do so as effectively as possible.
- **Introduce.** Some of the elements in MINDSPACE are not used extensively by policy-makers, yet may have a considerable impact. Most notably, there is room for more innovative use of social norms and commitment devices in policies. Of course, introducing new measures in this way may require significant efforts to ensure there is public permission for the approach.
- **Reassess.** Government needs to understand the ways it may be changing the behaviour of citizens unintentionally. We have already seen that some priming effects work in surprising ways that seem hard to explain. It is quite possible that the state is producing unintended – and possibly unwanted – changes in behaviour. The insights from MINDSPACE offer a rigorous way of reassessing whether and how government is shaping the behaviour of its citizens. There is a further issue here around permission. If government is changing behaviour unintentionally, then it is not seeking permission to do so. Therefore, reassessing the government’s role may increase democratic accountability.

The factors in MINDSPACE invite these three approaches to varying degrees.

- **Incentives** and **Salience**, for example, are existing tools to change behaviour that could be enhanced.

- **Messenger** and **Defaults** involve a greater degree of reassessment: they are currently being used to change behaviour, but with less consideration and intent.
- **Priming** may not be used intentionally very much (if at all), but its possible introduction into policy is still rather unclear and controversial.
- **Norms** are a more obvious candidate for introduction, but it's still important to understand how government may be unintentionally influencing them.
- **Commitments** are used to a limited extent, but could be introduced further. Their use by government is generally intentional, and so they do not invite much reassessment.

It is not *just* choices that affect behaviour

The key point is that government is always shaping behaviour. Often (as in *Nudge*) this is framed in terms of the *choices* government offers. However, MINDSPACE shows that it is not *just* choices that affect behaviour: a whole range of factors in the environment affect behaviour without any “choices” taking place. For example, a hospital may launch a policy to reduce violence against staff that focuses on changing the interactions between staff and visitors: perhaps using social norms to point out that most people behave politely, or relying on ego effects to draw on people’s desired positive self images. But the design of the built environment of the hospital may have shaped behaviour so that people are stressed and prone to violence before these interactions take place.

Part of this stress can be understood in terms of choices offered – for example, the possible routes through a building – but it may also be created through factors such as the clarity of the signs (saliency) or the cleanliness of the floors (affect). Indeed, Birmingham Heartlands hospital redesigned its Accident and Emergency department with the aim of reducing environmental triggers for crime. After analysing how people used the building, new signage was introduced and natural surveillance was extended; as a result, the average number of aggressive incidents fell from 13 a month in 2003 to 5 a month in 2005.²¹⁸

Key questions for policy-makers

- Can you introduce any new elements from the MINDSPACE framework?
- How does MINDSPACE enhance your existing attempts to change behaviour?
- Do you need to reassess your existing actions using MINDSPACE?

4. Engage

Facilitating public debate and gaining approval

New methods of engaging the public may be needed to explore what is acceptable

Behaviour change can be controversial, involve difficult tradeoffs, and concern areas where government legitimacy is controversial. These questions are both tricky and of general concern to the public. Therefore, new methods of engaging the public may be needed to explore what actions are acceptable. COI have recently published a guide to *Effective public engagement* that offers helpful guidance in this area.²¹⁹ The question of gaining *approval* raises difficult questions about how far elected representatives should seek specific permissions for their actions. This is a much wider debate, but we argue that the potentially controversial nature of behaviour change initiatives means gaining specific approval is important.

A deliberative format may be most suitable

Given that there are still many unresolved questions around behaviour change, a deliberative format may be most suitable. Focus groups have often been used for similar purposes, but have the disadvantage of being small-scale as well as private – and therefore may not be seen as being able to give legitimate approval for a policy. Citizens' juries are more transparent and attract relatively high trust: while only a third of people say that they would trust a local group of councillors to resolve a difficult planning issue, two thirds say they would trust a decision made by twelve members of the public.²²⁰ But juries are still small samples and are vulnerable to domination by a few individuals. Both focus groups and juries may have considerable value in giving policy-makers a new perspective on issues, but they may only partially address the issue of giving 'permission' for a major behaviour change policy.

A policy-maker looking to gain permission for a policy may wish to turn to larger-scale, public events. These often involve a representative sample of several hundred people being brought together for a day or more to listen to evidence and discuss an issue. In 'deliberative polling', participants are polled on their views at the beginning and end of the process, and a shift in attitudes is often seen. In 'deliberative forums' people often asked to reach a collective view, which can create more need for discussion and negotiation.

National Pensions Day

On 18th March 2006, 1,075 people, across six locations, took part in National Pensions Day. Participants were selected to represent various sections of the population. In demographically mixed groups of 10, they had detailed discussions on the Pension Commission's proposals, and voted using key pads. People also took part in online debates. 72% of participants voted in favour of automatic enrolment with the choice to opt-out (the adopted policy), and 20% for full compulsion with no opt-out.²²¹

Such events may have greater legitimacy than focus groups because they can offer a more representative sample of the public, which means they give the impression that the nation has had a "fair say" and no section of society has been excluded.²²² Of course, policy-makers have to decide who the sample is representative of: should it be the nation as a whole, or just those groups whose behaviour will be affected? Much depends on how the opportunity costs of intervention are framed, but they may decide that the most acceptable solution is to have a cross section of relevant target audiences.

Such events may preserve personal responsibility

If the event has such legitimacy, then it could be seen that some personal responsibility has been preserved because people have been able to make a considered and informed decision to allow government to change their behaviour. Of course, these types of events are only likely to succeed if they are seen to have consequences, rather than being "for show" only. There is potential for government procedures to demand that policymakers explain how they have taken results of such an event into account – even if they do not act on them.²²³

There are ways of reducing costs

Although these events may seem expensive, they should be compared against the total cost of government consultation – and there are some ways of minimising their costs. For example, government could hold regular high-profile deliberative forums (perhaps once every two months), with a refreshed sample of the public, that departments would bid to use.²²⁴ In practice, the range of behavioural issues in policy is so large that government will not always be able to gain permission in this way. Therefore, the most sensible approach for policy-makers is to anticipate which policies are likely to be most controversial, and try to match the level of engagement accordingly. We suggest how public acceptability can be anticipated on page 64.

Key questions for policy-makers

- Are you seeking permission for a policy or new perspectives on a behaviour change issue?
- Are the consequences of your policy so wide-reaching or so potentially controversial that a deliberative forum or poll may be needed?
- If so, how are you going to take the results of the event into account?

5. Exemplify

Changing government's behaviour

The actions of government representatives send messages about the behaviour it condones

In most behaviour change interventions, exemplifying desired changes is important for two main reasons. First, because the actions of high-profile representatives of government send implicit messages about behaviours it condones. If government is not displaying the behaviours it is encouraging in others, this will act against people's desire for reciprocity and fairness (see 'Commitment'), while inviting charges of hypocrisy. Second, government policy should not give mixed messages about whether certain types of behaviour are encouraged or not. Just as individuals seek consistency (as shown in Ego effects), there needs to be consistency in the behaviour of government and its representatives.

MINDSPACE principles can be applied to the process of policy-making

MINDSPACE suggests a third dimension: its principles can be applied to improve the process of policy-making. In other words, government attempts to change its own behaviour. Are there instances where the status quo bias has led to the default being adopted? Does the status of the messenger sometimes outweigh the strength of the message? Do loss aversion and mental accounting prevent innovative reallocation of budgets?²²⁵ This is particularly resonant in the current economic climate and the state of the public finances. Many public policy decisions may simply reflect how things have always been done, and the potential losses from moving away from this position may loom large, relative to the gains. Policy-makers may overcome this inertia by framing the decision differently - for example, by starting from the perspective of the alternative state of the world.

MINDSPACE could be applied to organisational change in government

Furthermore, MINDSPACE could be applied to the process of achieving organisational change in government. There are some obvious 'easy wins' here, such as lowering the default temperature in buildings to meet SOGE emissions targets, or using Ego effects to lift employee engagement. But there are also more fundamental applications. For example, incentives have been applied to encourage cross-departmental working, with mixed success so far.²²⁶ Better appreciation of the MINDSPACE effects, particularly the behavioural response to incentives and the power of creating a collective social norm, may help government make greater progress towards meeting this challenge. This is an area the Institute for Government will be exploring further.

Key questions for policy-makers

- Are the actions and policies of government consistent with the change you are seeking?
- How could MINDSPACE be applied to improve the way you and your team make policy?
- How could MINDSPACE be used to help achieve organisational change in government?

6. Evaluate

Working out what works

It can be unclear how various effects with interact in specific cases

Any attempt to change behaviour must recognise the challenge it faces. Some of the factors that influence behaviour are fairly obvious and easy for government to influence; others are more elusive and require tradeoffs. And while the evidence for the effects in MINDSPACE is very strong, it can be unclear how the various effects will interact in specific cases. Behaviour change policy needs to understand the complex range of factors that affect behaviour, and good evaluation is a crucial way of doing so.

We should aim for evidence-based innovation

We know that some things work in some contexts but can they be translated across contexts? Although there will always be a healthy tension between evidence-based policy and innovation-based policy, our collective mission should be evidence-based innovation. In other words, we should take what we know to be robust phenomena across a range of contexts and give them the best shot of success where the evidence base does not exist. Considering the various elements of MINDSPACE will be central in this regard.

The main challenges to determining 'what works' are controlling for selection and establishing causality. We suspect that commitments work, for example, but only in those who chose to sign up to commitment devices.

There are four main approaches to demonstrating causality

There are four main approaches to demonstrating causality. These can be pictured as lying on a spectrum: at one end, there is the case of the researcher having no control over the data; at the other end, there is the case of the researcher having total control.

No control



1. Secondary data, inferring causality
2. Secondary data, natural experiment
3. Primary data, field experiment
4. Primary data, laboratory experiment

Total control

There are clearly pros and cons with all these methods. Data we have no control over are more 'real world'; data we can control are less like the real world. To establish causality, we must take full advantage of all the data and methods available to us. We should continue to look for secondary data that can be used as natural experiments – but the lack of suitable data does limit how far this approach can take us. Much more can be done with field experiments, which have been under-used in research into behaviour change but, with innovative designs and the right research partners, have the potential to shed some significant light on the underlying causes of changes in behaviour.

There should be greater collaboration between policy-makers and academics

Whatever the precise details of the studies, there should be greater collaboration between policy-makers and academics. There has been enormous progress at the two ends of the control spectrum (analysis of secondary data and lab experiments) and the time is ripe to enhance the evidence base by taking some control of the data in a real world environment.

The same rigour that is used to evaluate the effectiveness and cost-effectiveness of health technologies and, increasingly, public health interventions must be applied to behaviour change interventions. Therefore, there is a good case for establishing an institutional centre that can evaluate behaviour change. This does

not need to be a new body, but it does need scientific competence and a degree of independence. The centre would be tasked with determining which methods were most effective and cost-effective for changing specific behaviours.²²⁷

Of course, evaluation may allow us to develop a better understanding of which groups in society may respond best to which interventions. This knowledge will then feed back into the initial process of exploring how to change behaviour through Insight, segmentation, and the best robust evidence available.

Evaluation in practice: Camden council

Camden Council is currently evaluating the use of heat meters to change energy use. In 2008, the council installed new radiator-based heating systems in 150 houses in Gospel Oak. These new systems are popular with residents, since they now have much more control over their heating. In addition, the new systems incorporate heat meters that measure the hot water used by a property. The heat meters can provide accurate data on carbon emissions (whereas information on energy consumption is often self-reported and thus open to distortion).

Upgrading the heating systems has therefore had the side-effect of creating an accurate and representative set of data for an important policy issue. Indeed, the heat meters have now produced a full year of data, thereby establishing a baseline for evaluation. Furthermore, the fact that every house on the estate has a meter eliminates the 'selection bias' that is created by relying on volunteers (since volunteers are likely to be environmentally-conscious anyway and thus not be typical energy users)

Camden has now received funding from Mayor's Targeted Funding Stream to extend the heat meters scheme to 2,500 homes across the borough. This larger sample will present an excellent opportunity to evaluate attempts to change energy usage through: a) judging the impact of particular behaviour change effects relating to elements of MINDSPACE, b) examining how results vary according to residents' characteristics, and c) studying how impact varies over the longer term. For example, the power of social norms could be tested by examining if allowing residents to compare their energy consumption against the surrounding average affects their usage. To minimise costs, this information can be provided on LCD displays on the heat meters themselves.

A similar approach could be used to measure the impact of using pledges to take energy-saving measures (commitment); how the use of emotion affects usage (affect); and the best way to frame incentives, as well as their cost effectiveness (incentives). Not only does this mean that, for example, the impact of commitment devices can be tested robustly, but it can also be compared against the impact of social norms. In this way, policy-makers can build up an understanding of what are the most effective ways of changing behaviour in a particular setting.

The actions listed above are suggestions only and have not been adopted by Camden. However, the council has planned well for its evaluation by gathering expert academic input early on in the process. Collaboration of this kind will bring benefits for both sides. Camden will be able to underpin their actions with academic rigour, in order to understand where they can get most value for money. On the academic side, this promises to be a high-quality field experiment that will advance our understanding of behaviour change as a whole. Despite these mutual benefits, the link was only made through the enterprise of individuals. This suggests there is a significant role for

Intermediaries who can reconcile the desires and priorities of policy-makers and academics, who can see the opportunities for mutual gain, and who know the best people to contact in the various fields.

Looking at the example of Camden, there are some lessons for building evaluation into policies aimed at behaviour change:

1. Ensure you are actually measuring what you intend to measure robustly. Heat represents 80% of a property's carbon emissions, whereas meters that track electricity usage only cover 11% of emissions.
2. Personal relationships and institutional outlook are important. Camden was open to working with academics, while academics understood the policy context and contingencies.
3. Policy-makers should understand what they can gain from evaluation. In a time of fiscal constraint, robust knowledge about the (cost) effectiveness of policies is particularly valuable. If evaluation is built in early, any disruptions to implementation can be minimised.

Key questions for policy-makers

- How will you evaluate the results of your intervention?
- What measures will you put in place to ensure this evaluation is robust enough to provide convincing evidence?
- Is there an opportunity to get academic collaboration?

Making policy differently: an example of MINDSPACE in practice

How can policy-makers apply this framework in practice? Below we explain how it can all come together, step by step. We apply the framework to the fictional example of a local authority attempting to change behaviour around short car journeys. This example has been chosen because it gives a particularly clear example of how the Es can be applied, rather than because it is likely to be the most effective on its own terms. In Annex 2, we show how the framework could tackle teenage pregnancy.

The policy issue

A local authority is trying to reduce its LAA commitment to reduce CO2 emissions in the area. It has identified reducing the high volume of short car journeys as a key objective, since research suggests people could replace 78% of car journeys under five miles with a different mode of transport.²²⁸ Of course, they realise that doing so will require considerable changes in behaviour. Owing to the short timeframe of the LAA commitment, they decide to focus first on those journeys that are likely to be easiest to change quickly. How does MINDSPACE help them do this?

Explore

The local authority starts by trying to understand people's conscious motivations and reasons for their current behaviour. The local authority uses the Department

for Transport's National Travel Survey, which identifies four main reasons for trips: commuting/business, social, shopping and 'escort' travel (accompanying others, such as children to school).²²⁹

A short insight exercise helps the local authority explore local residents' thoughts about these types of trips. They discover that commuting and 'escort' travel are difficult to change quickly because they often heavily ingrained habits that take place under 'cognitive load' (in other words, in the morning we are under pressure and just want get to work – or our children to school). Therefore, they initially choose to focus on shopping behaviour. Insight suggests that the main car use for shopping consists of a weekly supermarket visit and various trips to more local shops.

The local authority also explores residents' attitudes to changing their behaviour. The purpose here is to see what MINDSPACE effects may be most appropriate – for example, whether there is potential to participate in activities that require more conscious support (for example, commitments). It learns that most people are vaguely aware that the environment is an issue (mainly because of media coverage), but it is not salient to them. As a result, there is a gap between attitudes and behaviour. They are, however, very concerned about financial stability and wish to save money. Finally, they strongly associate, often unknowingly, the act of using a car with a positive self-image of capability and freedom.

These motivations and attitudes suggest some potential applications of MINDSPACE:

- a) Salience may be important for re-framing the familiar act of taking a short car journey
- b) Incentives may be useful to take advantage of people's desires to save money
- c) Commitment or Ego devices may work by drawing on people's impressions of themselves as 'good citizens', to counteract their positive associations with cars
- d) Priming may be effective, since there are some clear locations where primes could be deployed

There are also some MINDSPACE effects that may be less effective:

- a) There is no obvious way of setting a Default in the choice architecture
- b) There are few obvious ways of using Messengers that most people may pay attention to for this behaviour
- c) These short car journeys are the dominant Social Norm in the local area, which makes the exploitation of norms more problematic – but not impossible

Enable

The local authority realised that it would be unhelpful to encourage behaviour that was constrained by many substantive barriers. They looked at the practicalities of using alternatives to cars for these journeys, including cost, infrastructure and transport provision. Cost was not seen as a barrier, since the alternatives to car journeys were usually cheaper; infrastructure presented some problems, since one of the major supermarkets had limited pavement access; bus services were plausible alternatives for most of the target population, with all three of the supermarkets having a bus stop within two hundred metres.

Encourage

The local authority decided to draw on Salience, Priming and Commitment, as follows:

Saliency and Incentives

In order to play on residents' desire to save money, the local authority distributed a series of mock coupons offering "£3 off your next shop", explaining that this is the average cost of a return car journey to the shops or supermarkets in the local area (including parking charges). This has the effect of framing car journeys in terms of their cost, which is salient to residents; it also takes advantage of mental accounting, since it attaches the cost to a specific account – if a trip is simply to buy a £4 takeaway, £3 will seem large in this 'mental account'. This message was also backed up by a limited advertising campaign in main town centres.

Commitment and Ego

In order to counter positive self-images of using a car, the local authority wanted to tap into alternate sources of positive self-image: the desire to be a responsible citizen. Commitment devices were used in order to encourage people to be consistent with this self-image. People were asked to commit to not using their car on a Sunday with two other neighbours, perhaps with the forfeit of washing the neighbours' cars. It is likely that people will have a powerful motivation to present a positive public image, while the involvement of two other neighbours means there is low-key enforcement. Finally, the local authority concentrated on gaining many commitments from selected streets (rather than spreading the commitments across street), in order to create a dominant and visible social norm. The local authority also said it would come back every other month to see if the challenge had been met. If this policy was successful, this could be extended to a more challenging 'Car Free Saturday'.

Priming

Before and after the initial campaign, the local authority ran a survey at supermarket entrances and town centres, asking local residents about the number of short car journeys they took a week. Not only did this provide valuable data, it also 'primed' people to be more receptive to the messages. Finally, the local authority also agreed with the main supermarkets to put a large sign saying 'WALK IN' at their entrances: although this appeared to be an invitation to enter, it was intended to associate supermarket visits with the act of walking.

Finally, the local authority also reassessed its current communications about car journeys. It realised that its current tactic of warning people that widespread car journeys were polluting the local area may have been reinforcing a negative social norm, since it was highlighting how normal such behaviour was.

Engage

There was relatively little need for engagement in this instance:

- Most people accepted the goal of the behaviour change: they recognised that they should be using their cars less, on the grounds that it will bring benefits for others; and, to a lesser extent, health benefits for themselves
- Although the use of priming is generally controversial, it was less so in this instance because most people are familiar with the practice of being asked survey questions. The 'Walk In' signs were also less controversial because most people accept some degree of influence over their behaviour in commercial environments.

However, the local authority recognised that the commitment devices could be seen as neighbours 'snooping' on other neighbours. Therefore, they stressed the voluntary nature of the commitment and framed it more as a light-hearted challenge to strengthen relations between neighbours.

Exemplify

The local authority also recognised the importance of being seen to ‘practise what it preached’. Of course, many of the relevant images of government behaviour (such as the use of ministerial cars) are out of local government control, while the everyday activities of local government may not be salient to residents. Nevertheless, the council ensured that it minimised the short car journeys of employees by organising car pool activities and providing adequate bicycle racks. It also used incentives through a lottery that randomly attached a £10 high street voucher under the saddle of one employee bicycle every month. The Leader’s status as a messenger was exploited by publicising his achievement in going an entire week without using his car.

Finally, the local authority considered whether its own policy-making approach to short car journeys could be improved. It decided to change practices so that the mental default in road planning was to consider the possibility of non-car journeys first, to ensure all options and perspectives had been registered. The council also made a public commitment that future retail planning decisions must ensure there is adequate provision of accessibility for non-car users.

Evaluate

The council evaluated the intervention through two main methods: surveys and selected follow-ups. Before the intervention started, the council conducted a day-long survey on a Sunday at the three supermarkets and town centre. The survey asked: a) if the person had travelled by car to get there; b) if so, approximately how far; c) how many short car journeys they took each week. This survey was then repeated a month after the initial campaign had been in force, and again three months after that. The surveys also acted as priming mechanisms for the main campaign.

The follow-ups were for the commitment campaigns. As promised, the council followed up a random sample of those who had committed to not use their cars to determine if the commitment had been held. The council would check with at least two members of each commitment group, to reduce self-reporting bias. They also asked those who had been offered to participate but had declined, to see how their car use had changed. Likely CO₂ savings could then be calculated from these estimates.

Who should act?

We have outlined how MINDSPACE could be applied in practice through Exploring, Enabling, Encouraging, Engaging, Exemplifying and Evaluating. But an obvious question follows on from such a guide: *who* should be undertaking these actions? Are these mainly tasks for central or local government?

Of course, policies aimed at shaping behaviour often act at different levels, with local actions complementing national campaigns. The division of labour will be affected by the obvious fact that certain policy responsibilities reside with different tiers of government. But there are at least three other factors to consider:

- **Scale.** Certain effects may rely on a level of co-ordination that requires national government involvement. For example, norms may be more quickly established through national media because it can supply greater consistency of message.
- **Feedback.** It has been shown that if people receive some feedback from changing their behaviour it can encourage that behaviour further. Feedback may not need government involvement, just as people may thank you if you start offering them your seat on the train. However, local

government may be well-placed to provide feedback on behaviour change in ways that are salient, perhaps by relating it to familiar local events and locations.²³⁰

- **Points of contact.** As well as high-level campaigns, there is a role for the organisation charged with contacting the citizen to frame and shape the contact using MINDSPACE. This could be, for example, a letter from the DVLA or a visit from a social worker. People working at a local level (though not necessarily in local government) therefore have a significant role to play. This is particularly true because they may be better informed about the recipient's context, which may help them apply MINDSPACE in an effective way.

Local government may have a particular role in engaging citizens

Local government may have a particular role in engaging citizens. The rationale here is that local government is 'local enough to engage directly in dialogue with communities about the balance of values that 'authorises' any intervention.'²³¹

Similarly, local government is well-placed to 'Enable' certain behaviours by identifying and removing practical barriers. By understanding the overall context in which people act, local government may be able to see that, for example, opportunities for exercise are limited by poor access to a park or recycling by the location of deposit banks. This may lead to opportunities for co-production that help local government better direct its resources to encourage certain behaviours – or to apply for funding to address outstanding barriers.

Finally, local government is likely to be presented with more opportunities to pilot and evaluate innovative ways of changing behaviour, as in Camden. In this instance, central government may have a role in holding a fund for piloting or evaluation, and in providing guidance. The London Collaborative has recently produced a guide for those wishing to identify specific roles that local government can play in behaviour change.²³²

Public permission and personal responsibility

This chapter considers issues around the legitimacy of government involvement in behaviour change. First, we offer the different reasons why behaviour change may spark controversy. Second, we outline public perceptions of personal responsibility and explain how MINDSPACE may change the terms of the debate.

Potential for controversy

Citizens' views need to be taken into account

Policy-makers know that attempts to change citizens' behaviour may well be controversial. This is particularly true given new evidence about how people act, and new ways of applying this evidence. Government legitimacy rests on the fact it represents and serves the people, and thus it is vital that their views are taken into account when considering any attempt to influence their behaviour.

Framing is crucial when attempting to engage the public with behaviour change. As Gillian Norton has pointed out, 'talking about behaviour change is a sure fire way of making sure it doesn't happen'.²³³ Across government, many of our interviewees have argued that "behaviour change" is an unhelpful term. "Behaviour", in particular, has negative and paternalistic associations.

Public acceptability should not be the sole criterion for action

Of course, there are good reasons why public acceptability should not be the sole or determining condition for going forward with behaviour change. We explore some of these issues in a later section on personal responsibility, while Richard Reeves has recently proposed tests of legitimacy, autonomy and effectiveness for health-related behaviour change.²³⁴ Furthermore, it may be that government needs to take a lead on issues despite public opposition, since these public attitudes may actually shift in response to the introduction of the policy. Consider, for example, the shift in attitudes to the London congestion charge (see Figure 10, below).

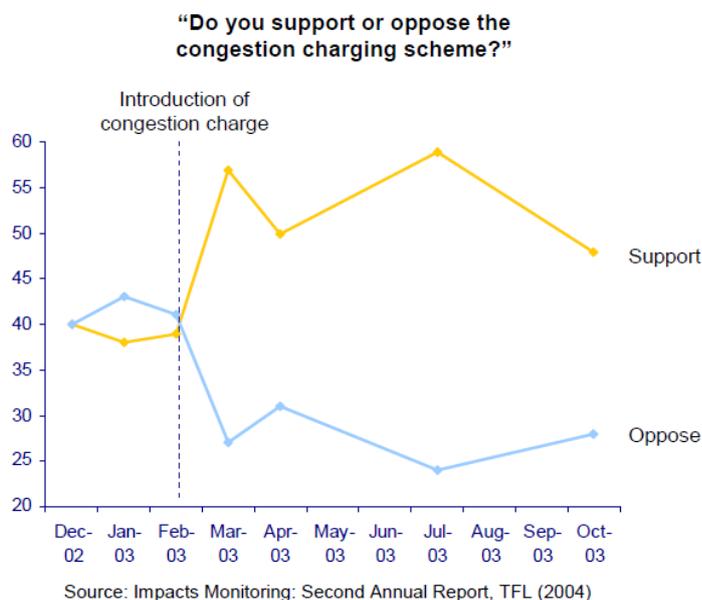


Figure 10: Support for the London congestion charge, 2002-3²³⁵

How preferences change in response to policies is a remarkably under-researched area. Economists, for example, typically focus on people's preferences before a change and rarely go back afterwards to see how things actually panned out. How, then, can policy-makers decide which policies have the greatest potential for controversy, and thus may require extra efforts to engage citizens?

Naturally, there are some criteria that determine the acceptability of policies in general, including cost, benefits (and their distribution), and the number of people affected. All these factors may put extra pressure on the state of the evidence – whether there are robust reasons to believe the policy will succeed.

In addition to these general criteria, there are three factors that are particularly useful for understanding controversy around behaviour change:

Three factors for understanding controversy

1. *who* the policy affects
2. *what* type of behaviour is intended
3. *how* the change will be accomplished

We show how policy-makers can apply each of these criteria to estimate the potential controversy that may ensue from a proposed policy. We then show how the framework could be applied to a hypothetical policy.

1. Who

We generally accept greater government intervention for some groups

We generally accept that government has greater scope for changing the behaviour of some citizens more than others. Children, the mentally ill and (more controversially) those suffering from addictions are usually seen as not wholly capable of making effective decisions about their own welfare. Paradoxically, though, attempting to change the behaviour of these groups may be controversial precisely because they lack autonomy – government is in a position of considerable power, and so other citizens are likely to scrutinize its actions carefully. One element of this controversy concerns whether these groups are capable of fully understanding the behaviour change, and thus whether they can give meaningful approval to what is being done.

Changes affecting particular groups will require careful justification

Any behaviour change that will affect certain groups in particular is likely to require careful justification, not least to any associations that represent those groups. But there may be particular controversy if the behaviour concerned is seen as integral to a group's identity or culture.²³⁶ There may be good reasons for the change, but policy-makers need to be aware of the potential charges of discrimination and intolerance.

Receipt of government help is often seen to justify requests to change behaviour

We have seen that people have a strong instinct for reciprocity. Accordingly, recent political discourse has emphasised the principle of 'something for something': those who have received certain benefits from state action should act in certain ways, which may require changes in behaviour.²³⁷ However, when government acts on this principle it may give rise to controversy – suppose, for example, the required behaviour change is seen to outweigh the benefits received. Similarly, people may feel that changing behaviour is a matter of *personal* responsibility, rather than a matter for government (we discuss this more below).

A more extreme version of this perspective is that some people, by their actions, may have forfeited some level of control over their behaviour. Most obviously, those convicted of crimes are expected to receive some punishment that affects their behaviour. But applying this principle more widely would be very controversial: it would involve creating a class of actions that function like criminal acts. Drawing these lines would be difficult and potentially harmful, although people themselves often think this way (categorising certain people as "bad parents", for example).²³⁸

Finally, policy-makers trying to change the behaviour of institutions face a complex challenge. On the one hand, there is a good case that the freedoms of people, rather than institutions, count the most – and government can change the behaviour of companies in ways it could not for private citizens.²³⁹ On the other hand, there is a strong impulse for government to encourage economic prosperity and enterprise, a case which is made forcibly by business associations. Of course, many of these issues are now addressed at a European level.²⁴⁰

2. What

Assessing how much legitimacy the state has in changing certain types of behaviour is a massive and complex area. And public reactions may not be predictable or consistent: an apparently innocuous attempt to change behaviour, backed by strong evidence, may become a flashpoint. We give a few points that have practical applications.

Harms and benefits to self and others. Our case studies were chosen to reflect the distinctions that the public and policy-makers may draw between behaviour that affects others and ourselves, and between harms and benefits. These are the obvious dimensions for understanding how people react to certain policy areas. On this basis, there has been more support for interventions to promote safer communities (reducing harm to others) than to encourage healthier lifestyles (especially if framed as promoting benefits to self).

Not all types of harm are weighed equally

But not all types of harm are seen as equally pressing cases for changing personal behaviour. Harm may consist of: specific identifiable harm to others, such as anti-social behaviour or smoking; excessive calls on public resources, such as repeated irresponsible behaviour; harm to ‘general others’ within state boundaries, such as littering; or to ‘future others’, such as excessive depletion of natural resources.²⁴¹ While there is strong support for behaviour to change to prevent specific harm to others, this often falls off as the consequences become more distant from the individual making the sacrifice.

And not all dimensions of harm and benefit will be seen as equally important. Gang violence and knife crime, for example, not only result in harm to others, they result in harm that affects others in particular ways – the violation of rights, increased fear, bodily harm, and so on. In contrast, littering, which also involves harms to others, does not affect the wellbeing of other people in quite the same fundamental ways.

Is self-harm really present?

Finally, when actions affect individuals, we need to consider whether *self-harm* is really present. A key challenge is to identify when ‘bad behaviours’ as defined by policymakers really do reduce people’s wellbeing – for example, people often really enjoy fatty foods and consumption of alcohol.²⁴² If we can establish that the behaviours *do* reduce wellbeing, the case for nudges is compelling; if not, the nudges (in the absence of important spill-over effects) are paternalistic, and will therefore require greater justification.

We are more likely to act if we are given a clear reason for doing so

Clarity and apparent importance of goal. If people see the harm as distant from themselves, one response is to make these harms more salient. We are more likely to act if we are given a reason for doing so that we can understand (although, as we have seen, we do not always act on good reasons). Indeed, the Automatic System means that the very act of giving explanations – regardless of their strength – increases people’s willingness to agree to requests.²⁴³

In other words, making the desired behaviour change salient and justified can balance out people’s tendency to care less about “distant” harms.²⁴⁴ A 2007 MORI survey found that 70% of respondents agreed (27% ‘strongly’) that ‘the government should take the lead in combating climate change, even if it means using the law to

change people's behaviour'.²⁴⁵ All this underscores the fact that the way in which interventions are framed has an effect on their acceptability.

Conclusive evidence can provide powerful justification for behaviour

Availability and prestige of evidence and expertise. Conclusive evidence can provide powerful justification for behaviour. Focus groups for a recent study revealed that 'the level of intervention and the degree of proactive government intervention were accepted in proportion to the extent to which [participants] believed there was *evidence of harm from the behaviour in question*'.²⁴⁶ Similarly, a recent study found that we accept our decisions may be impaired when there are trusted experts to advise people in making choices about their behaviour (e.g. GPs).²⁴⁷ Of course, this varies between policy issues, since public trust in professions varies considerably.²⁴⁸ But expertise may carry particular weight – and people may particularly welcome guidance – in those areas where they recognise that decisions are difficult or they do not have a good sense of their preferences.²⁴⁹

Government can act as surrogate willpower...

Assumption of "real" intentions. Not only does behavioural economics reveal that we are not rational, it also notes that we recognise this fact ourselves. We know that we aren't good at resisting temptation, and this can cause guilt and anxiety. In these cases, behaviour change can be seen 'to augment individual freedom, helping us do what we want to but can't do, rather than constrain it'.²⁵⁰ In this way, government acts as surrogate willpower and locks our biscuit tins (we discuss the implications for personal responsibility in the next section).

...but our 'real' intentions are not always clear

This argument works well for some cases, such as pensions reform, where there was both a clear objective case that behaviour change would increase personal benefit, and widespread public recognition that people were not acting in their best interests. Where the state is just helping us act on existing intentions, there is likely to be less controversy. But what about the many cases where our intentions are unformed, conflicted, mutable, and vary in intensity? Philosophy gives us ways to analyse such intentions,²⁵¹ but policymakers may need to use new methods of engaging people to discover and inform their intentions (see 'Engage', above).

If intentions are unclear, there is a temptation that government will assume what citizens' "real" intentions are; and this is something that many thinkers and citizens find unpalatable.²⁵² Most people agree that government should preserve people's "right to be wrong" (depending on the harms to others); being able to identify what it would be rational for a person to do does not necessarily allow you to interfere with that person's irrational action.²⁵³ Of course, the question is what constitutes "interfering", which leads onto the final dimension: *how* behaviour is changed.

3. How

Even if people agree with the behaviour goal, they may object to the means of accomplishing it. The different MINDSPACE effects will attract different levels of controversy.²⁵⁴ There are several factors that determine controversy:

Automatic effects may raise charges of manipulation

Degree of conscious control. As noted, MINDSPACE effects depend at least partly on the Automatic System. This means that citizens may not fully realise that their behaviour is being changed – or, at least, how it is being changed. Clearly, this opens government up to charges of manipulation. People tend to think that attempts to change their behaviour will be effective if they are simply provided information in an "above board" way - people have a strong dislike of being "tricked". This dislike has a psychological grounding, but fundamentally it is an issue of trust in government.

A lack of conscious control also has implications for consent and freedom of choice. First, it creates a greater need for citizens to approve the use of the behaviour change – perhaps using new forms of democratic engagement. Second, if the effect operates automatically, it may offer little opportunity for citizens to opt-

out or choose otherwise; the concept of “choice architecture” is less use here. Any action that may reduce the “right to be wrong” will be very controversial.

Of course, some traditional attempts to change behaviour are not *explicit* (as noted in the ‘Saliency’ section, some incentives are effectively invisible), and these have attracted controversy. But they rarely attract the charge of ‘manipulation’ because they are based on conscious actions to supply and register information, rather than relying on unconscious reactions.

People may feel government is affecting their personality

Impact on personal identity. People have a strong instinct for reciprocity that informs their relationship with government – they pay taxes and the government provides services in return.²⁵⁵ This transactional model remains intact if government legislates and provides advice to inform behaviour. But if government is seen as using powerful, pre-conscious effects to subtly change behaviour, people may feel the relationship has changed: now the state is affecting “them” – their very personality.²⁵⁶

Familiarity may increase acceptability

Familiarity. People are likely to be less suspicious of effects if they are already familiar with them – for example, most people are acquainted with the principle of a default setting. But even the less familiar effects, such as priming, may be present in everyday life. For example, simply asking people how likely they are to perform a task in the future increases the likelihood that they will, yet it is a fairly common action and so people are more likely to see it as innocuous.²⁵⁷ As always, framing is crucial.

Is the effect easy to explain?

Ease of understanding. Closely related to familiarity is whether the effect can be easily understood if explained. For example, most people can grasp the idea that certain actors are more persuasive than others (messenger). On the other hand, the workings of social norms and (especially) priming are complex, difficult and often counter-intuitive.

Does the effect violate a sense of fairness?

Perceived fairness. Effects may be controversial if they have a particular impact on certain members of society – clearly, this relates to the question of “Who” is affected. But the nature of the effects themselves may be seen as unfair: financial incentives to reduce harms are controversial because they are seen as rewarding bad behaviour.²⁵⁸

Judging potential acceptability in practice

Policy-makers can apply the criteria of ‘Who, What, and How’ to predict whether certain behaviour changes are likely to be controversial. To give a simple and hypothetical example, consider how Acceptable Behaviour Contracts (ABCs) as currently in use could be made less acceptable by changing each one of the three factors.

- **Who.** ABCs were originally introduced for 10 to 17 year olds. We generally are more tolerant of changing children’s behaviour because they may not be fully aware of their roles and responsibilities in society. ABCs are increasingly applied to adults, and there are grounds for this being more controversial. In the event, the move has attracted little controversy because the harms of anti-social behaviour are seen as the same regardless of who causes them. But consider the controversy if ABCs had targeted particular groups of adults: *Single Parent* Acceptable Behaviour Contracts, for example.
- **What.** Suppose these adult ABCs were applied to a different policy issue, perhaps that of healthy eating. Those who are overweight commit, with certain penalties, to eating a certain amount every day. Now the behaviour change aims to increase personal benefits, rather than reducing harms, which is likely to be more controversial – especially if adults are the recipients.

- **How.** Even though these ‘Acceptable Eating Contracts’ would be very controversial, they still act within conscious control – people know they have signed up to them. Consider if the means of behaviour change acted mostly outside conscious awareness. Suppose the government used channels such as posters, labelling or certain turns of phrase to ‘prime’ people to eat healthily.²⁵⁹ This role for government would be unfamiliar for people and may trigger charges of manipulation.

Figure 11 below illustrates how these hypothetical policies become more controversial based on the dimensions of Who, What and How. We have deliberately chosen an extremely controversial hypothetical policy so the illustration is as clear as possible.

		Hypothetical policies			
		Acceptable Behaviour Contracts	“Adult Acceptable Behaviour Contracts”	“Adult Acceptable Eating Contracts”	“Priming for Acceptable Adult Eating”
Dimensions of controversy	Who	Children	Adults	Adults	Adults
	What	Harm to others (anti-social behaviour)	Harm to others (anti-social behaviour)	Benefits to self (healthy eating)	Benefits to self (healthy eating)
	How	Commitment	Commitment	Commitment	Priming

Less controversial
 More controversial

Figure 11: Illustration of potential controversy from hypothetical policies

The value of thinking this way is that policy-makers can identify potential ways of assuaging controversy, should they decide to proceed. For example, if the “Who” dimension is controversial, then more assurances of equity and tolerance may be needed; if “What”, then the quality and impact of evidence should be stressed; if “How”, then the methods may need to be demystified and more explicit approval gained for using such methods.

Nevertheless, some risks will always remain. It is very difficult to anticipate how policies will be framed by the media and perceived by the public: some aspects of a policy may be strongly supported while others reviled. Indeed, this type of public debate may be a healthy and necessary part of government’s use of behaviour change; it may spark democratic engagement and lead to a clearer agreement on the proper role of the state.

It is very difficult to anticipate how policies will be framed and perceived

Changing behaviour and personal responsibility

People want personal responsibility *and* a role for government

What does the public think – and why?

The most striking thing about public attitudes to government's involvement in behaviour change is that they show no clear underlying preferences. On the one hand 48% of people think that "people should be responsible for making their own decisions about their health and welfare" and on the other hand the same people think that it is the government's responsibility to influence people's behaviour to encourage healthy lifestyles.²⁶⁰ The responses also show greater support for the state to 'influence' behaviour rather than to 'protect' people (which could be seen as more explicitly paternalistic).



Source: IPSOS Mori, 1,015 British adults aged 16+, January 1999

The Pensions Commission, for example, found that participants both a) wanted to make their own decisions *and* b) wanted to be told what to do, since they did not always feel they could make the right decisions.²⁶¹ Indeed, such imprecise and changeable attitudes have been found across a range of contexts. Our responses – like our behaviour – are influenced greatly by framing and by context. Whilst we sometimes recognise this about ourselves, we are not so good at appreciating it when assessing the behaviour of others.

When we are successful, we are likely to overlook the situational context (a good night's sleep, a lack of distractions) and claim full credit for achievements. But when we encounter failure, we are likely to blame the context rather than ourselves: when we get a parking ticket, we complain about the unclear information sign or the sluggish service at the dry cleaners; we don't dwell on the fact that we should have put more money in the meter.

We are biased towards explaining the behaviour of others in terms of their personality, not situation

On the other hand, we are biased towards explaining the behaviour of others in terms of their personal qualities (e.g. their intelligence or self-control), rather than the situation they find themselves in. For example, take two groups of people, and get one group to think up general knowledge questions to ask the others. Anyone watching is likely to think the questioners are more knowledgeable and intelligent than those answering – but this is irrational; they have forgotten that the situation gives the questioners more opportunity to look knowledgeable.²⁶²

Such considerations go to the heart of the debate about the boundaries between government and personal responsibility. We are predisposed to see the actions of others as a result of their *personal* actions, and thus products of their personal responsibility. Similarly, we think that our achievements result from our personal efforts. At the same time, we are predisposed to think of all the misfortunes that led to our problems, which may imply that outcomes are also based on circumstances, as well as personal resources.²⁶³

Perceptions of personal responsibility: the example of health

Evidence across a range of contexts using a range of methods shows that the general public hold individuals responsible for their health and wellbeing.²⁶⁴ There is also evidence in support of focussing on lifestyle as the main cause of conditions such as obesity.²⁶⁵ Such survey evidence is useful, but we also require information on how the general public – in their roles as citizens and as taxpayers – weigh concerns for reducing inequalities on the one hand against holding individuals responsible for those inequalities on the other. An inequality only becomes an inequity when the causes of the inequality are seen to be outside of people's control.

One popular way of thinking about this is to judge whether the behaviour is seen as the result of 'bad luck' or 'bad choices'. Consider the fact that, controlling for health status, men consult their GPs less than women do. On the one hand, it could be seen as 'bad luck' to be a man, in the sense that factors beyond his control (e.g. society's demands for men to be 'macho') determine his behaviour. On the other, his behaviour could be seen as 'bad choices' that he can be held to account for.

In terms of policy-making, the public may be more likely to approve any support measures for such a man if they think in terms of 'bad luck', rather than 'bad choices'.²⁶⁶ This may be related to people's strong instinct for reciprocity, which implies help is justified if someone has taken appropriate actions to improve their situation, even if these were not successful.

However, there is some evidence that attitudes vary between policy areas: while 78% of respondents said that it was right to limit access to benefits if an unemployed person was not actively looking for work, just 24% said that it would be right to limit NHS medical treatment for someone whose illness was due to heavy smoking or drinking.²⁶⁷

The overall message, therefore, is that we tend to attribute outcomes to people's personal actions. But what exactly do we mean by personal *responsibility*?

What is personal responsibility?

When we speak of 'personal responsibility', we are often conflating at least three different concepts:²⁶⁸

1. **Causal responsibility.** Many of our actions (or failures to act) expose us to certain consequences that others don't face – playing rugby is more likely to result in injury than playing the piano. How far should people experience the consequences of their actions (or failure of action), and how far should others relieve them of these consequences?
2. **Moral responsibility.** In what circumstances is it fitting to judge someone by the standards of good conduct we expect of ourselves and others? For example, most people would not judge someone morally responsible for committing a crime if they were mentally ill at the time. It is more difficult if someone commits wrongdoing when acting under duress, as when someone steals from their employer to pay kidnappers.²⁶⁹
3. **Role responsibility.** These are the responsibilities that people assume in a certain context, organisation or community. These can be more formal (spouse, doctor, minister) or informal (friend, neighbour, citizen). We usually recognise that the actor who is best placed to address a problem or prevent it happening again may not be the actor who caused it. Sometimes the best placed actor may not be an individual, but government - therefore,

the public often accepts that government has some role responsibility to provide public services or address societal problems.

Government involvement in changing behaviour is not mutually exclusive with personal responsibility

The most important point is that the government's involvement in changing behaviour is not mutually exclusive with personal responsibility. Personal responsibility is often seen as a 'zero-sum game': in other words, "if the state's taking responsibility, that means I am not". But it is perfectly possible for government to just supply the trigger or support for individuals to take greater personal responsibility.²⁷⁰ This is particularly true for those aspects of MINDSPACE that rely more on the Reflective system. For example, the Prime Minister's Strategy Unit has found that the process of developing, agreeing and monitoring personalised agreements between services and citizens can prompt more responsible behaviour.

If government were to use commitment devices to make an initial change to behaviour, then people may build on that initial change and start taking personal responsibility in related areas. Recycling of bottles may lead to broader pro-environmental behaviours; stopping smoking may encourage greater exercise. In other words, government may spark initial changes that lead to reinforcing behaviours that manifest personal responsibility; the fact that government supplied the initial push does not devalue the subsequent responsibility.

The moral hazard problem

Nevertheless, an important concern that plays directly into the general effectiveness of behaviour change interventions is the 'moral hazard' problem. If we think the state is making decisions for us, we may absolve ourselves of the responsibility to take charge of our own behaviour. This is a statement about how the world is, rather than a value judgment, although the degree of moral hazard varies from case to case.²⁷¹ Therefore, government may wish to be careful to frame behaviour change as a pathway to increased personal responsibility.

We think people can be held responsible if they can act rationally with some freedom of choice

How does MINDSPACE affect ideas of personal responsibility?

Clearly, judging whether and how much someone is responsible for an action depends greatly on their circumstances and our judgment. But there are some basic principles we apply when considering whether someone can be held responsible or not: we don't judge the insane in the same way as the sane, for example.²⁷² In essence, we think people can be held responsible if they can act rationally, supported by substantive freedom of choice.

It has long been accepted that some citizens may be in a state where they cannot exert rational responsibility for their actions: whether because they are children, mentally ill or (more controversially) in the grip of addictions. On the other hand, most adults are seen as capable of reason, and hence responsibility, although they may not achieve such responsibility because of weakness of will.²⁷³

Evidence from behavioural economics on the importance of the Automatic System complicates this view. As the Nobel Prize-winning psychologist Daniel Kahneman has observed: "We tend to believe that somebody is behaving that way because he wants to behave that way, because he tends to behave that way, because that's his nature. It turns out that the environmental effects on behaviour are a lot stronger than most people expect."²⁷⁴

Contextual influences on behaviour can be both powerful and unnoticed

Of course, we may still reconcile personal responsibility with this view. We may say that, although these environmental effects are strong, it is up to the responsible individual to resist them where damaging to their wellbeing. But these are not the 'environmental effects' of traditional political debate, which must be ameliorated by government or overcome by individuals and communities. Rather, they offer a challenge to our understanding of how we think: as we have seen, many of these effects are not only strong but also operate with little or no conscious control.

Can people resist things if they are not aware of them?

Can people resist things if they are not aware of them? How much substantive freedom do their 'reflective selves' actually have? Does this affect the way that we hold people causally or morally responsible? Certainly, it seems there is a considerable challenge to a strict understanding of responsibility: 'Responsibility requires that an agent acts in a reason-responsive way *that he accepts as a way of acting on his own reasons*. An agent whose ['Automatic System'] is manipulated by other agents in ways he would reject (were he aware of them) does not meet this condition for responsibility.'²⁷⁵

There *are* instances where effects can be produced that are both unconscious and in opposition to conscious will.²⁷⁶ But most of the time things are usually more complicated: people often have *some* opportunity to decide differently when being influenced.

Usually people have some opportunity to decide differently when being influenced

For example, it has been shown that the mere use of the word "because" triggers a powerful compliance reaction. When a group of people waiting for a photocopying machine were asked "Excuse me, I have five pages. May I use the Xerox machine?", only 60% of those asked agreed. When the phrase was changed to "Excuse me, I have five pages. May I use the Xerox machine because I'm in a rush?" compliance leapt to 94%.²⁷⁷

But it was not simply the act of giving a reason that made the difference, it was the automatic reaction triggered by the word "because": when the phrase was simply "Excuse me, I have five pages. May I use the Xerox machine because I need to make some copies?", compliance was 93%. The 'Automatic System' had reacted to "because", even though the Reflective system could have seen that no reason had been given.

The fact is, though, that 7% of respondents did not respond to this automatic effect. This may have been because their reflective systems cut in, they had a moral objection to queue jumping, or they were uncaring or in a rush. Regardless, it appears that there was *some* freedom of choice. But other situations are more difficult: what if the person concerned happens to be mentally or emotionally vulnerable at the moment they are exposed to the effect, through no fault of their own?

Judgments of personal responsibility need to be informed by evidence

In sum, MINDSPACE points out that we are all strongly affected by factors that may lie outside our awareness and control – and this complicates our understanding of personal responsibility. In practice, the question of how far MINDSPACE effects preserve substantive freedom, and in which contexts, is likely to come down to political judgment. Nevertheless, it should be informed by the evidence available: we need to acknowledge the nature and strength of the proven influences on human behaviour. This is one of the fundamental purposes of our report.

Conclusions and future challenges

Conclusions

MINDSPACE is pervasive

For policymakers, professionals and communities facing policy challenges such as crime, obesity, or environmental sustainability, behavioural approaches offer a potentially powerful new set of tools. Applying the insights of MINDSPACE can lead to low cost, low pain ways of nudging citizens - or ourselves - into new ways of acting by going with the grain of our automatic brain. This is an important idea at any time, but especially relevant in a period of fiscal constraint.

Policymakers could, in theory, seek to restrict the use of behavioural change approaches in general, such as banning advertising and other forms of marketing. But as we have seen, behavioural influences go well beyond the narrow remit of advertising. Policy-makers could seek to equip the citizen with an armoury of techniques to resist the influences that swirl around them - lessons for our children in 'unwanted influences and how to resist them'. Such ideas have merit, but they also have serious limitations, not least the fact that many influences (such as priming effects) are quite hard to detect.

More fundamentally, policy-makers need to understand that we are being influenced –and influencing others – all the time. This does not always lead to change. Indeed, many of the influences on our behaviour are more 'anchors' than nudges. What we eat, where we go, what we do – most of us are creatures of habit and, in a very general sense, the environment that we live in. The point is that government often forms a significant part of this environment, whether intentionally or not.

Therefore, policy-makers can use MINDSPACE to better understand the various effects on behaviour their policies may be having. Fundamentally, government will always be shaping choices: is the pension scheme opt-in or opt-out? Who is communicating the message? Behavioural science will continue to turn previously invisible influences into explicit choices, and policymakers and professionals into 'choice architects' whether they like it or not. And the more we come to know about behavioural effects, the less 'neutral' doing nothing will appear.

Whether reluctantly, or enthusiastically, today's policymakers are in the business of influencing behaviour. One way of thinking about this is to view the role of the policymaker or public servant as trying to shape influences around us to maximise the public and private good, while also leaving as much choice in the hands of citizens as possible. This is what is known as 'libertarian paternalism', but it does raise questions of its own.

Public permission matters

The more powerful and subtle behavioural change approaches are, the more they may provoke public and political concern. Citizens may accept their application on other people, but may not be so happy about their use on themselves. Behavioural approaches embody a line of thinking that moves from the idea of an autonomous individual making rational decisions to a "situated" decision-maker, much of whose behaviour is automatic and influenced by their 'choice environment'. This raises the

We are being influenced –
and influencing others –
all the time

Public approval is needed

question: who decides on this ‘choice environment’? This question has attracted remarkably little attention. Policy-makers wishing to use these tools summarised in MINDSPACE need the approval of the public to do so. Indeed, these approaches suggest an important new role for policymakers as brokers of public views and interests around the ecology of behaviour.

Future challenges

Reducing inequalities

An exciting but unresolved question thrown up by MINDSPACE is whether it has any effect in reducing inequalities. Most traditional policy interventions aim to ‘change minds’ – to produce rational changes in the way people think - in order to bring about behaviour change. Many (but not all) persuasion and education campaigns still aim to change attitudes and then behaviour by relying on rational use of the information provided.²⁷⁸

But who is most likely to benefit from such interventions? The intuitive answer is that more educated individuals are more likely to comprehend such information and, as result, act on it. More educated individuals, the argument goes, are also more likely to have the habit and the resources to search for more information which will provide them with even more reasons and tools to change their behaviour. Indeed, it is well-established that better education causes better health.²⁷⁹ Therefore, it may be that information campaigns widen inequalities in health and welfare, since they may reflect the fact that some citizens have a greater capacity (in the broadest possible sense) to change their behaviour.²⁸⁰

In contrast, the ‘Automatic System’ relies mostly on contextual changes to bring about behaviour change, without necessarily changing people’s minds. The effects of such contextual changes are therefore likely to be less dependent on education and income. In other words, it may be a more efficient *and* equitable way of influencing behaviour. As already noted, there is evidence that changing the pensions default to automatic enrolment brought a particularly large increase in take-up for low and medium income workers, eliminating most of the previous differences in participation due to income, sex, job tenure and race.²⁸¹ Overall, though, evidence on the distributional consequences of MINDSPACE is still sparse, and so there is a real need to evaluate whether it offers a way of using resources more efficiently and fairly.

How long do MINDSPACE effects last?

Policy-makers reading this report may have a nagging question: how long do MINDSPACE effects last? Is their impact on behaviour ephemeral or enduring? How long should my intervention last?

Psychologists sometimes make a distinction between ‘compliance’ and ‘conversion’.²⁸² For example, someone with racist views may nonetheless be careful not to show discriminatory behaviour at a job interview or when they are in a public setting. But in private, or one-to-one settings, they might show strong discrimination. In effect, they show compliance when under scrutiny, but they haven’t converted, so their behaviour is prone to revert at any time.

We assume that the goal of any attempt to change behaviour is to create an *enduring* change – indeed, one that becomes self-sustaining – although policy-makers may also reckon that compliance is better than nothing. We suggest that enduring change can be achieved through ‘trigger’ effects, ‘self-sustaining’ effects, and cultural change. We explain each of these below.

MINDSPACE may be a more efficient and equitable way of influencing behaviour than information provision

Temporary effects do not mean fleeting impacts

'Trigger' effects: are these only fleeting?

As discussed earlier, some MINDSPACE effects are rapid and even subconscious, notably **priming**, **salience**, and **affect**. On the face of it, their influence appears fleeting. Thus, the effects of priming may only last for a short while after exposure to the prime. But this does not mean that their *impact* is fleeting, since the behaviour and decision may have been changed in that interval.

These effects may be thought of as 'triggers'. Priming may only last a short while, but during that time it may lead to someone making a commitment that translates into longer-lasting change. But people are not only a bundle of reflexes. We can 'habituate' to repeated prompts, and we can learn to resist or reinterpret them in other ways. For example, a very effective trick is to give a busy stranger something – such as a flower – then immediately ask for some money. Because of the power of reciprocity, most people will automatically comply with this request, and probably be annoyed with themselves afterwards. But they are unlikely to fall for this ploy more than one or two times.

The fact is, there is relatively little practical evidence about how the impact of frequently used effects might habituate over time. Success will probably depend on whether the citizen is broadly happy with the result – in other words, the reinforcement that follows it. For example, smokers trying to quit deliberately try to avoid some of the primes that encourage their smoking, such as the habit of having a cigarette with a drink. MINDSPACE effects that direct them away from smoking are likely to be welcomed rather than consciously resisted (unlike the flower trick mentioned above). The effect is then reinforced by the sense of feeling good.

Hence one intervention helped people to develop healthy habits by using the method of context-dependent repetition, which was delivered in the form of information or advice on weight control, such as "try to eat roughly at the same times" and "plan ahead to find ways to incorporate the behaviour into daily routines".²⁸³ This approach recognises the power of automatic responses to context and tries to harness them for a specified goal.

Behavioural triggers can be built into situations and contexts

It is important to note that though behavioural triggers may be short-term in their influence, they can be repeated by being built into situations and contexts. For example, as mentioned earlier in relation to a dangerous road in Chicago or the approach to some junctions in the UK, the increased salience of driving speed can be 'built into' a road by the simple act of painting white lines.²⁸⁴ And, of course, if a short-term effect causes many people to change their behaviour, this itself creates new kinds of social influence, notably the possibility of moving people to a new 'behavioural equilibrium' (see below).

'Self-sustaining' effects: changing the equilibrium

At first glance, influences such as **social norms**, **defaults** and **ego** effects appear to rest on deep-seated aspects of the environment and ourselves. For example, it may be much harder for the policy-maker or community to change the social norm, but if they can there is good reason to think that the effect will be widespread, lasting and self-sustaining.

The most obvious example is defaults. For a start, the use of defaults is based on the status quo bias, which encourages stability and minimum effort over time. Governments have considerable control over many defaults, such as around pensions, insurance rules or what side the steering wheel is on our cars. Not surprisingly, defaults have become perhaps the most widely known element of behavioural economics.

Other effects have a self-sustaining dimension, though. Commitments, for example, are based around fidelity to a decision over time (assuming that this decision can be obtained in the first place). They 'go with the grain' of how we act

Some effects have a self-sustaining dimension, but their duration is not guaranteed

by recognising that small changes in behaviour may lead to a subsequent change in attitudes. However, the effects of commitments are less guaranteed to last than defaults – if the costs of keeping to the commitment become higher and the consequences less salient, the change in behaviour may not be sustained. In short, there is greater scope for interfering factors.

Norms also have a powerful self-sustaining element, but again their duration is not guaranteed. As explained, norms can be explicit (where someone tells you what others do) or implicit (where you observe what others do). We saw earlier that the explicit social norm effect declined in the months after letters were sent out detailing neighbours' energy consumption, but increased again on receipt of subsequent letters.²⁸⁵ Implicit norms are powerful and self-reinforcing, but government's difficulty here is how much effort is required to trigger a new, sustainable norm. Social norms may change very slowly or quickly, they may change because of a large, sudden event or a single invisible decision that creates a 'tipping point'.²⁸⁶

Compensating behaviours

People may compensate with other acts if their behaviour is changed

Short of trying out a given intervention, we cannot be sure how much any given MINDSPACE effect will lead to other 'compensating behaviours' over time, as often occur when attempting to 'change minds'. For example, we may eat more when we give up smoking because we cognitively decide to quit smoking, but does the same thing happen when we give up because the context has caused us to quit? Or, while smaller plates may make us eat less initially, will we start to pile plates higher in compensation? In this example, there are reasons to think not, since evidence shows that levels of eating are strongly linked to the context and availability of food (at least once a certain level of hunger has been satisfied), but the general challenge stands.

Again, this points to the need for Insight to gain understanding of the people whose behaviours you are attempting to change. For example, the geographer John Adams argues that we each have an individual built-in 'risk thermostat' – a level of risk we are ready to tolerate – which is a largely automatic instinct, derived from the accrual of experiences throughout our lives. Adams argues this means that changing behaviour so people wear motorcycle helmets may actually increase the likelihood of accidents: the risk thermostat kicks in, and people feel there is more scope to drive faster as a consequence. Insight could therefore help understand how people perceive and tolerate risk, and help build an intervention that limits compensating behaviours like these.²⁸⁷

Evidence from some policy areas, such as crime, suggests that compensating and displacement behaviours tend to be relatively limited. But in other policy areas substantial and problematic compensatory behaviours have been found. For example, it has been argued that attempts to reduce CO₂ emissions through encouraging people to drive smaller, more efficient cars are substantially offset by people's subsequent tendency to drive more often.²⁸⁸ And, of course, individuals' behaviour should be seen as the product of a wider system: if the pressures and incentives in this system remain the same, a person's attempts to change their actions may not be sustained, and compensating behaviours may emerge instead.

From behaviour change to cultural change

MINDSPACE can create or change habits by going with the grain of behaviour: harnessing automatic effects

As we have seen, much of behaviour change is about battling habits – either to change them or to use other habitual or hard-wired responses to nudge ourselves in a different direction. Habits are 'behavioural dispositions to repeat well-practiced actions given recurring circumstances', and they usually develop when actions are repeatedly paired with an event or context (e.g. drinking coffee after waking up).²⁸⁹ Although the initial pairing may have had some conscious purpose, once acquired

the action can be triggered just by the event or context, even in absence of the person's intention – or even in opposition to their intention.

Often attempts to break habits rely on providing information, but conscious thoughts may not provide an effective means for addressing automatic behaviour – not least because people often shape their views around their behaviour.²⁹⁰ In contrast, MINDSPACE suggests that the most effective way of changing or creating habits is by going with the grain of behaviour: harnessing the same automatic effects to nudge people onto a different, self-sustaining, track, without always explicitly stating the need to pursue a particular goal.

Habits do not just exist at the individual level

But habits do not exist at the individual level only. When replicated across a community or society we call them 'culture'. The Italians drink on average 48 litres of wine per year, while Britons drink less than half that amount.²⁹¹ In contrast, the vice of the Scandinavian nations is coffee: Finland, Norway, Sweden and Denmark fill the top four slots for consumption, drinking more than five times the level we do.²⁹² Sometimes such differences exist within countries too, such as differences in smoking across socio-economic groups in the UK.

Ultimately, most policymakers are focused on this bigger picture – often known as culture change.²⁹³ There may be occasions when the power of argument alone can eventually such culture change, such as gender equality or race relations. But generally the broader sweep of policy history suggests that such change is driven by a mix of both broad social argument and small policy steps. Smoking is perhaps the most familiar example. Over several decades the behavioural equilibrium has shifted from widespread smoking to today's status as an increasingly minority activity. Better information; powerful advertising (and the prohibition of pro-smoking advertising); expanding bans; and changing social norms have formed a mutually reinforcing thread of influence to change the behavioural equilibrium.

There is every reason to think that is a pattern that we will see repeated in many other areas of behaviour too, from sexual behaviour to carbon emissions. At the same time, new behavioural challenges will surely emerge too. For example, the UK leads the world in per capita spend on video games – roughly four times that of Germany and nearly 20 times the world average.²⁹⁴ Is that a virtue or vice? We may have to wait a generation to decide.

What we can be sure of is that culture change is around us all the time, and communities and governments will continue to take views on how they do, and do not, want it to unfold.

The future of behavioural policies

Some leading proponents have portrayed the application of behavioural economics as a radical 'third way' between liberal and paternalistic approaches to government. Others have tended to dismiss the approach as a distraction to the robust application of 'normal' economics to policy. In crude terms, the first camp says the way to reduce carbon emissions is through harnessing the power of techniques such as comparisons with our neighbours' emissions; for the second camp, it is simply to get the price of carbon right, and then to let markets sort it out.

Not a paradigm shift in policy-making, and not a reason to give up on conventional policy tools

Our position sits between the two camps. The application of behavioural economics does not imply a paradigm shift in policy-making. It certainly does not mean giving up on conventional policy tools such as regulation, price signals and better information. Sophisticated behavioural programmes to reduce smoking or excess drinking don't imply giving up on taxes on cigarettes and alcohol. Similarly, programmes to persuade us to eat five portions of fruits or vegetables a day mean still have to address practical barriers such as how the lack of supply of fresh food in poorer neighbourhoods.²⁹⁵

Who should act?

We can be confident that behavioural economic approaches offer policymakers powerful new tools, but there is still much that we do not know. There remains uncertainty over how lasting many of the effects are; how effects that work in one set of circumstances will work in another; and whether effects that work well with one segment of the population will work with another (including potential impacts on inequalities – though there are grounds to think that more automatic approaches will tend to reduce them).

There are also questions about how much such techniques should be employed by central government or left as tools for local policymakers, professionals and communities. One of the most important roles for central government in the coming years will be to ensure that local and professional applications of behavioural approaches are rigorously evaluated, our knowledge systematically built, and the results made available for communities to debate and adopt as they see fit. When the cost-effectiveness for an application is clearly shown, and the public acceptability has been established, central government might then move to national implementation – be this to reduce crime, strengthen communities, or support healthy and prosperous lives.

We saw at the beginning of this report how our decisions over a short time at lunch are influenced by the context within those decisions are made – by various elements of MINDSPACE. Accounting for these effects in public policy could result in resources being used both more efficiently and more fairly. There may turn out to be a free lunch after all.

Ideas for action

Changing policy-making

Nudging professionals. Breaking down all-in-one tick-box orders of medical tests into smaller blocks with costs and frequency of use alongside. Magistrates, doctors, and police provided with information on how their decisions compare with those of average and gold (evidenced-based) standard.

Downplay negative norms. As we have seen, stressing the prevalence of an undesirable behaviour can make people more likely to indulge in that behaviour themselves. A better tactic is to make these activities seem minor and socially undesirable, thereby bringing ‘in-group’ effects on your side.

Help policy-makers reduce the debt burden. Applying MINDSPACE to reducing the fiscal deficit, from building a mandate with the public to creating a dynamic of collective ownership across Departments to reduce costs.

An institutional centre for evaluating behavioural change. There is a good case for establishing a central competence that can evaluate behaviour change. This does not need to be a new body, but it does need scientific competence and a degree of independence. The centre would be tasked with determining which methods were most effective and cost-effective for changing specific behaviours.

A “Dragon’s Den” for innovative behaviour ideas. Professionals and communities who come up with innovative ideas have a means of submitting their ideas for consideration. Those that get through an initial selection process are invited to pitch to a panel of experts; convincing cases are given support for piloting and evaluation, and, if shown to be effective, assistance to help wider participation and follow-up.

Changing policies

Obesity in schools. Use all we know about choice architecture in school canteens to improve diets, such as increasing the prominence of healthy foods and offer a national points programme for healthy eating and exercise, with a range of rewards offered to classes, schools and cities.

Helping people help themselves. Use self-exclusion agreements to restrict access to online casinos and betting sites. Set up a central website funded by gaming industry that allows people to sign agreements restricting access to all registered online gaming sites.

Making the money go further. Refashion taxes, grants and benefits using behavioural economics. For example, front-load grants to disadvantaged students to make university feel more attractive, and offer lower but less variable tax credit options to those on variable incomes.

Citizen-to-citizen welfare. Online tax-free credit system set up to promote exchange of care services between citizens, harnessing reciprocity on the lines of the Japanese system of *fureai kippu* (care credits for social care) or the US Elderplan (where ex-patients help recent or current patients).

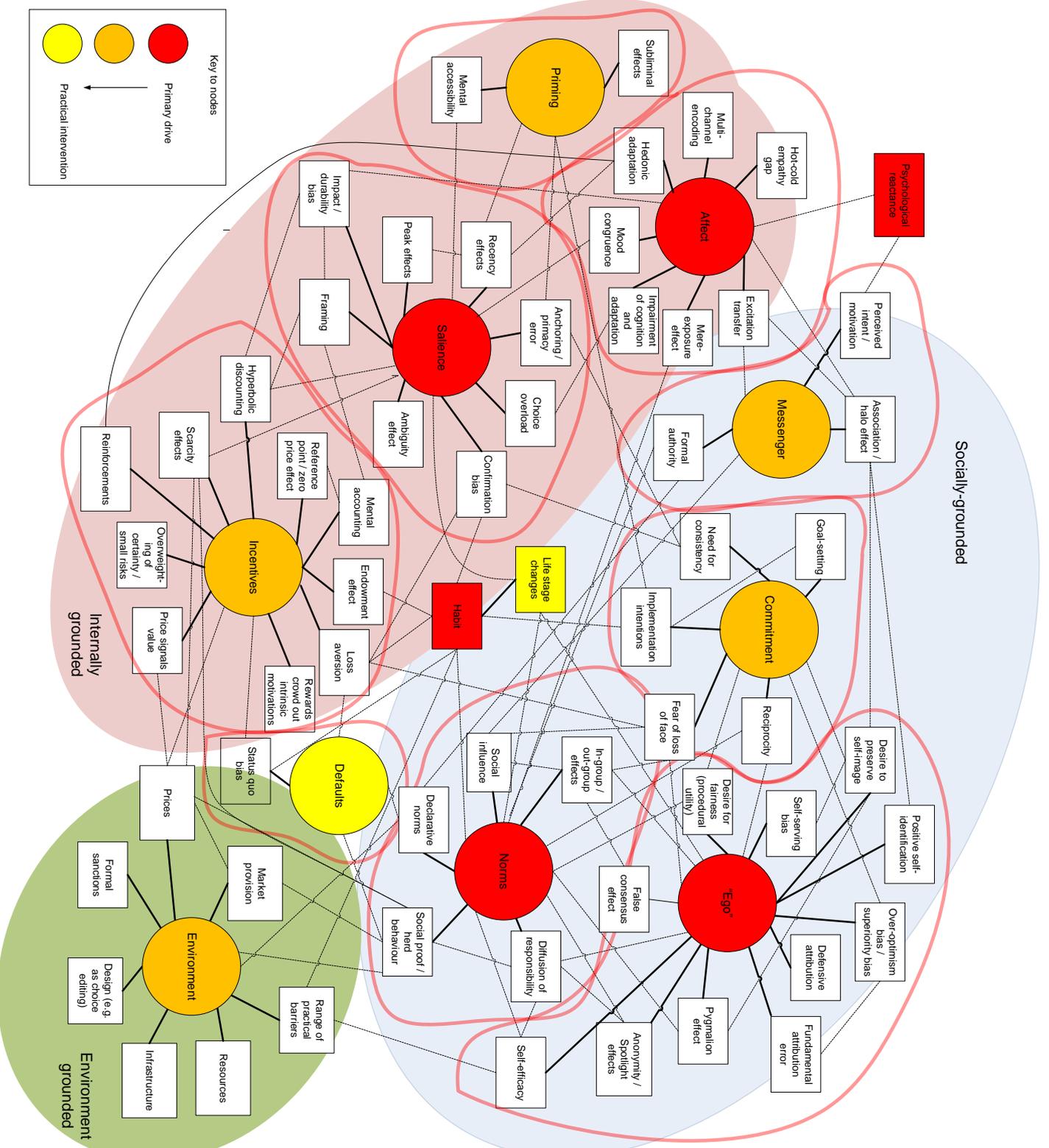
Annex 1: MINDSPACE mapped

Diagram presenting the concepts related to the elements in

MINDSPACE. The solid lines indicate that a given psychological process is considered as being an essential part (as a direct consequence, cause or manifestation) of the principle in question (e.g. framing is making something salient, while salience causes recency effects). The dotted lines are secondary connections, while the red/orange/yellow colouring of the circles denotes whether the factor is a primary drive (e.g. affect) or whether it is more applied (e.g. defaults). The red grouping lines denote the boundaries of MINDSPACE.

More details on the terms in the diagram can be found in:

Hewstone, Stroebe, Jonas (2007) *Introduction to Social Psychology: A European Perspective*. Chichester: Wiley, Fourth Edition.



Annex 2: Applying MINDSPACE to teenage pregnancy

A local authority has identified that it has unusually high rates, compared with comparable areas, of both teenage pregnancies and STDs. They have been set a challenging LAA target for National Indicator 112 (PSA 24) 'Under 18 Conception Rate', but their performance indicators are not moving. How can MINDSPACE offer a new approach?

Explore

The Local Authority brings together key figures from the PCT, local schools and the local community to assess levels of interest and current local strategies. This starts to identify ideas about what might be going wrong in the local area, and establishes common interests and resources to explore the issue further.

Insight research is commissioned locally involving focus groups and some one-to-one interviews (given the personal nature of the subject). This research explores the thoughts, feelings and pressures on teenagers (including teenage parents) and their parents. Evidence is also drawn from the new 'What works?' data bank of previous evaluations and international evidence funded by several large central government departments.

Insight found that one of the weaknesses of information and leaflets was that it concentrated on facts and figures about sex and STDs rather than the more potent influences on behaviour such as self-image and social pressure (Ego and Norms). For example, young people often felt unsure about how widespread sexual activity was, and those who were engaging in early sex felt uncomfortable about the reaction of their partner if they insisted on contraception, since it might imply they were already promiscuous or that it somehow implied they didn't trust their partner. It was also found that many young people did not relate to national-level statistics and figures.

Ironically, the local practice of having previous teenage parents come and talk to children in schools about why they regretted getting pregnant so young was found to have the exact reverse effect on many young people. It helped them imagine themselves in that situation (Salience), made it seem more normal (Norms), and the young mothers themselves seemed rather impressive and grown-up (Messenger).

Finally, it turned out that a major driver of early sexual activity, and indeed lower educational attainment and behavioural problems in the classroom, turned out to be rooted in self-image. Many young people felt caught in a frustrating dynamic of 'being treated like a child at home and school', and, in a slightly jumbled way, felt that sex was a route to being respected and treated as an adult (Ego).

Enable

For the most part, lack of information about safe sex was not found to be a major barrier, but there was evidence that there were some specific gaps in knowledge, such as some practical aspects of birth control use and a lack of understanding of the long-term effects of certain STDs. Sex guidance and information was therefore updated. Supply of contraception, including the cost of condoms, was a barrier in some at-risk younger groups, and dispensers were added in school toilets – within cubicles rather than more public areas to avoid unwanted social pressure.

Encourage

Salience and Norms

Recognising the importance of self-esteem rather than facts, leaflets and classes were changed to focus much more heavily on how other people, including peers and the other sex, felt about birth control. In order to make statistics more Salient,

a local survey of relationships and sexual behaviours was organised by parents and a local school nurse. Students found the results from the local survey far more salient, and it also served to break the taboo of younger age sex and relationships. Many young people were surprised to find out that far fewer of their peers were having sex than they thought, which they felt removed pressure on them (Norms).

Messenger

Schools also took a new approach to visits: rather than inviting *just* teenage mothers in to talk, they set up a panel of five former pupils to talk about their lives and relationships. Just like the teenage parents, they were articulate and impressive – but, of course, most of those who left school were not teenage parents. A typical panel of 20-something ex-students had three who were not parents, of whom one was recently married, one was in a long-term relationship, and one who had recently broken up. The fourth was also recently married and had just had a child. The fifth, on some of the panels, had been a teen parent. In other words, various ‘alternative futures’ were made Salient, while it was clear that the dominant Norm was not being a single mother.

Commitment

Some schools and parents experimented with ‘compacts’ – students would actually make a pledge with themselves as part of PHSE classes that, if they were in a relationship, they would agree with their partner to use birth control (Commitment). Though some felt these ‘compacts’ were embarrassing, many subsequently felt that they were glad that they had done so.

Engage

Many of the elements of the Borough’s programme on teenage sexual behaviour were controversial. Engaging with parents, professional and children was an important part of getting ‘permission’ for the programme. The local authority had to stress the scale of the problem in the area (although not to teenagers, to prevent an undesirable social norm), and the difficulties that can ensue from teenage pregnancy. The engagement itself helped to raise the profile of the issue and increased the acceptability of talking about sex and relationships in the area, thereby creating a self-reinforcing social norm.

Exemplify

In this instance, the local authority recognised that it would find it difficult to exemplify actions that lead to lower teenage pregnancy. Therefore, it mostly restricted its activities to ensuring that it was giving a consistent message on the desirability of teenage pregnancy in all its areas of activity. In terms of policy-making, it was recognised that the Commitment to reach a certain LAA target had encouraged the local authority to think differently. In addition, a local health worker gave a hard-hitting presentation to the local authority’s team on the real emotion and social problems teenage pregnancy was creating in the local area (Salience and Affect). As a result, the Default approach to information provision had been shifted from ‘neutrality’ to ‘socially situated’ – unless decided otherwise, all information would be geared towards affecting self-esteem issues and social pressures felt by teenagers.

Evaluate

There were various elements to the programmes that were tried in the area. Schools and communities tended to use slightly different combinations. The evaluation used this variation, or tapestry, of interventions to test the relative efficacy of different aspects of the programme. Outcome variables included levels of STDs, teen pregnancy rates, and a repeat of the local survey on sexual behaviours.

Annex 3: New frontiers of behaviour change: Insight from experts

This annex gives short insights into some of the latest developments in behaviour change from world experts.

1. Virtual Worlds to test behavioural interventions

Virtual worlds are three-dimensional environments found online in which communities of networked individuals interact. Millions of people use such platforms and they have become increasingly sophisticated. Within such worlds (e.g. Second Life) individuals can make friends with like-minded people or even do their weekly shopping. Researchers in my department are currently using this technology to teach medical students how to be good doctors.

The potential exists to use virtual worlds to test out some new policies in the area of behaviour change. In the past we have spent large amounts of money on interventions to change behaviour with little idea of whether they will work or not. It may be that we can try out various interventions within virtual worlds first, so as to get an idea of their potential impact. Chesney has recently explored the use of virtual worlds for experimental economics. Overall the behaviour of virtual subjects was not found to differ significantly from established standard results, suggesting their usefulness as experimental subjects.

Professor The Lord Ara Darzi, Professor of Surgery, Imperial College London. Formerly Under Secretary State for Health

2. Evaluating behaviour change policy

The next steps for behavioural economics are large field studies on policy, since data collection may challenge governments' intuitions. Academics could also invite people who are involved in legislation to come and present the assumptions they are making about human behaviour, give them some feedback and work together on changes. Examples could be legislation about driving while texting, energy usage, income tax, calorie labelling, and so on.

Professor Dan Ariely, Alfred P. Sloan Professor of Behavioral Economics, Massachusetts Institute of Technology, author of Predictably Irrational (HarperCollins: 2008)

3. Neuroeconomics

Neuroscience now offers profound insights into how the human brain implements high level psychological functions, including decision making. Such knowledge when combined with insights from other disciplines has spawned new disciplines, a pertinent example being the field of neuroeconomics. This new field has already generated remarkable findings into questions as diverse as how people learn in an optimal fashion, how human preferences are formed and the mechanisms that explain common deviations from rationality in our choice behaviour.

The wider impact of these findings is that they suggest a profound revision in how we construe the architecture of the human mind. It now appears that the brain comprises not a monolithic single executive decision making system but instead comprises multiple distinct decision-making systems, each competing for control over choice behaviour. The obvious analogy here is that of a parliament of the mind. The challenge now is to understand how these systems interact during the expression of behaviour including how they impact on self-control. A deeper understanding here is likely to provide insights into the types of interventions or triggers that

engage these distinct systems, with potential beneficial or indeed detrimental effects. It opens the distinct possibility that we can implement effective policies that can provide powerful, yet simple, tools that engender change in behaviour across a range of societal contexts including our health service, schools and our general social environment.

Professor Ray Dolan, Director of the Wellcome Trust Centre for Neuroimaging, University College London

4. Influencing behaviour through design

Winston Churchill wrote: 'We shape our buildings; thereafter they shape us.' The built environment presents a series of 'clues' to the public and effectively gives them permission to do certain things or behave in certain ways. Whether it is the corporate employer which creates social spaces to encourage informal collaboration across disciplines inside its office building, or the transport operator which deliberately denies passengers even surfaces on which to place and discard coffee cups on the subway system, organisations have used design to encourage behaviours best suited to their mission.

Today one of the leading-edge areas in which design can influence behaviour change is in relation to safeguarding the environment. Having well-designed recycling facilities can support greater recycling by communities, for example; giving home owners immediate and understandable visual feedback on the amount of energy they are consuming can encourage a reduction in energy use.

Jeremy Myerson, Helen Hamlyn Professor of Design, Royal College of Art

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- ⁸⁸ Landry, Lange, List, Price, Rupp (2006). Toward an understanding of the economics of charity: Evidence from a field experiment. *Quarterly Journal of Economics* 121:747–782.
- ⁸⁹ This is related to the *prototype-willingness model*. See Gibbons, Gerrard, Blanton and Russell (1998) Reasoned action and social reaction: Willingness and intention as independent predictors of health risk. *Journal of Personality and Social Psychology* 74: 1164–1180. Gibbons, Gerrard, Lane, Mahler and Kulik (2005) Using UV photography to reduce use of tanning booths: A test of cognitive mediation. *Health Psychology* 24:358–363.
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- ⁹² Festinger's (1957) *cognitive dissonance theory* says that if people experience a disjuncture between their attitudes and their behaviour, they change their attitudes so they are consistent with their behaviour. Thus, smokers who know that their habit causes lung cancer will justify it to themselves as a way to stay thin or relieve stress. Similarly, Bem's (1967) *self-perception theory* proposes that we form our attitudes, opinions, and other internal states by observing our behaviour and concluding what attitudes must have caused them. Bem (1967) Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review* 74:183–200.
- ⁹³ This is known as the “Pygmalion effect”. Rosenthal and Jacobson (1992) *Pygmalion in the classroom*. New York: Irvington. Expanded edition.
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- ⁹⁷ Halpern (2010) *The Hidden Wealth of Nations*. Cambridge: Polity.
- ⁹⁸ For a recent practical overview of these issues in the field of health, see Reeves (2009) *A Liberal Dose? Health and Wellbeing – the Role of the State*.
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- ¹⁰⁰ See, for example, IPSOS MORI (2009) *August Issues Index*, where 32% of respondents saw crime as being amongst the top issues facing Britain. At: <http://www.ipsos-mori.com/researchpublications/researcharchive/poll.aspx?oltemid=2452>
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- ¹⁰² Home Office (2007) *Homicides, Firearm Offences and Intimate Violence 2005/2006*. Home Office Statistical Bulletin 02/07.
- ¹⁰³ Walker et al. (eds) (2009) *Crime in England and Wales 2008/9, Volume 1*, p.6, p.10. There is some evidence from NHS hospital episode statistics that ‘assault by a sharp object’ admissions increased by 30% between 1997 and 2005. Maxwell et al. (2007) Trends in admissions to hospital involving an assault using a knife or other sharp instrument, England, 1997-2005. *Journal of Public Health* 29(2): 187.
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- ¹⁰⁵ Sharp et al (2004), p.vi.
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- ¹²¹ Cabinet Office (2008) *Engaging Communities in Fighting Crime: A Review by Louise Casey*, pp.50-6.
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- ¹³⁸ In psychological terms, the costumes and performances make the issue of litter and FPN more 'available' in the mind. Availability has great power over how we think – for example, people tend to overestimate the risk of dangers that come easily to mind (for example, plane crashes) and underestimate the dangers of those that are less obvious (for example, sun-beds). For a brief description, see Thaler and Sunstein (2008), pp.27-8.
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- ¹⁹⁹ This is known as the 'status quo bias'. Financial Services Authority (2008) *Financial Capability: A Behavioural Economics Perspective*, p.33.

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- ²⁰⁴ Madrian and Shea (2001) The power of suggestion: Inertia in 401(k) participation and savings behaviour. *Quarterly Journal of Economics* 116:1149-1187.
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- ²⁰⁸ DWP (2009) *Impact Assessment of Workplace Pension Reform (Completing the Picture) Regulations 2010*, p.2.
- ²⁰⁹ DWP (2009) *Impact Assessment of Workplace Pension Reform (Completing the Picture) Regulations 2010*, p.2.
- ²¹⁰ The framework was originally developed in the context of changing behaviour for sustainable development. See: DEFRA (2008) *A Framework for Pro-environmental behaviours*, p.53. We also draw on some of the modifications suggested by Lewis (2007) *States of Reason*.
- ²¹¹ Cabinet Office Delivery and Transformation Group (2007) *Establishing an effective Customer Insight Capability in Public Sector Organisations*, p.4.
- ²¹² Cabinet Office (2009) *Guide to Segmentation*. At: http://www.cabinetoffice.gov.uk/public_service_reform/innovation/segmentation.aspx
- ²¹³ Defra (2008) *A Framework for Proenvironmental behaviours*.
- ²¹⁴ Hurley (2006) *The Public Ecology of Responsibility*. Working Paper. At: www.bristol.ac.uk/philosophy/hurley/papers/Responsibility.doc. This notion is similar to the communitarian concept of the situated self. See: Sandel (1982) *Liberalism and the limits of justice*.
- ²¹⁵ The Cabinet Office has recently affirmed the value of drawing on the experience of frontline workers in Cabinet Office (2009) *Listening to the Frontline: Capturing Insight and Learning Lessons in Policy-making*.
- ²¹⁶ Judah, et al. (2009) Experimental Pretesting of Hand-Washing Interventions in a Natural Setting. *American Journal of Public Health* 99:S405-S411.
- ²¹⁷ There are many other possible examples. Very poor availability of fresh food in the locality may hinder any attempts to eat healthily. King's Fund (2005) *Health Inequality*.
- ²¹⁹ COI and Cabinet Office. (2009) *Effective public engagement: A guide for policy-makers and communications professionals*. Available at: <http://coi.gov.uk/documents/guidance/effective-public-engagement.pdf>
- ²²⁰ Halpern (2010) *The Hidden Wealth of Nations*, pp.192-3.
- ²²¹ Taken from House of Commons (2007) *Citizens' Juries: Briefing Note*; Hills (2007) 'Pensions, public opinion and policy', in Hills and Le Grand (eds) *Making social policy work*, pp.221-243. Bristol: Policy Press.
- ²²² Perceived fairness of procedures ('procedural equity') has been shown to be valued by the public. See Pearce (2007) Rethinking Fairness. *Public Policy Research* 14(1): 11-22.
- ²²³ Brown (2009) *Personal Responsibility*, p.102.
- ²²⁴ Halpern (2010) *The Hidden Wealth of Nations*, p.196.
- ²²⁵ Applied this way, MINDSPACE can trigger a process of 'double loop learning' – that is, learning about *how an organisation learns*, rather than just solving problems in accepted ways. See: Argyris and Schön (1978) *Organizational learning: A theory of action perspective*, Reading, Mass: Addison Wesley.

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- ²²⁷ The National Institute for Clinical Excellence has provided guidance on public health interventions designed to change behaviour. <http://www.nice.org.uk/PH6>
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- ²³⁰ Interestingly, one study found that simply leaving feedback cards was the most cost-effective way of encouraging the correct sorting of rubbish for recycling. Timlett and Williams (2008) Public participation and recycling performance in England: A comparison of tools for behaviour change. *Resources Conservation and Recycling* 52(4):622-34.
- ²³¹ London Collaborative (2009) *The Capital Ambition guide to behaviour change*, p.35.
- ²³² London Collaborative (2009) *The Capital Ambition guide to behaviour change*, p.35.
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- ²³⁴ Reeves (2009) *A Liberal Dose? Health and Wellbeing – the Role of the State*.
- ²³⁵ Taken from Knott (2008) *Achieving Culture Change: A Policy Framework*. Prime Minister's Strategy Unit, p.68.
- ²³⁶ See the debate over the legal status of the drug *khat*, which plays a significant role in East African culture. Advisory Council on the Misuse of Drugs (2005) *Khat (Qat): Assessment of risk to individuals and communities in the UK*.
- ²³⁷ One of the "responsibilities" of the draft NHS Constitution states that 'You should recognise that you make a significant contribution to your own, and your family's, good health and well-being, and take some personal responsibility for it.' Department of Health (2009) *The NHS Constitution*, p.9. See Brown (2009) *Personal Responsibility*, Chapter 7.
- ²³⁸ As noted earlier, the Pygmalion effect means that people tend to fulfil the roles or labels that are attached to them – whether positive or negative.
- ²³⁹ Reeves (2009), p.21.
- ²⁴⁰ See, for example, Hallsworth et al. (2008) *The EU Platform on Diet, Physical Activity and Health*. Cambridge: RAND Europe.
- ²⁴¹ Lewis (2007) *States of Reason*, p.7. London: IPPR.
- ²⁴² This point is made at greater length in Reeves (2009), p.22.
- ²⁴³ As noted before, we have a very strong appetite for explanations (or 'attributions'). See: Langer (1989) Minding matters. *Advances in Experimental Social Psychology*, Vol. 22, ed. Berkowitz. New York: Academic Press. Sutherland (2007) *Irrationality*, p.110.
- ²⁴⁴ There is much useful information on this topic from the field of pro-environmental behaviours. See: Jackson (2005) *Motivating Sustainable Consumption*; Darnton (2004) *Driving Public Behaviours for Sustainable Lifestyles*.
- ²⁴⁵ IPSOS MORI (2007) *Tipping Point or Turning Point? Social Marketing and Climate Change*.
- ²⁴⁶ Reeves (2009), p.10.
- ²⁴⁷ IPSOS Mori Survey. Base: 1,070 UK adults age 16+, interviewed 3-6 Jan 2008.
- ²⁴⁸ Ipsos MORI/RCP. (2009). *Trust in People*. See <http://www.judiciary.gov.uk/docs/poll-trust-in-professions-topline-20091.pdf>
- ²⁴⁹ Thaler and Sunstein (2008), pp.81-3.
- ²⁵⁰ Social Market Foundation (2006) *Creatures of Habit? The Art of Behavioural Change*, p.8.
- ²⁵¹ The philosopher Harry Frankfurt makes a useful distinction between 'first order' and 'second order' desires. First order wishes concern a person's contingent actions (behaving in a certain way), while second-order wishes are about primary (wishes to wish to do or not to do something). Frankfurt (1971) Freedom of the will and the concept of a person. *Journal of Philosophy* 68:5-22.
- ²⁵² Most famously, Sir Isaiah Berlin argued against this way of thinking in his 1958 essay 'Two Types of Liberty', in Berlin (2002) *Liberty*. Oxford University Press.
- ²⁵³ Swift (2007) *Political Philosophy: A beginner's guide for students and politicians*, p.84.

- ²⁵⁴ We are referring to the controversy that ensues when people consider whether the use of a particular effect is justified, not whether the use of an effect increases or reduces controversy. For example, a behaviour change that uses Messenger effects may reduce controversy by recognising that we may listen more to a message from our GP than from the Secretary of State for Health. But people may consider the “use” of their GP in this way to be unacceptable and controversial.
- ²⁵⁵ This viewpoint is underpinned by a long tradition of “social contract” thinking. See Boucher and Kelly (1994) *The Social Contract from Hobbes to Rawls*. Routledge.
- ²⁵⁶ Dean (2009) *Governmentality: Power and Rule in Modern Society*. Second Edition. Sage.
- ²⁵⁷ Morowitz et al. (1993) Does measuring intent change behaviour? *Journal of Consumer Research* 20:46-61; Sherman (1980) On the self-erasing nature of errors of prediction. *Journal of Personality and Social Psychology* 39:340-350.
- ²⁵⁸ Mulgan (2009) *Influencing Public Behaviour to Improve Health and Wellbeing*, p.27.
- ²⁵⁹ There are very good reasons for rejecting any such actions out of hand, but this is not to say they would not work, if considered acceptable. See: Bargh (2006) ‘What have we been priming all these years? On the development, mechanisms, and ecology of nonconscious social behavior’, *European Journal of Social Psychology* 36: 147-169.
- ²⁶⁰ IPSOS Mori. 2,019 British adults, 9 May-5 June 2008.
- ²⁶¹ Pensions Commission (2005) *Pensions Commission Research: Appendix D*, p.108.
- ²⁶² Ross et al. (1977) Social roles, social control, and biases in social-perception processes. *Journal of Personality and Social Psychology* 35:485-94.
- ²⁶³ These ‘circumstances’ are different from the environmental cues we discuss elsewhere in the document. These cues act on people without their conscious knowledge; indeed, people actively resist the suggestion that their actions are being influenced.
- ²⁶⁴ For example, a recent IPSOS MORI poll gave the public a set of factors and asked which, if any, they thought had ‘the biggest impact on your chances of living a long and healthy life’. 79% selected ‘Your lifestyle’, 39% ‘Your genes’, and 35% ‘Your social circumstances’. Of course, it is perfectly possible that genes and social circumstances can affect lifestyle, but it seems likely that most people saw this as an issue of personal responsibility. IPSOS MORI, 1,994 British adults, 14-21 August 2008.
- ²⁶⁵ Donaldson et al (2008) Weighting and valuing quality adjusted life years: preliminary results from the Social Value of a QALY Project. At: http://www.haps.bham.ac.uk/publichealth/methodology/docs/publications/JH12_Donaldson_Social_Value_of_QALY_July2008.pdf
- ²⁶⁶ Dworkin (1981). What is Equality? Part 1: Equality of Welfare. *Philosophy and Public Affairs* 10(3):185-246
- ²⁶⁷ Sefton (2005) Give and take: public attitudes to redistribution. In Park et al. *British Social Attitudes 22nd Report*.
- ²⁶⁸ Brown (2009) *Personal Responsibility*, pp.21-27. Brown actually gives four types, but we have conflated ‘causal’ and ‘preventative’ responsibility.
- ²⁶⁹ It is important to distinguish between consequential and moral responsibility because sometimes it may be appropriate to criticise someone for their moral conduct but not force them to bear the consequences. Brown (2009), p.26.
- ²⁷⁰ The philosopher Alexander Brown points out that ‘collective action can be a way for large numbers of people to take personal responsibility together’. Brown (2009) *Personal Responsibility*, p.17.
- ²⁷¹ See, for example, Pauly (1968) The economics of moral hazard: Comment. *The American Economic Review* 58(3):531-537.
- ²⁷² Hurley (2006) *The Public Ecology of Responsibility*, p.5.
- ²⁷³ Hurley (2003) *Justice, Luck, Knowledge*. Cambridge, MA: Harvard University Press.
- ²⁷⁴ Quoted in conversation at: http://www.edge.org/3rd_culture/thaler_sendhil08/class4.html
- ²⁷⁵ Hurley (2006) *The Public Ecology of Responsibility*, p.15.
- ²⁷⁶ There is a large body of research which suggests the presence of automatic effects that discriminate against racial minorities – whether or not the person being tested is themselves a member of an ethnic minority or consciously holds discriminatory attitudes. For an overview of the evidence, see Payne and Cameron (2010). Divided minds, divided morals: How implicit social cognition underpins and undermines our sense of social justice. In Gawronski and Payne (eds.) *Handbook of Implicit Social Cognition: Measurement, Theory,*

and Applications. New York, NY: Guilford Press. At:
<http://www.unc.edu/~bkpayne/publications/PayneCameron.pdf>

²⁷⁷ Langer (1989) Minding matters. *Advances in Experimental Social Psychology*, Vol. 22, ed. Berkowitz. New York: Academic Press. Quoted in Cialdini (2007), p.4.

²⁷⁸ Norman, Abraham and Conner (eds.) (2000) *Understanding changing health behaviour: From health beliefs to self-regulation*. Amsterdam: Harwood Academic.

²⁷⁹ See, for example, Silles (2008) The causal effect of education on health: Evidence from the United Kingdom. *Economics of Education Review* 28(1):122-128.

²⁸⁰ Although there is evidence that some interventions aimed at general populations widen health inequalities, the specific link between information campaigns (as opposed to other approaches) and increasing inequality is not clear. Macintyre et al. (2001) Using evidence to inform health policy: case study. *British Medical Journal* 322:222-225; De Walle, van der Pal, de Jong-van den Berg, Jeeninga, Schoute, de Rover, et al. (1999) Effect of mass media campaign to reduce socioeconomic differences in women's awareness and behaviour concerning use of folic acid: cross sectional study. *BMJ* 319: 291-292; Thomas et al. (2008) Population tobacco control interventions and their effects on social inequalities in smoking: systematic review. *Tobacco Control* 17:230-237.

²⁸¹ Madrian and Shea (2001).

²⁸² See Moscovici. (1980) Towards a theory of conversion behaviour. In: Berkowitz (ed.) *Advances in Experimental Social Psychology*, vol. 13, New York: Academic Press

²⁸³ Lally, Chipperfield and Wardle. (2008). Healthy habits: Efficacy of simple advice on weight control. *International Journal of Obesity* 32:700–707.

²⁸⁴ Thaler and Sunstein (2008) p.37.

²⁸⁵ Allcott (2009) Social norms and energy conservation. Discussion Paper. Center for Energy and Environmental Policy Research.

²⁸⁶ For more on this important issue, see Ball (2004) *Critical Mass: How one thing leads to another*; Schelling (1978) *Micromotives and Macrobehaviour*; Gladwell (2000) *The Tipping Point: How little things can make a big difference*.

²⁸⁷ Adams (1995) *Risk*. London: University College London Press.

²⁸⁸ This is known as the 'rebound effect' or Khazzoom-Brookes postulate. See: Herring and Roy (2007) Technological innovation, energy efficient design and the rebound effect. *Technovation* 27:4, pp.194-203. The intellectual roots of the concept are in the 'Jevons paradox'. See: Jevons (1865) *The Coal Question*. London: Macmillan.

²⁸⁹ Wood, Tam and Witt (2005). Changing circumstances, disrupting habits. *Journal of Personality and Social Psychology* 88: 918–933; Wood and Neal (2007). A new look at habits and the habit–goal interface. *Psychological Review* 114: 843–863.

²⁹⁰ Aarts, Verplanken and van Knippenberg (1997) Habit and information use in travel mode choices. *Acta Psychologica* 96:1–14; Verplanken, Aarts and van Knippenberg (1997) Habit, information acquisition, and the process of making travel mode choices. *European Journal of Social Psychology* 27:539–560.

²⁹¹ 2005 data. In contrast the world average is 4 litres – less than a tenth of the Italian rate. See: <http://www.wineinstitute.org/files/PerCapitaWineConsumptionCountries.pdf>.

²⁹² The Finns drink 12.0kg of coffee per capita per year compared with the UK's meagre 2.8kg (and the world average of 0.8kg). See <http://www.ico.org/historical.asp>.

²⁹³ See Knott. (2008) *Achieving Culture Change: A Policy Framework*. Prime Minister's Strategy Unit, p.68.

²⁹⁴ 2008 data, Euromonitor International.

²⁹⁵ Beaulac, Kristjansson, Cummins (2009) A systematic review of food deserts, 1966-2007. *Preventing Chronic Disease* 6:3; King's Fund. (2005) *Health Inequality*.

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