

# Recognising the true potential of technology to change behaviour

Technology could successfully change behaviours where decades of campaigns and legislation have failed



Intermittent smokers who consider smoking disgusting, reframe their behaviour as social smoking. Photograph: Peter Macdiarmid/Getty Images

With the quantified self already walking among us and the internet of things within easy reach, digital technology is creating unprecedented opportunities to encourage, enable and empower more sustainable behaviours.

If we are to unlock the power of technology we must be more ambitious than simply digitising analogue strategies or creating another communications channel.

The true potential of technology lies in its ability to do things that nothing else can do. In behaviour change terms, the potential to succeed where decades of education programmes, awareness campaigns and product innovation have failed; to make a difference where government policy and legislation has had limited impact.

Using behavioural insights, it is possible to highlight the bottlenecks, drop out points and achilles heels of traditional behaviour change efforts — the reasons why we have failed in the past — and apply the unique possibilities of technology to these specific challenges.

## Overcoming our limitations

As human beings we are fallible to the point of being feeble. As irrational, habit-bound creatures, driven by the need for immediate gratification we are blighted by inherent limitations that make behaviour change hugely challenging. Naturally weak-willed and lacking in self-control, we are rendered docile in the face of the unconscious cognitive processes, social dynamics and external contextual cues that are the true determinants of 'our' behaviour.

Luckily, the history of the human race is almost defined by its ability to invent stuff that bolsters its feeble capabilities. That stuff is, of course, what we generically refer to as 'technology'. And in the same way that the internal combustion engine and the light bulb allow us to overcome our relatively feeble powers of motion and perception, so digital technology can be directed to overcoming our relatively feeble powers of reasoning, self-control, motivation, self-awareness and agency—the factors that make behaviour change so difficult.

Herein lies the true potential of technology: not in the laboratory or the workshop, but in an understanding of the behavioural dynamics that define the human condition, both generally and within the context of a specific user-group, market segment or community.

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## Maintaining behaviour change momentum

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Human beings are inherently lazy and self-consciously changing our behaviours requires great effort and energy. As such, the initiation of a change effort might be relatively easy to trigger, but the maintenance and consolidation of that change is where the real challenge lies.

Technology has immense and unique potential to make an impact in this area. Gamification can make otherwise tedious efforts enjoyable and less cognitively taxing. Social media can amplify social comparison and norming effects or amplify the effectiveness of public commitments.

Quantified feedback is a highly effective motivational trigger. Tangible progress serves as positive reinforcement that generates further motivation, supports the maintenance of new behaviours and allows new habits to form.

By definition, computers are designed to process large amounts of data and have the capacity to analyse, visualise and communicate that data in highly engaging ways. In combination with goal setting, feedback can be made highly specific and personal and considerably more effective as a result.

For example, counting the number of unsmoked cigarettes and comparing that to, for example, a component of the car you will buy with the money you save after quitting for six months is considerably more effective than simply noting the amount of unsmoked cigarettes or even the amount of money saved.

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## The intention/action gap

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Due to our relatively limited cognitive capacity, our memories are prone to error. In a behaviour change context this can be aggravated by a tendency to accidentally-on-purpose forget things in order to avoid exerting effort. In other circumstances we allow habits to hound good intentions out of conscious awareness and default to routine behaviours.

Timely, context-sensitive reminders to, for instance, grab your gym kit as you leave for work or pack the re-usable carrier bags into the car before a shopping trip would help overcome these cognitive slips.

Emotion has a central role in human decision-making and behaviour. Unfortunately, our behaviour change intentions tend to be driven by our more rational psychological components and can be very easily subverted by the more powerful, less rational emotional ones.

Technology has a huge potential for positive impact in this context as a form of 'self-binding'—a mechanism that ties you to rational intentions in the face of emotional interference.

The concept of self-binding originated in Greek mythology with the story of Odysseus and the Sirens. Knowing in advance that his rationality would be subverted by the siren song, and that he would perish as a result, Odysseus ordered his men to bind him to the ship's mast as a pre-emptive measure.

Sailing past the Sirens, his inability to yield to the seductive song triggered a bout of temporary insanity, but the self-bind implemented his rational intentions nonetheless. This is perhaps one of the clearest expositions, and most effective solutions, to the perennial challenge presented by the intention-action gap.

Bereft of any emotion, technology can be relied up to echo, remind, reinforce and (in some cases) enforce the intentions that you made when in a fully rational state.

In the context of sexual health, where high jinx and alcohol is often the primary cause of unprotected sexual encounters, self-made reminders can be timed to coincide with the time of night that you are most vulnerable to temptation.

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## Lying to ourselves

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Cognitive dissonance represents one of the more powerful behaviour change mechanisms we have at our disposal. Cognitive dissonance is the psychological tension that results when our behaviour contradicts our opinions, attitudes or values. This tension is highly uncomfortable and only dissolved when one or other of the components changes and harmony between the components is restored.

However, as human beings we are highly adept at lying to ourselves and, in particular, twisting our interpretation of reality to fit our attitudes and opinions and therefore avoiding cognitive dissonance.

So for instance, light and intermittent smokers diffuse the cognitive dissonance caused by the fact that they smoke - yet consider smoking disgusting - by reframing their behaviour as social smoking.

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The opportunity here lies in the fact that behaviour tracked by technology, as opposed to experienced subjectively or tracked via self-reported data, is much more difficult for our psychological defence mechanisms to distort. As such, we are left with no choice, but to change our actual behaviour in order to diffuse the tension caused by cognitive dissonance.

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