Helpdesk Research Report: Literature and debates around behaviour change

Date: 02.03.12

Query: What are the strongest groups of literature and main debates around behaviour change?

Enquirer: DFID

Author: Sumedh Rao (sumedh@gsdrc.org)

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1. Overview

There is a large literature around behaviour change, drawing from a number of disciplines including psychology, sociology, anthropology, economics, and neuroscience. Within these disciplines there does not seem to be a particularly outstanding group of literature or debate and it is highly contestable what the strongest groups of literature seem to be. There are a number of debates relating to behaviour change in a number of fields and at its widest interpretation ‘behaviour change’ could be said to encompass the majority of disciplines such as psychology and cognitive science.

That said, for development policy the two most relevant debates are probably those in relation to the conceptualisation of behaviour change and the application of behaviour change. Section 2 outlines the debates surrounding the theories/models of behaviour change, and in particular the three commonly cited models:

- Social Learning Theory / Social Cognitive Theory
- Theory of Planned Behaviour
- Stages of Change / Transtheoretical Model
Section 3 look at the application of behaviour change measures, particularly the concept of ‘nudging’ in public policy, and examines the debates about the effectiveness of such interventions and the ethics of their use.

### 2. Theories/Models of Behaviour Change

CommGAP (2009) identifies the main theories of social behaviour as: Social Cognitive Theory; the Theory of Planned Behaviour and the Stages of Change/Transtheoretical model. Arnold (expert comments) argues that the literature around the Theory of Planned Behaviour is the most useful and has been shown to be a good predictor of behaviour change, especially in the area of health communication. This model clearly shows the role of pre-existing attitudes and beliefs, which illustrates where behaviour change interventions have to be targeted.

The Theory of Planned Behaviour and the other two models are outlined as follows (C-Change 2010, CommGAP 2009):

**Social Learning Theory/Social Cognitive Theory**

These theories describe the dynamic interaction of personal factors, behaviour, and the environment in which the behaviour is performed. Five key factors can affect the likelihood that a person changes a health behaviour: 1) knowledge of health risks and benefits; 2) self-efficacy (confidence in one’s ability to take action and overcome barriers); 3) outcome expectations (the cost and benefits of adopting a behaviour); 4) goals people set (and strategies for realizing them); and 5) perceived social and structural facilitators and/or impediments/barriers to the desired change.

The concept of reinforcement suggests that responses to a behaviour decrease or increase the likelihood of reoccurrence.

In addition, the theory suggests that people learn not only from their own experiences but by observing others performing actions and the benefits they gain through those actions. This concept of modelling has been influential in developing entertainment education programs.

Key questions:
- How do people come to know about a given issue?
- How do people feel about their ability to practice certain actions? Is self-efficacy high or low?
- Who influences people’s knowledge, attitudes, and behaviours?
- What barriers discourage practicing certain behaviours?
- How can specific practices be reinforced/reminded/maintained?
- Who are credible role models who perform the targeted behaviour?
- How can collective efficacy about specific issues be promoted?
Theory of Planned Behaviour

This theory posits that *behavioural intention* is the most important determinant of behaviour. Behaviours are more likely to be influenced when: individuals have positive *attitudes* about the behaviour; the behaviour is viewed positively by key people who influence the individual (*subjective norm*); and the individual has a sense that he/she can control the behaviour (*perceived behavioural control*).

Key questions:
- Do individuals want to perform the behaviour? How likely are individuals to perform behaviour?
- Are individuals opposed to the behaviour?
- Why do some individuals have positive or negative intentions?
- Do people feel they can control behaviours?
- What might motivate people to have positive attitudes?
Stages of Change/ Transtheoretical Model

This model focuses on stages of individual motivation and readiness to change behaviours.

1. **Pre-contemplation**: individual has no intention of taking action within the next six months.
2. **Contemplation**: individual intends to take action in the next six months.
3. **Preparation**: individual intends to take action within the next 30 days and has taken some behavioural steps in this direction.
4. **Action**: individual has changed behaviour for less than six months.
5. **Maintenance**: individual has changed behaviour for more than six months.
6. **Termination**: individuals have 100 percent efficacy and will maintain their behaviour.

Key questions:
- What are the different stages across several groups in a community vis-à-vis proposed changes/issues?
- Are there any obvious explanations to understand such differences across groups? Why do they hold different attitudes or are in different stages?
- How can stage transition be promoted?
- What appeals can be mobilized to promote stage change?
- What motivates people to act to maintain behaviour change? Can those factors be tapped into to promote changes among peoples in other, previous stages?

Figure 3. Theory of Stages of Change (CommGAP 2009)
Criticisms

Blair-Stevens (expert comments) argues that though these theories of behaviour change are three of the most commonly cited models, they are not necessarily the most relevant or 'best' ones. These models are based on an underlying 'rationale economic man' assumption – that we actively assess options and utilities, and then act. Blair-Stevens argues that these have been “massively debunked in recent years” (expert comments). Several theorists have identified non-rational ways of thinking. For example, Kahneman (2011) argues that in addition to a slower, deliberative and logical system of thinking, people also employ a second fast, intuitive and emotional system of thinking. This second system is prone to faults and biases, and provides a pervasive influence of intuitive impressions on thoughts and behaviour. Real world examples include the impact of loss aversion and overconfidence on corporate strategies, the difficulties of predicting what will make us happy in the future, the challenges of properly framing risks at work and at home, the profound effect of cognitive biases on investment, and the inaccurate judgement of past experiences.

Becker (expert comments) strongly disagrees that the CommGAP (2009) theories are the main theories of behaviour change, noting that they are only discussing individual behaviour change. There are in fact a great number of behavioural change models. Rao (2012), for example, outlines 28 different models of behavioural change based on varying underlying theories. These focus variously on the enabling environment level, the community level, the interpersonal level, or the individual level. In many cases, theorists have contributed towards multiple approaches and these approaches are not mutually exclusive of each other.

Ultimately, rather than identify a dominant conceptual framework, it may be better, as Glanz, Rimer, and Lewis (2002) argue, to accept that no single theory or conceptual framework is dominant and instead choose from the multitude of theories. Each approach and theory can provide insights and help think about possible courses of action to promote behaviour change (C-Change, 2010). Blair-Stevens advocates an ‘open theory approach’, which aims to “include the range of different disciplines that can contribute to understanding of a behavioural challenge and intervention options selection, and the hugely diverse range of theories that every discipline can bring to understanding” (expert comments).

Blair-Stevens (expert comments) also points out that rather than ‘change’ behaviours we are actually looking to ‘influence and sustain positive behaviour’. He notes that once someone has adopted a problem-behaviour it is harder to get them to change than it would in terms of preventing them adopting the behaviour in the first place. In relation to children and young people, the focus is not actually about ‘behaviour change’ but rather helping them adopt and maintain positive behaviour before problem behaviours set in.

3. Behaviour Change in Public Policy

A great deal of public policy aims to influence behaviour. Governments have undertaken this generally through legislation, regulation or taxation. Recently, however, the field of ‘behavioural economics’, which draws lessons from psychology and economics, has been gaining influence in public policy, particularly the concept of ‘nudging’. This term, popularised
by Thaler and Sunstein (2008), involves the active engineering of choice architecture – i.e. presenting choices in such a way so as to influence outcome.

Dolan et al. (2010) argue that ‘nudge’ and other behavioural economic insights “could lead to significantly improved policy outcomes, and at lower cost, than the way many conventional policy tools are currently used” (2010:10).

The use of behavioural economics and ‘nudge’ remains contentious with advocates for and against. The main ongoing debates seem to centre about the effectiveness of such interventions and around the ethics of their use.

Effectiveness

One of the central criticisms in ‘nudge’ is its contradictory nature. People are assumed to not be able to act in their own interests. If they are unable to make the right choices for themselves, how is it possible they make the right decisions for others – the targeted audience? This seems to misinterpret the concept of ‘nudge’ in that people are able to act rationally but they often make predictable mistakes because of their use of heuristics, fallacies, and because of the way they are influenced by their social interactions. Certain presentation of choices – choice architecture – can help counteract the factors and help people make choices that are more in their interest.

‘Nudge’ interventions by themselves, are unlikely to be effective. In an investigation into behavioural change interventions undertaken by government, a UK House of Lords Science and Technology Sub-Committee’s concluded that ‘nudges’ used in isolation will often not be effective in changing the behaviour of the population (House of Lords, 2011). Instead, government should include a range of measures – including some regulatory measures – and mix and match policy measures using both incentives and disincentives to bring about change. Government should also improve their ability to evaluate interventions. The report also notes that behaviour change can be slow to become evident, with evidence of change taking up to a generation to become visible.

In part to respond to a need for clearer evidence on the effectiveness of behavioural interventions, a ‘behavioural insights team’ was set up in the UK Government Cabinet office in 2010. Since the establishment, examples of how behavioural insights have been applied in 2010-11 (Cabinet Office) include:

- **Organ donation.** A ‘required choice’ for online vehicle licence applicants was introduced which is estimated to double the proportion joining the register and bring an extra million donors over the course of this Parliament.
- **Healthier food.** Salt in pre-prepared food is to be reduced by 15% on 2010 targets as part of a voluntary agreement with industry. It is estimated that this will save around 4,500 lives a year.
- **Environment.** Energy Performance Certificates have been redesigned to help households understand how efficient their home is relative to others, and how they can best act to save money and CO.
- **Tax.** A self-assessment debt campaign using behavioural insights contributed to increased tax being paid by £350m in the first six weeks of the campaign, much earlier than the comparable period last year. This included changing letters to explain
that most people in their local area had already paid their taxes, a trial of which boosted repayment rates by around 15%.

A 2012 report identified that applying behaviour insights could significantly reduce fraud, error and debt (Behavioural Insights Team, 2012). Minor changes to processes, forms and language seem to have had an impact on behaviour which could lead to significant cost-savings. Effective steps based on evidence from behavioural science that will reduce fraud and error include: making it as straightforward as possible for people to pay tax or debts; highlighting the positive behaviour of others by, for instance, telling people that "9 out of 10 people pay their tax on time"; changing the format of letters to highlight key messages and actions required; presenting information more effectively; using personal pronouns rather than generic references; and exploring different types of communication to see which worked better. The report also noted that not all techniques are feasible. Adding a post-it note or a handwritten name to an official communication seems to increase responses, but may not be feasible on a large scale in relation to a large degree of communication.

The basis of Behavioural Insights Team (2012) report is the ‘test, learn, adapt’ approach which recognises that the effectiveness of different interventions depend heavily on the context. Consequently this approach involves testing in a new context, learning which aspect is working (or not), and then adapting the approach to yield better results. Though there is currently a lack of robust evidence of the effectiveness of such ‘nudge’ interventions in international development policy, this ‘test, learn, adapt’ approach may, over time, allow the accumulation of evidence as to what can be effective.

**Ethics**

Another debate concerns the ethical implications of ‘nudge’, in that it undermines individual freedom and can be seen as a form of manipulation or control.

The application of behavioural economics is often associated with the concept of ‘libertarian paternalism’ - the idea that it is both possible and legitimate for private and public institutions to affect behaviour while also respecting freedom of choice. Sunstein and Thaler (2003) expand on this concept, arguing that though ‘libertarian paternalism’ may seem like an oxymoron, it is in fact not. Libertarian paternalism is a relatively weak and nonintrusive type of paternalism, which maintains a libertarian component as choices are not blocked or fenced off; rather individuals are steered towards choices.

In relation to the ethics of employing ‘nudge’ and other behaviour change interventions in the UK, a report of a House of Lords Select Committee argues that there is ‘no set of rules against which to determine whether or not an intervention is acceptable’ (House of Lords 2011: 15). Ethical acceptability can be determined by the behaviour change intervention’s proportionality, which in turn can be determined by looking at the scale of the problem the intervention is designed to solve and the evidence that it will be effective in doing so. Notably the Committee stated that they “do not believe that levels of public acceptance or ‘public permission’ are a necessary precondition of an ethically acceptable intervention”. (House of Lords 2011:15). However, they also note low public acceptance of the effectiveness of an intervention will undermine the intervention; ministers must explain the evidence-base of any
proposed behaviour change intervention, why it is necessary and why it is a proportionate means of addressing a well-defined problem.

Others argue that the use of ‘nudge’ may have perverse effects. Wolfe (2009), for example, criticises the use of behavioural economics and ‘nudging’ in policy, in the US context. He argues that ‘nudging’ would be opaque to those being ‘nudged’; incentives are likely to be exploited by the knowledgeable middle-class rather than time-strapped individuals; and that this could eventually lead to distinctions between ‘good’ citizens and ‘bad’ citizens, the latter of whom stubbornly refuse to accept the nudges.

Bovens (2009) examines the ethics and morality of ‘nudge’. He notes the positive yet ironic aspect of ‘nudge’ that it may bring individuals more in line with their preferences than through their own intentional agency. Such factors can undermine or fragment our concept of ourselves - why did we not act in line with our overall preferences without ‘nudge’? Having people who are incapable of controlling their lives in the long-term can lead to a process of infantilisation. Finally Bovens raises the issue of democratic mandate. Where people do not put themselves in a situation of ‘nudges’ but are still exposed to ‘nudges’, does this undermine democratic control?

In general, there continues to be debate on the ethical and moral implications of using nudge and this will vary from context to context, depending on those initiating the nudge intervention and their relationship to those that are being ‘nudged’.

4. References

http://www.cabinetoffice.gov.uk/sites/default/files/resources/BIT_FraudErrorDebt_accessible.pdf

http://www.bovens.org/TheEthicsFV.pdf

Cabinet Office, 2012, ‘Behavioural insights could save millions of pounds’

http://www.c-changeprogram.org/sites/default/files/sbcc_module0_intro.pdf

CommGAP (2009) Theories of Behaviour Change

Dolan, P. et al., 2010, 'Influencing behaviour through public policy', Institute for Government
http://www.instituteforgovernment.org.uk/publications/2/


http://www.gsdrc.org/docs/open/HDQ795.pdf


Wolfe, 2009, 'All Power to the Choice Architects: A Liberal Critique of Libertarian Paternalism', New America Foundation
http://www.newamerica.net/publications/policy/all_power_to_the_choice_architects

6. Additional information

Contributors
Clive Blair-Stevens (Strategic Social Marketing)
Antje Becker-Benton (Communication for Change)
Emily Bockh (Communication for Change)
Anne-Katrin Arnold (World Bank CommGAP)

About Helpdesk research reports: Helpdesk reports are based on 2 days of desk-based research. They are designed to provide a brief overview of the key issues; and a summary of some of the best literature available. Experts are contacted during the course of the research, and those able to provide input within the short time-frame are acknowledged.