

## Design with Intent: Influencing people's behaviour through products & services

Dan Lockton

Design inevitably influences our behaviour, whether we notice it consciously or not. As you walk around Made in Brunel, you can be sure that your attention and interest and the route you take around the show will be shaped, on many levels, by the design and positioning of the stands, the colour and style of the display boards, the appearance of the projects (and people!).

As designers we don't always consciously consider the power this gives us to help people (or, indeed, to manipulate them), but there's growing recognition that "designers are in the behaviour business", championed by people such as Frog Design's Robert Fabricant, and Stanford's BJ Fogg with the concept of *persuasive technology*. I've used the term 'Design with Intent' to mean design that's intended to influence or result in certain user behaviour. It's an attempt to describe systems across lots of disciplines—services, products, interfaces, even built environments—that have been designed with the intent to influence how people use them.

However, there's not much guidance available for designers briefed with influencing users' behaviour, particularly in socially beneficial humanistic contexts, such as reducing the environmental impact of our everyday lives (the focus of my research here at Brunel). As consumer products become increasingly efficient technologically, human behaviour is often the weak link, at a societal level but also at the scale of interaction with individual products and services. We buy 'energy-saving' lights and then leave them on all night, boil a kettle-full of water even though we only need a mug-full, and stick with the default setting on the washing machine, afraid of investigating the others. Individual behavioural decisions (or the lack of them) are responsible for a significant proportion of our energy use and waste generation, and in many ways encouraging more sustainable behaviour can be seen as a *design problem*, concerned with how and why people interact with the products and systems around them, and how that interaction might be influenced.

Some of the fantastic student projects you can see in this book are addressing exactly this area: helping people to use resources more effectively, from reducing household water consumption to using household heating more efficiently. Others are tackling other kinds of socially beneficial behaviour change through design, from helping people to drink more water to encouraging people to wash their hands in public toilets to motivating busy parents to spend more time with their children.

In fact, the concept of design explicitly intended to influence users towards particular behaviours recurs across a number of disciplines, from the growing field of *design against crime*, to urban planning encouraging community spirit, to mobile phone applications making it easier to track your exercise regime, to getting people to sign up correctly on websites, to the fact that cash machines make you take your card back before giving you cash. But not much work has been done to *link* ideas and techniques from these disparate fields—ergonomics, behavioural

economics, human-computer interaction and cognitive, social, and ecological psychology—and present them in a form which can be applied by designers to develop new products and systems, and improve existing ones.

This is what I've been trying to do via my research, which has led to the development of the Design with Intent toolkit (<http://www.designwithintent.co.uk>): a pattern library of techniques for influencing behaviour through design, with diverse examples from many different domains, presented in a form which is hopefully useful to designers as a way of generating relevant ideas and suggesting new ways to address problems where human behaviour is an important component. (It ought to be applicable to design for behaviour change in general, not just more sustainable behaviour, although that's the focus of my PhD as part of the Cleaner Electronics Research Group.)

The patterns (over 100 so far) are grouped into 'lenses'—currently Architectural, Errorproofing, Interaction, Ludic, Perceptual, Cognitive, Machiavellian and Security—as a way of explaining them via different worldviews, both representing and challenging preconceived ideas clients might have about how to go about influencing users. The examples show how analogous or similar problems have been tackled by designers elsewhere—and how effective the solutions have been.

Over the last couple of years, Design with Intent has been tested and developed through workshops with designers, design students and other stakeholders, with some great opportunities to demonstrate it to organisations such as the RSA, IDEO London, QinetiQ, Learndirect, EMC Consulting and Engine Service Design as well as running sessions here at Brunel for Sustainable Design and Environmentally Sensitive Design modules on our MSc Integrated Product Design and BA/BSc Design courses. It's been applied to briefs ranging from getting people to shower for less time, to closing curtains at night to conserve heat, to influencing people not to leave the tap running while brushing their teeth, with hundreds of new concepts generated and evaluated. At time of writing I'm preparing to run a workshop at the UX London conference, applying Design with Intent to the design of online user experience—helping guide and support users' decision-making via websites and improving usability while influencing behaviour.

Along with my Brunel Design colleagues Fergus Bisset—who's investigating intrinsic motivation through design—and Nicola Combe, who's working with Buro Happold on bringing together inclusive and sustainable design through better home heating controls, and other colleagues in the Human Centred Design Institute here at Brunel, we're trying to push forward the frontiers of what is an exciting, fast-developing new kind of design thinking and practice. Politicians are starting to talk a lot about behaviour change for social benefit: if they're serious, designers of the future are going to be crucial to this effort.

Herbert Simon—one of the most brilliant interdisciplinary minds of the 20th century—once said that “everyone designs who devises courses of action aimed at changing existing situations into preferred ones”, and this applies to *designing behaviour* just as much as it does to physical features. Whether we mean to do it or not, it's going to happen, so we might as well get good at it.

**Dan Lockton** is a PhD researcher in the Cleaner Electronics Research Group, Brunel Design. He studied BSc Industrial Design Engineering at Brunel, and then a Cambridge-MIT Institute Master's in Technology Policy at the University of Cambridge. Before returning to Brunel in 2007, Dan worked for clients including Sinclair Research and Tangerine on consumer technology and lightweight transport research and development.

The Design with Intent toolkit is available from <http://www.designwithintent.co.uk>