By Nick Marsh and Dan Lockton

Research in practice: Bringing behavioural change from lab to studio

Design influences behaviour, whether it's planned or not. Service Design has a great opportunity to lead the emerging field of design for behavioural change, helping guide and shape experiences to benefit users, service providers and wider society. In this article, presented as an evolving conversation between research and practice, Nick Marsh (EMC Consulting) and Dan Lockton (Brunel University) discuss and explore design patterns for influencing behaviour through Service Design, and how Service Designers and academics can work together for social benefit.

Nick: Hi Dan, thanks for agreeing to take part in this conversation. Maybe we should start with you outlining a bit about your research interests? Two interlinked questions then; firstly, what do you mean by 'Design with Intent', and secondly why do you think this is a valuable approach to interrogating and describing the way that 'designers' (which of course includes lots of 'silent designers' that never went to art school) act on the world?

Dan: Thanks, Nick. I use 'Design with Intent' to mean design that's intended to influence or result in certain user behaviour. It's an attempt to describe systems and touchpoints across lots of disciplines – services, products, interfaces, even built environments – that have been designed with the intent to influence how people use them. Everything we design inevitably changes people's behaviour, but as designers we don't always consciously consider the power this gives us to help people, and, sometimes, to manipulate them.
It's this reflective approach that can be valuable: being aware that we're designing not just experiences, but actually designing behaviour at one level or another. Whether we mean to do it or not, it's going to happen, so we might as well get good at it.

Nick: It's certainly an ambitious thesis! Of course pattern libraries are common in lots of different design disciplines. Examples include things like grid systems for graphic designers or ergonomics manuals. However, the thing that gets me excited about your work, and what makes it so relevant to the design of services and systems made of many different touchpoints is its magnificent scope. I love that you are trying to create a universal taxonomy for describing all aspects of how designers try to shape and change user behaviour. At this point I think it would be good to introduce the 'lenses' that you've created that help us to navigate the vast terrain of this field. Could you briefly outline these lenses, with a quick example for each?

Dan: Many people have thought about influencing behaviour in different domains: this isn't a new field by any means, but the terminology and principles haven't often been presented in a form useful to designers. The lenses are a way of explaining some of these design patterns via different 'worldviews' so they can serve as concept inspiration, and as a way of challenging or extending preconceived ideas

THE EIGHT LENSES OF THE DESIGN WITH INTENT TOOLKIT – A COLLECTION OF PATTERNS FOR INFLUENCING BEHAVIOUR THROUGH DESIGN

Architectural: Patterns from architecture & planning, also applicable to system architecture: basic affordance patterns such as segmentation & spacing, breaking a system up into parts which users interact with separately rather than all together – e.g. fast food restaurant drive-through split up into multiple windows to prevent one customer blocking it. *People: Christopher Alexander*

Error-proofing: Sees deviations from a target behaviour as 'errors' which design can help avoid. Often found in medical device design and manufacturing engineering (as poka-yoke) – patterns such as the Interlock on an ATM which makes sure the customer removes the card before the cash is dispensed. *People: Don Norman, Shigeo Shingo*

Interaction: Patterns where users' interactions with the system affect how their behaviour is influenced – some core HCI & IxD patterns such as kinds of feedback, progress bars, previews, etc. but also *BJ Fogg's* work on Persuasive Technology, such as Kairos (context-sensitive suggestion of behaviour at the right moment, e.g. Amazon's 'often bought with' recommendations)

Ludic: Patterns drawn from games or modelled on more playful forms of influencing behaviour. A great non-profit sector physical example is the type of spiral charity donation wishing well that provides an exciting, engaging experience for 'users' (often children) while encouraging donations, but lots of digital examples too. *People: Amy Jo Kim, Ian Bogost*

Perceptual: Ideas from product semantics and ecological & Gestalt psychology about how users perceive patterns and meanings. A nice physical touchpoint example is the use of different shaped apertures on recycling bins to suggest which types of rubbish should go where.

Cognitive: Draws on behavioural economics & cognitive psychology, understanding how people make decisions, and using that knowledge to influence actions. Example: Get Up & Move (http://getupandmove.me) employs people's desire to reciprocate socially to encourage people to 'barter' exercise commitments with each other. *People: Richard Thaler, Robert Cialdini*

Machiavellian: Patterns embodying an 'end justifies the means' approach. Often unethical, but nevertheless commonly used to influence consumers through advertising, pricing structures and so on. E.g. provoking consumers' worry about a problem they didn't know they had (chronic halitosis), and then offering to 'solve' it (Listerine). *People: Vance Packard, Douglas Rushkoff*

Security: Represents a 'security' worldview, i.e. that undesired user behaviour is something to deter and/or prevent through 'countermeasures' designed into systems: examples such as the threat of surveillance built into environments, digital rights management on music, DVDs & software

clients might have about how to influence users.
They've evolved based on designers' feedback through running workshop sessions; the latest set of eight are shown in the table. In total there's about 100 patterns spread among the lenses.
The whole lot's available at http://designwithintent.co.uk as a card deck and a wiki, with plenty of examples.
Now it seems as though Service Design, by its multidisciplinary, people-focused nature, has a great opportunity to lead this emerging field of design for behavioural change. As someone with significant experience, Nick, how do you see this sort of thinking manifest itself – do you see any patterns being used intentionally in services? Does the drive come from clients or designers themselves? What kinds of behaviour are you trying to influence, and have you got any thoughts on what works and what doesn't?

Nick: Well, the first thing I think I should say is that the degree to which Service Design exploits the kinds of techniques described in your lenses depends to an extent on what you consider Service Design to be. Crudely speaking, I've been involved in two different types of Service Design that operate at different levels of influence over the behaviour of people engaged in the design programme, and I see application and implications in both of them.

»The Design with intent method has been developed through a series of workshop sessions with designers and design students working on behavioural change briefs.«

The first type of Service Design, which is the closest to most other design disciplines and is essentially an aesthetic challenge, is the design of connected user experiences of different touchpoints. For more spatial/interior design projects I've been involved with in airports I've used the Architectural and Perceptual techniques to enforce compliance with queuing and engage passengers in processes by lowering visual clutter. For more digitally focused designs I've used Ludic and Interaction techniques to engage users in otherwise boring tasks like filling out forms by making them game-like and providing rich feedback and so forth.

The second type of Service Design, which is a conceptual step onwards from the first, as it's primarily an organisational challenge, is using design-led methods and techniques to develop strategies for service organisations, and to teach other people how to use design to improve how their organisations work and the quality of the services they deliver.

I think at this level, the lenses are a great tool for opening up the conversation with clients and co-designers about how users are treated by the organisation. Are they inputs into a system, or are they people? Do we think of them as stupid, or smart? Do we use Security or Machiavellian techniques to force customers and citizens to do stuff, or is it better to use Ludic and Cognitive approaches that play to people's enthusiasms and sense of fun?

When you start applying these questions to social challenges, which is where a lot of Service Design practice in the UK is focused, you start to get some really big ideas! Have you thought about how to focus the toolkit on design-led social programmes?

Dan: Many social challenges do involve behavioural change. I suppose it's a concept that is more naturally familiar to people trained in social science than (most) designers are, and the idea of influencing public behaviour, albeit mainly through laws and taxes, is well-known to the policy makers who fund many projects. It's important that designers are able to contribute to these initiatives with confidence that what we do is understood by those who make the decisions.

That may mean that academic research on behavioural change, how to do it, what works, when, why, etc, needs to be made more easily available to designers. Academia itself can be seen as a service to society, and as such its interactions with the public would often benefit from being 'designed' with as much thought as goes into Service Design practice: when should it be responsive, doing research the public wants, and when should it lead and guide governmental decisions and public debate?

Academic design research is of limited use without connection to what designers actually do, so my aim has always been to produce something that's useful to designers, and I hope that – together with others doing research in this area – we can help Service Design tackle the social challenges of behavioural change with valuable ideas, insights and evidence.

Nick: I agree, although I think it is also up to designers to take the initiative and reach out to the academy. There's a huge amount of inspiration to be found there, and lots of opportunity for collaboration. I suppose that the important thing is to build the conversation and look beyond your current frames of reference, and I've certainly enjoyed doing that here!

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