

Touchpoint

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Designing motivation or motivating design? Exploring Service Design, motivation and behavioural change

Motivation researcher Edward Deci has suggested that if we want behavioural change to be sustainable, we have to move past thinking of motivation as something that we 'do' to other people and see it rather as something that we as Service Designers can enable service users to 'do' by themselves. In this article, Fergus Bisset explores the ways in which Service Designers can create more motivating services. Dan Lockton then looks at where motivating behaviour via Service Design often starts, with the basic 'pinball' and 'shortcut' approaches. We conclude by proposing that if services are to be sustainable in the long term, we as Service Designers need to strive to accommodate humans' differing levels of motivation and encourage and support service users' sense of autonomy within the services we design.

Visualising motivation

Designers have historically tended to view motivation as something that they cannot directly influence: a complex component of human behaviour influenced by many diverse philosophical, social and physiological factors. More traditionally there has been a belief that if the aesthetic of the design were sufficiently consistent with users' expectations, people would be attracted to it and in turn change their behaviour. Motivational research shows us that this analysis is largely self-fulfilling and that such

'extrinsic' or superficial design interventions do indeed motivate behaviour and encourage engagement with a product or service, but only in the short term. The same motivational research shows that such short term 'aesthetic' motivational pick-me-ups, much like a sugar-rush or a caffeine hit, quickly wear off.

The challenge in designing for behavioural change is supporting users to internalise the values of a service so their engagement with the behaviour demanded is more than skin deep. Zap-



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DESIGNING MOTIVATION OR MOTIVATING DESIGN?

By Fergus Bisset and Dan Lockton

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pos, the American clothing company has been very effective in empowering their employees to embody their organisational values in this way, largely by employing people who already embody the values of the organisation. However, the concept of ‘design for motivation’ is perhaps something of a Catch-22 – design to control user behaviour too closely and you’ll constrain users’ sense of autonomy. On the other hand, design with too many options or encourage responsibility in users too early and without sufficient support, and you’ll create an equally demotivating experience.

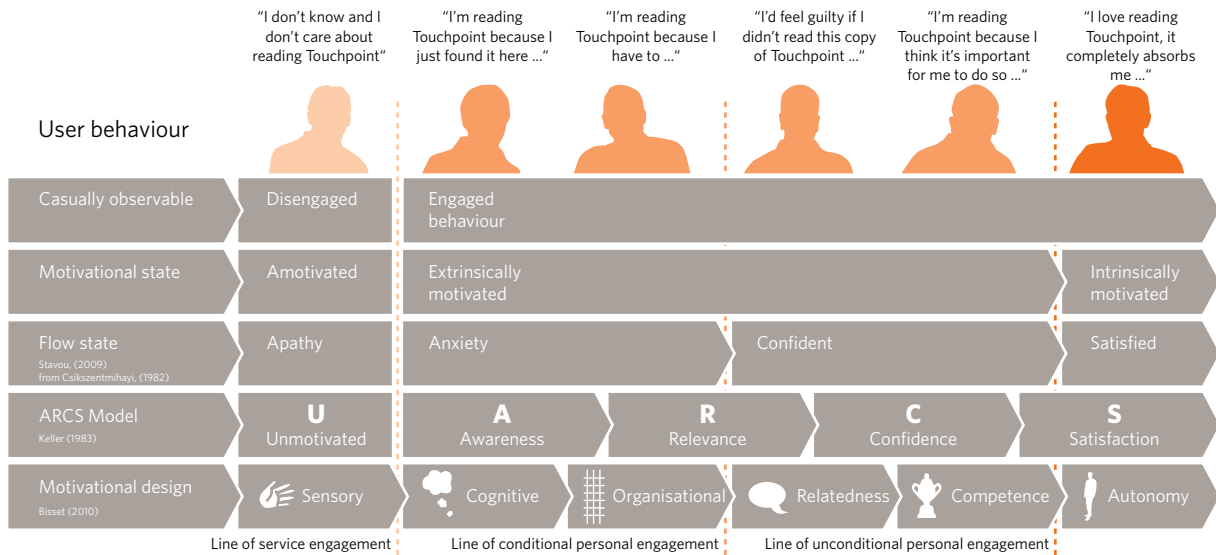
Models of the natural ‘motivational’ progression of users throughout an experience or service encounter, informed by research, might help guide our understanding of what motivates us. Luckily, the motivational psychology literature doesn’t let us down: Reeve (2005) summarises ways that we can conceptualise how best to energise behaviour, not just in the first instance of a user-product interaction but throughout the lifespan of a user-service relationship:

Let’s explore these frameworks with reference to the artefact we hold in our hands. If our copy of Touchpoint fell through the letterbox in a way that grabbed our senses, visually or aurally, perhaps the increased salience of its arrival might increase the immediacy of our awareness – this is ‘the aesthetic’ we mention above – high on impact, but low on sustainability. Mobile phones are prime examples of service touchpoints that encourage engagement by giving users a number of auditory, haptic

and visual signals – such as ringtones, vibrating alerts or the screen lighting up. Indeed, exploring sensory perception to increase engagement is very much the strength of Volkswagen’s Fun Theory (www.thefuntheory.com) marketing campaign – a viral Internet phenomenon, demonstrating how enhanced sensory interaction can positively energise behaviour.

For designers, who more traditionally have been responsible for shaping sensory experiences through manipulation of materials and form, this is an interesting point of reflection. How we understand such sensory stimuli – cognitive representation of signals around us – determines both how we mentally organise the experience and our perceptions of its relevance to us. Our ability to organise these signals and affordances also affects whether we can effectively internalise the experience – whether it resonates with us – and whether we are motivated to continue engaging. If we can’t understand why our phone is making a noise or we can’t make sense of our phone bill our experience becomes a demotivating one. In this instance we are more likely to take steps to distance ourselves from this negative interaction rather than continue to approach the challenges it presents us.

Our ability to persist with a task requires that we can visualise the underlying cause and effect structure of the experience, or that we adhere to the values of the experience sufficiently to offset the interim negativity. As the above dia-



Frameworks of motivated behaviour from the motivational psychology literature.

gram indicates, if you wish for users to interact cognitively at even a basic level with a service you are designing – that's to say, engage with the values, benefits or knowledge structures of the service experience – sensory manipulation of affordances alone is not going to be enough. As Service Designers we need to help users see the underlying structures of the services they use.

The underlying structure of your Touchpoint experience

Indeed, how might the information contained in Touchpoint (or any service touchpoint) be organised to motivate our continued interaction? To engage users we need to help them understand the personal relevance of the services we design. When we pick up our copy of Touchpoint, colour coding directs our attention to the various groupings of content within the journal – thus gener-

ating sensory awareness. But how do we assess the value of the content it presents us – progressing from left to right in the illustrated frameworks? Do we flick to people we know – relatedness – a social connection, the equivalent of the “other users who bought this item, also bought these ...” feature on Amazon.com? Or do we flick through the journal by subject, based on our own interests? If this is the case then we might be motivated by the opportunity to assess our own levels of competence and how well articles challenge or support our knowledge.

With more time, do we simply start at the front of the journal and read from cover to cover as if the very concept of participating in this experience already resonates with our self-image and expectations? In this case it is possible to say that you are intrinsically motivated – in other words, not reliant on any extrinsic

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»Of course, our personal internalisations and expectations of an experience do not always mesh with reality.«

nudges or prods towards the goal of consuming the contents of the journal.

Of course, our personal internalisations and expectations of an experience do not always mesh with reality. If the view of motivation in this article clashes with your existing conceptions of it, what is your response? Is it to assess the authors' competence by Googling them? Or looking us up on LinkedIn or Facebook to assess our social relatedness and credibility? As these frameworks help elucidate, our ability to sustain motivation is a critical component of human behaviour and a key factor in determining how successfully we engage with services we encounter in our daily lives.

As Service Designers we are already equipped with many tools to help us gain user insights such as these. These tools also help us assess which of these sensory, cognitive, organisational, relatedness or competence needs will help users successfully internalise the services we are designing. We can also, through co-design, involve users in the design of services, allowing us to see what it is that motivates our customers and embody those values ourselves (at least for the duration of the project). Motivation is thus a reciprocal process and perhaps less about what we 'do' to other stakeholders and perhaps as much about how we visualise, interpret and design for our own behaviour. Designers do not, however, always agree on where or how users' engagement with a service should start. In many service situations, what's often required, is a kind

of behavioural specification, outlining predictably how people will interact with the service via each touchpoint. There are two approaches here (though they're probably part of a continuum): modelling people as either shortcut users or pinball users.

Pinball users

In 'Designing for Interaction', Dan Saffer notes "designers have to give up control (or, really, the myth of control) when designing a service process." Nevertheless, many services have aspects where a degree of control is desired, often for safety or security reasons. If a bank has a row of ATMs, it doesn't want customers at adjacent machines to stand too close together, so it spaces them far enough apart for this not to happen: the actual affordances of the system are designed so that only certain behaviours occur. In 2009 Nepal's Tribhuvan Airport issued staff with trousers without pockets, to reduce bribery by making it harder to hide cash, as part of a scheme to improve the airport's international reputation and reduce travellers' complaints of intimidation.

An approach like this models users as 'pinballs' to shunt around, ignoring the finer-grained process of internalisation that is a prerequisite for sustained motivation. The interlock on a microwave door prevents using the oven with the door open, yet does not try to educate users as to why it is safer. It just silently structures behaviour: users follow the designers' behaviour specification without necessarily being aware of it.

This view of influencing human behaviour can lead to poor user experience, when the priorities of the service provider and users conflict. Disabling the fast-forward button on your DVD player, to force you to sit through trailers and copyright threats, provokes significant discontent. However, where interests align, better experience can result. A hospital which fits medical gas bottles and hoses with error proofed ‘indexed pin’ connectors – keyed to fit together only in the right combinations – is restricting nurses’ behaviour, but making the job easier and providing a safer patient experience. So, the pinball approach is not always as user-unfriendly as it might initially seem, but does risk challenging people’s autonomy, and so reducing reciprocal, motivated engagement.

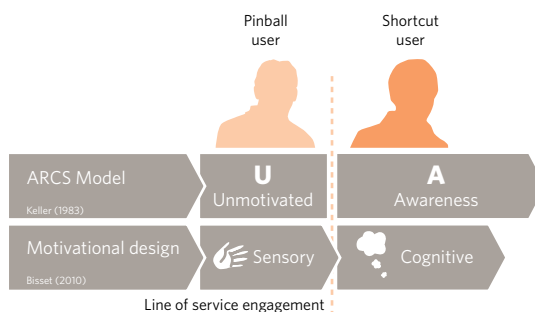
Shortcut users

While people are not fully predictable, there is enough psychological evidence that we are predictably irrational (Dan Ariely’s term). There are recurring patterns of decision-making heuristics and biases, and designers with an

understanding of these have a powerful tool for influencing behaviour. In an economic context, this is the premise behind Richard Thaler and Cass Sunstein’s bestseller *Nudge*, but designers can apply many of the same insights, with the benefit of a wealth of user-centred research methods to test our assumptions.

The basic theory is that people take shortcuts. We make decisions based on how choices are presented to us, and cannot devote the same mental effort to engage with every decision we face. If something is the default option, whether print quality in a dialogue box or presumed consent for organ donation, we probably stick with it. If a bank’s service staff are helpful, we start to attribute that attitude to the brand as a whole. If a restaurant always looks empty, we assume the experience it provides is poor. Individually these acts might not bear analytical scrutiny – and none of us acts like this all the time – but shortcut decisions do determine how many people behave when interacting with a service. We can use this to help people navigate choices in a mutually beneficial way: e.g.,

»In many service situations, what’s often required is a kind of behavioural specification, outlining predictably how people will interact with the service via each touch-point.«



Shortcut and Pinball users, a way of conceptualising a basic first stage of user engagement with a service you are designing.

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if your research shows that a segment of your customers makes purchasing decisions based purely on price, it makes sense to present your choices in a way which makes it easy to determine which is cheapest – using price as a construct around which to help users internalise the service value.

As expressed previously, the decision comes down to whether your service

can help users transition from being uninterested ‘shortcutters’ (“I stick with X electricity company because it’s too much hassle to switch”) to engaged and motivated customers (“I signed up with Y because they’re doing really great things with renewables, and I care about my children’s future”). While designing shortcuts might be necessary to ‘acquire’ customers in the first place, without engaging them with the values and pro-



»The literal shortcuts pedestrians take – desire paths – can be observed and then formalised (paving the cowpaths) to meet users' needs better.«

cesses of your service proposition, it is perhaps only inertia that is going to keep them doing business with you.

Final thoughts

Ideally, mass customisation of services would allow us to meet users where they are – and perhaps move them where they (and we) would like them to be. Realistically, and despite the constraints of real world projects, the psychology literature indicates that there are clear opportunities for Service Design approaches which both accommodate individuals' differing levels of motivation and which can support humans' innate and learned responses.

It is apparent that how you envision, model and relate to your service users will largely determine the design strategies you use to motivate and engage them. It is also apparent that how narrow or empowered your perceptions of human behaviour are, as a Service Designer, will be reflected in the character of your service – and the subsequent short-term motivation or long-term engagement of your service users. ●

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- Fergus Bisset** has until recently been a design researcher at Brunel University exploring the relationship of motivation and design. This research has been inspired by and influenced his recent work with the Design Museum, London, FutureGov Consultancy and NHS London and continues to inspire his ongoing work with the British Olympic Association and the Youth Olympic Games.
- Dan Lockton** is a researcher at Brunel University, exploring how design influences human behaviour. His evolving »Design with Intent toolkit« (<http://designwithintent.co.uk>) is an attempt to put the research into a form useful to designers working on projects where influencing user behaviour is important.

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

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By Nick Marsh and Dan Lockton

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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