

Dan Lockton

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My aim is to leave the world in a better state than I found it, using expertise from different fields to help create an intelligent, sustainable, worthwhile future.

I'm a designer, engineer and researcher with experience working on the development of a variety of consumer technology products and new design methods, as an in-house designer, a freelance contractor and as an academic.

Most recently, I've specialised in the growing field of Design for Behaviour Change, applying techniques from a range of psychological and technical disciplines to the problems of influencing human behaviour for social benefit, via the design of products, systems, services and environments. In particular, my 'Design with Intent' toolkit is being tested through application to environmental problems, where influencing consumer use and interaction behaviour can have a significant effect on resource use and waste, but the intention is that the work is applicable to behaviour change in general. This research is being undertaken at Brunel University, as part of the Cleaner Electronics Research Group, and has been supported by a blog, Design with Intent (formerly Architectures of Control in Design), since 2005, which has (as of 2009) approximately 1,200 subscribers via RSS.

EDUCATION

Brunel University

PhD Design for Sustainable Behaviour, 2007–present

Brunel Design / Cleaner Electronics Research Group / School of Engineering & Design, Uxbridge, Middlesex
Investigating design techniques for influencing users' behaviour to improve environmental performance of energy-using consumer products, but also with intended wider applicability in interaction and system design. Supervisors: Professor David Harrison, Brunel University and Professor Neville Stanton, University of Southampton

University of Cambridge, Downing College

MPhil Technology Policy, 2004–05

Cambridge-MIT Institute / Taught by Judge Institute of Management, Department of Engineering & Institute for Manufacturing

Examiners' Letter of Commendation. Innovation management and policy strategy; focus on sustainable energy and environmental technology policy, entrepreneurship, digital rights, intellectual property and new product development. Dissertation supervisor: Dr David Reiner, Judge Institute of Management

Brunel University

BSc (Hons) Industrial Design Engineering, 2000–04

Department of Design & Systems Engineering, Runnymede, Surrey

First Class honours. Intensely multidisciplinary course including workshop programme, environmentally sensitive design, manufacturing, materials science, analogue and digital electronics, dynamics, FEA, CAD/CAM systems, graphics and marketing

INDUSTRIAL EXPERIENCE

Dan Lockton Design & Innovation, freelance product design and R&D, 2004–present

Clients including Sinclair Research, Tangerine, Mayhem UK and a number of other companies and individual entrepreneurs. Variety of work including design and prototyping of radical future vehicles for Sir Clive Sinclair, corporate identity strategy and smartphone market segmentation for Tangerine's Korean and Chinese clients, mechanical design of pharmaceutical packaging equipment, concepts for novelty toothpaste caps, prototyping radio-controlled watercraft, setting up collaborative blogs for other designers and the creation and development of Incluminate, an award-winning lighting backup system

Freelance writer, 2003–present

Writing mainly on design/technology/innovation, transport design and the motor industry, including 40 commissioned articles for *Inventor Resource* (2007) and *Rebel Without Applause* (2003), a comprehensive history of the Reliant Motor Company

Daka Research (UK) / Sinclair Research, Industrial design engineer, 2002–03

Lightweight transport design. Development of A-Bike, electric vehicles & wheelchair accessories for international markets, including FEA, solid modelling, concept generation and testing, prototyping, competitor analysis, technical investigation, literature production and customer-facing roles at trade shows

ACADEMIC EXPERIENCE

Brunel University, Teaching assistant / demonstrator, 2007–present

Assistance and assessment for Analogue Electronics labs (Level 2) and Environmentally Sensitive Design projects (Level 3) for design undergraduates, and Sustainable Design for MSc Integrated Product Design postgraduates including session on design for sustainable behaviour

Design and Behaviour online discussion group, Founder / co-administrator, 2008–present

A discussion group and mailing list bringing together designers, engineers, psychologists and social science researchers interested or working in the field of influencing behaviour, <http://www.designandbehaviour.com>

Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA), Design Directions student competition, 2009

Member of team developing brief on design for behaviour change as part of the 2009-10 competition open to UK design students; Design with Intent toolkit cited as reference material.

PUBLICATIONS, PRESENTATIONS & AWARDS

Journal articles

Lockton, D., Harrison, D.J., Stanton, N.A. 'Making the user more efficient: Design for sustainable behaviour'. *International Journal of Sustainable Engineering* Vol.1 No. 1, pp. 3-8, March 2008,

<http://hdl.handle.net/2438/2137> (preprint), <http://dx.doi.org/10.1080/19397030802131068> (final)

Lockton, D., Harrison, D.J., Stanton, N.A. 'The Design with Intent Method: a design tool for influencing user behaviour'. *Applied Ergonomics* in press, October 2009, <http://dx.doi.org/10.1016/j.apergo.2009.09.001>

Invited presentations of research to industry

In 2008-9, presentations on Design with Intent to teams from: QinetiQ, Sevenoaks; Marks & Spencer, London; Engine service design, London; UFI Learndirect, Sheffield; EMC Consulting, London; Design Council, London.

Academic & industry conference and seminar presentations

Design for Persuasion. Belgacom Surfhouse / Hogeschool West-Vlaanderen, Brussels, October 2009. Presentation (invited): 'How to influence user behaviour: Design with Intent'

Sustainable Innovation '09: Towards Sustainable Product Design 14. Centre for Sustainable Design, Farnham, October 2009. Presentation: 'Design for Sustainable Behaviour: investigating design methods for influencing user behaviour' (in proceedings); <http://hdl.handle.net/2438/3664> (preprint)

NDM9 "NDM and Computers": 9th bi-annual International Conference on Naturalistic Decision Making. British Computer Society, London, June 2009. Doctoral consortium presentation: 'Choice Architecture and Design with Intent' (in proceedings: BCS eWiC, <http://www.bcs.org/server.php?show=conWebDoc.26891>)

Architectures of Control Symposium. Loughborough University, May 2009. Presentation (invited): 'Architectures of Control: Design with Intent'

Skillswap Goes Behavioural. Clearleft, Brighton, May 2009. Presentation (invited): 'Design with Intent: How designers can influence behaviour'

Persuasive 2009: 4th International Conference on Persuasive Technology. Claremont, California, April 2009. Presentation: 'Influencing Interaction: Development of the Design with Intent Method' (in proceedings: ACM Digital Library, <http://doi.acm.org/10.1145/1541948.1541956>); <http://hdl.handle.net/2438/3257> (preprint)

Design Behaviour: Making It Happen. engCETL, Loughborough University, October 2008. Presentation (invited): 'Design for Sustainable Behaviour: Easier Efficiency by Influencing Interaction'

Human Centred Design Institute seminar series, Brunel University, October 2008. Presentation (invited): 'Design with Intent: How designers can influence interaction and help users help themselves'

New Sciences of Protection: Designing Safe Living. Institute for Advanced Studies, Lancaster University, July 2008. Presentation (invited): 'Design with Intent: behaviour-shaping through design'

ReSCon 2008: Engineering & Design Student Conference. Brunel University, June 2008. Poster: 'Design for Sustainable Behaviour', http://research.danlockton.co.uk/ResCon_poster_DL.ai.pdf

Persuasive 2008: 3rd International Conference on Persuasive Technology. Oulu, Finland, June 2008. Presentation: 'Design with Intent: Persuasive Technology in a wider context' (in proceedings: Springer Lecture Notes in Computer Science vol. 5033, http://dx.doi.org/10.1007/978-3-540-68504-3_30); <http://hdl.handle.net/2438/2138> (preprint)

Books, book chapters, etc

Lockton, D., Harrison, D.J., Stanton, N.A. *Design for Behaviour Change: The Design with Intent Toolkit v.0.9*, Uxbridge: Brunel University Press 2009 (ISBN 978-1-902316-6-1 print; 978-1-902316-63-5 eBook) <http://www.designwithintent.co.uk>

Lockton, D., Harrison, D.J., Stanton, N.A. 'Design for Behaviour Change' in A.M. Columbus (Ed.): *Advances in Psychology Research* 67, Hauppauge: Nova Science Publishers 2010 (forthcoming)

Weightman, C., Lockton, D., Hanson, J.E. et al (Eds.): *Good Thinking: Brunel Design 04*, Runnymede: Brunel University 2004 (ISBN 1-902316-41-X)

Lockton, D. *Rebel Without Applause: The Reliant Company from Inception to Zenith*, Minster Lovell: Bookmarque 2003 (ISBN 1-870519-64-7)

Other articles

Lockton, D. 'Designing with intent'. Review of Greengaged session Design for Life: Barriers to Behaviour Change. Invited article for Design Council / Greengaged website, September 2009

Lockton, D. 'Design for sustainable behaviour: influencing users to improve efficiency of product use' ('My PhD' series). Interfaces 78, British Computer Society Interaction Group, Spring 2009

Lockton, D. 'J.G. Ballard and Architectures of Control'. Lead story for *Ballardian.com*, January 2008

Lockton, D. 'Not Purrfect: The Reliant Kitten'. *Original Tin* magazine, September 2006

Lockton, D. 'Double-edged sword: The Reliant Scimitar SS1'. Article for *Austin-Rover Online*, May 2006

Lockton, D. 'Architectures of Control in product design'. *Engineering Designer*, March/April 2006

Plus a major series of articles for InventorResource.co.uk and contributions to the TAXI Design Network and *Gown* magazine

Patent application

'Backup light for standard lamp fitting'. Filed 14 June 2006, publication number GB2435319

Awards

2009 Thomas Gerald Gray Charitable Trust PhD Studentship (Brunel University)

2009 Royal Academy of Engineering International Travel Grant to attend Persuasive 2009

2008 Fellowship of the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA) – "in recognition of expertise in behavioural change and work to address sustainability and environmental concerns through design"

2008 Vice-Chancellor's Travel Prize to attend Persuasive 2008 (Brunel University Graduate School)

2007-8 Ormsby Trust Design PhD Studentship (Brunel University)

2007 Oxford Creativity Assistive Technology/TRIZ Competition, prize-winner for auxetic compression bandage concept

2006 Bosch Technology Horizons Award (Royal Academy of Engineering / Independent), runner-up in writing competition

2006 Isambard Kingdom Brunel Award (Brunel University / Ideas21), winner in Engineering category for Incluminate backup lighting system, <http://www.incluminate.co.uk>

2005 Cambridge University Entrepreneurs Award, winner for Wheelchair Drive project

2004 Motion Drives & Controls Award for Engineering in Product Design, winner for Wheelchair Drive project, Brunel University

2000 CIMA / Procter & Gamble Business Management Team Competition, schools' winner, Exeter School

1999 Young Enterprise South-West / Institute of Directors Award for team entrepreneurship, Exeter School

1998 Arkwright Trust A-level Design & Technology Scholarship, Exeter School

SOME PROJECTS & ACHIEVEMENTS

Design with Intent, Blog, <http://www.danlockton.co.uk>, 2005–present (formerly ‘Architectures of Control in Design’). How do people use products, systems and environments? How can designers influence interaction? With over 300 posts investigating aspects of ‘Design with Intent’ and hundreds of comments from readers around the world, the blog has attracted significant interest, with mention in the Guardian and regular syndication by Reuters (via BlogBurst) and Alltop’s User Interface topic

Department of Energy and Climate Change, Smart electricity & gas metering consultation, Summer 2009. Invited to meeting to provide ‘design’ input as part of consultation process; contributed to Design & Behaviour / RSA formal response document

Electric conversion of 1985 Reliant Fox pick-up, using Agni/Lynch 72V permanent magnet motor, 2009–present

Accepted as a Qinetiq Trusted Expert, 2009

Applied Ergonomics, reviewer, September 2009–present

International Journal of Sustainable Engineering, reviewer, July 2008–present

Oxford Creativity-certified ‘TRIZ Tyro’, 2007

Cambridge-MIT Institute, 2005: Rapid design and compilation of a graduate directory to support promotion of the Institute’s international master’s programmes

Presentation on ‘Mergers and acquisitions in the British motor industry’ given to 4th year MEng students at Institute for Manufacturing, University of Cambridge, 2005

Management of Technology & Innovation team consulting project with Cambridge Frequency Standards, 2005: market research & IP strategy for a development in optical frequency standards

Student representative for MPhil Technology Policy, University of Cambridge, 2004-5 and for all BSc finalists in department at Brunel, 2003-4; Brunel representative on the Institution of Engineering Designers’ course accreditation panel, 2002

Member of organising team for ‘Good Thinking’, the Brunel Design Show 2004: coordination, directory editor, website editor, publicity & marketing director

Represented Sinclair Research at REHAcare International Disability Product Exhibition, Düsseldorf, 2002

Memberships

Royal Society for the Encouragement of Arts, Manufactures and Commerce, fellow (FRSA)

Institution of Engineering Designers, graduate member

Design Research Society, member

ACM SIGCHI, student member

British Computer Society Interaction group, student member

Ergonomics Society, student member

Battery Vehicle Society, member

November 2009