

Tommy Dylan | Design Researcher

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Current position

Since 2016 **Senior Prototyping Technician, Northumbria University Newcastle**
Leading the prototyping workshop by fostering a creative and productive environment and supporting students and researchers on diverse design projects. I support physical computing and experience prototyping through hands-on teaching workshops, project-centred tutorials, guidance and physical builds.

Education

2013-2017 **PhD in Industrial Design, Northumbria University**
Reframing older people with dementia in design
Revealing the realities of care environments through the design of physical digital artefacts for meaningful moments

An overview can be found in the Appendix.

Awarded a scholarship with Microsoft Research, Cambridge
Supervised by Professor Jayne Wallace, Professor Mark Blythe and Dr Tim Regan

2010-2012 **MA in Product Design, Edinburgh University**
Iterative deployment
A method of idea generation through rapid user deployment

Iterative deployment was an experimental method of generating product ideas by deploying open-ended prototypes and iterating them according to how they were used.

Distinction
Awarded Andrew Grant prize for product design
Awarded Andrew Grant scholarship

2003-2007 **BSc (HONS) in Product Design, Dundee University**
First Class
Best in Year 2005, 2006, 2008
1st Prize in an NCR service design competition

Experience

- Sept-Dec 2011 **Interaction Designer, Human Experience and Design, Cambridge (Internship)**
As part of a multi-disciplinary team, I contributed to ongoing projects, and under the supervision of Tim Regan and Richard Banks, worked on a self-initiated project around ageing and care environments ([Digital Teaware](#)). Despite only being a 3-month contract I was able to complete a research project and made a significant contribution through a double-blind peer-reviewed conference paper.
- July 2009 **Studio Technician, Moritz Waldemeyer, London (Internship)**
General studio and workshop support.

Research

My practice-based research involves design-led methods and embedded technology to create prototype products that explore novel concepts, roles and opportunities for interaction design. Most importantly to me, these products are human-centered, their conception is entwined with real people, through in-depth fieldwork, iteration and deployment. Much of my work has contributed to the role of design in supporting the well-being of older people, including those living with dementia. My PhD project involved designing to support meaningful experiences as a response to the daily realities people face in care environments. By designing and deploying research products I was able to challenge limited perceptions of older people with dementia, as well as articulating a range of values, positions and pragmatic insights directly applicable to product and interaction design. Alongside conducting research through design, I explore alternative approaches to the representation of knowledge in artefacts and their making. So far, this has led to papers and practical examples of comics as an approach more analogous to the visual and material nature of design.

JOURNAL & CONFERENCE ARTICLES

- 2017 *What's the matter with[in] Design Fiction?*
Enrique Encinas, Thomas Dylan & Robb Mitchell
2017 Research through Design Conference (RtD'17). Edinburgh, UK
Double blind peer review
- 2016 *RtD Comics: A Medium for Representing Research Through Design*
Thomas Dykes, Mark Blythe, Jayne Wallace & James Thomas
2016 Conference on Designing Interactive Systems (DIS '16). ACM SIGCHI
Brisbane, Australia
Double-blind peer review and an acceptance rate of 26%
- 2016 *Paper Street View: A Guided Tour of Design and Making (Pictorial/Comic)*
Thomas Dykes, Jayne Wallace & James Thomas
2016 Conference on Designing Interactive Systems (DIS '16) ACM SIGCHI
Brisbane, Australia
Double-blind peer review and an acceptance rate of 31%
- 2013 *Interactive Teaware: Sharing Experiences in Old Age*
Thomas Dykes, Jayne Wallace & Tim Regan
2013 Research through Design Conference (RtD'13). Newcastle, UK.
Double-blind peer review

2009 *Towards a New Disciplinary Framework for Contemporary Creative Design Practice*
Thomas Dykes, Paul Rodgers & Michael Smyth
International Journal of CoCreation in Design and the Arts
Taylor and Francis
Double-blind peer-reviewed by independent, anonymous expert referees

2009 *Towards a New Disciplinary Framework for contemporary Design Practice*
Thomas Dykes, Paul Rodgers & Michael Smyth
International Conference on Engineering and Product Design Education EPDE09
Double-blind peer review

SELECTED TALKS

2016 *The Role of Befriending*. Dementia Lab: The Role of Design, Essen Germany (Invited)
A keynote speech at a conference dedicated to state of the art approaches when designing for dementia.

2015 *The Materiality of Ludic Engagement in the Care Environment*. Microsoft Research, Cambridge
A 50-minute research seminar to Microsoft Research Cambridge and remotely to Microsoft labs across the world.

2014 *Paper Street View*. Tyne and Wear Care Alliance, Gateshead (Invited)
I was invited by the Alzheimer's Society to present my research to care managers in the local area. I talked about the importance of meaningful artefacts and the potential of digital technology in care environments.

2009 *Fuzzy Design*. [Interaction Design Symposium](#), University of Split, Croatia (Invited)

EXHIBITIONS

2017 *Dream Machine*. RtD 2017, Talbot Rice Gallery, Edinburgh (with Enrique Encinas)

2017 *Aide Mémoire*. Interactions Gallery, British HCI 2017 (with Tom Flint)

2013 *Interactive Teaware*. RtD 2013, Baltic, Newcastle

2013 *photoBot*. I am Seeing Things, Talbot Rice Gallery, Edinburgh (Invited)

A conference and [public exhibition](#) were I was invited to show my work alongside international designers and artists, such as Superflux and Dunne & Rabby.

2011 *Aide Mémoire*. Sonica, [The Museum of Transitory Art](#), Slovenia.

Sonica is an international festival of (electronic) music as well as sound and experimental art.

TRAINING

2012-2013 Microsoft Summer School (1 week)

Research Philosophies and Paradigms (4 hours)

Research Ethics in a Wider Context (2 hours)

Ethics for Research (2 Hours)

Ethics for Research Involving People (2 hours)

Participatory Action Research: process, practice and impact (2 days)

ADDITIONAL RESEARCH ACTIVITIES

Jan-March
2015

Student Volunteer Chair, Research through Design 2015

I was responsible for managing volunteer recruitment as well as planning and coordinating volunteer activities throughout the conference.

April-June
2009

Conference Organiser, Creative Cultures 2009

Working with a team of research students to organise a student-led conference. My principal responsibility was managing abstract submissions and designing conference proceedings.

Design

APPROACH

My products stem from design-led engagements with people outside the studio. I am motivated by the perspectives of others, human-centred, messy situations that require empathy, care and attention. As an experienced maker, I work hands-on with a range of design materials and techniques, alongside embedded digital technology, allowing me to consider all aspects of a product design, holistically. This holistic approach means I can make iterative working prototypes that act as a tool for understanding design situations in more detail, by enabling people to experience and respond to tangible propositions.

KEY DESIGN SKILLS

Communication of product ideas through sketch, 3D modelling, low fidelity prototypes and product videos.

Experience of design-led research methods including participant observation, cultural probes, iterative deployment, interviews and workshops.

Keen awareness of themes and approaches in contemporary interaction design and their practical application when designing products.

Translating design-led research into tangible product proposals through creative analysis.

Determined problem solver with an aptitude for seeking out solutions through hands-on experimentation and collaboration.

PROTOTYPING

Experience using various materials and techniques, including cardboard, foam, resin, Rapid Prototyping, brass and leather.

Skilled at building robust working prototypes that can be used like real products and therefore deployed/tested realistically.

Working with prototyping platforms and embedded technology: Raspberry PI, Arduino, .NET Gadgeteer and ATMega.

Experience of various programming languages across platforms: C, C++, Python and JavaScript.

OTHER MEDIA AND APPROACHES

Filming and editing prototype videos using Adobe Premiere Pro.

Fluent using Adobe Illustrator and Photoshop.

Teaching

MODULES

- 2017 ***Computer Applications: Design Interactions, DFI, Northumbria University***
I developed this course to support students in the design of physical interactions. Students learnt practical electronics and Arduino, alongside their use in the creation of thoughtful interactions.
- 2017 ***More than just a tea and chat, Interaction Design, Northumbria University***
Together with course leaders, I developed and supported a module brief that responds to findings from my PhD research. The brief was about positive ageing and encouraged students to think about interactions that help foster relationships and emotional well-being through befriending services.

LECTURES

- Jan 2018 ***Interaction Design? 4th year DFI, Northumbria University (1 hour)***
Exploring contemporary themes and approaches in the field of interaction design.
- Nov 2017 ***Designing Our Future with IoT, 2nd year DFI, Northumbria University (2 hours)***
An introduction to the Internet of Things and what it might look like in the future. Students were introduced to the importance of product experience when designing ubiquitous interactions.

WORKSHOPS

- July 2017 ***Conductive Glass Workshops, Sunderland Glass Centre (5 days)***
Supporting an exploration of the intersection between glass and conductive materials.
- 2016-2017 ***Physical Computing with Arduino, Northumbria University (8 hours, 2 years running)***
Workshops introducing Interaction Design students to physical computing with the Arduino.
- 2013-2015 ***Rapid Interaction Design with Microsoft .NET Gadgeteer***
A series of workshops across various design schools introducing students to the .NET Gadgeteer as a rapid and creative prototyping tool. In collaboration with Microsoft Research, Cambridge.

TU/E Eindhoven (2 days)

Edinburgh College of Art (4 days, 3 years running)

Northumbria University (2 days)

Microsoft Summer School (4 hours)

Appendix

Reframing older people with dementia in design

Revealing the realities of care environments through the design of physical digital artefacts for meaningful moments

This research was a practice-based exploration into the design of digital artefacts for people with dementia in care contexts. A critical contextual review maintains that digital technology in research and commercial settings tends to be deficit-driven, focusing on assistive technologies, ensuring safety and security, supporting staff practice and easing the burden of care. Technological solutionism leads to problems and solutions that neglect the realities and lived experience of dementia and so the principal concern tends to be medical or therapeutic, rather than a person-centred concern for a broader set of human experiences. Instead of framing problems associated with dementia, in advance of the design process, this Research through Design project involved responding openly to immersion in contexts of care. A practice-led methodological bricolage was adopted, this involved, participation in care contexts, design and making, engagement through digital artefacts and continuous reflection and documentation.



Figure 1: Paper Street View and the Photo Scrabbler

Two artefacts contribute to this research, namely, Paper Street View and the Photo Scrabbler (Figure 1). Both reappropriate online content with a focus on crafting digital experiences. Comics are presented as a way of disseminating design and making in a manner analogous to the visual and material nature of design. Values are contextualised as a way of framing a space in which to design, that is not driven by problems and deficit, but by designerly enquiry. Meaningful moments are used to emphasise the importance of creating positive interpersonal interactions. Physical Digital Resources frames insights suggesting that digital artefacts hold potential as a resource in care settings. Rather than a predefined role, a resource openly supports a range of social dynamics, this, however, is variable and dependent on realities, such as the culture of care and time of day. Research throughout supports often negated design values like an appreciation of aesthetics, materiality and crafted experiences that support varied facets of human experience. Alongside the articulation of values, this work provides a lens on the dynamics of the care environment that is used to pose: a need for active engagement, first hand-experience of care contexts, the potential of client-client interaction, and a less risk-averse view of dementia in design and HCI disciplines.