

THE HELEN HAMLYN CENTRE FOR DESIGN YEARBOOK 2013

The Helen Hamlyn Centre for Design is based within the creative postgraduate community of the Royal College of Art, London. Our design research and projects with industry have one simple aim: to help improve people's lives. Our work is organised in three research labs: Age & Ability, Work & City and Health & Patient Safety. Each lab takes an approach that is inclusive and interdisciplinary. We develop innovative and empathic research methods – and we exchange knowledge via industrial collaboration, events, external education and publications. This Yearbook describes our activities in 2012-13.

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Rendering from Future Taxi project for London by Helen Hamlyn Research Associate Niels van Roij

MESSAGE FROM THE RECTOR

DR PAUL THOMPSON



The Royal College of Art, in common with all UK universities, has been preparing its submission to the 2013 REF (Research Excellence Framework) – an official, comprehensive review of research expertise conducted every five years. In this demanding exercise, the RCA's Helen Hamlyn Centre for Design will yet again figure prominently in our submission as a centre of international excellence.

The Centre is one of the research jewels in the RCA's crown, a well-established player in inclusive and interdisciplinary design research dedicated to improving the lives of all generations, but particularly the old. It is also the largest research centre within the College, and has the longest track record of successfully securing

funds from the UK Research Councils, third sector and business partners.

As this 2013 Yearbook testifies, the Centre has made giant strides over the past 12 months in consolidating its strengths and extending its reach. Allied to its formidable links with industry, the Centre also began supervising its first PhD candidates this year. Unsurprisingly, it will provide two significant case studies on impact for our REF submission: on design for patient safety and inclusive design.

The year was 'book-ended' by two extraordinary events: the first, in October 2012, saw Helen Hamlyn Research Associates work with senior civil servants in a Design Summit at Ten Downing Street; the second, in July 2013, witnessed the successful staging

of the Include Asia conference with local partners in Hong Kong.

2012-13 also marked the tenth anniversary of the Helen Hamlyn Trust, providing a moment for all of us to reflect on the extraordinary achievements of the Trust in promoting social justice, protecting world heritage, and improving the lives of countless individuals around the world.

I want to thank everyone involved in the Helen Hamlyn Centre for Design: the Director and Helen Hamlyn Professor of Design, Jeremy Myerson; Deputy Director Rama Gheerawo; the research team; partners; advisers and sponsors; members of the Helen Hamlyn Trust and Lady Hamlyn herself, for making 2012-13 such a memorable year.

MESSAGE FROM THE FOUNDER

HELEN HAMLYN



The Helen Hamlyn Trust celebrated its tenth anniversary last autumn and we marked the occasion by publishing a book about our main projects under the title 'Nurturing Innovation'. That title has particular relevance to the Helen Hamlyn Centre for Design at the Royal College of Art, which is one of the most important and enduring beneficiaries of my Trust's support, and which nurtures innovation in a number of ways.

The Centre's Student Awards identify and reward emerging talent within the RCA post-graduate community; its Research Associates programme gives new College graduates the opportunity to work directly with business partners and its collaborative research funded by the UK Research Councils generates the design knowledge required to create better lives for all, in partnership with other leading centres of expertise.

All of these aspects are covered in this 2013 Yearbook, which shows the dynamic progress in each of the centre's three research labs.

I wish the Helen Hamlyn Research Associates at the College every success with their end-of-year show and symposium, *Life Examined*, and in their future careers. If they can go out into the world and effect real change, then innovation will truly have been nurtured.



Helen Hamlyn Research Associate Ross Atkin studies the stairlift in an older person's home as part of a project with Stannah

DIRECTOR'S REPORT

JEREMY MYERSON



The title of this 2013 Yearbook, *Life Examined*, makes a deliberate reference to the famous observation by Socrates that 'the unexamined life is not worth living'. The choice of title serves to shine a light on a key aspect of our work: in-depth user research with different groups of people as a basis for designing.

You will see in this publication that our design researchers are photographed interacting with the individuals and communities they are researching – from taxi drivers, hospital patients and office workers to care home residents with dementia or autism – in a series of specially commissioned photographs.

These images form the backbone of our end-of-year exhibition, which is also called *Life Examined*. This is being held for the first time in the new Dyson Building gallery on the RCA's Battersea campus as part of the 2013 London Design Festival.

The decision to make our ethos of

social activism and our direct research methods so visible through these photographs is not simply about promoting our own values and beliefs – it reflects a broader trend in design.

Twenty five years ago, there was a broad imperative for designers and engineers to collaborate more effectively, to learn each other's language. Ten years ago, the focus extended to designers and business people coming together more productively, as business schools around the world switched onto the potential of design and B-schools became D-schools.

Today, the growing interdisciplinary action is centred on designers getting closer to anthropologists, ethnographers and other social scientists in pursuit of innovation. The research-intensive 'front end' of the design process has never received so much attention in terms of methods and techniques, in order to better understand human need and aspiration.

This is not just the case in Europe or the US. This year we took our Include conference to Hong Kong to run Include Asia for the first time. This event featured more than 40 academic papers, many from the Asia Pacific region. The links between design and the social sciences were strongly evident as policymakers and practitioners in the region look to new approaches to address the social challenges of rapid urbanisation.

The Helen Hamlyn Centre for Design is a willing participant in this new game, as anthropological perspectives and ethnographic research enjoy a rising profile within design. That is why we now have our own PhD students in the centre and why we continue to pursue interdisciplinary research opportunities with industry and the UK research councils through our Helen Hamlyn Research Associates programme.

This Yearbook explains our approach. We hope you enjoy reading about what we have done this year.



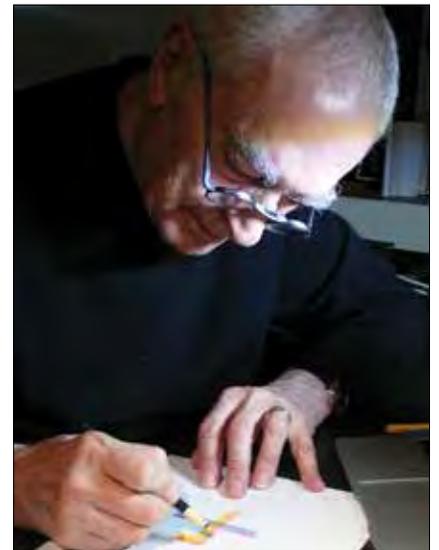
Life examined: Helen Hamlyn Centre for Design researchers Chris McGinley and Cristina Gorzanelli (second and third left) visit Progress, a gardening community centre in Brixton, as part of a project supported by BlackBerry

VIGNELLI MAP LECTURE

To mark our growing relationship with the Vignelli Center for Design Studies at Rochester Institute of Technology, the Helen Hamlyn Centre for Design hosted a special transatlantic RCA lecture by Peter B Lloyd, author of *Vignelli: Transit Maps* (RIT Cary Graphic Arts Press), on 7 May 2013.

Lloyd's book tells the curious story of how, in 1972, the eminent designer Massimo Vignelli created one of the most beautiful but also most contentious maps of an underground railway network. His deeply modernist design for the New York subway lasted only seven years, until it was replaced by a traditional geographic map. To everyone's surprise, in 2011 the Metropolitan Transportation Authority brought the Vignelli map back into use.

Peter Lloyd's research for the book was carried out in part at the Vignelli Center for Design Studies at Rochester Institute of Technology. His illustrated talk to an animated RCA audience described the birth, death and rebirth of Vignelli's map of the most complex transit system in the world – and strengthened the bonds between the two centres, both of which are generously supported by the Helen Hamlyn Trust.



Above right: legendary designer Massimo Vignelli and his New York subway map. Below: the Vignelli Center for Design Studies, Rochester Institute of Technology

INCLUDE ASIA 2013

After six successful editions in London, starting in 2001, the Include international conference on inclusive design made its debut in the Asia Pacific region on 2-3 July 2013, as part of Hong Kong's Knowledge of Design Week.

Include Asia 2013 was a partnership between the Helen Hamlyn Centre for Design at the RCA, the Hong Kong Design Centre and the School of Design at Hong Kong Polytechnic University. The conference theme of 'Global Challenges and Local Solutions in Inclusive Design' was explored from a variety of angles – through invited presentations, academic paper sessions, panel discussions, workshops and awards.

The event mapped how inclusive design can respond to urgent global concerns such as ageing population, climate change and rapid urbanisation with local solutions for individuals and communities. More than 120 academic papers were submitted for peer review to Include Asia 2013, and 45 were presented.

Keynote speaker was Kathryn Firth, Chief of Design at the London Legacy Development Corporation, who spoke on the transformation of the London Olympic Park into a new vibrant urban quarter. Joseph Kwan, Michael Siu and Yasuyuki Hirai were given Include Asia awards as Champions of Inclusive Design for their work in the region.

Top right: keynote speaker Kathryn Firth of the London Legacy Development Corporation addresses Include Asia. Right: Prof Yasuyuki Hirai of Kyushu University, Japan, receives an Include Asia award from Dr Edmund Lee, Director of the Hong Kong Design Centre, and the RCA's Jeremy Myerson





Top right: Dr Victor Lo, Chairman of the Hong Kong Design Centre, welcomes delegates to the conference. Above: Deputy Director Rama Gheerawo (right) leads a panel discussion with (from left) Alvin Yip, Cees De Bont, Patricia Moore, Steve Wilcox and Yasuyuki Hirai

DESIGN THAT MAKES A DIFFERENCE

The Helen Hamlyn Centre for Design teamed up with the Norwegian Design Council in the spring to present an exhibition of 20 inclusive design projects from the UK and Norway. The event, which was held in the Royal College of Art's Henry Moore Gallery from 19-26 April, was supported by the Royal Norwegian Embassy in London and officially opened by the Ambassador of Norway HE Mr Kim Traavik.

Curated by Deputy Director Rama Gheerawo with Onny Eikhaug of the Norwegian Design Council, the Design that Makes a Difference exhibition showcased work ranging from passenger trains and hotel chains to government websites, voting systems and community-led initiatives. The projects were split into three themes: business-driven (demonstrating benefits to industry); community-centred (addressing digital or physical communities); and public facing (designing in the public realm).

The exhibition built on a seven-year partnership between the Helen Hamlyn Centre for Design and the Norwegian Design Council that covers conferences, publications, design projects and executive education. A symposium was also held at the RCA on 19 April to discuss the exhibition, with a keynote speech by Michael Wolff, UK Government Inclusive Design Adviser, and case studies given by Ben Terrett from the Government Digital Service in the UK and Oyvind Gronli, who showcased the Norwegian government's new voting system.



The exhibition has since been displayed at the University of Cambridge's Engineering Design Centre (above) and at London's City Hall, courtesy of the Mayor of London's office. It will travel to Oslo in 2014.

Top: curators Onny Eikhaug and Rama Gheerawo show the Norwegian ambassador HE Kim Traavik (centre) around the exhibits.

Right: views of the exhibition at the RCA



CHALLENGE WORKSHOPS



The Challenge Workshops is the centre's international programme of knowledge transfer aimed at designers, and is led by Kyoto-based Visiting Senior Fellow Julia Cassim. In 2012-13 this award-winning programme focused heavily on design for healthcare with two major events in Seoul and Sheffield.

Commissioned by the Korean Institute for Design Promotion (KIDP), the Seoul workshop was held at the Seoul National University Hospital. It involved 40 designers and healthcare staff working on a brief framed around the patient journey from admission to discharge in four areas of the hospital. The challenge was to try to reduce communication error and enhance patient services.

In Sheffield, the workshop took the form of a 24 Hour Design Challenge. It was held as part of the Design4Health conference organised by Art & Design Research Lab of Sheffield Hallam University. Teams of designers from 11 countries worked with clinicians, carers and people living with two chronic conditions – cystic fibrosis and motor neurone disease.

Three further Challenge Workshops were held in Turkey in February 2013 at the invitation of the Istanbul Minerals & Metals Exporters Association, who are a government body. These were run in collaboration with the Middle East Technical University in Ankara and Mimar Sinan and Marmara Universities in Istanbul. The aim was to encourage young Turkish designers to understand the importance of age and disability-friendly design.

But perhaps the highlight of the year for the Challenge Workshops programme was the staging of an exhibition at the British Council in London on the UK-Croatia Extra/Ordinary Design Workshops. Curated by Julia Cassim and designed by Gero Grundmann, the exhibition launched the Welcome Croatia Festival in London, in celebration of its accession to the European Union. The exhibition was opened on 10 January by HE Andrea Zlatar Viočić, Minister of Culture of the Republic of Croatia, and ran until the end of January.



Top left: Seoul designers rise to the challenge
 Top right: Blown Away design concept from Sheffield workshop
 Above: Identity for British Council exhibition in London on Croatian Challenge Workshops

DOWNING STREET DESIGN SUMMIT

EXPLORING INNOVATION



The Helen Hamlyn Centre for Design played a leading role in planning and delivering a Royal College of Art service design summit at Ten Downing Street on 28 October 2012 to help high fliers in Whitehall make government services more digital and more efficient.

Organised by Rohan Silva, one of Prime Minister David Cameron's key advisors, the day-long design summit convened officials including Cabinet Secretary Jeremy Heywood, Head of the Civil Service Bob Kerslake, and Francis Maude, Minister for the Cabinet Office, to hear how design thinking can help civil servants to reshape government services from a user point of view.

After a keynote address by Tim Brown, IDEO chief executive and RCA alumnus, Helen Hamlyn Research Associates worked alongside IDEO

designers to run workshops exploring service design principles, visualisation tools and research methods focusing on three areas of UK Government policy: border control, NHS repeat prescriptions and the New Enterprise Allowance.

Professor Jeremy Myerson, who spoke at the event, comments: 'Making Government services more citizen-centred inevitably puts policymakers on the trail of people-centred design. Design thinking has a great deal to offer the Civil Service and our experience at Number Ten showed that senior figures were very receptive to its concepts and approaches.'

Above: designers from the RCA and IDEO pictured outside Ten Downing Street after the design summit



The centre continued its collaboration with Unwired Events and Inflate, the inflatable structures company founded by RCA design graduate Nick Crosbie, to stage a one-day innovation fair of early-stage technologies for work and the workplace. The event, Exploring Innovation (above), has a novel format: visitors meet the innovators face to face in a series of luminous inflatable pods as part of a specially timed tour.

This year's fair was held on 2 May 2013 and presented innovations by three RCA start-up companies (Sugru, Kwickscreen and Made in Mind) alongside new ideas from the corporate labs. Exploring Innovation was sponsored by global furniture company Haworth.

EXTERNAL EDUCATION

The Helen Hamlyn Centre for Design further expanded its programme of External Education offering courses and workshops in people-centred design to company executives, SMEs, practising designers, students and academics internationally. Led by Deputy Director, Rama Gheerawo, this programme is based in the Business of Inclusive Design strand of the Age & Ability Research Lab.

Executive education has been of increasing interest to partners on the Research Associate programme who have asked the centre to run inclusive design sessions for company personnel in addition to the research projects being undertaken by RCA graduates. Kinnarps and Stannah featured in the External Education programme this year.

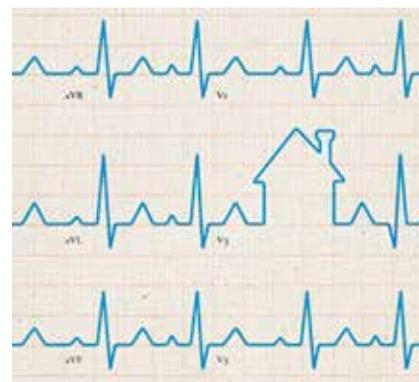
The centre has contributed to the London Creative and Digital Fusion programme by holding inclusive design seminars for London-based SMEs. There is now a formal agreement with the Hong Kong Design Centre's Institute of Design Knowledge for the RCA to deliver a series of people-centred and service design sessions in Hong Kong. The first event was created and run with Sean Donahue from ArtCenter College of Design in July 2013.

The continuing partnership with the Norwegian Design Council saw further material developed and delivered. Working with Onny Eikhaug, leader of the Council's Innovation for All programme, the centre delivered workshops across Norway, and in Japan for designers and academics at the International Association for Universal Design conference in Fukuoka in October 2012.



Participants in Oslo (top) and at Stannah in the UK (below) try out empathy tools as part of an executive education experience

SMART SALON ON HEALTH



International design consultancy Smart Design teamed up with the Helen Hamlyn Centre for Design in January 2013 to hold its first Smart Salon in Europe at the RCA. The subject was design for healthcare, and the provocation for an evening of debate and discussion was – can we design a better patient?

In healthcare, the first six months following diagnosis is a critically important time for chronic-care patients to regain control of their lives. Yet almost 30 per cent of post-surgical patients end up back in the hospital within 30 days because they have trouble adapting to new behaviours after they get home.

A panel consisting of Matt Jameson Evans, co-founder of Health Unlocked, Andy Ward, Managing Principal for GE Healthcare, Phil Golz, European Innovation Manager at GlaxoSmithKline and Eric Freitag, Director of Healthcare at Smart Design, explored how design can help patients take greater control of their own recovery. The evening was chaired by Helen Hamlyn Professor of Design, Jeremy Myerson.



Photo by HOPF Images. Copyright Institute of Design Knowledge

Teams present design work in Oslo (top), attendees receive certificates in Hong Kong (below)



AGE & ABILITY RESEARCH LAB



The Age & Ability Lab looks at how designers can shape a future that includes all ages and abilities. A keynote study this year explored the design of an inclusive taxi for London, and we continued the theme of Everyday Living with projects for Stannah on the connected stairlift, Panasonic on services to support healthy ageing, and Kingwood on activities for adults with autism. Our People & Technology research focused on bridging the gap between assistive and mainstream technology (with BT and Scope) and on strengthening neighbourhood community links (with BlackBerry). We also completed a study with Oticon on ways to improve the use of hearing aids.

Rama Gheerawo, Lab Leader

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FUTURE TAXI

An Inclusive Vehicle for London

Research Associate:
Niels van Roij, RCA Graduate 2012
Vehicle Design

Research Partner:
Hexagon and Karsan

Senior Associate:
Merih Kunur, RCA Graduate
2003 Vehicle Design

Project Duration:
June 2012 - August 2013



Senior Associate Merih Kunur (right) and Research Associate Niels van Roij interview a London taxi driver as part of the project

This study set out to define a new approach to designing a London taxi for all ages and abilities.

Although the current London black cab is one of the few purpose-built taxis in the world, the design is now two decades old and in need of modernisation. This design study looked at how a newly designed taxi could meet the requirements of a new London fleet whilst addressing the needs of passengers of all ages and abilities through an inclusive design approach.

Working with Studio Hexagon and car company Karsan who are based in Turkey, research built on their existing prototype vehicle, Concept V1, developed as a versatile platform with a large, airy interior. The current black cab was reviewed through interviews with taxi drivers, visits to taxi shelters

and discussions held at taxi service centres. Desk research included online forums alongside trade show visits and interviews with vehicle experts.

Spending long hours

The study concentrated on inclusivity of both taxi drivers and passengers. The taxi is the driver's workspace where they spend long hours, but the current driver environment does not provide the necessary comfort and amenities. In contrast, passengers only spend a short time in the cab and have different physical, mental, visual and cognitive needs.

Central to the study was a co-creation workshop with a range of participants where a real cab was critiqued and solutions explored.

Five key areas emerged for further design work: the driver area (making

it more comfortable and functional); passenger environment (increasing flexibility and designing it for short journeys); the dashboard (incorporating new technology); iconic look (important for drivers and tourists); and the door aperture (many travellers found access difficult). These areas will be addressed in a series of follow-on projects in the coming year. ■

RISE

Designing the Connected Stairlift

Research Associate:
Ross Atkin, RCA Graduate 2009
Innovation Design Engineering

Research Partner:
Stannah

Project Duration:
Oct 2011- Sept 2013



Research Associate Ross Atkin and Tom Smith from Stannah conduct field research

This project looks at how a digital network of care could be built around the movements of a stairlift in the home.

To its owner, a stairlift is a safe and convenient way of moving between floors. To the owner's family and friends, it represents reassurance that their loved one is safe in their own home. In the second year of collaboration with Stannah, one of the world's leading stairlift manufacturers, this project has sought to understand how digital technology could extend this reassurance.

The study addressed three questions: is digital monitoring a useful addition to a stairlift? What kind of monitoring is acceptable to older people? And what is the appropriate way to deliver information to their informal care network?

Insights, prototypes and scenarios generated in the first year were used to design a fully resolved prototype digital monitoring system. Working with Stannah's design team and an external developer, the necessary hardware and software components were created and tested.

Seven participants were recruited and systems were installed in their homes as well as on the smartphones of relatives. Interviews were conducted with both stairlift users and their family members to explore their attitudes towards the system. Novel mapping and provocation tools were used to make these interviews as rich and useful as possible. After several months, follow-up interviews were conducted to help improve the system.

The service allows the informal care network around a stairlift user to keep

track of some of their daily activities such as moving between floors, eating and drinking. It generates alerts if the stairlift user is inactive for a long period, prompting family and friends to check on them. In addition, it manages information flow between different members of the care network, helping them to co-ordinate support.

In parallel to the user testing, a team of MBA students at Imperial College Business School investigated the wider financial and strategic implications for Stannah to move into the emerging telecare market. The project has resulted in a validated prototype product, which has been created in partnership with its end users and is ready to be extended to a commercial pilot. ■

ENABLING TECHNOLOGY

Creating an Inclusive Approach to Digital Technology

Research Associates:

Sam Jewell, RCA Graduate 2011
Innovation Design Engineering
Ross Atkin, RCA Graduate 2009
Innovation Design Engineering

Research Partners:

BT and Scope

Project Duration:

June 2012 - Sept 2013



Ross Atkin (left) and Sam Jewell (second left) test a digital music interface with a member of the Para-orchestra in London

This project aims to bridge the gap between mainstream and assistive technology to directly benefit the lives of disabled people.

Digital technology has the potential to transform life for many disabled people, but assistive technology is often low functioning and expensive

with limited and inconsistent provision across the UK. Mainstream technology is cheap and powerful but is often not capable of adapting to the diverse requirements of disabled people.

Working with leading telecoms provider BT and pan-disability charity Scope, this project has sought to

identify opportunities to bridge the gap between mainstream and assistive technology.

Research with a diverse group of disabled people, from Scope's Beaumont College in Lancaster to the Para-orchestra in London, painted a picture of their relationship to technology. It also highlighted the importance of the route into technology as a determining factor for the mix of mainstream, assistive and bespoke elements a person was using.

A changing world

Detailed analysis of the technology landscape and a series of expert interviews created a nuanced understanding of the rapidly changing world of assistive technology and the development of inclusive digital services. A number of areas of opportunity were identified. The emergence of 'open source hardware' allows devices to be tailored to an individual's specific requirements, fitting their needs far better than any mass-produced device, and at a fraction of the cost of much assistive technology.

Two families of devices have been created: a 'Pop-up Reader' stand that allows a visually impaired person to read a letter with their smartphone; and 'Tailored Touch', a way of turning easily adapted objects, or even existing surfaces into cheap, robust and highly personalised replacements for computer interfaces.

The project has also generated a publication aimed at digital public service providers looking beyond web accessibility standards to make these services inclusive of the widest possible number of people. ■

EVERYDAY ACTIVITIES

Living Environments for Adults with Autism

Research Associate:
Katie Gaudion, RCA Graduate
2010 Textiles

Research Partner:
The Kingwood Trust
Research Consultant:
Colum Lowe, BEING
Project Duration:
Oct 2012 - Sept 2013



Katie Gaudion (left) explores an activity with a young adult with autism and a member of the Kingwood support staff

This project looks at how everyday activities in the home can be transformed to engage adults with autism more effectively.

Doing the laundry, preparing a meal and vacuuming the floor are all everyday activities that help us to develop skills, live independently and make our homes more pleasant to live in. But performing such everyday activities can be a challenge for people with autism and can affect their participation in everyday life.

Difficulties with social communication and joint attention will make it hard for a person with autism to understand

how to do a particular activity. Difficulties with executive functioning can make organising, planning and sustaining attention during an activity a challenge. Sensory sensitivities may affect how a person experiences everyday objects and the physical environment in which the activity is being performed.

Working closely with support staff at Kingwood, this project explores ways in which everyday activities can be designed to relate more closely to the needs, interests and capabilities of adults with autism. The study evaluated existing questionnaires

on activities of daily living as part of a literature review, and created visual design probes called Doing Things With Things and Objects of Everyday Use.

These probes invited the people that Kingwood support and their support staff to work together and express what activities they like or dislike, and possible reasons why. Participatory observation, workshops, interviewing support staff and encouraging them to record their own observations were prioritised in the study.

The research findings revealed how the sensory feedback from daily activities and their related objects can affect a person's level of motivation towards doing an activity. The study suggests that encompassing a person's sensory preferences and special interests into an activity can make it more meaningful and enjoyable.

To support these research findings, two prototypes were developed: the Hubble Bubble vacuum cleaner, which blows bubbles, and the Spiny Disc, which fits on a washing machine. These will be piloted at a Kingwood residence.

Insights have been captured in a publication documenting the study, the fourth in an ongoing series; it includes a design guide that offers simple ideas for how people with autism, their families and support staff can extend, tailor, embrace and create new everyday activities, to help them to become more actively engaged within their own homes.

Research associate Katie Gaudion also completed the first year of her PhD by practice, supported by Kingwood, which is looking at empathic design approaches to improve everyday living for adults with autism. ■

THE QUALIFIED SELF

Health and Wellbeing Services
for Older People

Research Associate:
Peter Ziegler, RCA Graduate 2011
Design Products

Research Partner:
Panasonic

Project Duration:
Oct 2012 - Sept 2013



Research Associate Peter Ziegler (right) checks out the fitness regime of an older person in Hyde Park, London

This project explores how customised technology services can support older people through personal insights rather than numerical data.

When a person ages, they have a different relationship with their bodies – managing health and wellbeing becomes more complex – and they have a different relationship with technology too. This project explores new technology services to support the health and wellbeing of older people, working with an industry partner from Japan where the ageing demographic is especially pronounced.

The study conducted in-depth ethnographic research with a user group of 24 people, aged 55-75, individually and in groups, in the home and outside, to learn about their lifestyles, to understand the social, physical and psychological

factors that shape their health and wellbeing, and to probe attitudes to technology.

Insights from the research revealed that most current tech solutions to support health and wellbeing are aimed at 'digital natives' who have grown up with technology naturally. This is personified by the Quantified Self (QS) movement, which concerns measuring sleep patterns, body fat, heart rate, steps taken, calories eaten and so on, using sensors and input devices so that the individual achieves self-knowledge through numerical data.

A new approach

The study has developed an approach that goes beyond the Quantified Self to define an idea known as the Qualified Self (QLS), so that the individual achieves self-knowledge through

human insights. The Qualified Self is not the opposite of the Quantified Self, nor a replacement for it. QLS is an extension – an important refinement that plays to the needs of older people, 'digital immigrants' who are far less interested in wiring themselves up to collect lots of data and graphs.

QS gives people a better grasp of their performance through the reading of a range of empirical health data; QLS has the potential to give a better sense of self, through the reading of a range of emotional and aspiration aspects of health and wellbeing. Concept designs to illustrate The Qualified Self approach have been developed to show how the system might work in practice. ■

LOUD AND CLEAR

Making Hearing Care Inclusive

Research Associate:
Tom Stables, RCA Graduate 2010
Design Products

Research Partner:
Oticon

Project Duration:
Oct 2012 - Sept 2013



Research Associate Tom Stables (right) assesses the usability of hearing aids

This project explores how the design of instructions and basic tasks can help make using a hearing aid easier.

Hearing aids are technically capable of delivering real hearing benefits, but are often misunderstood and then rejected by their users. This can be because the design of the device,

auxiliary products, and the information and service surrounding the device do not meet real needs.

In its second year, this project has expanded the knowledge gained in the early phases of the study and applied it to live projects currently being completed at Oticon, the leading

hearing care manufacturer.

The main areas of focus are: 'communicating instructions' and 'getting the basics right', which is about the basic functions of using and owning a hearing aid, putting the instrument on the ear, changing the battery, cleaning and storage. Some functions are hard to simplify through design, so it becomes essential that these are explained in a simple way. This is the role of the project about communicating instructions.

Breaking down actions

Specific research tools were designed to break down the actions of using a hearing aid into steps that could then be talked about objectively rather than emotionally. It was then possible to see people's actual abilities and contexts of use, and identify areas where design could help. The tools were also designed to help people to see beyond the device they were given and imagine what it could be and how they would like it to work.

The project about getting the basics right has generated design methods to incorporate real user input into concept development at Oticon to ensure that future projects are evaluated in relation to people's needs and aspirations. ■

CULTURAL INTERFACES

Strengthening Community Interactions

Senior Associate:
Chris McGinley, RCA Graduate 2002
Innovation Design Engineering

Research Partner:
BlackBerry

Visiting Research Associate:
Cristina Gorzanelli

Project Duration:
Oct 2012 - Sept 2013



Senior Associate Chris McGinley (right) and Visiting Research Associate Cristina Gorzanelli (centre) conduct research at Progress, a gardening community centre in Brixton

This project looks at how digital innovation can enhance neighbourhood activities in a range of diverse cultural settings.

This study, in collaboration with BlackBerry, a world leader in mobile computing, looked at how digital technology can address different cultural activities, aspirations and attitudes. The project examined culture through the lens of the particular 'neighbourhood', focusing on two aspects – location (for example, adventure playgrounds) and activities (such as community radio).

At the core of the study was a two-month project involving Masters students from three RCA programmes, Information Experience Design, Service Design and Visual Communication.

They were divided into five teams, each working with a London community group, representing diverse cultural aspects within their neighbourhoods. The design teams were challenged to work in a co-creation process with immersion and empathy highlighted as routes to explore the issues, build hypotheses, gather insights and create design proposals.

Varied creative outputs

'Interfaces' was interpreted in its broadest sense and not limited to screens or handheld devices. The creative outputs of the project propose new interfaces that promote interaction in one of the following ways: people-people; people-environment; people-service; people-technology and

people-device. Proposals ranged from ways to engage a local community with the music and harmony central to a nearby Hindu Centre, to drawing together geographically disconnected communities through an online 'patchwork' that captures and connects people through their horticultural activities. ■



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Images of work from the Cultural Interfaces research project. Twenty four RCA Masters students looked at how digital technology could address a community's cultural activities, aspirations and attitudes. An awards ceremony at the RCA in London in June 2013 announced 'Patchwork Progress' as the winning team and 'Tumble' as the runner-up. An exhibition of the work was shown at the London Design Festival in September 2013.

1. Patchwork Progress is a digital patchwork that grows as the community gets busy gardening. It uploads and shares activities and achievements from across the network using community centres and bus shelters. Progress, the Brixton-based partner organisation, holds gardening activities for people aged 2 to 92.

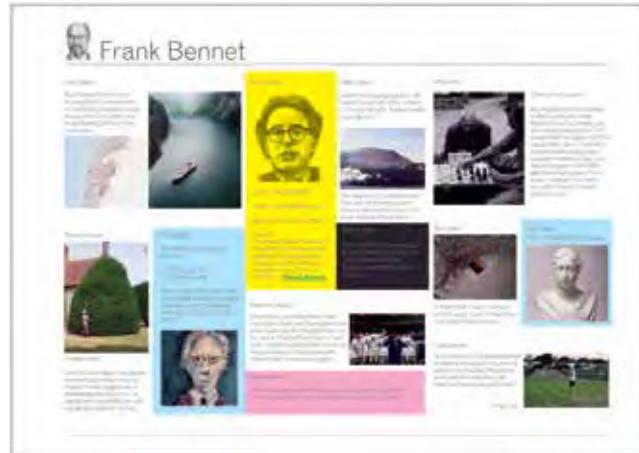
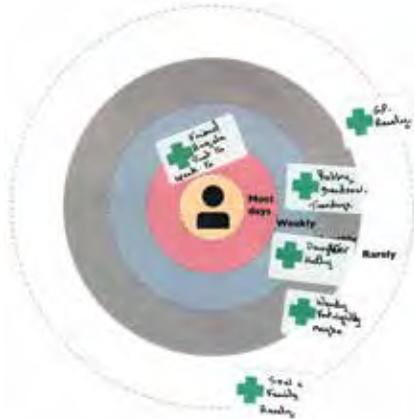
2. Show and Tell Companion is a service comprising a digital app that uses Hindu music to bridge the generation gap. It also puts on film showings, exhibitions and competitions to share Hindu culture. The community partner was the Caribbean Hindu Cultural Society in South London.

3. Tumble is a physical object and digital platform that records and shares songs and stories by simply touching or turning the device. The resulting Playlist for Hackney is an evolving repository of

Hackney's memories and music. The team worked with community radio project Hackney Stream, part of Age UK Hackney.

4. West Norwood Now is an online platform that encourages and facilitates offline interactions, aiming to enable conversations amongst diverse members of the community. It barter time and skills, focusing on children's activities to then bring parents together. The team worked with FEAST, a monthly food market in West Norwood.

5. Brixton Voice is a collection of interconnected sound installations hidden in buildings, bus stops and benches that give oral histories through the gossip, stories and anecdotes that the community feels are most important. The team worked with the Brixton Society which promotes the rich heritage of Brixton.



The Helen Hamlyn Centre for Design is a member of the AKTIVE (Advancing Knowledge of Telecare for Independence and Vitality in Later Life) Consortium. This explores how telecare can improve the lives of older people who are prone to falls or have memory problems. Supported by the Technology Strategy Board, the project launched in 2011 and is led by CIRCLE (Centre for International Research on Care, Labour and Equalities) at the University of Leeds, with Oxford Institute of Population Ageing at the University of Oxford and industry partners Tunstall Healthcare and Inventya.

Using design ethnography methods to conduct research in participants' homes, The research is looking at attitudes towards telecare and products. It is using research kits to encourage creative thinking about telecare delivery as well as outlining potential for future developments.

Senior Associate: Chris McGinley
Research Associate: Amanda Buckley
Funded by: Technology Strategy Board

This design study looks at how social networking technology can better support older people in maintaining connections to the individuals and groups that mean the most to them. Older people tend to use the internet in different ways to younger people, and most current social networking sites offer little incentive for them to engage. The research is part of a larger project with the EPFL+ECAL Lab, Ecole Polytechnique Fédérale de Lausanne, looking at our relationship to the digital world.

Ideas from the first year of research spanned interactive, technological and visual propositions. These looked at

different types of interfaces that go beyond a keyboard and mouse, such as using a person's most defining feature, their face, to log into their account, or saying the name of a person to a digital device and it immediately brings up their online profile. Work this year concentrated on working with older people to 'fine-tune' the social networking concepts into digital design propositions based on pre-digital archetypes (such as a newspaper or address book).

Research Associate: Peter Ziegler
Research Partner: EPFL+ECAL Lab

TALES OF RETIREMENT

ASSISTED DIGITAL PROJECT



With people potentially living for another two or three decades beyond 65, traditional notions of retirement need to be radically rethought. This study worked with 18 people between the ages of 60-80 to understand their personal perspectives on later life and the challenges they faced as they transitioned into retirement.

Challenges and preconceptions were addressed in three areas: connection to family, friends and other networks; defining tasks and managing time; and improving wellbeing. Ten 'dos and don'ts' of retirement were captured to form a manifesto for reframing conversations around retirement. The outputs from the project aim to help set an agenda for future work in an ageing society and support designers and policy makers in planning for increased longevity.

Senior Associate: Chris McGinley
 Researcher: Florie Salnot
 Research Partner: Nesta



Nearly one in five (18 per cent) of UK adults are offline (never or rarely use the internet). This could be because they do not have the hardware or internet access, or because of lack of confidence or digital skills. This joint project with the Government Digital Service (GDS) looks at how Assisted Digital support can meet the needs of older people.

Assisted Digital will not focus on getting people online or incentivising digital take-up but will ensure people who are offline can access and use digital government services. The project asks the questions: what

should Assisted Digital look like and how does it need to perform? By focusing on older people, it will explore how Assisted Digital can become intuitive to use for a wide range of people with varying needs and abilities. The aim is to create design concepts that have been developed through intensive research and testing with users and will inform the wider work GDS are doing on Assisted Digital.

Research Associate: Peter Ziegler
 Research Partner: UK Government
 Digital Service

PARTNERS

Age & Ability Research Lab

Being

BEING is a specialist business consultancy that helps organisations in the public, private or charitable sectors achieve their goals through the effective application and management of design.

www.beingdesign.co.uk

**BlackBerry**

BlackBerry, a global leader in wireless innovation, revolutionised the mobile industry with the introduction of the BlackBerry® solution in 1999. Its product line includes the BlackBerry® PlayBook™ tablet, smartphone, software for business and accessories. BlackBerry products and services are used by people all over the world.

www.blackberry.com

**BT**

BT is one of the world's leading communications services companies, with customers in the UK and in more than 170 countries worldwide. Its support for the 2012 Paralympic Games demonstrates its long running commitment to accessibility and inclusion both in its core activities and their funding of pioneering projects around the UK.

www.btplc.com/betterfuture

**EPFL+ECAL Lab**

The EPFL+ECAL Lab is a unit of the EPFL (Ecole Polytechnique Fédérale de Lausanne) in cooperation with ECAL (University of Art and Design Lausanne). Its mission is to foster innovation at a crossroads between technology, design and architecture.

www.epfl-ecal-lab.ch

**Government Digital Service**

The Government Digital Service is a new team within the Cabinet Office tasked with transforming government digital services. Established in response to Martha Lane Fox's report, 'Directgov 2010 and beyond: revolution not evolution', its purpose is to ensure the Government offers world-class digital products that meet people's needs.

<http://digital.cabinetoffice.gov.uk>



Cabinet Office
Government Digital Service

Hexagon and Karsan

Hexagon Studio is Turkey's largest engineering & design centre. It gives services to the automotive, transport and defense industries covering the product development cycle. Its sister company Karsan, is the main vehicle manufacturer in Turkey and has produced cars for over 45 years, also trucks and buses for third parties like Renault, Peugeot, Hyundai and Citroën.

www.hexagonstudio.com.tr

<http://en.karsan.com.tr>

**Kingwood Trust**

A registered charity it provides support for adults and young people with autism. Its mission is to pioneer best practice which acknowledges and promotes the potential of people with autism and to disseminate this practice and influence the national agenda. Kingwood is an independent charity and company limited by guarantee.

www.kingwood.org.uk

**Nesta**

Nesta is an independent charity with a mission to help people and organisations bring great ideas to life. It does this by providing investments and grants and mobilising research, networks and skills. Nesta doesn't work alone. It relies on the strength of the partnerships it forms with other innovators, community organisations, educators and investors.

www.nesta.org.uk

**Oticon**

Oticon, founded in 1904, is one of the world's leading hearing instrument manufacturers. Based on the brand promise 'People First', through its products and support it aims to empower people. Oticon was the first manufacturer to produce a fully digital hearing device.

www.oticon.com



Panasonic

Panasonic is a worldwide leader in the development, manufacturing and marketing of electronic products for a wide range of consumer, business, and industrial needs.

www.panasonic.co.uk



Scope

Scope exists to make the UK a better place for disabled people and their families. It does this by providing support and running a range of services, raising awareness of the issues that disabled people face and influencing change across society.

www.scope.org.uk



Stannah

A family company founded over 140 years ago and based in the UK, Stannah is the world's largest manufacturer of stairlifts which give people invaluable freedom, independence and safer enjoyment of their own homes. It is also the UK's largest independent supplier of passenger and vertical platform lifts.

www.stannahstairlifts.co.uk



Technology Strategy Board

The Technology Strategy Board is an executive non-departmental public body that aims to drive innovation. Its role is to stimulate technology-enabled innovation in areas that offer the greatest scope for boosting UK growth and productivity, advising the Government on how to remove barriers to innovation.

www.innovateuk.org





WORK & CITY RESEARCH LAB



The Work & City Lab investigates how designers can make living and working in our cities more inclusive and sustainable. Our work with industrial partners this year focused on new ways to make the workspace more expressive, flexible and comfortable – and on alternative models of low energy lighting in the school classroom. We explored energy use in the home on a major European Union – funded project and proposed a new design framework for the mental health unit of a Scottish hospital. Engagement in three UK Research Council funded studies – Creative Citizens, Creative Exchange and Family Rituals 2.0 – demonstrated our long-term interest in researching the growth of digitally connected communities.

Jo-Anne Bichard, Lab Leader

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LIGHTING FOR LEARNING

Rethinking School Environments

Research Associate:
Amanda Buckley, RCA Graduate
Design Products 2012

Research Partner:
Megaman Charity Trust Fund

Project Duration:
Oct 2012 - Sept 2014



Research Associate Amanda Buckley (centre) conducts a lighting workshop with teachers in a London school

This project is researching alternative models of low energy lighting to enhance learning in the secondary school classroom.

Information technology is now ever-present in the learning environment. Pen and paper is often replaced by the laptop, and the low reflective blackboard supplanted by the digital whiteboard and projector. But despite these changes, artificial lighting in classrooms has hardly evolved.

This study explores how better lighting can support educational needs within the technology-driven secondary school classroom for students aged 11 to 17. In particular it challenges prevailing attitudes that more light

automatically means improved concentration by adolescents. Instead the study adopts a less technical and more humanistic perspective on lighting, one that takes into consideration the biological and psychological needs of both teachers and pupils.

Mixed methods

The project has adopted a range of research methods including: a literature review; expert interviews with architects, lighting designers and educational psychologists; observations in schools in the UK and Hong Kong; and teacher workshops. The study seeks to answer three main

questions: how can lighting support the learning process? How can low energy lighting positively impact the school environment? And how can lighting influence the use of educational technologies in schools?

Insights and data collected in the first year of the study will be supplemented with a further international study in Norway during winter, to see how having few hours of daylight impacts lighting in schools. A series of light experiments will also be designed, installed and tested in UK classrooms to gain a clearer understanding of alternative models of sustainable school lighting. ■

CREATIVE CITIZENS

New Media and Community-led Design

Research Associates:
Gail Ramster, RCA Graduate 2007
Innovation Design Engineering
Alan Outten, RCA Graduate 2007
Design Interactions
Senior Associate:
Catherine Greene

Project Partners:
Nesta, The Glass-House,
Open University
Research Funders:
AHRC, EPSRC
Project Duration:
May 2012 - Oct 2014

This project asks how we can use digital media to creatively engage people in community-led design.

Community-led design is where people come together to redesign spaces and services in their neighbourhood, such as creating a community garden, setting up a new club, or opening an old building to make a community hub. These projects need as many participants as possible so that they have the time, energy and ideas to keep things going.

One opportunity is to use digital media such as online social networks and web platforms that enable new forms of civic engagement, participation and expression. For example, can new media help reach an audience that is more representative of the community as a whole?

This is the focus of the research being carried out by the Helen Hamlyn Centre for Design and the Open University as part of Creative Citizens, a major research project funded by two UK Research Councils. Two professional partners, The Glass-House Community-led Design and Nesta, are collaborating on this phase of our work. The overall Creative Citizens project is managed by Cardiff University.

Two London projects

This year we have been working closely with two London community-led design projects to design and test digital media interventions that local people can use to help their projects to grow. These ideas are being co-designed with the projects and will use their strengths and assets rather than outside help and funding, so that the outcomes are more sustainable and could be more easily adopted by other projects.

The first of these projects is The Mill in Walthamstow. The Mill opened in



Gail Ramster and Alan Outten (standing) work with creative citizens at the Kentish Town Neighbourhood Forum in London

2011 after locals convinced the council to let them take over an ex-library and create a community centre. The Mill helps local people to develop new services, clubs or social groups, which use the spaces in The Mill's building.

The Mill would like its online visitors to experience the same spirit of creativity and collaboration that can be found in the building everyday. So the research team is exploring how people at The Mill can capture stories from the building and share them online, to open up communication between the real world and the online space.

The second project is Kentish Town

Neighbourhood Forum, a group of residents who are creating their own Neighbourhood Plan for the area. They want to share their draft plan with Kentish Town residents so that it is representative of the community before it goes to referendum.

So the research team is working with the Forum to see how they could increase awareness, for example, by looking at how small actions by their current membership to spread their message through social networks can collectively have a much larger effect. ■

LIVING CITIES

Temporary Urban Events and the Workplace

Research Associate:
Imogen Privett, RCA Graduate
Architecture 2011

Research Partner:
Haworth

Project Duration:
Oct 2012 - Sept 2013

This project asks what the workplace can learn from agile and engaging temporary events in the city.

As we are increasingly able to work anywhere, people are ever more likely to come into the office specifically to interact with others. But, for all the talk of changing patterns of work, many workplaces remain inflexible – and difficult and expensive to adapt.

This project focuses on the agility unpredictability and mutability of urban public space in order to help companies manage change and unpredictability in the workplace. It asks how adaptable uses of urban space – from markets and festivals to pop-up shops – might inform the development of a much more agile and

flexible office landscape, and whether we can look to these kinds of events for clues as to how we might bring people together within work environments.

Key physical aspects

Living Cities is a key phase of a long-term research collaboration with global furniture company Haworth, entitled Living Landscape. Different physical aspects of outdoor city life were investigated in order to examine how social interaction and communication are managed in flexible and regularly changing settings. Extensive visits were made across a range of different event types to observe and map behaviours, structures and interactions, and

experts in urban design and event planning were consulted.

Key design elements were identified, which formed the basis of a series of workshops with architects and designers, using a specially designed board game called Deploy, at Haworth's London showroom during Clerkenwell Design Week in May 2013.

This user engagement provided some valuable areas of interest and opportunity for further development. Through analysis of the civic/commercial realm termed by the Ancient Greeks as the 'agora', the Living Cities study provides insights into how physical settings can support greater flexibility and agility at work. ■



Research Associate Imogen Privett (centre) conducts research with architects and designers at Clerkenwell Design Week

LIVING STAGES

What Can Workplaces Learn from Theatre Design?

Senior Research Associates:
Tom Jarvis, RCA Graduate Design
Products 2011

Research Partners:
Haworth, Philips Lighting

Project Duration:
Oct 2012 - Sept 2013



Research Associate Tom Jarvis (left) tests his prototype screening system with users in the Haworth showroom

This project takes research about the influence of stage design on the workplace into a development phase to create a new system of illuminated surfaces.

Living Stages explores how theatre design can provide inspiration to create more expressive and effective office environments using a simple 'kit of parts' approach. Many workplaces are designed either as psychologically impoverished 'lean' spaces that do nothing to enhance company culture, or as highly customised and expensive one-off settings that are difficult to build and replicate.

The first year of the study, led by Imogen Privett, defined a vocabulary of low cost yet highly effective stage

techniques to create mood and atmosphere in the workplace. In its second year, the project led by Tom Jarvis has extended into one practical application of the research – the design of a top hung, illuminated screen system to support private concentration and informal collaboration in the open plan office. Philips has joined Haworth as an industrial collaborator on the project to learn how they can develop effective and creative solutions for offices, combining light with furnishings.

Extensive testing

A lightweight system capable of hanging from a suspended ceiling was designed and tested extensively

in three UK offices to investigate the psychological requirements of office workers in situations where they are required to concentrate or collaborate.

Data was collected from more than 60 office workers in relation to screen variables such as translucency (low to high), colour (calm to vivid) illumination (soft to intense) and arrangement (open to closed).

With this data, the project aims to develop a low cost, user controlled, self-illuminating, top hung screen system, that will enable office workers to personalise spaces to their precise emotional and practical requirements. ■

THE CREATIVE EXCHANGE

A Hub for Innovation in Digital Public Space



This project brings researchers in the arts and humanities together with creative companies to exchange knowledge in the digital domain.

The Helen Hamlyn Centre for Design is continuing to work alongside the RCA's School of Communication on the Creative Exchange (CX) project, which explores the innovation potential of a concept known as 'digital public space'.

The CX is one of four national knowledge exchange (KE) hubs funded by the AHRC as part of a programme to expand the creative economy in the UK. The AHRC aims to achieve this by connecting researchers in the arts and humanities with a range of creative and cultural organisations, thus facilitating connections between existing knowledge systems, stimulating innovation and contributing to the

economic development of the UK's creative and cultural sector.

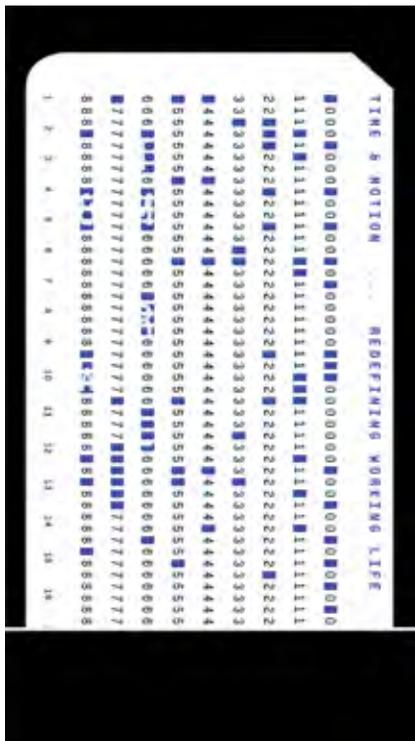
In addition to the RCA, the CX hub comprises research teams from Lancaster University's Imagination Centre and Newcastle University's Culture Lab. Professor Rachel Cooper of Lancaster University is the Principal Investigator on the project.

The Helen Hamlyn Centre for Design has made a distinctive contribution to the CX hub over the past year by initiating a strand of work exploring how the digital public space might support a rethink of the temporal, physical and social boundaries of working life.

This strand of activity will culminate in a major exhibition and public programme in partnership with FACT (Foundation for Art and Creative Technology) in Liverpool later this year.

Entitled *Time & Motion: Redefining Working Life*, it will feature an exhibition of artefacts and experiments (scheduled 13 December 2013 - 9 March 2014 at FACT), a symposium, film screenings and an accompanying book edited by Jeremy Myerson and Emily Gee of FACT and published by Liverpool University Press.

A key feature of the CX hub is the recruitment of a cohort of 20 PhD researchers to the project by the three participating universities. In 2012-13, Doctoral candidates John Fass, Ben Dalton and Veronica Ranner (see opposite) joined the RCA CX hub to undertake a 'PhD by practice', working and reflecting on intensive co-creative and design experiments. Following workshops with industry partners and academics, they have developed a series of projects that are currently



underway and will be showcased in the *Time & Motion* exhibition. Three new PhD researchers will join the CX project in 2013-14.

Dr Georgina Voss has also joined the CX hub as a Knowledge Associate where, through management and critical analysis of the CX and the design projects within it, she will examine the aesthetics, artefacts, knowledge systems of interdisciplinary technical and creative practices. She is also working with other researchers across the wider consortia of AHRC KE Hubs – REACT, Bristol; Creative Works, London; and Design in Action, Dundee – to interrogate wider questions around industry-university links within the creative economy, modes of cross-disciplinary collaboration, and policy implications. ■

CX Doctoral Researchers



Ben Dalton is a computational design and experimental media researcher. He is currently on research leave from the Faculty of Arts, Environment & Technology at Leeds Metropolitan University, to join the CX hub. He has recently been a guest Professor at the Bergen National Academy of Art and Design, teaching workshops on interaction design. He has a background in ubiquitous computing and mobile sensor networks from the MIT Media Lab, and has conducted research in the Århus University Electron-Molecular Interaction group, University of Leeds Spintronics and Magnetic Nanostructures lab, and Jim Henson's Creature Shop, London. His Doctoral research asks how we can design for digital pseudonymity given the importance of multiple identity creation throughout history, and given shifts towards 'real-name' policies and recent developments in digital space.



John Fass is a designer, researcher and visiting lecturer on the new RCA programme, Information Experience Design. He has a background as a digital designer and has worked professionally in information architecture, interaction design and user interface design. Previously,

John was a photographer working on branding, packaging and publishing projects for different clients. He is interested in digital ethnography, how technology influences people and society, and how computational storytelling might draw meaning from digital data records. His Doctoral research looks at how designers should respond to the online production and consumption of digital news. What kinds of technological artefacts, narrative processes and data models will be necessary to experience future news scenarios, and how will the public contribute to the story?



Veronica Ranner is a designer and researcher with a focus on mediating the intersection of design, society and emerging technologies. She holds a degree in Industrial Design from Pforzheim University and an MA in Design Interactions from RCA. She has acted as lead designer on the BMBF- funded medical pilot study MµGUARD in the heart defibrillator industry as well as working as a design consultant. Her Doctoral research sits at the intersection of bio-sensing, self-tracking and biotechnology: through re-visiting biomedical devices and novel forms of bio-digital, what is the role of body communication in the context of digitality?

Far left: participants in a CX lab held at the RCA in February 2013 on the theme of modelling the dynamic growth of digital public space
Above left: *Time & Motion* exhibition identity draws on the history of punch cards

SUSLAB

People, Energy and Everyday Life

Research Associate:
Flora Bowden, Sustain RCA
Senior Associates:
Dan Lockton
Catherine Greene, RCA Graduate
Design Products 2007

Project Funder:
Interreg IVB
Project Duration:
Oct 2012 - Sept 2015



Senior Associate Dan Lockton (left) and SustainRCA Research Associate Flora Bowden (right) interview a resident in east London about domestic energy

This project aims to reduce household energy use through the design and trialling of new people-centred products, services and interfaces, developed with householders.

Reducing energy use is a major challenge for society and the need to change our behaviour is receiving increasing attention. However there is a need to integrate the 'what' of quantitative data with the 'why' of people-centred design research. Why do people use energy in everyday life – what are they actually doing? And how can design address this?

People don't set out to 'use energy' – demand is the result of solving everyday problems, meeting needs for comfort, light, food, cleaning and entertainment, often in emotional contexts. This is where research can provide insights directly useful for the design process. The Helen Hamlyn Centre for Design and SustainRCA are working with partner organisations in

the Netherlands, Sweden, Germany and the UK on a EU-funded project called Suslab to investigate this issue. Our UK partners are Imperial College London and the Institute for Sustainability.

The focus of Suslab is on reducing household energy use through new design interventions, developing and testing products, services and interfaces. The project draws on a broad range of expertise, including environmental scientists and architects alongside designers, and each region is creating a 'Living Lab'—a specially designed test home for short-term studies on sustainable living.

Everyday routines

We are currently in Phase 1, researching 'in the field' to establish baseline information about householders' everyday routines, energy use and understanding of energy through in-depth home visits and probe studies. Through deeper insights into everyday

interactions, we are aiming to help frame the 'problems' and contexts of energy use – and address them through design – in more nuanced ways.

From autumn 2013, we move into Phase 2, which is centred on a test home being built on an eco-park in Dagenham. Using insights from Phase 1, we will, with householders, co-create prototype interventions to be tested and iterated in the Lab. In Phase 3 our prototypes will be tested with wider user groups in their own homes.

Central to the project is the development of people-centred design research methodologies that can provide insights about the usability and adoption of sustainable innovations across many sectors. The RCA has led on the development of a methods toolkit – including observational and self-reporting techniques, and product and service prototyping – which has been disseminated to all project partners to inform their research. ■

FAMILY RITUALS 2.0

Keeping Mobile Workers Connected

Research Associate:
Paulina Yurman, RCA Graduate
Innovation Design Engineering
1996

Senior Research Fellow:
Jo-Anne Richard

Research Funder:
EPSRC

Project Duration:
April 2013 - March 2015



Digital technology is disrupting the traditional patterns of family life

This project asks how mobile workers in the digital age can take part in key aspects of family life when away from home.

Family Rituals 2.0 was developed during an EPSRC 'Creativity Greenhouse' held in July 2012 with the key theme of 'achieving work-life balance in a digitally dependent world'.

In partnership with Newcastle University, Bournemouth University and the University of the West of England, this multidisciplinary research project aims to understand family values held in everyday rituals – and how mobile workers, whose work frequently takes them away from home overnight, can observe and participate in these important family activities.

Family rituals can be anything from celebrating key personal milestones such as anniversaries and birthdays to major calendar occasions such as Christmas and Eid, or just daily observances such as dinner or a

bedtime story. The project aims to understand how digital technologies might be used to support inclusion in these rituals for those who are away from home.

For many mobile workers there may be conflict between important family occasions and the demands of modern work culture, especially in the digital era of being on-line and contactable at any time. The project proposes that there needs to be a deeper understanding of the evolving nature of family rituals within the digital age.

Work-life balance

Bringing together designers from the RCA with social anthropologists, psychologists, computer scientists and geographers, the research has begun by examining the term 'work-life balance'. We have found that it is an increasingly complex term. For example, work means different things to different people, boundaries

between work and other aspects of lives are increasingly blurred, and what constitutes a balance is open to individual and cultural variation. However, from an individual perspective, it can be taken as the point in which an individual is satisfied with both their work and their home life.

Whilst work-life balance may be open to different interpretations, what is without question is that, for many, the nature of work is changing. In the technology-based and knowledge-intensive industries, work is no longer focused on traditional time and space constraints. As such there are new opportunities for mobility and flexible working, but how does traditional family life fit this change? ■

WORKSCAPES**Improving a Mental Health Environment**

Research Associate:
Benjamin Koslowski,
RCA Graduate Architecture 2011

Research Partner:
NHS Forth Valley

Project Duration:
Dec 2012 - Feb 2013



Babs McCool (left), charitable arts and wellbeing coordinator, Forth Valley Royal Hospital, discusses design strategy with Research Associate Ben Koslowski

This project uses a new tool to analyse and re-programme workspace to propose improvements to the Mental Health Unit of a large Scottish hospital.

Workscapes is a design framework that uses four urban planning principles – programmable surfaces, landmark objects, points of interest, and circulation/orientation – in conjunction with a qualitative user research process to tailor the design of workspace more closely to people's real needs. It was devised in partnership with an industrial consortium, and in its second year of development, it has been tested on two different types

of workspace in Scotland.

The first case study proposes a new design strategy for the Mental Health Unit at Forth Valley Royal Hospital in Larbert to accommodate an arts programme. Our Scottish partners identified a series of issues with the newly built unit, which is currently characterised by long, featureless corridors, anonymous spaces for staff and patients, underused therapeutic courtyards and perceived noise issues.

A multi-disciplinary research team from the Helen Hamlyn Centre for Design spent a week in the Mental Health Unit in January 2013, observing and mapping processes, auditing

various spaces, and conducting interviews and workshops with patients, nursing staff and consultants. Various tensions – between having a clinical or homely environment, for example – were examined.

Design interventions

Application of the Workscapes planning tool resulted in the proposal of a design strategy to help brief designers and artists to make interventions in the Mental Health Unit to create a greater sense of place, as well as offering the opportunity for a range of meaningful activities for patients.

The interventions can be implemented over time and fall into three key categories. Commissioned artworks create recognisable landmarks that can ease wayfinding, enhance the atmosphere of spaces, offer a greater sense of variety across the different wards and help to modify lighting and acoustics.

Original design features can help to create a series of distinct ward identities, such as Fern Valley and Daffodil Fields, and offer more comfort and variety to patients, staff and visitors.

Design modifications to the existing architecture of the unit are aimed at accommodating an extended arts programme for patients. Overall, the design strategy is intended to ensure that the various interventions implemented over time cohere and help to create a richer environment for all who use the Mental Health Unit.

A second case study adopting the Workscapes framework was undertaken with the Royal Bank of Scotland on its Gogarburn campus in Edinburgh to improve the design of the workplace and support the company's agile working initiative. ■

PARTNERS

Work & City Research Lab

AHRC

The Arts and Humanities Research Council (AHRC) is a national funding agency supporting both arts and humanities research. The AHRC is leading on Connected Communities, a cross-Council programme designed to help understand the changing nature of communities in their historical and cultural contexts. www.ahrc.ac.uk



EPSRC

The Engineering and Physical Sciences Research Council (EPSRC) is the UK's main agency for funding research in engineering and the physical sciences. The Digital Economy theme supports research to realise the transformational impact of digital technologies on aspects of community life, cultural experiences, future society, and the economy. www.epsrc.ac.uk



Haworth

Haworth is an industry leader in workplace solutions, putting the individual at the heart of its activities. Haworth aims to improve human wellbeing and performance by supporting the transformation of cultures, promoting innovation and creating better ways of working. www.haworth-europe.com



Interreg IVB

Interreg North-West Europe (NWE) is a European Union Programme that promotes the economic, environmental, social and territorial future of the North-West Europe area. The SuslabsNWE project is a consortia from Germany, The Netherlands, Sweden and the UK investigating domestic patterns of energy use.

www.nweurope.eu
www.suslabnwe.eu



Megaman Charity Trust Fund

Established in 2008 in recognition of the role played by the private sector in meeting the needs of the community, Megaman Charity Trust Fund support focuses on education and environmental protection. It is funded by Neonlite International Holdings Ltd, the parent company and owner of the Megaman trademark, renowned for its innovative energy-efficient lighting products. www.megamanlighting.com/en



NHS Forth Valley

NHS Forth Valley employs around 7,000 staff from professional and support occupations in its acute hospital, four community hospitals and 56 health centres. It operates as a single integrated system comprising acute hospital services, and community based services which are delivered through three Community Health Partnerships in Clackmannanshire, Falkirk and Stirling. www.nhsforthvalley.com



Philips Lighting

Royal Philips is a diversified health and well-being company, focused on improving people's lives through meaningful innovation in the areas of healthcare, consumer lifestyle and lighting.

www.philips.com/newscenter



RBS

The RBS Group is a large international banking and financial services company. From its headquarters in Edinburgh, the Group serves over 30 million customers in the United Kingdom, Europe, the Middle East, the Americas and Asia. Its award-winning workplace development programme is managed by Choice, Design and Moves. www.rbs.co.uk





HEALTH & PATIENT SAFETY RESEARCH LAB



The Health and Patient Safety Lab explores how designers can collaborate with clinicians and patients to meet healthcare challenges for the 21st century. This year we worked with ArjoHuntleigh to address the challenge of bedsores in community care and began a long-term collaboration with De Puy on the

future of knee surgery. We extended our interest in aspects of dementia care with studies on wayfinding and care furniture, with Bupa and Kinnarps respectively. Our flagship project to redesign the ambulance progressed with a major evaluation workshop at Imperial College and we also supported an entrepreneurial start-up to improve medication for breast cancer patients.

Ed Matthews Lab Leader

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UNDER PRESSURE

Preventing Bedsores In Community Care

Senior Associate:
Gianpaolo Fusari, RCA Graduate
2009 Innovation Design Engineering

Research Partner:
ArjoHuntleigh

Research Fellow:
Jonathan West, RCA Graduate 2003
Innovation Design Engineering

Project Duration:
Oct 2012 - Sept 2013



Tissue viability experts discuss concepts with Research Fellow Jonathan West (left) and Senior Associate Gianpaolo Fusari (right)

This project aims to define a new approach to managing and preventing pressure ulcers in the community, outside of hospital care.

Pressure ulcers, commonly known as bedsores, are usually an avoidable side effect of poor patient care, costing four per cent of the NHS annual budget. They normally develop when a particular area of the body is under pressure for an extended period of time.

Pressure ulcers can develop very quickly on people of all ages; they can be extremely painful and can lead to more severe complications such as permanent disabilities. These injuries have a huge negative impact on people's quality of life and on the lives

of the people who care for them. The project began by focusing on understanding how and why pressure ulcers develop. Individual patient factors were investigated, as well as the effects of pressure, friction, shear, temperature and moisture on the skin.

Experts consulted

The research team observed and interviewed Tissue Viability Nurses and carers in different environments, and consulted leading experts in wound healing and prevention. Existing care techniques, products and surfaces for pressure ulcers were reviewed.

Three distinct challenges affecting the treatment and management of

pressure ulcers in the community were identified: frequency of patient repositioning, incontinence and skin assessment. The project developed a complete approach to monitoring and treating patients, with outputs including an exploration of new surfaces and products to relieve pressure at susceptible parts of the patient's body, and software design to better coordinate care in the community. ■

HOME COMFORTS

Designing Furniture for Care

Research Associate:
Lisa Johansson, RCA Graduate
Design Products 2010

Research Partner:
Kinnarps

Project Duration:
Oct 2012 - Dec 2013



Research Associate Lisa Johansson talks with care home staff and residents

This project explores the future of furniture design for the care market in Scandinavia.

By 2050, Sweden will have 2.3 million people over the age of 65, Norway will have 1.2 million people in the same age group, and one in every four Danish citizens will be over 65. These ageing populations will create a critical demand care for older people in Scandinavia, with an impact on both older people who will need to remain

independent for longer, and on care professionals who will need reliable environments to ensure they can do their job safely and efficiently.

This project began with desk research and expert interviews followed by visits to Solvik care home just outside Oslo in Norway, Höjdenhemmet care home in Sweden, and Dagmargården care home in Denmark. The purpose of the visits was to gain a clearer understanding of how

furniture is used, and can be used to improve care for older people for both the staff and the residents.

A range of research methods was used to gain a better understanding of the everyday life of older people, their friends, families and carers. Semi-structured interviews were carried out with care home and care service workers, care home residents and people receiving care in their own homes. The study extended to older people over the age of 70 living at home without help to discuss their hopes and expectations for the future, and how furniture might help.

Concept framework

The project generated a research concept framework to guide, inform and inspire new product development in this area by Kinnarps. Four concept designs were also created. The first is a modular lounge that can be adjusted according to the resident's needs, to avoid over-assistance resulting in losing skills prematurely.

The second is a tray table/side table with a top that charges technological devices such as mobiles and tablets by laying them on the surface; this alleviates the problem of residents, especially those with dementia, forgetting to charge their devices.

The project also generated a dining chair that helps people to sit down and stand up, providing greater independence for residents and reducing the risk of injury to the backs of care staff, and a conversation chair for people who are hard of hearing. The chair directs the sound from the person sitting opposite while blocking out other sounds from the surrounding environment. These concepts will be tested with users in the final phase of the project. ■

CUTTING EDGE**Advancing Surgical Procedure for Knee Surgery**

Research Associate:
Hawys Tomos, RCA Graduate:
Innovation Design Engineering 2011

Senior Associate:
Gianpaolo Fusari, RCA Graduate
Innovation Design Engineering 2009

Research Partner:
DePuy

Project Duration:
Jan 2013 - Sept 2013



Senior Associate Karina Torlei (centre) and Research Associate Hamys Tomos (right) examine an X-ray as part of a 'deep dive' into surgical procedures

This project is investigating the future of knee surgery as part of a long-term collaboration with the surgical community.

A total knee replacement (TKR) is a proven intervention for advanced arthritis and other conditions of the knee. As patients live longer and the demands on healthcare providers worldwide increase, the need for efficient, low cost and durable solutions is evident. A knee replacement can restore movement, reduce pain and increase the quality of life for the patient; however one in five patients is unhappy with the results of their operation.

Current methods of performing a TKR are built on surgical procedures and philosophies that have remained

largely unchanged since the 1970s. Standard implants aim to replace the worn joint surfaces with hard-wearing metal and plastic components. There are various mechanical techniques for determining the position of these implants, and some surgeons are now questioning the established theories of alignment in order to improve clinical results and patient satisfaction.

Exploring new procedures

The study is exploring the broader surgical landscape and the attitudes of surgeons to see how new procedures may be developed. Immersive research has been carried out into the science and theory of knee surgery, including interviews with surgeons around the world and observations of live surgery.

Further insights have been gleaned from journal articles, conferences and the online clinical community in the early phase of the project. ■

READING THE SIGNS

Wayfinding for
Dementia Care

Research Associate:
Charlotte Crumbleholme,
RCA Graduate Visual
Communication 2009

Research Partner:
Bupa

Project Duration:
Oct 2012 - Sept 2013



Research Associate Charlotte Crumbleholme (centre) shares ideas on signage with care staff at a Bupa care home in Ashford

This project looks at how people with dementia find their way around the unfamiliar environment of a care home.

Dementia is often associated with memory loss, mood changes, and problems with communication and concentration. It can cause people living with the condition to become disorientated, even in once familiar surroundings. Unfortunately the effects of the illness tend to be magnified when people with dementia move into a care home and are unable to locate places in the new setting. This can lead to a feeling of lost autonomy for residents, and put extra strain on care staff as they work to help residents become familiar with their surroundings.

Standard wayfinding and sign systems are often unsuitable for people

living with dementia who find it hard to process information and make decisions. Working with dementia care specialist Bupa, a comparative study was undertaken across three of its recently built care homes to gain insight into wayfinding problems and pilot interventions that might help.

Three different approaches

Each care home selected for research had a similar floor plan but adopted a different approach to signage. The first was a new home in which a minimal approach to signage was piloted, meaning clutter was removed and attention was focused on toilet signs. In the second home, co-design workshops were used to develop ideas with staff to test on site. The third home implemented a signage system designed by Bupa's

in-house marketing team.

Intensive observations were undertaken in each home to assess each pilot. This confirmed the complexities of living with dementia and highlighted opportunities to develop some of the design principles being explored. Most significantly, the study confirmed the role of staff in interpreting the needs of residents. It also highlighted the need for distinctive signs and landmarks in the home that can be used to reassure and offer directions to residents.

The results of the research have been consolidated in design guidelines to help improve wayfinding in Bupa care homes. The signage and other changes to the interior of the homes should help provide more peace of mind to residents and give better support to staff in the care of residents. ■

STAYING THE COURSE

Helping Breast Cancer Patients to Take Medication

Research Associate:
Maximo Riadigos RCA Graduate,
Innovation Design Engineering 2010

Research Partner:
LornaLou

Research Fellow:
Jonathan West, RCA Graduate 2003
Innovation Design Engineering

Project Duration:
Nov 2012 - July 2013



Research Fellow Jonathan West (left) and Research Associate Maximo Riadigos (right) discuss interface designs with entrepreneurs Lorna Perks and Stu Halson

This project looks at how technology can improve medication compliance during breast cancer treatment.

Patients face a drastic change in their lifestyle when they start breast cancer treatment. Every patient is different; they experience different side effects, and manage their medications in different ways. This study, a collaboration with the LornaLou start-up company founded by entrepreneurs Lorna Perks and Stu Halson, looked at the context surrounding cancer treatments. It investigated the different challenges that patients and practitioners face through a series of in-depth interviews, observations and workshops with patients, nurses and pharmacists.

A set of fake blister packs containing

sweets was created as a research tool to see how people cope with an unfamiliar medication regime. These were administered to selected participants as well as the research team itself. This technique revealed the practical difficulties of compliance, as well as the challenge of organising and adapting a new routine into everyday life.

Education is key

The study revealed that education is the most important factor affecting compliance, also that smartphone technology is useful in that it is an integrated part of people's lifestyle and routines. Most patients learn about their medications in one initial session with the cancer care nurse. This session

covers the different drugs, when and how they need to be taken, as well as the side effects that may be experienced. It takes place at a time when the patient is likely to be stressed and worried, sometimes shortly after chemotherapy, which can affect concentration and comprehension. Nurses therefore have to give sufficient information to the patient, without overwhelming them.

The main research output is a smartphone app, developed to support patients during the education session with the nurse, as well as at home. This provides relevant information about their specific treatment, and patients can review the different elements of their treatment that are confusing or unclear. ■

EMERGENCY AMBULANCE

The centre's flagship project to redesign the interior of the emergency ambulance moved forward during the year with a major one-day workshop at Imperial College London to evaluate our demonstrator prototype in March 2013.

This workshop was attended by 85 experts from the ambulance industry (including manufacturers, paramedics, clinicians and fleet managers) drawn from all over Europe. Its aim was to build a coalition of industrial support and expertise around the ambulance redesign project, and it succeeded in opening up a series of new routes to commercialisation with UK and European partners. Dr Anthony Marsh, chairman of AACE (the Association of Ambulance Chief Executives) gave the keynote address and pledged to support the project.

In another welcome development, the new ambulance, which was first launched at the London Design Festival 2011, was given the NGO (Non-Governmental Organisation) Award by the Design For All Foundation, based in Barcelona. This prestigious award follows prizes for the ambulance from the Design Museum, Industrial Designers Society of America and the Victor J Papanek Foundation.

Senior Associate: Gianpaolo Fusari
 Lead researcher: Ed Matthews
 Research partners: Imperial College St Mary's NHS Trust; Vehicle Design Department, RCA; Department of Emergency Medicine, University of West of England; London Ambulance Service
 Funded by: London NHS (Regional Innovation Fund) and Helen Hamlyn Trust



Top: experts from the ambulance industry queue up to review the RCA's ambulance demonstrator unit as part of the evaluation workshop held at Imperial College London. Above: breakout session on patient accessibility examines the concept design

PARTNERS

Health & Patient Safety Research Lab

ArjoHuntleigh

ArjoHuntleigh, a member of the Getinge Group, offers a broad range of integrated solutions for the care of people with reduced mobility and related conditions, with the aim to enhance quality of care and cost efficiency in elderly care facilities, hospitals and other healthcare environments.

www.arjohuntleigh.com

**Bupa**

Bupa is a leader in dementia care with around 300 nursing and residential care homes in the UK. It looks after over 18,000 people and employs around 27,000 people in the UK. Bupa's 'Person First, Dementia Second' training has been specially developed by the Bradford Dementia Group at the University of Bradford.

www.bupa.co.uk/care-homes

**DePuy**

The DePuy Companies are part of the Johnson & Johnson Family of Companies and are global leaders in providing healthcare solutions. DePuy Orthopaedics – a global leader in joint replacement products – focuses on the retention, restoration and improvement of movement through design, manufacture and delivery of orthopaedic devices and supplies.

www.depuy.com

**Kinnarps**

Kinnarps, founded in Sweden in 1942, is Europe's largest provider of workspace interior solutions. Its Swedish origins have helped develop a culture where ergonomics, quality and care for the environment are at its core. Kinnarp's focus is on people, creating spaces that inspire, motivate and care for their wellbeing.

www.kinnarps.com/en/uk

**LornaLou**

LornaLou is a start-up company funded in 2011 by Lorna Perks and Stu Halson with the objective of improving medication compliance within cancer treatments through the integration of mobile technologies and smart data analysis, which won them the Orange Different Business award in 2012.

<http://lornalou.co.uk>





Lady Hamlyn presents the Helen Hamlyn Design Award for Alumni to filmmaker Marie Lenclos, graduate of the RCA School of Communication and Research Associate 2002. The print is by 2013 RCA Communication graduate Giulia Garbin. See Awards overleaf

THE HELEN HAMLYN DESIGN AWARDS 2013

Rewarding Excellence in
People-centred Design

The Centre's annual award scheme for graduating Royal College of Art design students aims to catalyse social activism and innovation.

A radical architectural proposal to rethink the care home setting at the scale of an entire town was the standout project in the 2013 Helen Hamlyn Design Awards.

The Awards, which have been running for 20 years, reward outstanding RCA student design projects that contribute to improving quality of life and are based on real user research.

Other winners this year included a range of kitchen products redesigned to support visually impaired people, a system to address the health risks posed by defecating in the open in India, and a series of architectural structures to brighten the workplace.

A new award for ergonomics was given this year by the Stephen Pheasant Memorial Fund, which aims to encourage students of ergonomics in their work, and to aid research into working systems and the design of artefacts. This was won by four

Innovation Design Engineering students, with Haemobility, an inventive project that rethinks blood donation.

In all, the Helen Hamlyn Design Awards received 30 nominations from RCA professors representing seven design programmes across the College. An international panel of experts and sponsors judged the work in the 2013 RCA Show of graduating students.

HELEN HAMLYN DESIGN AWARD FOR ALUMNI



Winner: Marie Lenclos
RCA Communication Graduate 2001
Helen Hamlyn Research Associate 2002

Inclusive Communication with Pigeon Films

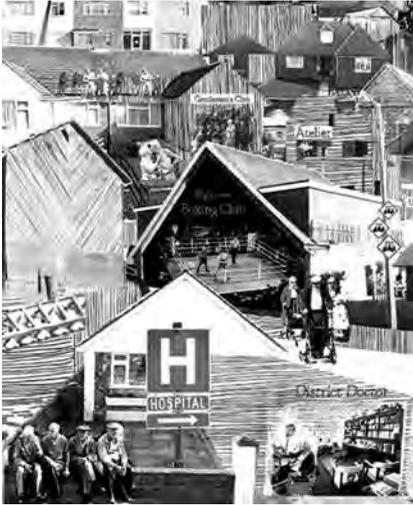
Pigeon Films make short films about things that are important to people in their everyday life. In the films people talk about their life and experiences. Films are commissioned by charities and the public sector; educational institutions and industry clients such as Mencap, Women's Design Service and Hackney Council.

Judge's comment: "Since highlighting the problem of taking young children on public transport in London as an RCA student, Marie Lenclos has successfully used her film-making skills to champion the cause of many different socially excluded groups."

Jeremy Myerson, Director, the Helen Hamlyn Centre for Design



HELEN HAMLYN DESIGN AWARD FOR CREATIVITY



Winner: Arisa Ishibashi
RCA Architecture



Highly Commended: Simon Kinneir
RCA Design Products



Highly Commended: Marc Miralda-Besa
RCA Design Products

Goldies Arcadia – Care Home Network

Peacehaven is resurrected to reframe the town as an arcadia for Goldies – a new generation of active and demanding old age pensioners. The proposal is a democratic alternative to the standard care home. Growing out of the existing dwelling, the care home spreads over the town to form a networked urbanism of care, community life and leisure pursuits.

Judge's comment: "Elements of this practical and imaginative scheme are exactly what care providers should be thinking about for the next generation of older people. Hopefully they will."

Helen Hamlyn

Subtle Sensory Feedback

Everyday kitchen products are redesigned to give extra sensory feedback beyond a reliance on sight. Subtle changes improve the practicality and enjoyability of a task, providing more self-confidence and self-sufficiency for people with sight loss.

Judge's comment: "Deep thought and consideration to improve the eating and drinking of people with reduced sight."

Helen Hamlyn

The Bathroom Space

This project redesigns three bathroom products for easier use in smaller spaces. An electronic bathroom scale balances so that it can be stored on its side; a laundry basket doubles as a wall-hung drying rack; a wall mounted bin can be opened by foot from underneath.

Judge's comment: "In an older person's bathroom, these ideas make everyday products easier and more attractive to use."

Helen Hamlyn

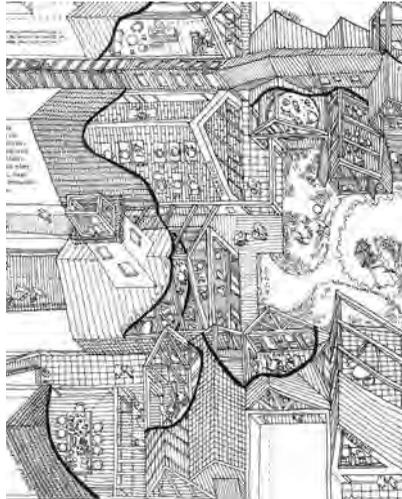
AGE UK AWARD FOR INCLUSIVE DESIGN

TECHNOLOGY STRATEGY BOARD DESIGN AWARD FOR INDEPENDENT LIVING

MIE MEDICAL RESEARCH DESIGN AWARD FOR HEALTH & PATIENT SAFETY



Winner: Simon Kinneir
RCA Design Products



Winner: Arisa Ishibashi
RCA Architecture



Winner: Shruti Grover
RCA Innovation Design Engineering

Subtle Sensory Feedback

Everyday kitchen products are redesigned to give extra sensory feedback beyond a reliance on sight. Subtle changes improve the practicality and enjoyability of a task, providing more self-confidence and self-sufficiency for people with sight loss.

Judge's comment: "Rational and elegant solution to a problem which affects millions of visually impaired people of all ages."

Prof James Goodwin, Age UK

Goldies Arcadia – Care Home Network

Peacehaven is resurrected to reframe the town as an arcadia for Goldies – a new generation of active and demanding old age pensioners. The proposal is a democratic alternative to the standard care home. Growing out of the existing dwelling, the care home spreads over the town to form a networked urbanism of care, community life and leisure pursuits.

Judge's comment: "An architectural design concept that takes an intractable challenge and addresses an entrenched model of long term care delivery. This is a novel and radical approach that reassigns value to older adults with high-level care requirements."

Jackie Marshall-Cyrus, Technology Strategy Board

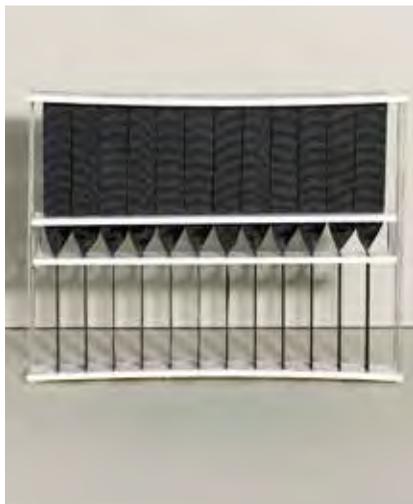
Gu Bank: gamification of human waste for India's bio-security

Sixty per cent of India defecates in the open, posing health risks in cities. This project incentivises male migrants to daily deposit their faecal matter in an anaerobically decomposable 'Gu Bag' which can earn credits redeemable for bio-methane.

Judge's comment: "A brave and innovative project that has real potential to improve the health of many of our humankind."

Brian Firth, MIE Medical Research Fund

GMW ARCHITECTS DESIGN AWARD FOR WORK & CITY



Winner: Kia Utzon-Frank
RCA Goldsmithing, Silversmithing,
Metalwork and Jewellery

Corners of Interest

The Louver Twisting Comb

Corners of Interest transforms and personalises living and working space using foldable string structures, bringing light and colour into play with the existing architecture. The Louver Twisting Comb is a patent-pending screen/blind system to divide rooms in an artistic way.

Judge's comment: "This project has huge potential to develop a variety of architectural components in terms of scale, internal and external use. High aesthetic value."

Tim Hardingham, GMW Architects



THE STEPHEN PHEASANT MEMORIAL FUND DESIGN AWARD FOR ERGONOMICS



Winning team: James Wright, Ama Williams,
Daniel McLaughlin, Zhanling Feng
RCA Innovation Design Engineering

Haemobility

Haemobility rethinks the blood donation service to address the need for wider participation within our growing and ageing population, since only four per cent of the eligible population donate blood. The system comprises a mobile blood donation trolley unit, a new needle device and a simple blood type tester.

Judge's comment: "The project covers so many different aspects of ergonomics – from transport and manual handling to workspace and instrument design. The team worked well together to make a system that could make a real difference to blood donation."

Jane Dillon, Stephen Pheasant Memorial Fund



RCA FIXPERTS AWARD



Winner: Florie Salnot
Partner: Denise Stephens
Film Makers: Peter Judson and Rachel Singer

The Little Things

This film describes how RCA graduate Flora Salnot created a simple new device to make it easier for people with frailty in the hands to wear earrings.

Judge's comment: 'This collaboration addresses not just functional need but personal desire as well. The film is beautifully made and the design is ingenious – a 'little thing' that makes a big difference.'

David Constantine, Motivation

Fixperts is a social project and open knowledge sharing platform to enable designers to use their making skills to solve problems for other people; it was founded by RCA alumni, Daniel Charny and James Carrigan.



PEOPLE

The Helen Hamlyn Centre for Design Team



Jeremy Myerson
Director and Chair



Rama Gheerawo
Deputy Director



Ed Matthews
Senior Research Fellow



Jo-Anne Bichard
Senior Research Fellow



Jonathan West
Research Fellow



Kay Sandford
Business Operations
Manager



Margaret Durkan
Communication
Manager



Mark Byrne
Administrator



Belinda Abbott
External Education
Programmes



Georgina Voss
Knowledge
Associate, CX Project



Gianpaolo Fusari
Senior Associate



Catherine Greene
Senior Associate



Merih Kunur
Senior Associate*



Dan Lockton
Senior Associate



Chris McGinley
Senior Associate

* Post shared with RCA Vehicle Design

Advisory Board

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Helen Hamlyn, Helen Hamlyn Trust
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College of Art
Prof Rachel Cooper, University of
Lancaster
Prof Jeremy Aynsley, Director of
Research, RCA

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Prof Gordon Kennedy
Michael Wolff
Health & Patient Safety:
Prof Ara Darzi
Dr Raj Aggarwal, Imperial College
London
Work & City :
Dr Frank Duffy
Tim Fendley, AIG

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Sean Donahue
Yanki Lee
Gabriella Spinelli
Jonathan Ventura
Rob Waller

PEOPLE

Helen Hamlyn Research Associates 2013



Ross Atkin



Flora Bowden



Amanda Buckley



Lottie Crumbleholme



Katie Gaudion



Cristina Gorzanelli

Ross Atkin

Ross graduated from the Royal College of Art in Industrial Design Engineering in 2009. His first degree is in Mechanical Engineering from the University of Nottingham. His projects as an in-house designer range from benches to vacuum cleaners. Ross has completed projects at the centre relating to public space and assistive technology. He has a growing interest in the interface of technology and people, particularly around connected devices.

ross.atkin@rca.ac.uk

Flora Bowden

Flora completed a Master of Architecture in Urban Design at the Bartlett School of Architecture in 2009 and her BA in Fine Art at Middlesex University in 2005. She is interested in how environments shape and are shaped by inhabitants and events and how we visualise and understand this change over time. Before joining the RCA, Flora worked on several large scale research projects within SEED Foundation, exploring issues of sustainability in design.

flora.bowden@rca.ac.uk

Amanda Buckley

Amanda graduated from the Royal College of Art in 2012 with an MA in Design Products, where she developed products around classroom furniture and interior lighting with a focus on production. Prior to attending the RCA she worked at Steelcase Inc for five years researching and designing office systems and environments. Amanda's interest lies in the space where fashion and technology integrate.

amanda.buckley@network.rca.ac.uk

Lottie Crumbleholme

Lottie graduated from Visual Communication at the RCA in 2009. She is a graphic designer with a range of commercial experience in design for print, publishing, exhibitions and corporate communications; she is also a part time senior lecturer at Bucks New University. She has a long-standing interest in social and environmental issues, working on projects addressing sustainability and dementia care.

c.crumbleholme@network.rca.ac.uk

Katie Gaudion

Katie holds a Master in Philosophy in Textiles from the RCA. Her specialist research is in co-designing with adults and children with learning disabilities and neurological conditions. Katie is the founding member of Angles between Curves, a design research practice and a past winner of the Helen Hamlyn Award for Creativity. Katie is currently studying for a PhD by practice. Her doctoral study is supported by the Kingwood Trust.

katie.gaudion@network.rca.ac.uk

Cristina Gorzanelli

Cristina graduated from Product Design at ISIA Faenza (Italy) in 2010, with a year studying in Valencia, Spain. She is currently a PhD candidate in 'Design For The Territory' at Università di Genova (Italy) and a Visiting Research Associate at the Helen Hamlyn Centre for Design. She is particularly curious about the relationship between people, new media and social behaviour in local communities.

cristina.gorzanelli@gmail.com

PEOPLE

Helen Hamlyn Research
Associates 2013



Tom
Jarvis



Sam
Jewell



Lisa
Johansson



Benjamin
Koslowski



Alan
Outten



Imogen
Privett



Gail
Ramster

Tom Jarvis

Tom graduated from Design Products at the RCA in 2011. His final projects: Tools to Service an Orchestra and Inflatable Double Bass Case; won the Conran Award for Design and featured in Terence Conran's exhibition at the Design Museum, The Way We Live Now. Before starting his Masters course, Tom studied Fine Art at the University of Wales Institute and worked for a landscape design firm. In his freelance practice, he develops tools for professions that have high injury rates.
tom.jarvis@network.rca.ac.uk

Sam Jewell

Sam graduated from Innovation Design Engineering at the RCA in 2011. His final project AudioWeb won a Helen Hamlyn Design Awards and an award from the James Dyson Foundation. Before starting his Masters course he gained a First Class degree at Cambridge University, and spent two years working with a large engineering consultancy. Sam recently won the Imperial College Business School Entrepreneurship Prize, and is a founding member of a start-up called Matopy. sam.jewell@cantab.net

Lisa Johansson

Lisa graduated from the Royal College of Art's Design Products course in 2010. Born in Sweden she moved

to London to do her first degree in Product Design at Central Saint Martins College of Art & Design, She then spent two years designing furniture and products for the nursery industry. She is passionate about design research, in particular sociology, sustainability and system design. Lisa is a co-founder of the design consultancy INTO.

lisa.johansson@network.rca.ac.uk

Benjamin Koslowski

Benjamin completed his undergraduate studies in Architecture at the University of Greenwich in 2008. His work takes a great interest in how technology changes our cities and the way we live and relate to one another. He graduated from the RCA in Architecture in 2011. He has several years of experience working in architectural practices on projects ranging from furniture to urban design.

benjamin.koslowski@network.rca.ac.uk

Alan Outten

Alan graduated from Design Interactions at the RCA in 2007 having previously obtained a PhD in Biomedical and Neural Systems from Imperial College where he spent his time listening to the sounds of human muscles. Alan also holds a BSc in Cybernetics from Reading University and has worked at the Institute for Bioengineering

(Brunel University), the Royal Hospital for Neuro-disability, Channel 4 and McLaren as well as consulting for many other organisations including NASA, BBC and UKTI. His core interest is in how technology can bring a positive change to people's lives and he is fascinated by the science and art of creativity.

alan.outten@network.rca.ac.uk

Imogen Privett

Imogen graduated from the Architecture Department at the RCA in 2011. Before starting her Masters course she gained a degree in History from the University of Cambridge and a first class degree in Architecture from the University of Westminster. She also spent several years working in architectural practice in London across a range of sectors. She has a particular interest in the relationship between people and place, and currently works as a freelance architectural designer.

imogen.privett@network.rca.ac.uk

Gail Ramster

Gail graduated from RCA Industrial Design Engineering in 2007. Her first degree was Mechanical Engineering at Imperial College, with a year studying in Lyon, France. She enjoys projects that focus on communities and urban design, and has worked in consumer electronics and wayfinding.

gail.ramster@network.rca.ac.uk

PEOPLE

Helen Hamlyn Research Associates 2013



Maximo
Riadigos



Niels
van Roij



Hawys
Tomos



Tom
Stables



Paulina
Yurman



Peter
Zeigler

Maximo Riadigos

Maximo graduated from the RCA in Innovation Design Engineering in 2010. He was born in Argentina where he studied for his first degree in Industrial Engineering from the Austral University. His interest in the user-centred design process led him to work for an international innovation and user experience consultancy where he was involved in various ground-breaking projects, from investment banks to global environmental organisations. He is passionate about using design as a platform to improve people's lives.

maximo.riadigos@network.rca.ac.uk

Niels van Roij

Niels gained his BA at Design Academy Eindhoven. He graduated from Vehicle Design at RCA in 2012. His degree project Inclusive Design Interior won the Age UK Award for Inclusive Design, the Lady Hamlyn Design Award, the Worshipful Company of Carmen Transport Design Award and was shortlisted for both the Pininfarina Design Competition and the Car Design News Interior Motives Design Awards. His project featured in the Futures Gallery exhibition at the London Transport Museum. Setting up studio Niels completed vehicle, product and research projects.

niels.vanroij@network.rca.ac.uk

Hawys Tomos

Hawys graduated from Innovation Design Engineering at the Royal College of Art in 2011. She has a particular interest in the human aspect of design, from behavioural patterns and instinctive actions to medical devices and biomechanics. Previously, her love of dance and interest in the limits of the human body inspired her to study movement in the guise of Mechanical Engineering at Imperial College London. She was awarded a Dyson Bursary in 2011.

hawys.tomos@network.rca.ac.uk

Tom Stables

Tom graduated from BA Product Design at Central Saint Martins College of Art and Design in 2006. Setting up studio he completed interior, lighting and product design projects for a range of clients including Paul Smith, LVMH, Vtech and Hulger. He graduated from the RCA with MA Design Products in 2010. His work has always been driven by an interest in people, which led to an inclusive design emphasis in his graduation show.

tom.stables@network.rca.ac.uk

Paulina Yurman

Paulina Yurman is a designer researcher currently doing a PhD at Goldsmiths on the role of technology as a nanny, as an escape from domesticity and in the conflicts of worker/parent identities. Paulina graduated from the RCA in Industrial Design Engineering in 1996, after which she went to work as a Senior Designer for LEGO in Denmark, before setting up her own practice in London, designing products and furniture. Paulina has a keen interest in innovation and creativity in everyday life behaviour.

paulina.yurman@rca.ac.uk

Peter Ziegler

Peter completed his BSc in Industrial Design from the University of Cincinnati in 2003 and graduated from the RCA Design Products course in 2011. He has accumulated experience in design from endoscopic surgical procedures to articulating ethical retail experiences for mobile phone service providers. His professional life has largely been shaped by his time spent at design research and strategy firm Gravitytank Inc in Chicago, where he got his feet wet in ethnography and product and service definition.

peter.ziegler@network.rca.ac.uk

PUBLICATIONS

Selected Publications, Presentations, and Conferences

Publications

Bichard, J. & Gheerawo, R. (eds) (2013) *The Design Journal*, Volume 16, Number 2, Bloomsbury Journals

Bichard, J. (2013) 'Leaving the Anthropology Department Behind' in the *Journal of Finnish Anthropology*

Flowers, S. & Voss, G. (2013) 'User innovation in the music software industry', *The Oxford Handbook of the Creative Industries* (Eds. Jones C, Sapsed J and Lorenzen M), Oxford University Press

Lockton, D., Harrison, D. & Stanton, N.A. (2012) 'Models of the user: designers' perspectives on influencing sustainable behaviour'. *Journal of Design Research* 10(1/2), 7-27

Lockton, D., Harrison, D., Cain, R., Stanton, N.A. & Jennings, P. (2013) 'Exploring problem-framing through behavioural heuristics', *International Journal of Design* 7(1), 37-53

McGinley, C. & Gaudion, K. (2013) 'Outdoor environments for adults with autism', *World Health Design* January 2013

Myerson, J. (2013) 'Design for the Fourth Age' in *Improving Later Life: Understanding the Oldest Old* ed. Davidson, S., Goodwin, J. & Rossall P., Age UK London

Myerson J. (2013) 'Workplace and Wellbeing' in *Wellbeing and the Environment*, Ed. Cooper, R. & Burton, E. Wiley-Blackwell

Myerson J. (2013) 'The Evolution of Workspace Design: from the Machine to the Network' in *The Handbook of Interior Design*, Ed. Brooker, G. & Weinthal, L. Berg

Phillips, R., Lockton, D., Baurley, S. & Silve,

S. (2013) 'Making instructions for others: exploring mental models through a simple exercise', *Interactions* 20(5)

Voss, G. (2012) 'Treating it as a normal business': Researching the pornography industry. *Sexualities* 15:3-4

Voss, G. & Carolan, N. (2012) User-led design in the urban/domestic environment, *Journal of Urban Technology*.19:2

Voss, G., Nightingale, P. & Tollady, C. (2012) *European Instruments to Support Service Innovation, INNO-NETS: European Union*

West, J., Davey, G., Anderson, A., Matthews, E. & Myerson, J. (2012) 'Designing out Medical Error (DOME): Establishing an evidence base to design products and equipment that better support surgical wards' *World Health Design* 5(4), pp. 48-55

Keynote and Invited Presentations

Atkin, R. (2013) 'Inclusive Design of Pedestrian Areas', *Chartered Institute of Highways and Transportation*, Greater London Branch, London

Fusari, G. (2013) 'Redesigning the UK Emergency Ambulance: a business case for integrating human factors', *Design of Medical Devices Conference*, University of Minnesota, Minneapolis, USA

Fusari, G. (2012) 'Reducing Violence and Aggression in A&E Through a Better Experience', *Time to Think Differently*, The King's Fund Annual Conference, London

Fusari, G. (2012) 'Redesigning the UK Emergency Ambulance', *Time to Think Differently*, The King's Fund Annual Conference, London

Gheerawo, R. (2012) 'Design, Health &

Patient Safety: A People-centred Approach to Innovation', *Design Medical – Inventer les Modes de Soins de Remain*, Cite Du Design, France

Gheerawo, R. (2012) 'From 3 to 30: Design and Ageing 2030', *Ageing Design Challenge 2030*, RMIT, Australia

Gheerawo, R. (2013) 'Design for Later Life: a People-centred Approach', *Design for Living in Later Life*, KT Equal, UK

Gheerawo, R. (2013) 'User-centred Design', *Inclusive Design*, King Fahd University, Saudi Arabia

Gheerawo, R. (2013) 'Alternative perspectives: Building for remaining abilities not disabled people', *Inclusive Design, Accessibility and Sustainability in Adaptive Architecture*, Naidex, UK

Gheerawo, R. (2013) 'Design Thinking and People-centred Innovation', *Inclusive Design Workshop*, Norwegian Design Council, Kristiansand, Norway

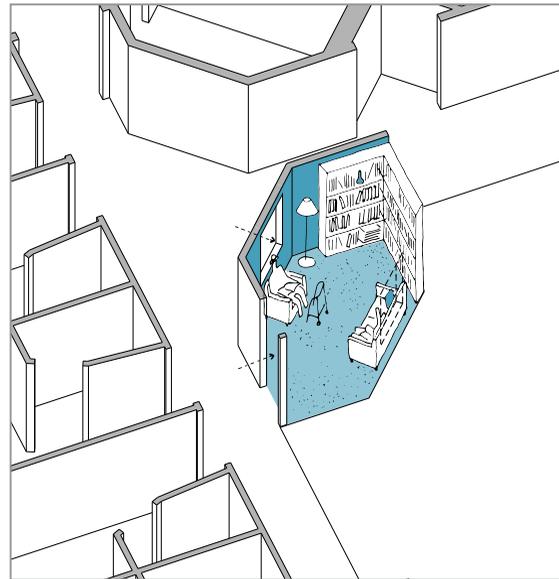
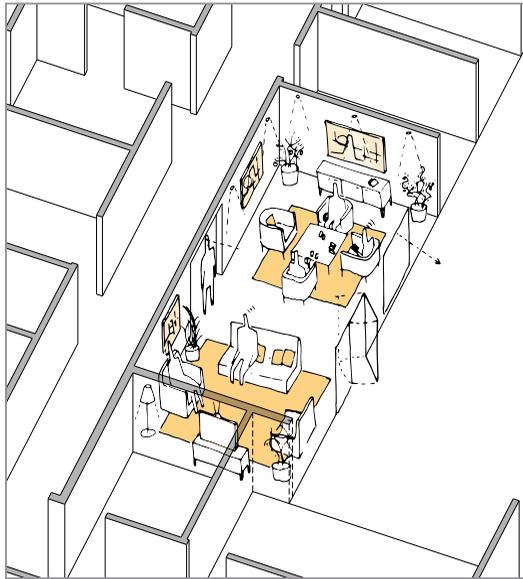
Gheerawo, R. (2013) 'Making a Difference: Building and Age-Inclusive Attitude', launch event, Channel 4, Mature Marketing Association, London

Matthews, E. (2012) 'Shaping the Future - Evidence-Based Design from User-Centred Research', presentation and paper, *Council of Ambulance Authorities Conference*, Hobart, Australia

Matthews, E. (2013) 'Inclusive Design - a People-Centred Approach', presentation and paper at *MICA Conference*, Brazil

Matthews, E. (2013) 'User Engagement: The "Magic Ingredient" In Designing And Commercialising Successful Healthcare Products', presentation at *Design of Medical Devices Conference*, University of Minnesota, USA

- McGinley, C. Dong, H. & Macredie, R. (2013) 'Exploring the potential of people-based information and empathy resources with professional designers.' IASDR 2013, Shibaura Institute of Technology, Tokyo, Japan
- McGinley, C. (2013) 'Designing for Later Years', Add Healthy Years to Longer Lives Conference, London
- McGinley, C. (2013) 'People centred approaches: route to information, insight and inspiration.' Telecare and Independent Ageing Conference, London
- Myerson, J. (2012) 'The problem comes first: exploring social challenge through design', National University of Rosario, Argentina
- Myerson, J. (2012) 'Design to improve wellbeing and quality of life', INTI (National Institute of Industrial Technology), Buenos Aires, Argentina
- Myerson, J. (2012) 'Ageing and the Environment', Ageing Research Day, Brighton and Sussex Medical School, UK
- Myerson, J. (2012) 'Programmable Space: design strategies to re-tune the office environment', WorkTech Holland, Zeist, The Netherlands
- Myerson, J. (2012) 'Living Environments for Adults with Autism', A Spectrum of Needs Symposium, Technical University of Delft, The Netherlands
- Myerson, J. (2013) 'Design and Patient Safety', CPSSQ (Centre for Patient Safety and Service Quality) Annual Symposium 2013, Imperial College London
- Myerson, J. (2013) 'Designing with people: fixing the system or transforming it?', Knowledge of Design Week, Hong Kong Design Centre, Hong Kong
- Myerson, J. (2013) 'Design and Behavior Change', Workshop on Influencing Behavioural Outcomes, Arup London
- Myerson, J. (2013) 'How Design Thinking Can Support and Influence Innovation in Healthcare', The King's Fund conference, Harnessing Innovation in the NHS, Royal College of Medicine, London
- Voss, G. (2012) 'Open Hardware Toolkits for User-Led Design', Open and User Innovation Workshop, Harvard University, USA
- Voss, G. (2013) 'Designing Genderqueer', Spotlight on Genderqueer Conference, Warwick University
- West, J. (2013) 'Designing Out Medical Error', Design of Medical Devices Conference, University of Minnesota, Minneapolis, USA
- Conference Proceedings**
- Bichard, J., Jain, J., Kirk, D. & Ladkin, A. (2013) 'Family Rituals 2.0. Overcoming distance in the work-life balance of mobile workers' paper presented at University of Vienna
- Bichard, J., Greene, C., Ramster, G. & Staples, T. (2013) 'Designing Ethnographic Encounters for Enriched HCI in Interaction Models and Techniques for Ageing and Impairment: Universal Access in Human-Computer Interaction Proceedings of HCI, Nevada, USA, Springer
- Bichard, J & Ramster, G. (2013) 'Pee-democracy: Opening data to the Great British Public Toilet Map' in Online Communities and Social Computing , HCI, Nevada, USA, Springer
- Bichard, J & Ramster, G. (2013) 'New Digital Dynamics of Ageing; Tools to facilitate Policies The Great British Public Toilet Map', International Association of Gerontology and Geriatrics, Seoul, South Korea
- Fusari, G. & Matthews.E. (2013) 'Redesigning the UK Emergency Ambulance', poster presentation at Design of Medical Devices Conference, University of Minnesota, Minneapolis, USA
- Gaudion, K. (2013) Poster and Presentation, 10th Autism-Europe International Congress, Budapest, Hungary
- Gheerawo, R. (2012) 'Universal Design Universal Challenges: Progressing People-centred Design in the 21st Century', 4th International Conference for Universal Design, IAUD, Fukuoka, Japan
- Lockton, D., Bowden, F., Greene, C., Brass, C. & Gheerawo, R. (2013). 'People and energy: A design-led approach to understanding everyday energy use behaviour'. EPIC 2013: Ethnographic Praxis in Industry Conference, Royal Institution, London
- Lockton, D., Cain, R., Harrison, D. & Nicholson, L. (2013). 'Carbon Culture at DECC: Digital Engagement for Sustainability at Work'. HCI 2013: 27th International British Computer Society Human Computer Interaction Conference: The Internet of Things, London
- Timlin, G. & Gheerawo, R. (2012) 'Design and Dementia: Using Universal Design processes to Improve Service and Design Innovation' in proceedings for the 4th International Conference for Universal Design, IAUD, Fukuoka, Japan
- West, J. (2013) 'Designing Out Medical Error', poster presentation at Design of Medical Devices Conference, University of Minnesota, Minneapolis, USA



Sketches by Research Associate Ben Koslowski for the NHS Forth Valley project

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The Helen Hamlyn Centre for Design,
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Published by
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Royal College of Art
Kensington Gore
London SW7 2EU
T: +44 (0)20 7590 4242
F: +44 (0)20 7590 4244
hhcd@rca.ac.uk
www.hhcd.rca.ac.uk

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Front and back covers:

Healthy ageing: Helen Hamlyn Research Associate Peter Ziegler participates in the exercise routine of an older person in Hyde Park, London, as part of a project with Panasonic to explore future technology services to support personal health



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