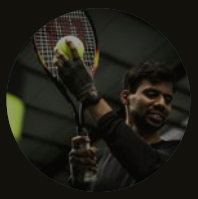
DESIGN.DIFFERENT

THE HELEN HAMLYN CENTRE FOR DESIGN

Vol 2, October 2021

30 YEARS



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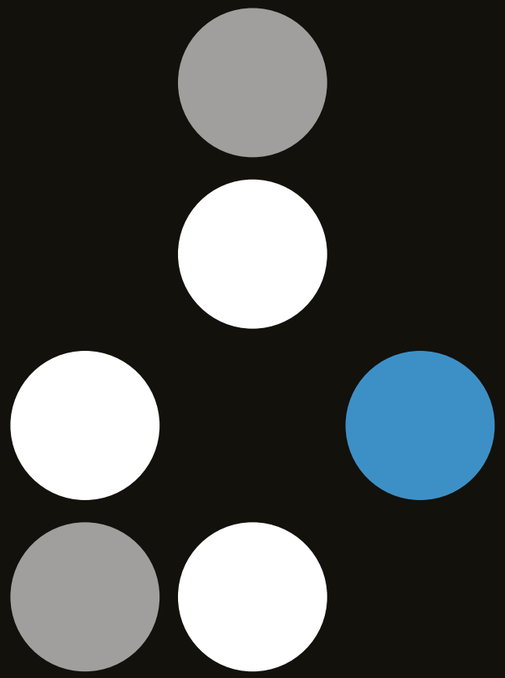

DESIGN. DIFFERENT 2021

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Design.Different
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HELLO...

This magazine describes the work of the Helen Hamlyn Centre for Design at the Royal College of Art that took place between October 2020 and September 2021, marking the 30th year of our existence. It features articles from our team describing inclusive design – a process whereby designers include the widest number of people especially those excluded by age, ability, gender or race. Articles feature future-facing reflections as well as reports on existing projects.

The magazine title comes from this simple idea: we design with a difference, to make a difference. We Design.Different!

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LOOKING BACK

30 YEARS

Prof Jeremy Myerson – Helen Hamlyn Professor of Design

The Helen Hamlyn Centre for Design celebrates its 30th anniversary in summer 2021, making it the longest-running centre for design research in the history of the Royal College of Art.

I've often been asked – as the Centre's co-founder with Roger Coleman, former director and now Professor Emeritus – to explain the origins of the Helen Hamlyn Centre for Design, how it has evolved and why it continues to be relevant today as a pioneer of inclusive design.

I've never really given an adequate answer, still less a comprehensive analysis.

So I decided to write a book – *Designing a World for Everyone: 30 Years of Inclusive Design* – which charts the history of inclusive design through the lens of the Helen Hamlyn Centre for Design's own projects in the field over three decades.

To do this, I've picked thirty everyday artefacts and environments and explored our influence on them. These cases vary in scale. Some are simple, hand-held objects such as a shatterproof beer glass, a jam jar with a square lid for easy opening or a carbon-fibre crutch styled like sports equipment. Others form part of large and complex environments or systems – the care home, hospital, streetscape, workplace, riverfront or airport, for example.

Some design solutions have reached the market or influenced practice; others we can file under 'ideas for the future'. All reflect an inclusive approach which we might describe as designing *with* people, not designing for people. The book aims to be as honest about our failures to reach the market as it is open about our more successful collaborations with industry.

Looking back, I believe that our approach has been marked by a combination of social activism with creative design and commercial application. With a targeted approach, we've been able to collaborate widely with business and academia, experiment with new research methods and coach designers at all levels in the empathic techniques and ideas of inclusive design.

We've never viewed inclusive design as a fixed entity, preferring instead to embrace its fluid character. Design practice has evolved from physical artefact to digital experience, and social inclusion has broadened from a focus on age and disability to newer forms of inclusion based on race, health and social equity. Our job is to keep pace.

Jeremy Myerson is The Helen Hamlyn Professor of Design at the Royal College of Art. He co-founded The Helen Hamlyn Centre for Design and was its director from 1999-2015. *Designing a World for Everyone: 30 Years of Inclusive Design* is published by Lund Humphries.

"The objective was to focus on design for an ageing population. In other words, designing for our future selves"

Helen Hamlyn

FACING FORWARD

Rama Gheerawo – Director

'Inclusive design' consists of two aspects: 'inclusive' and 'design'.

The term 'inclusive' has recently gained traction as organisations rush to reconsider what inclusion means. We talk about inclusivity in four primary ways.

- Age: looking across the human lifespan to include older people
- Ability: addressing a range of physical, cognitive and sensory abilities
- Gender: understanding the evolving landscape beyond binary definition
- Race: including people from diverse backgrounds and cultures

The first two of these represent the foundations of inclusive design. The others speak to urgent and timely conversations. Considering all four ways takes account of the real lives of the 7.6 billion people on the planet.

These ideas resonate with a deep, global yearning for equity and inclusivity. They are not 'back burner', or 'boutique', approaches. They emerge from the social challenges around us and are at the root of many of our projects.

In relation to 'design', inclusive innovations should be attractive. Everyone, whoever and wherever they are, deserves high-quality, vibrant, design. Inclusive design has addressed a design industry that needed to evolve, one that marginalised people who are older or disabled. There is still work to do,, but are designers guilty of similar exclusion by gender and race?

New calls for activism and action punctuate our conversation, and design must play its role and address its responsibilities.

Inclusive design is a response to this challenge. With its people-centred ethos, it includes the needs of everyone, with different characteristics and in different contexts. The ideas in this magazine are prompts for conversation that represent an aspirational future for design.

None of this would be possible without the support of the Royal College of Art, where inclusive design was defined in 1994, and which now embraces a humanist, expansive and experimental approach. Lady Hamlyn and her Trust have given staunch and stellar support over the last three decades. Our collaborators and contributors have ensured that our projects are deployed in a way that adds diversity and value to design.

The same sun rises and sets on us all every day, but that day can bring a radically different experience for those marginalised by design. Inclusive design is our humble way of achieving greater balance and positivity. I hope it is a powerful tool for you, as it is for us.

"So often, health outcomes and life chances are driven by social determinants that can be shaped by designers, architects, and engineers working in concert with sound policy making. Design has a vital role to play in creating an inclusive world..."

Dr Paul Thompson,
Vice-Chancellor, RCA

REFLECTIONS

Helen Hamlyn CBE

My trust's partnership with the RCA began 30 years ago when the Design Age Centre was established. As an RCA alumni and fellow, I am well aware of the wonderful opportunities offered to postgraduate students there.

The objective was to focus on the necessity and importance of appropriate design for an ageing population. In other words, 'designing for our future selves'. At that time there were very few products available commercially to meet the needs of older people in their daily life, at home, in public places, transport etc.

The Centre firstly under the directorship of Roger Coleman was joined shortly afterwards by Jeremy Myerson as co-director. They started by introducing workshops where the graduate students could meet with older people from Age Concern and Help the Aged to discuss their needs by explaining the problems they faced in their daily lives. Thus, forming the concept of socially inclusive design which is the foundation stone of all the design thinking at the Centre today.

Now under the direction of Rama Gheerawo the Centre is progressing research and design on many diverse projects. It is highly respected and advises governments and companies around the world.

With the recent accolade of a £4.9 million grant from Research England to set up the Design Age Institute at the Centre, in partnership with the University of Oxford's Institute of Population Ageing, the National Innovation Centre for Ageing at Newcastle University, the International Longevity Centre and the Design Museum. The Institute will advise the government on appropriate design thinking for the growing ageing population.

Perhaps the most significant achievement of the Centre is that over the last 30 years it has become a global influence underlining the need for socially inclusive design for a more equitable and better future for everyone.

Top: Helen Hamlyn at the Centre's student awards pre-pandemic.
Bottom: Participants take part in a workshop for the Creative Citizens Project

ENGAGE WITH US

DIFFERENT WAYS OF WORKING

The Centre works on design, innovation and research projects with business, government, community and the public sector. There are a number of ways to engage with us and benefit from the value of an inclusive design approach:

- Design sprints (4–6 days) with Centre staff and RCA students to explore a particular topic through an inclusive design lens and develop a range of design concepts and scenarios that feed your innovation pipeline and future planning
- Pathfinder inclusive design projects (4–12 weeks) to scope new frontiers and innovation opportunities for a particular product, technology or service, or for the organisation as a whole
- Design research projects (6–18 months) where an RCA graduate is employed by the Centre to conduct an in-depth investigation on a particular issue or area of research interest
- Partnering academia and industry on research grants (1–3 years), leaning on our methods of stakeholder engagement, participatory design and inclusion
- Open Masterclasses and custom external education workshops and programmes in inclusive design, design thinking and creative leadership
- Keynotes, interviews, platform presentations and panel discussions on a range of inclusive design topics or applications within specific subject areas
- Conference, workshop and event support and partnership
- Membership of advisory boards, design awards and peer-review panels, and both academic and industry facing committees
- Authorship of articles for mainstream and academic publications
- Online, open-source resources from project reports, magazine articles, books and publications, to tools and platforms such as *www.designingwithpeople.org* and *www.creativeleaderscircle.rca.ac.uk*.

CONNECT

To keep up to date with the Centre activties, news, forthcoming events and job openings, follow us on social media. A complete list of our conferences, publications, as well as our project archive and staff profiles can also be found on the RCA website.

@hhcdesignrca

@HHCDesign

Helen Hamlyn Centre for Design

www.rca.ac.uk/hhcd

DESIGN AGE INSTITUTE

Colum Menzies Lowe – Director

The Design Age Institute has been running for just over a year – and what a year it's been. We've recruited a team of 12 online (I still don't know how tall they all are), begun significant research projects with our partners Oxford University and the International Longevity Centre UK, embarked on ambitious design projects with the National Innovation Centre for Ageing and scoped out powerful engagement activities with the Design Museum, not to mention launching our own website (designage.org) and a community engagement site, This Age Thing (thisage thing.co). Phew!

"Older adults have 70% of wealth in the UK but seem to be poorly served"

So, now we need to focus on the work itself. Whatever initiative we are pursuing, or whichever of our partners we are working with, the one issue that keeps emerging is ageism. The public narrative about ageing that seems to persist around decline, disability and societal burden is pervasive, like the lazy stereotype of the 'grumpy old person', resistant, reactionary and wilfully disconnected from the modern world. Neither of these, of course, remotely reflect reality, but they affect how older people are perceived and treated and how they are served by our public services and the high street. Older adults have 70 per cent of all household wealth in the UK, but seem to be poorly served. This makes no commercial sense – older people are apparently spending less and less as they age, not because they are incapacitated, or uninterested, but simply because their needs and wants are not being met.

Designers obviously have a role to play here. When designing products and services for older people it is too easy to fall into the trap of designing for 'the other', as if people over 50 (or wherever you draw the line) are significantly different – as if we suddenly change, having reached some arbitrary line in the sand. The simple truth is that we all age, continuously, and we will all get old: there is very little connecting older people as a single marketing category that differs from the needs of younger people. If you catch yourself thinking 'older people are ….' you're probably about to think or say something very inaccurate, and possibly inappropriate. The result of this 'othering' has resulted in a catalogue of products and services that at best are not fit for purpose, and at worst stigmatise and further marginalise an already alienated group of people. I encourage all designers not to design for the other, but to design for their future selves, to 'design.different'!

Top: Designers benefit from talking to older people. Middle: *A little bit of joy every day, that's our powerful message.* Credit: Eva Oosterlaken. Bottom: *Through the transformative power of design, we aim to help everyone age happier.* Credit: *The Design Museum*

Royal College of Art

DESIGN AGE® INSTITUTE

WHAT'S BEEN HAPPENING

Since it was established in April, the Design Age Institute has launched This Age Thing, a community where people can come together to help redesign a world in which we all live longer, more healthily and, of course, joyfully. With positive stories of ageing in a range of areas such as sport, music, fashion, design and technology, and opportunities to feed into live design projects, This Age Thing offers everyone the opportunity to get involved, share wisdom and use their lived experience to help all of us age better.

This Age Thing is not just online – it is going live from October 2021, with the launch of The Wisdom Hour, a new creative storytelling space celebrating positive stories of ageing. The Wisdom Hour invites people of all ages to the Design Museum for a cup of tea and the opportunity to listen, to learn, to share experiences and celebrate stories of getting older.

Together with the Design Museum we have also created a series of events that explore and celebrate healthy and joyful ageing in society and the innovation and design that will shape ageing communities in the future. These include Designing for Your Future Self, a series of talks which invites audiences to explore the ideas, trends and passions that are shaping our future lives. This first session, in September, titled Designing a World for Everyone, explores how design can be used to transform public spaces, towns and cities and communities to support people of all ages.

And we are very excited to share the news about a project that has only just started – with the Design Museum we will be working on Growing Together, a year-long age-friendly community garden project to turn the Design Museum's garden into a space which can be enjoyed by people of all ages.

Top: *Sharing your positive stories of ageing.* Credit: This Age Thing.
Middle Left: *Objects that bring joy at every age.* Credit: Eva Oosterlake.
Middle Right :*'Age' can mean many different things. What does 'Age' mean to you?* Credit: Eva Oosterlaken

DAI PROJECT UPDATES

The Design Age Institute (DAI) has embarked on several design initiatives, including work with Centaur Robotics, who have developed a two-wheeled personal electronic vehicle (PEV) to enhance the mobility of older people. The DAI is working on the design of proximity avoidance technology. By making the PEV a more appealing product, both for existing wheelchair users and those who have not previously considered using a wheelchair, there is significant opportunity to expand the mobility market.

In partnership with Newcastle University, we are working on projects that support technology developments to develop products that encourage personal mobility and simplify remote/online banking. We have issued a call-out for Pathfinder Projects, in which the DAI will support entrepreneurial businesses in helping to take prototypes to market in the home, health and work sectors. We are in discussions about working with four early-stage businesses and would welcome contact from other early-stage businesses, or people with ideas.

Finally, the DAI is launching the Hamlyn Walker Challenge. Founded by our patron Lady Hamlyn, this challenge is looking at the design of walking frames and aids for personal mobility for use both indoors and outdoors. This is focused on both improving their functionality and removing some of the social stigma attached to using them.

ACADEMIC DESIGN RESEARCH

Dr Chris McGinley – Senior Research Fellow
Dr Gerard Briscoe – Research Fellow
Sidse Carroll, PhD – Research Fellow

MISSION STATEMENT:

The work of the Design Age Institute seeks to create new knowledge and impact on design for ageing through interdisciplinary academic design research, building on the HHCD's 30 years of experience and practice relating to the needs of older people. We have the following ambitions :

- Position design within gerontology and the wider research landscape, including theoretical frameworks, methods and tools for design for ageing.
- Identify specialist design expertise for exploiting higher education institution research more effectively.
- Establish research into lived experience to ensure that the voices of older people, diversity and different ways of ageing, are at the heart of future research collaborations, through a people-centred and inclusive approach, thereby addressing inequality.
- Explore enabling environments and spatial inclusion in an ageing society, helping older people to live independently in their homes, neighbourhoods and society.
- Explore technology futures to humanise emerging technology through inclusive and speculative design for older people.
- Influence policy-making in design-related areas, including housing, public planning, social care and healthcare, enabling a shift from crisis to aspiration through design guidance.
- Our research partner is the University of Oxford's Institute of Population Ageing.

CONTACT THE DAI

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Design Age Institute

THIS AGE THING

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This Age Thing

DESIGN FOR AGEING: LOGAN'S RUN VS INCLUSIVE DESIGN

Dr Gerard Briscoe – Research Fellow

The UN has identified population ageing as a global phenomenon: virtually every country in the world is experiencing a growth in older populations. Specifically, the 65+ age group will increase from the current 9 per cent to 16 per cent of the global population by 2050. The UK Office for National Statistics (ONS) anticipates a structural change: people will live longer and have fewer children. Specifically, 25 per cent of the UK population will be aged 65+ by 2050, an increase from 20 percent in 2018.

However, the current state of design, especially technology, reflects the scenario in the film Logan's Run, in which everyone is young and no-one lives to old age, rather than a more desirable, inclusive society in which all ages are catered for. This design paradigm nonetheless appears to be the dominant one. For example, Apple's Siri is apparently named after the android created to serve humans from the Logan's Run television series, with an uncannily similar verbal approach at its launch.

Emerging approaches for probable futures are potentially even more questionable than the present ones. For example, AgeTech is expected to be a $2.7 trillion industry by 2025. While superficially desirable, the approach of designing exclusively for older people is problematic – failing to adopt inclusive design approaches in the initial stages of technology developments cannot be remedied in subsequent specialist technology, which would be inherently restricted, even assuming it was inclusive in other ways: it would only be appropriate for crisis purchases, and its appeal would be limited due to its potential and perceived stigma.

Designers therefore need to move beyond ageist stereotypes, whether negative or positive, as the majority of older people – 58 per cent in the UK, according to the ONS – have full physical and mental ability. Ageing populations are also diverse, and design needs to embody this diversity to bring living longer closer to living well. Overall, adopting an inclusive design approach would enable the creation of useful, appealing design for adults of all ages, and create the inclusive futures we need.

AGE AND DIVERSITY

Dr Chris McGinley – Senior Research Fellow

Last year's Age and Diversity summary discussed how we could emerge from a difficult year with purpose, ensuring we learn lessons from the inequalities magnified by the pandemic. This year, much of that message remains unchanged. Remote research is now the norm, and over the last 18 months we have honed our skills of remote conversation, connection, and co-design. It has taken a little more time and inventiveness, but in many ways these remote modes of exchange have been more successful than we anticipated.

With the Connected Places Catapult we created 'Personas Plus', capturing real-life experiences of a broad range of people who could all be considered 'older', living through profoundly different circumstances, highlighting that age does not define home and domestic life.

With Cartwright Pickard we understood the UK's housing crisis as not just about first-time buyers, although some considerations – location, availability and affordability – are certainly shared. Older people's desires around home are nuanced, and rarely about retreating from 'the bustle' to quiet solitude – instead they are about local provision and opportunity, neighbourhood experiences and social interactions. Our pathfinding project will develop new typologies for later life living, including affordable build to rent models.

With Invisible Creations we are exploring diversity in elder experiences. The wide range of existing housing stock that older people in the UK currently live in presents not only a complex challenge, but also the need for diverse options – we already have a range of initial design concepts, from the simple to the sublime.

We continue our work in neurodiversity, establishing a new two-year project with previous partners Heart n Soul, through the Common Ambition programme funded by the Health Foundation, continuing to use the power of co-design – in this instance to enable equitable health services for people with learning disabilities and autism.

Our REMAIN project with King's College London is at the extremely exciting stage of detailing and prototyping. The project insights are now embedded within a

wearable unit, which will shortly be on the wrists of the same young people with ADHD who have accompanied us on a remote co-design journey.

Finally, we are advancing our previous work on Vocal Accessibility with Tata Consultancy Services. This project paves the way for new paradigms of accessibility through new modalities, in order to guide new products and interactions towards more inclusive sonic experiences.

This year has demonstrated resilience and purpose: we and the people we engage with have adapted, and the energy and enthusiasm our projects generate fills us with optimism going forward.

Above: Two participants model making in a co-design workshop. Right: Sketch of initial design interventions for later life products for the Homes that care: Home Comforts project

"At the Centre we speak about life stage rather than age. Numerical age does not correlate to life experiences"

BELIEVE IN US

Led by Research Associates Dr Katie Gaudion and Dr Will Renel, the project will create spaces put people with learning disabilities and autistic people in control of redesigning health services. Health services can be difficult for people to navigate, and they can be even more confusing and overwhelming for people with learning disabilities and autistic people. Over two years, people with learning disabilities, autistic people and health professionals, will use co-design processes to work together in an equal way. The project is underpinned by a dynamic partnership through which trust, respect and love can be utilised to improve the culture and quality of relationships that are at the heart of healthcare services.

The project will create spaces in which experiences are shared, decisions are made and relationships are reframed, opening up radical new ways of delivering healthcare for people with learning disabilities and autistic people. We want to improve the motivation and morale of health and social care professionals, giving them tools to focus on the core purpose of their jobs; our outcomes support the NHS Long Term Plan. Ultimately, we want to show how disabled people can thrive when they engage with healthcare services that have been co-designed with them in mind.

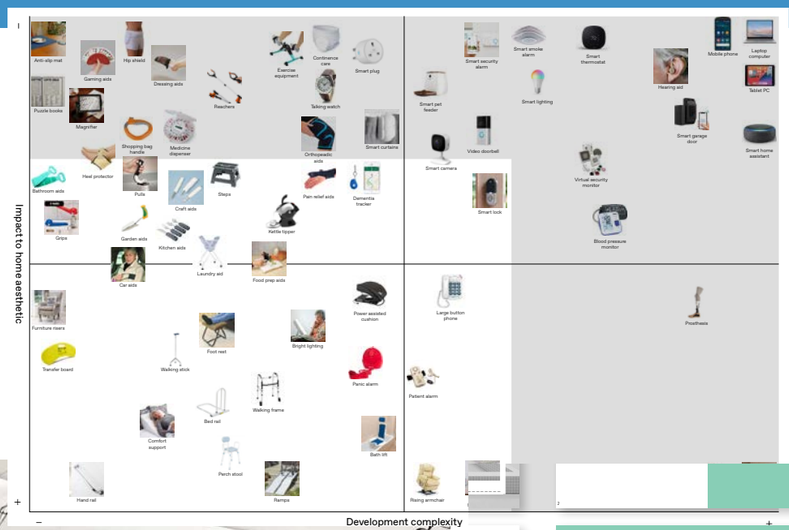
HOMES THAT CARE: HOME COMFORTS

Products for later life address critical human needs; they keep people safe, secure and independent as they age. However, most manufacturers tend to focus on utility, prioritising functionality and cost whilst neglecting consumers' aesthetic preferences. The resulting products can make people's homes feel 'clinicalised', and this is the main reason why people resist adapting their homes, which places them at risk.

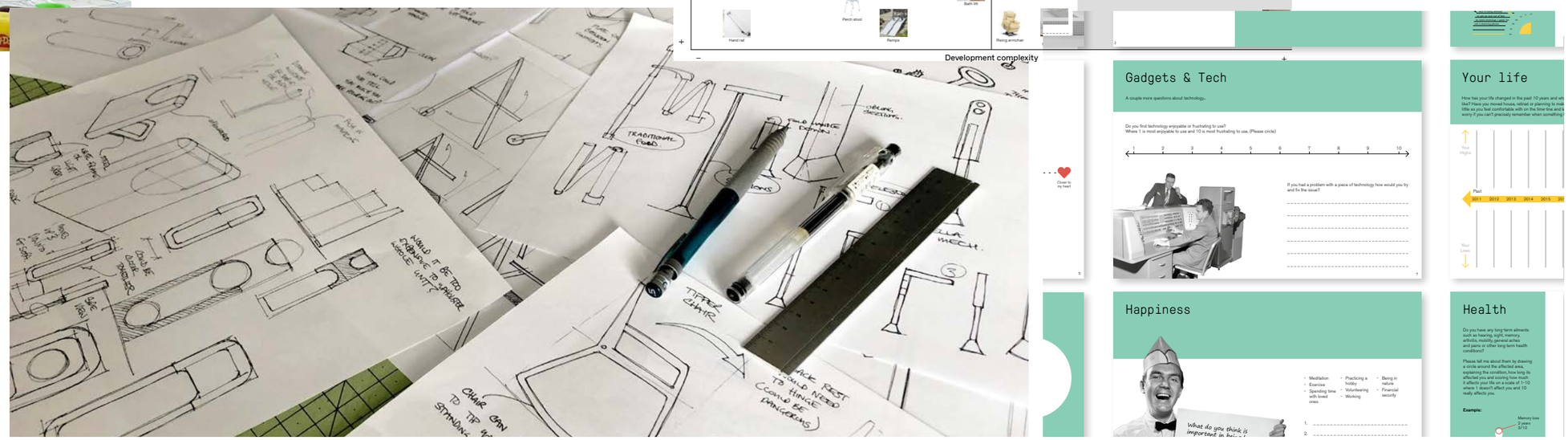
Launched in 2020, Invisible Creations aims to address these shortcomings in the market by developing products that help older people to live healthier, happier lives in their own homes for longer through the use of insightful and elegant design.

The 'Homes That Care: Home Comforts' project is a collaboration between designers from the HHCD's Age & Diversity Research Space and Invisible Creations. Together, through a human-centred design lens, we are investigating how people aged 65+ wish to engage with and experience products and environments for later life.

By the end of 2021 the team will have developed a suite of concepts, which respond to people's needs and aspirations, enabling people to transition smoothly from agile to fragile, without compromising their living spaces.



Left: Territory scope mapping later life products by impact to the home aesthetic and development complexity. Below: A design probe tool to remotely gather initial background information from participants

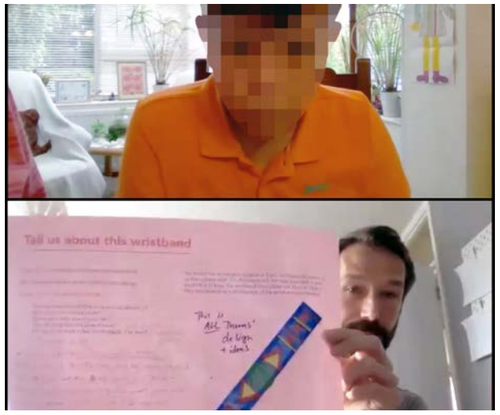


VOCAL ACCESSIBILITY 2021: AN INCLUSIVE DESIGN APPROACH

Accessibility design and research has traditionally focused on physical aspects. Whilst there has been some progress made in the last decade in the field of accessible HCI, it is still a relatively new field of research, with limited practical application. During 2018, HHCD Director Rama Gheerawo and Research Associate Juliette Poggi worked in collaboration with Tata Consultancy Services (TCS) to asses the accessibility of voice user interfaces (VUIs) and develop a set of guidelines that can be used by designers and technologists when developing new products and interactions. The Vocal Accessibility 2018 (VA 2018) project led to the creation of draft guidelines that were tested with TCS design teams, with positive results.

Right: A visually impaired interviewee showing how he uses a screen reader on his iPad

Below top: Remote co-design sessions with families living with ADHD. Below bottom: PACE Bands that will be available for children to trial



The aim of Vocal Accessibility 2021 (VA 2021) is to continue the development of these guidelines. That is, to develop an official standard for vocal interaction that can be implemented by businesses during new product innovation.

With the aim of developing these standards, the HHCD and TCS are partnering with an international institution which has longstanding experience in developing standards in the field of technology and accessibility. Through joint collaboration the three partners will work on the development of a set of standards that address accessibility requirements for VUI services and products.

PACES (AKA REMAIN)

Attention Deficit Hyperactivity Disorder (ADHD) affects one in 25 children. Those impacted can experience severe problems of inattention, impulsivity and hyperactivity. Half of the children diagnosed with ADHD require medication which needs to be closely monitored by the adults around them to ensure it does not affect their sleep and mood. Currently, ADHD symptoms are tracked via paper-based questionnaires. However, results can be subjective, leading to inaccuracies.

Designers from the HHCD, Led by Research Associate Stephen Douche, are collaborating with child psychologists from King's College London and software and hardware engineers from Mindpax to develop the world's first ADHD measurement tool, the PACE Band. Children will wear this activity tracker during their 12-week diagnosis and medication phase. The PACE Band will provide a objective, complementary measurement tool for clinicians, teachers and parents, allowing them to track a child's progress in real time.

Currently in the second year of a four-year study, the team hopes to test 120 units, along with companion apps, by the end of 2021, with the aim of a more substantial clinical trial by the end of 2023.

Left: A visually impaired interviewee showing how he uses his Mac with a braille keyboard. Below: A paperclip

HOW DOES A PAPER CLIP MAKE YOU FEEL?

Dr Katie Gaudion –
Senior Research Associate

WHY THE DESIGN INDUSTRY NEEDS MORE AUTISTIC CREATIVE TALENT

Inclusive design has an emphasis on how design can help and improve autistic people's lives, but let's flip this discourse and explore how autistic people can support and drive design.

At the HHCD we have been fortunate to collaborate with autistic people on a number of design projects. A novel outcome has been that whilst there were commonalities of experience between myself and some autistic participants, there were also moments when we did not share the same frame of reference for everyday objects. For example, when presented with a paperclip or desktop fan I would interact with them the way they were designed to be used. But for Jack, holding a paperclip provided comfort and support when he felt anxious, and for Nicky, her collection of desktop fans are not to cool herself down but to listen to the sound they make: a C minor chord on speed dial 2. It's moments like this that challenged my own perceptions and assumptions about how people experience things, exposing me to a different way of thinking and being in the world.

On reflection, Nicky and Jack used divergent thinking, a creative thinking technique designers are familiar with when developing new ideas and multiple solutions. Simon Baron-Cohen's latest book, *The Pattern Seeker* (2020), talks about the link between an autistic person's pattern-seeking and hyper-systemising abilities with invention and creativity. The book concludes: 'Among the new generation of hyper-systemizers will be some of the great inventors of our future. Their novel ideas can become innovations.'

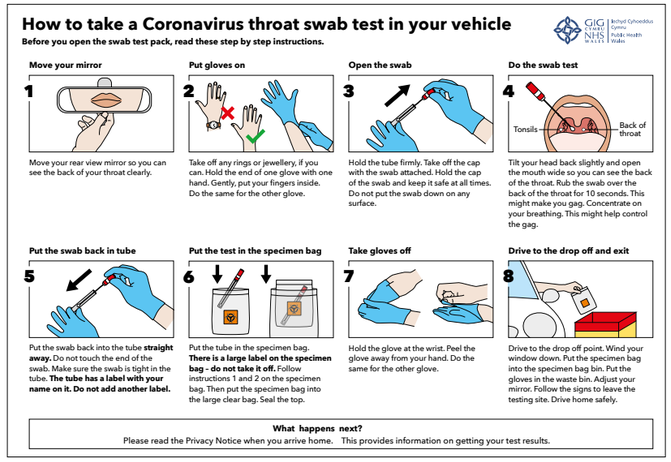
As the design industry thrives on producing unique ideas and innovations, they are at the forefront in integrating autistic creative thinkers of the future: after all, seeing things differently is what being a designer is all about.

HEALTH CARE

Jonathan West – Senior Research Fellow

The Healthcare Research Space witnessed huge changes in it work over the past year. This has raised fundamental and exciting questions about the nature of design in healthcare: how can we reduce the impact of Covid-19? How can we benefit an overstretched health service? How can we best prepare ourselves for future threats?

It also raised very practical questions: how can we help in the immediate future with Covid-19 efforts? How do we continue with our existing activities when all clinical research not related to Covid-19 is on hold? How do we complete our projects when front-line access (central to the way we work) is impossible?



Top: Instructions developed by the Centre for taking a throat swab test. Bottom: Researcher Indira Knight testing out the virtual environment for the gameChange project. Bottom right: Screenshot of virtual reality space to help people with psychosis

COVID-19 RESPONSE

Building on earlier work with UCLH to create new maps and signage for their COVID-19 theatre and recovery complex, and with Public Health Wales to design the self-swabbing instructions for testing kits (now in use in all drive-through and home testing), we are now working with Imperial College on far-reaching research into how to better protect front-line workers. Using Hololens headsets, the concept involves reducing the number of front-line staff required to be physically present in a hazardous situation. The HHCD is designing visors and torch mounts so that full face protection is given.

INCLUSIVE DESIGN AND HEALTHCARE 2021

Following our efforts in the first wave of the pandemic, we undertook further work with our clinical contacts to look at ways of protecting front-line staff working in potentially hazardous scenarios. Two major collaborative projects were successfully concluded, using improvised working methods, as direct access to our clinical partners was not possible.

As attention in healthcare returns to treating non-pandemic issues, the need to treat more people in a cheaper and more efficient manner is growing. Design can help to place human needs at the heart of innovation, making sure that patient safety and people's experience are primary considerations.

GAMECHANGE VR

The HHCD has been involved in a three-year project, led by Oxford University, to develop a Virtual Reality (VR) treatment for people receiving services for psychosis. This led to a fully functioning intervention, now in full clinical trials – one of the first of such treatments to reach this stage.

Research Associate Indira Knight not only led the research, which placed people with lived experience of psychosis at the heart of the design, but also published the methodology in the peer-reviewed journal *Design for Health*.

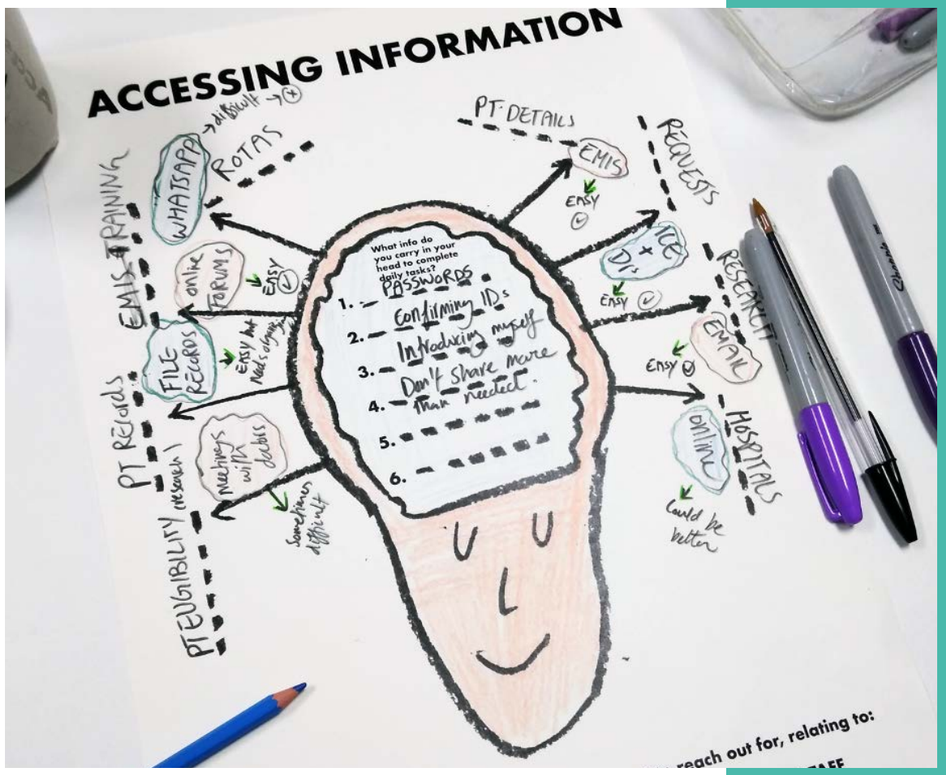
PASS – PRESERVING ANTIBIOTICS THROUGH SAFE STEWARDSHIP

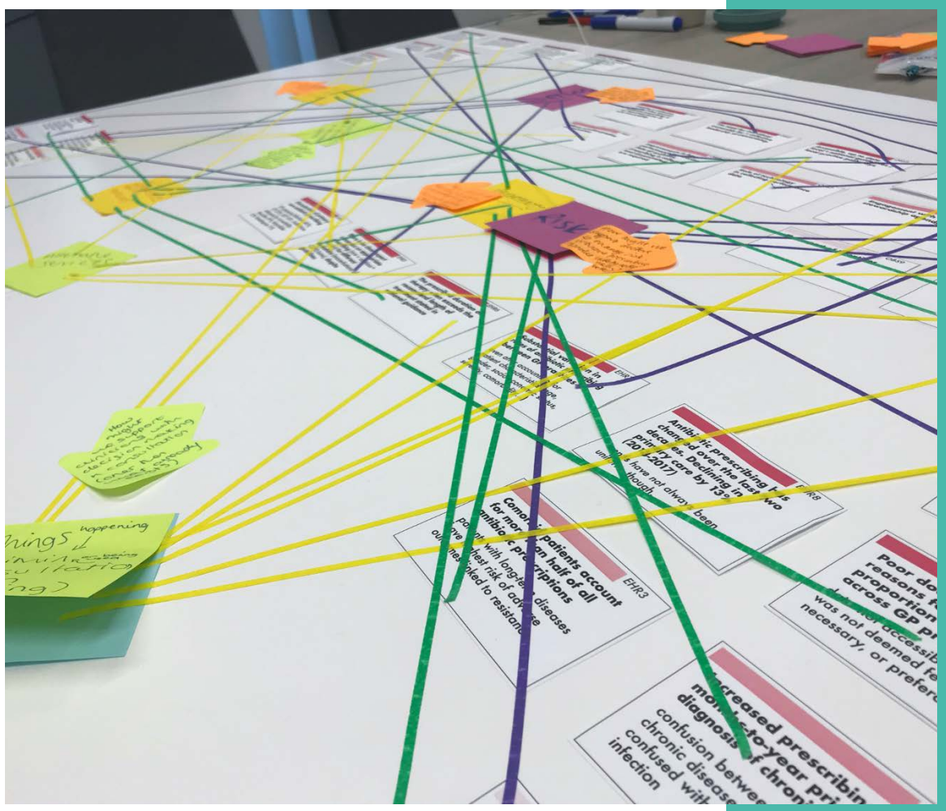
Another large multidisciplinary project, the PASS project, was completed this year – this aimed to promote good stewardship of antibiotics, and therefore reduce the growth of antimicrobial resistance ('superbugs'). Research Associate Rosanna Traina worked with UCL statisticians and UCL's Centre for Behaviour Change to discover how design might make a difference to stewardship.

Rosanna pioneered a methodology for garnering group consensus across a wide variety of expertise, with different fields and different data sets, to emerge with a set of coherent digital design interventions. These are detailed on the PASS project website (https://pass-antibiotics.github.io/about/pass-project); Rosanna is also documenting the methodology for peer-reviewed journals.

WHERE NEXT

As the world steps into a post-pandemic future, inclusive design has a vital role in addressing the challenges that are emerging as the healthcare landscape shifts. The role of AI in clinical decision support, the way in which information is interpreted by an overstretched workforce, and the increasing role of the patient and informal carer in healthcare delivery are just some of the imminent challenges we are working to address. Our aim, as ever, is to humanise healthcare.





Above: Two images showing design development work from the PASS project

TOWARD HUMANISED HEALTHCARE: DESIGNING THE TRANSFORMATION

Dr Melanie Flory – Associate Director, Research

The Office of National Statistics reported a £269 billion healthcare spend in 2020, with an estimated 564 million patient contacts with GP, hospital, mental health, NHS 111, community and ambulance services in 2018/19. This is the equivalent of every person in England being treated by the NHS ten times a year, or 1.5 million patient interactions every day! In the light of these numbers, *humanising healthcare* at home and globally is a no-brainer – but what does this mean?

Whilst a one-size-fits-all definition remains elusive, a systematic review of 1327 humanising health records and 14 full-text articles has identified thirty key elements of humanisation. Among these are *joy, patient dignity, adequate working conditions, a holistic approach and compassion.*

Where to start? Health and healthcare are systemic phenomena. The world faces new and evolving healthcare challenges of unprecedented scale and complexity. From the worldwide 'longevity revolution' and metabesity to the disruptive discoveries of the human microbiome and human connectome project, there is global agreement that healthcare, and the humanisation of it, is a wicked problem – something that our inclusive designers are familiar with.

Inclusive design is not just about creative processes, iterative prototyping and innovative thinking. These are but the outcomes of the designer's engagement with concepts, ideas and information. At the Centre we see inclusive design as a magnificent pathway in itself, towards understanding people, their needs, pain points and imagined utopias. This is what it means to be people centred. Co-designing *with* people is to humanise innovation.

Our designers and researchers are at heart inclusivity thinkers, who have the capacity, tools, research culture and design frameworks to be part of a multidisciplinary team of transformation professionals working together to understand, unravel and address the complex interdependencies involved in humanising healthcare.

The handful of healthcare projects presented here are really stories of what we do best – designing *with* people.

AGE

ABILITY

The same sun rises and sets on us all every day, but that day can bring a radically different experience depending on our age, ability, gender or race. These four areas form a basis for the inclusive design approach.

THE FOUR AXES OF INCLUSIVE DESIGN

Age: looking across the human lifespan to include older people
Ability: addressing a range of physical, cognitive and sensory abilities
Gender: understanding the evolving landscape beyond binary definition
Race: including people from diverse backgrounds and cultures

There is a growing call for new forms of action and engagement around equity, diversity and inclusion.

WE NEED TO RESPOND.

GENDER

RACE

INCLUSIVE DESIGN FOR BUSINESS IMPACT

Dr Ninela Ivanova – Innovation Fellow

BUSINESS CONTINUITY AND (RE)CREATION

How can inclusive design thinking, research and practice enable businesses to recover, transform and thrive in a Fourth Industrial Revolution (4IR), post-pandemic world?

The global impact of Covid-19 has posed unprecedented challenges to business continuity – the greatest worldwide societal and economic disruption since the Second World War. The pandemic has ushered in a new question for business and industry: *How can businesses continue, recreate, start up, transform and thrive in an environment that is almost entirely virtual?* Actively enabling can-do teams, collaboration, smart technology uptake, and cushioning financial shock, are some of the urgent business continuity challenges we face.

Innovation is the lifeblood of business. This is the central tenet of the new '*UK Innovation Strategy: Leading the future by creating it*', published by the UK Government's Department for Business, Energy & Industrial Strategy on 22 July 2021. It calls on businesses to make innovation central to everything they do, to help re-establish, transform and lead a robust, agile and thriving economy in the UK and beyond.

So what is the scope for design in enabling companies to fulfil this strategy, and seize the opportunities that an innovation economy can bring?

A pivotal moment in history, Covid-19 is a 'once-in-a-generation opportunity' to build on the ethos of cooperation and collaboration that has hitherto underpinned crisis management and solutions-finding and work together towards an inclusive and innovation-led economy, according to the Confederation of British Industry. This is echoed in the UK Government's Build Back Better campaign, which places people at the heart of economic recovery and the creation of new futures; the London Recovery Board's inclusive and collaborative cross-cutting approach of stakeholder engagement to deliver long-term economic and societal recovery, and the World Economic Forum's call for smart, clean and inclusive approaches to address uncertainty and business risks which have been amplified by the pandemic.

The call for people-centred approaches to economic and societal recovery by government, policy and business organisations creates scope to employ inclusive design as a mechanism for stakeholder engagement and inclusion in finding solutions for business continuity and (re)creation. The strength of the inclusive design approach lies in its potential to enable an equitable platform for co-creating contextually relevant, multi-perspective, inclusive and innovative solutions, applications and pathways.

The next stage of Inclusive Design for Business Impact sees us working with business – from the sole entrepreneur to global corporations – to co-create and deploy design thinking and inclusive innovation processes towards a robust yet malleable rebuilding of a prosperous, equitable and sustainable economy.

CASE STUDY

RESILIENCE

A case in point was our collaboration with the OnePlus smartphone technology company, who came to us with the specific request to help them define what 'resilience' meant for their brand, business and next-generation technologies.

"If there is one thing that the tech industry has not learnt yet, it is to leave a legacy and leave an imprint."

Tilen Pigac, PhD, OnePlus Head of Events and Community

Top: A new unboxing experience involving water soluble materials. Credit: Lissy Hatfield. Right: Speculative design scenarios to enable resilient transactions between people and technology

"How might OnePlus, through inclusive and resilient technology design, create positive impact for the individual, for their community, for society at large, and for the planet?"

Traditionally, inclusive design has helped companies innovate in products, services and user experience. Today, in this pivotal moment of recovery, transformation and pathfinding, organisations across sectors are realising that thinking inclusively about the way forward for their business and purpose can transcend a single-pointed focus of innovation.

A team of ten design researchers drawn from The Helen Hamlyn Centre for Design and RCA Master's students worked intensively over a six-day design sprint to explore the theme of resilience through a creative, inclusive, futures-focused and innovative lens.

The design sprint resulted in a range of design propositions that created an entire system of technological resilience. Examples included technology applications to support personal resilience, new material and packaging propositions, service design ideas that diversify OnePlus's community-centric approaches, and higher-level considerations for ethical and sustainable technology design, production and use cycles. These informed and inspired OnePlus in their pursuit and development of inclusive innovation that fulfils their vision and slogan – 'Never Settle' – and their aim to impact how future generations use technology.

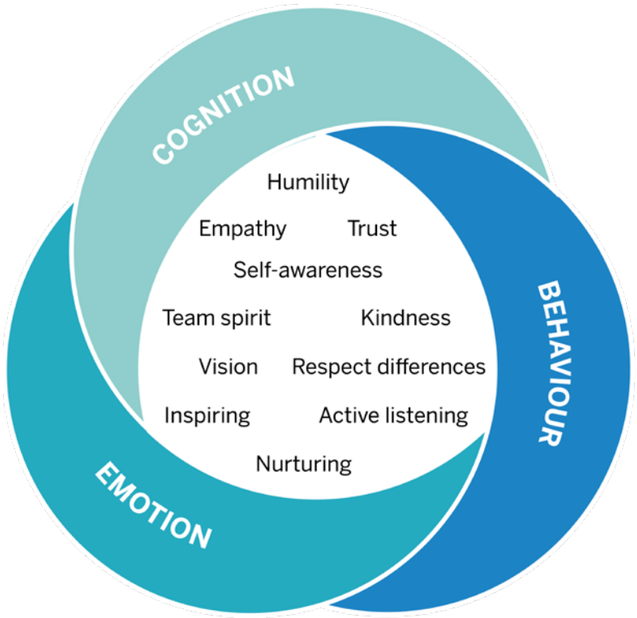
EVENTS & FORA

THE CREATIVE LEADERS CIRCLE

The Creative Leaders Circle is a platform that aims to build a worldwide open-source community that collaboratively defines, builds and grows leadership capacities and abilities. The need for a Creative Leaders Circle emerged organically in response to feedback from participants who had attended the Creative Leadership programme at The Helen Hamlyn Centre for Design over the last three years.

The first Creative Leaders Circle was held online on 10 February 2021, to enable an inclusive demographic across all continents to engage with each other and co-create a manifesto for global leadership. The event was attended by 125 people, who logged on from 31 locations across 25 countries. Participants were asked to discuss what was missing in leadership, to enable today's leaders to face the personal, professional and global needs, pain points and challenges of the workplace and working life. This resulted in the co-creation of 25 leadership manifestos.

The insights gathered were analysed thematically within the categories of cognition, emotion and behaviour, to enable an in-depth examination of the 'rich' meaning, ideas, and desires expressed within participant responses. The ten most common themes are illustrated below.



Further to the thematic cross-analysis of themes, the research lead – Dr Melanie Flory, HHCD Associate Director, Research – extracted four overarching themes that would quintessentially capture the leadership manifesto that unfolded from this open-source community participation. These were:

CREATIVE LEADERS CIRCLE THEMES

1. Put people first.
2. Leadership is not a lonely endeavour; it's a shared experience.
3. Soft skills are far from soft; they are a lifetime's practice.
4. Communities create and possess the power of the 'Creative We'.

Amidst the increasing demand for foresight and future-readiness in leadership, the Creative Leaders Circle unanimously called for global leadership models that are inclusive, contextual and responsive to the personal and professional needs of individuals and organisations.

More information at:
www.creativeleaderscircle.rca.ac.uk

IOB – INTERNET OF BEHAVIOURS: FUTURE NEW SERVICES AND APPLICATIONS

Internet of Behaviours (IoB) denotes the collection, usage and interpretation of data gathered via IoT devices. Such data offers invaluable insight into users' online (and offline) behaviours, preferences and interests. This raises many security and privacy concerns about what data is gathered and how it is stored, processed, accessed and shared, particularly at scale.

On 25 March 2021, Dr Ninela Ivanova joined a panel discussion at PrivSec Global, the international forum on data protection, privacy and security. The panel, led by Rob van Kranenburg, founder of the IoT Council, explored the complexities and the potential consequences for security and privacy in the current state of IoB industry practice. To future-proof developments in IoB exploitation, Ninela made the case for employing people-centred and values -led approaches to the design of IoT technologies, to ensure ethical, sustainable, inclusive and creativity-led systems and interactions.

Left: Overall themes of the open-source leadership manifesto. Top: A digital imprint. Throwback to our industry collaboration with Blackberry (2010). Design Credit: Clara Gaggero

FUTURE OF EDUCATION

CREATIVE LEADERSHIP IN SCHOOLS

Our Creative Leadership programme also became the platform for a Forum on the Future of Education, which explored people-centred and inclusive approaches to leadership within schools.

The event was co-curated and co-delivered by Lucy O'Rorke (The Helen Hamlyn Trust), Dominic Wyse (Helen Hamlyn Centre for Pedagogy, UCL), Qing Gu (UCL Centre for Educational Leadership), Lisa-Maria Muller (Chartered College of Teaching) and Rama Gheerawo and Ninela Ivanova (The Helen Hamlyn Centre for Design).

The forum, which took place on 15 April 2021, invited sixty stakeholders, including established and emerging school leaders, academics and educators, with the intention to engage, stimulate and enjoy thinking differently about leadership within education.

To kick-start the discussions, four thought provocations – from Professor Dame Alison Peacock, Professor Jeremy Myerson, Dr Melanie Flory and Judah Armani – presented different perspectives and approaches to education, from a wide range of contexts, including design, neuroscience and the criminal justice system.

A carefully curated programme of activities, using tools and methods from design, enabled participants to identify the issues they face in school leadership, share innovative approaches from their own practice, and cocreate a leadership manifesto that translates the shared knowledge and experience into people centred pathways for action and agency.

"Good leaders change organisations, great leaders change people."

Hoerr, 2005

INCLUSIVE DESIGN FOR SOCIAL IMPACT

Sean Donahue – Visiting Scholar from ArtCenter College of Design

Inclusive design does not just define a problem, it offers interventions that impact the day to day realities of people's lives across the globe. From intimate self care devices to infrastructures that form the built environments of the world's largest cities, inclusive design matters. Our focus on social impact is concerned with expanding the range of who is considered from a global perspective.

We are expanding the methods, tools, and worldviews that define Inclusive Design and impact. In the Centre, we see inclusive design as a framework to be evolved and developed in context. This research group advocates to move beyond the individual-driven and person-centred frameworks of inclusive design and instead work with local partners across the globe, including the people and the communities of support that make up their worlds – in the process as well as the outcome. This ensures that the act of design itself is also inclusive.

Initially working with migrant workers in the Middle East, older people in China, maternal health in Mozambique and communities excluded by race, geography or food in world cities such as London and Los Angeles. Social impact starts at home, but can impact everywhere.

Both the World Bank and the World Economic Forum speak about the importance of addressing social exclusion in supporting economic sustainability and stability. In the IDSI research group, we see 'social' as the third important component in a drive towards sustainable impact, alongside 'environmental' and 'economic' factors. The social is often less visible to design, and now is the time to bring it to the forefront of consideration. Design is a powerful tool that can consciously enable more inclusive practice, so we need to step out of our studios, step out of our silos of consideration and have a social response to the widest challenges of humanity.

"Inclusive Design has powerful application in meeting social challenges across the globe"

AI DESIGN LAB

Inclusive design has a real and ready application to the world of tech, especially to emerging areas such as Artificial Intelligence (AI). We ask such questions as how these technologies can benefit people with the greatest needs and be deployed to reverse exclusion. The Centre is working on a project as part of a collaboration between the Royal College of Art and Hong Kong Polytechnic University which established the PolyU|RCA Artificial Intelligence Design Laboratory (AIDL). This is a global first, creating a leading research facility to champion the integration of AI into the design of products and services. Its research deliverables will support a range of industries, including healthcare, manufacturing, hospitality and retail services.

Our work asks: how can 3D modelling technologies cater to the health behaviours and aspirations of older people in their homes, giving them five extra years of wellness, wellbeing and resilience in their own domestic spaces, on their terms? It aims to create a shift from 'home health monitoring' to 'home health enabling' by understanding the intersection between 3D modelling technology and the health and wellbeing needs of people at different stages of their lives. We will look at medical and personal health in the context of an ageing population, investigating how technological developments and capabilities can support the 'longevity economy'.

PUBLIC TOILETS RESEARCH UNIT

The Public Toilets Research Unit (PTRU) is a focused group within the Centre under the umbrella of Inclusive Design for Social Impact. The unit builds on a combined 30 years' experience of public toilets research undertaken by Professor Jo-Anne Bichard and Senior Research Associate Gail Ramster.

Outputs from the Centre's work includes inclusive design guidance, academic papers, book chapters, film contribution and the award winning InnovationRCA project The Great British Public Toilet Map. Following last year's success of Jo-Anne & Gail winning 'Standard Makers' awards for their contribution to the British Standards Safe working in a pandemic guidelines, they developed further inclusive design guidance in the publication 'Publicly Accessible Toilets after COVID-19' (https://rca-media2.rca.ac.uk/documents/PAT_COVID19.pdf).

The work was funded by the RCA's Research and Knowledge Exchange Office and included design contributions for HHCD Research Associate Imran Nazerali, and featured on Radio 4's You and Yours. The Public Toilet Research Unit and PiM.studio Architects have also been accepted onto the London Mayor's Designing London's Recovery programme. Their proposal called 'Engaged' will look at using empty high street units for shared public toilet provision with start-up businesses, as a contribution to critical public health infrastructure. They will be joining 20 other innovative projects to explore ways to design London's post pandemic recovery.

Above: A toilet door sign, Centre: Front cover of the 'Publically Accessible Toilets after COVID 19' publication. Left: Students prepare for an engagement workshop with migrant workers in the Middle East

TINKLE: TOILETS INNOVATION AND NEW KNOWLEDGE EXCHANGE

In 2021, the Public Toilets Research Unit (PTRU) launched the Toilets Innovation and New Knowledge Exchange (TINKLE).

TINKLE is a website (tinkle.rca.ac.uk) that aims to be a comprehensive resource for guidance, expertise and discussion on public toilet design and service delivery.

The project was initiated after the PTRU team recognised a problem: new toilets were being built that were not consistently designed to well-established best practice. The team realised that whilst few professionals specialise in toilet design, many designers may be tasked with designing or operating just one or two facilities in the course of their careers. Meanwhile, the guidance on toilet design is disseminated in multiple reports by separate organisations, manufacturers and research groups.

TINKLE aims to bring all this information together on one site, with a navigable interface that makes it easy to access knowledge. As well as the TINKLE resource bank, which includes regulations, guidance, reports, design guides and academic papers, the site offers two other knowledge exchange features: a network of experts and a discussion forum, Latrinalia.

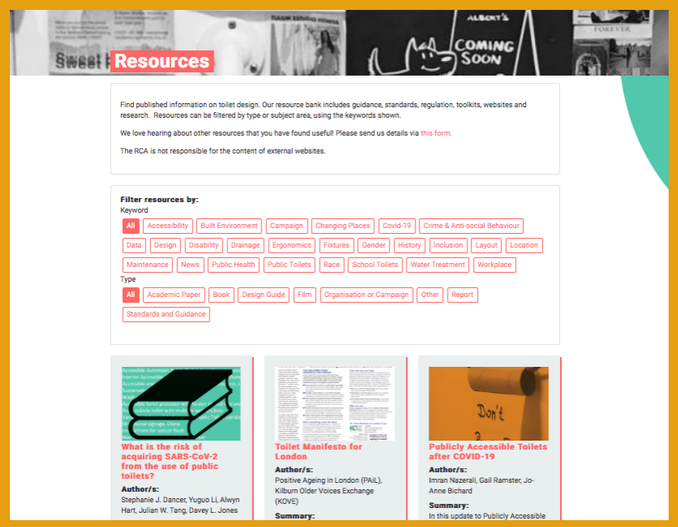
The TINKLE network is a directory of experts in toilet design and provision. Anyone can contact the network for their insight and advice on the latest developments in toilet design that may not have been documented yet.

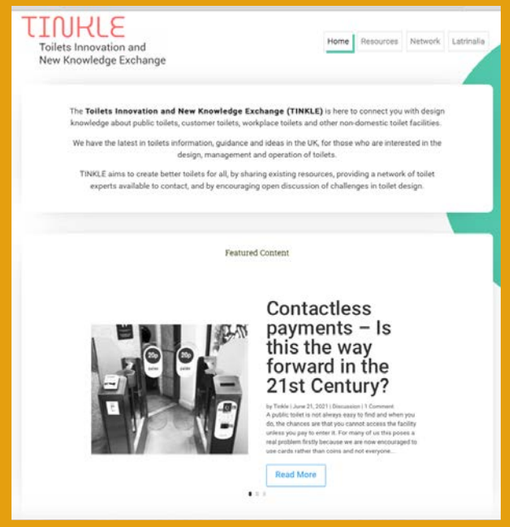
The name of TINKLE's discussion forum, Latrinalia, is the term for graffiti written on the walls of public toilets. Latrinalia continues this exchange – in a cleaner format – to more openly and collectively seek solutions for aspects of public toilet design to which no-one yet has the answers, as well as offering a space to announce developments, events, campaigns and research projects.

TINKLE has been created by the Public Toilets Research Unit, Royal College of Art, in partnership with the British Toilet Association and The Toilet Consortium.

Visit TINKLE at tinkle.rca.ac.uk or via twitter.com/PTRU_TINKLE

Below: Screenshots of the TINKLE website





INCLUSIVE EDUCATION

Rama Gheerawo – Director

As the HHCD embarks on its 30th year, it is now a good moment for us to think about developing teaching in inclusive design. The empathic attitude enshrined in the inclusive design approach can find powerful expression within education. This builds on the work of the Centre's PhD endeavours, in which PhD candidates are co-supervised with the RCA's Schools of Design, Communication and Architecture. All candidates have an inclusive and people-centred focus in their research, and are practice-based.

Inclusive education is an important part of an attitude and application that is developing rapidly within the field. Taught inclusive design courses are few and far between, but its ethos and understanding have permeated design practice widely. A key question is: how formal and formalised does inclusive design education need to be in order to develop impact and enable new generations of designers and researchers?

Alongside education, there is also a need for further research praxis and practice. We have come of age in terms of research, evidenced by the recent appointment of our very first Associate Director, Research, in January 2021. Dr Melanie Flory is a neuroscientist, psychologist and researcher with a track record of leading and delivering cutting-edge, multidisciplinary research. Her interdisciplinary research has spanned teams across Europe, USA, Asia and the Middle East for over twenty years. She has worked with inclusive design over the last five years, and joined our Creative Leadership team as a neuroscience project partner in 2018. Her appointment strengthens our research practice and grows our capability. Melanie will support the bidding process for more extensive research projects, take on leadership of our PhD programme, and investigate the feasibility of delivering inclusive design teaching modules.

The Research Excellence Framework (REF) is the UK Government's system for assessing the quality of research in all UK higher education institutions. For the 2021 REF assessment the RCA submitted nine impact case studies, of which three were written by the Centre. Ten staff from the Centre entered 19 research 'outputs', ranging from publications to exhibitions. Dr Emma Wakelin, the RCA's Director of Research and Innovation, noted the significance of our contribution to this important assessment of the College's high-quality research and the impact it has on the world.

CREATIVE LEADERSHIP EXTERNAL EDUCATION

External education is an important part of creative leadership. Our home-grown definition and model is valued widely by government, business, communities and individuals alike.

Open masterclasses, run by the RCA Innovation Education department, introduce the concept in detail to a wide range of people. Some have said...

- Creative Leadership will leave you bubbling with ideas and excited about a future we can create: one that is inclusive, compassionate, kind and valued.' (October 2020)

- 'I have not participated in a more valuable programme at a more crucial time in my personal history ... Our university has made a pledge to take a stand against systemic racism ... I was not expecting to find myself in my new leadership role and previously held numerous concerns ... Creative Leadership ... allowed me to identify myself and align my vision as a leader that will drive needed change to strengthen all of us personally, professionally and collectively for years to come.' (March 2021)

We continued to deliver short courses and workshops for executives and designers across government, business and industry. The Centre held the 22nd training session for Hong Kong Government civil servants, with 750 participants to date. Bespoke programmes are also available.

Top: Participants in a Open Masterclass on Creative Leadership run in 2019. Credit: Adam Hollingworth. Middle: Ivelina Gadzheva giving feedback to groups as part of a leadership exercise. Credit: Adam Hollingworth. Left: Rama Gheerawo delivering an online course with the Hong Kong Design Centre. Credit: HKDC

THE HELEN HAMLYN DESIGN AWARDS

The Helen Hamlyn Design Awards celebrate the most visionary, inclusive and innovative RCA graduate projects. Category winners were announced during an online awards ceremony in July 2021. Each student project applies design to improve people's lives, and demonstrates the impact people-centred approaches can have across disciplines at the RCA.

STUDENT AWARDS WINNERS
THE HELEN HAMLYN AWARD FOR CREATIVITY

Winner: Jessica Tiffany Hindradjaja – Architecture
Project: Spaces of Spillages: Rethinking Jakarta's High-rise Social Housings

The project is an alternative proposal for social housing in Jakarta. It negotiates the city's need for water management and density with the everyday labour arrangements of kampung kota residents. This is a neighbourhood typology for lower-income households. Its network of alleyways accommodates temporary spillages from the houses, enabling exchanges of labour and resources among the neighbours. This social infrastructure is used as a substitute for the neighbourhood's lack of formal infrastructure and resources, A mid-rise terraced building is proposed including housing units, production spaces, and spaces that allow occupation of the floodplain. The building negotiates the city's flood management effort without relocating kampung residents away from their neighbourhood. It is designed as a framework for a nimble way of living; building services are left exposed for easy alterations and maintenance.

Top: The Snowdon Award for Disability winner - Newblue. Bottom: The Helen Hamlyn Award for Creativity winner - Spaces of Spillages: Rethinging Jakarta's High-rise Social Housing

THE SNOWDON AWARD FOR DISABILITY

Winner: Disharee Mathur – Innovation Design Engineering (IDE)
Project: Newblue

Project Newblue uses a participatory design approach to diversify the traditional craft of Jaipur Blue Pottery for cultural and economic sustainability. India has the largest craft concentration in the world, yet only 2per cent of the global handicraft market share. The NewBlue material composites use locally abundant ceramic waste and represent the second technological intervention in Blue Pottery since the 1860s. It has been developed with a community-first approach working with artisans to ensure craft compatibility.

THE EIDD- DESIGN FOR ALL EUROPE AWARD FOR SOCIAL IMPACT

Winner: Jeremy Hulse – IDE
Project: Yuck Yuck Bye Bye

Yuck Yuck Bye Bye is a low-cost solution for treating food waste at the point of collection, in order to improve hygiene in the home and address the 'yuck factor' – the most common reason for non-participation in food waste collection/ recycling schemes. Something that could radically improve sustainability.

THE NORTHUMBRIAN WATER AWARD FOR INCLUSIVE INNOVATION

Winner: Natalie Bar-David Frenkel – IDE
Project: MO, Motion Oriented Playground

MO is a physical controller that supports pivotal early years learning. When 4 years olds are building muscles as well as cognitive and social habits, MO supports and trains them digitally as well. Designed through research with different types of learners, and educational methods, MO is an AI system that bridges the gaps between physical and digital learning through playful movement, in a virtual space.

Top: The EIDD-Design for All Europe Award for Social Impact winner – Yuck Yuck Bye Bye. Middle: The Northumbrian Water Award for Inclusive Innovation winner – Mo Motion Oriented Playground. Bottom Left: Runners Up – RESET. Bottom right: Runners Up – Moception

RUNNERS UP

Name: Giovanni Dipilato – Design Products
Project: RESET
RESET allows people with low vision to play tennis by audio-tracking the ball and giving a better understanding of the court's spaces, and an athlete's position through passive vibration. It moves the digital accessibility conversation forward.

Name: Jingyi Li – Global Innovation Design
Project: Moception
Moception is an eyes-free text editing method using a mixture of speech and mid-air gesture input. This enables visually impaired people to use one-handed gestures, and speech-to-text to input content .

FIXPERTS

https://fixing.education/films

Fixperts is a learning programme, co-founded by Daniel Charney and Dee Halligan, that challenges students to create ingenious solutions for a real person. Fixperts, and its sister programme FixCamp, are conceived and run by the people at Forth – a community interest company who believe in the power of creativity as a tool for social change. Students work with a Fix Partner on design projects that positively impact their Fix Partner's daily life. The Royal College of Art Helen Hamlyn Fixperts Award, now in its ninth year, is an acknowledgment of the incredible work carried out by Fixperts all around the world.

FIXPERTS AWARDS WINNERS AND RUNNERS UP

Winner – Adam Boult, Cleo Morgan, Anwen Parnis
Project: Glove device for Jo

Runner up – Itai Miller, Kama Zigelman
Project: Climbing Maze, Kama & Itai

ALUMNI AWARD – RALF ALWANI

Over 200 researchers and designers have been a part of the Helen Hamlyn Centre. Every year, the alumni award is given to reward an individual who has demonstrably continued to champion inclusive design since leaving the centre.

As an RCA Architecture student in 2015, Ralf Alwani was a joint recipient of the Award for Creativity for his work on the HELIX project which saw a collaborative RCA and Imperial College design team create a healthcare pop-up studio within St.Mary's Hospital. After his win, Ralf joined the HHCD team in 2016 where he worked on the Our Future Foyle project. This project partnered with Public Health Agency Northern Ireland to revitalise the area around the River Foyle, which had become synonymous with suicidal behaviour.

Since leaving the centre, Ralf has gone on to co-found Urban Scale Interventions. The studio uses design to solve social challenges, creating public spaces that increase mental health, and foster creative solutions for intervention. This year, Ralf was also named in Forbes top 30 under 30 for his work in the area of social impact.

INCLUSIVE DESIGN CHAMPION 2021 – VALERIE FLETCHER

The Inclusive Design Champion Award is a new category in this year's programme, it recognises continued exceptional contributions to the field of inclusive design over the years.

Valerie Fletcher's career has been divided between design and social justice. As Executive Director of the Institute for Human Centered Design (IHCD), she oversees consultation and design services to public and private entities in the US and globally. She created the IHCD User/Expert Lab which has over 500 people with lived experience of a physical, sensory or brain-based functional issue. She also drives the IHCD initiative on the Changing Reality of Disability that seeks to illuminate the relationship between inequity, racism and disability.

Top: Ralf Alwani. Below: Valerie Fletcher

PHD SUPERVISION

Prof Jo-Anne Bichard – Professor of Accessible Design

The Helen Hamlyn Centre for Design offers a unique PhD training experience for candidates interested in the investigation of advanced inclusive and people-centred design theory and practice. Supervision of PhD candidates is undertaken in partnership with RCA Schools and Programmes. This dual approach provides the PhD researcher with expert supervision in their School's chosen discipline coupled with the knowledge, experience and practice within inclusive design.

In 2021 the HHCD co supervised 11 PhD candidates with the RCA School of Design and School of Communication. All candidates have an inclusive and people-centred focus to their research, and are practice or thesis based.

The following PhD candidates are partnered with the School of Design and co-supervised by Professor Jo-Anne Bichard and Dr Chris McGinley (HHCD) with Dr Chang Hee Lee; Dr Laura Ferrarello, Dr Alex Williams and Dr Nick De Leon.

Peiqi Wang, Brendan Commane, Sarah Britten Jones, Rute Fiadeiro,Judith Buhmann, Muyao He and Sicong Xiao

The following PhD candidates are partnered with the School of Communication and co-supervised by Professor Jo-Anne Bichard (HHCD) and Professor Teal Triggs.

Nick Bell and Wenbo Ai

The following PhD candidates completed their research in 2021 and were supervised by Dr Chris McGinley (HHCD), Dr Elif Ozden-Yenigun and Anne Toomey at the School of Design

Laura Salisbury and Silke Hofmann

WENBO AI

Empowering Design Literacy and Engagement in Health Promoting Hospitals

Health Promoting Hospitals (HPH) is a concept that shifts hospital culture from one that is treatment centred to one that is health centred, creating an empowering community setting. Wenbo's research uses participatory communication design as a framework to enhance the transformational achievements of HPH: participatory design can empower and encourage patients and communities to design their own methods and run their own 'health centred' communities. This practice-led research contributes to the strengthening of community action, the reorientation of healthcare services, the redesign of the role of the hospital, and sustainable innovation development and management policy-making in a healthcare system. It aims to embed design methods within the transformational processes of HPH.

Above: Picture of Wenbo Ai's research around Health Promoting Hospitals

NICK BELL

Connections, Knowledges and Identities as Social Infrastructure for Neighbourhood Agency: an Open, Peer-driven, Contactless Participatory Design Approach.

Nick's practice-led study is attentive to the wider social determinants of health (Marmot, 2010), such as loneliness and social isolation. It looks at ways people can contribute to environments and systems in which it is easier to stay healthy (Friedli, 2012). In a North London neighbourhood, contactless participatory tools, 'chatterbricks', are being developed. These are audio probes that lonely and socially isolated residents can use to find meaningful human connection through forging weak social ties that act as bridges (Granovetter, 1973). Meaningful interpersonal connections (Fried, 2020) build a sense of shared social identity – a powerful psychological resource that can enable positive health impacts (Haslam et al, 2018).

Above: Nick Bell, The bottom face of a chatterbrick is made of pink mirrored acrylic sheet. It is laser engraved with the message 'use this to start a conversation'. Top Right: Brendan Commane's research into environments that support people with dementia. Middle Right: Sarah Britten Jones is looking at how inclusive operational design supports the Learning University

BRENDAN COMMANE

An investigation into dementia through visuals, textiles and interactive technology

Brendan's research investigates environments that support people with dementia. The objective is to explore visual environments within a designated space to understand how the impact of an immersive environment that is sensory and visual. The research involves carers and family members as well as the person living with dementia as co-designers. It explores interactive technology, textile items and sensory stimulation. The methods are based on ethnography, enabling the research to build on the current context and share relationships. It explores the vast potential in sharing life experiences.

SARAH BRITTEN JONES

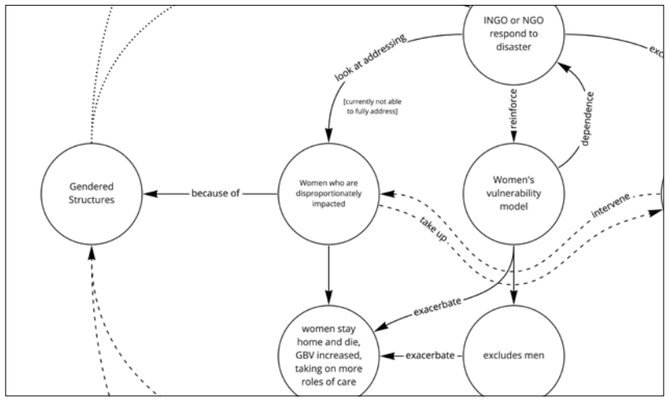
Designing the Learning University

The focus for Sarah's practice-based research is how inclusive operational design can enable the university to realise the requisite variety it needs to thrive in an uncertain environment. The university is a specific type of organisation shaped as a knowledge hierarchy for the generation and dissemination of knowledge. This intrinsic physical and psychological knowledge structure penetrates every aspect of the university, valuing some kinds of knowledge over others. This research explores how inclusive operational design might enable the university to develop effective feedback mechanisms, allowing it to be meaningfully affected and changed by those who are perceived as not knowing – those with other kinds of knowledge.

RUTE FIADEIRO

The Relationship Between Women's Lives and Humanitarian Design for Disaster Recovery

Each person will experience a disaster differently depending on where they sit within intersectional social categories (gender, ethnicity, age, and so on). While the effects of the disaster unfold, humanitarian assistance is often provided to support affected communities in their recovery. How these recovery strategies are designed can be vital to the forms of social transformation that may emerge from it. The research thus seeks to study how humanitarian design is incorporated into these recovery strategies and its effects on women's lives. More specifically, it asks what (if any) the role of humanitarian design might be in challenging gendered structures during disaster recovery by working in relation to women's lives.



MUYAO HE

Design for Wellbeing: an Exploration of how Blind and Visually Impaired People can be Included in the Art Museum Experience

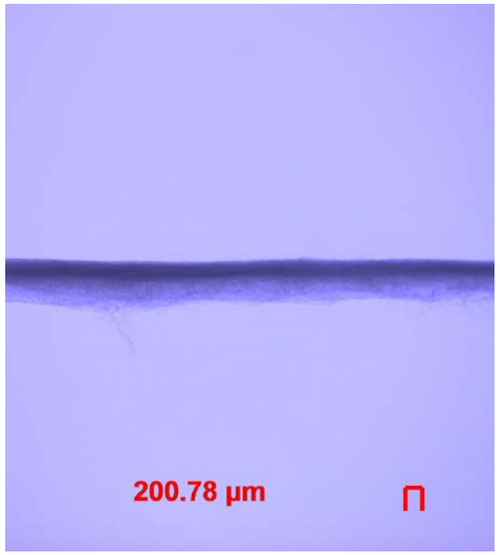
In a visually dominated world, those who have lost their sight are affected in nearly every aspect of contemporary life and are excluded from many activities, such as the enjoyment of art museums. Exclusion from these facilities runs counter to the stated mission of museums in terms of education, social justice and public service, as well as the objectives of 'the new museology'. To address this, Muyao aims to develop knowledge and methods from inclusive service design by integrating aspects of service design and inclusive design. This study is set in the context of China, since inclusive design may play a greater role in the context of the developing world, with its greater restrictions.

SILKE HOFMANN

Prototyping Bra Alternatives – How Women Affected by Breast Cancer Articulate their Individual Bra Needs and How These can be Implemented in Design

Silke's practice-driven PhD is concerned with the alternative bra requirements of women affected by breast cancer, who live with asymmetrical, differently sized or no breasts after a mastectomy. The post-mastectomy bras and external breast protheses that are available on the market are designed to reinstate general body symmetry. There are currently few bra options available that cater to the individual needs of women who choose to live without these aids.

To better understand how wearers' clothing needs can inform design development processes, this project reviews the roles of the wearer and the clothing designer in specific case studies.



LAURA SALISBURY

Wearing your Recovery

Laura's research explores the use of smart textiles as a method to disrupt post-stroke motor recovery. Having worked closely with brain injury survivors and leading neurologists, Laura has developed a patent-pending textile 'component' that provides targeted, continuous limb support by modifying neural responses to improve recovery.

Laura has recently been awarded MedTech and Advanced Materials grants from Research England and the Henry Royce Institute to further develop materials, scoping wider applications beyond stroke recovery.

She is undertaking this work as founder of KnitRegen Ltd., having secured venture capital funding.

PEIQI WANG

Developing meaningful collaboration between parents and doctors in neonatal care by designing conversation behaviour

In China, the isolation mode of treatment is adopted in neonatal care, which results in the conversation between parents and doctors becoming the main form of creating experience in the treatment process. Peiqi's PhD research explores the elements and process of parent-doctor conversation through design intervention. Combining cybernetics approaches, it defines and develops conversational design tools for parents and doctors in the process of prenatal consultation, and reconsiders the information exchange between parents and doctors and the long-term health of newborns through design tools. The research bridges the system of conversation and meaningful experience in neonatal care by working beyond the boundaries of existing practice.

SICONG XIAO

The Potential of AI Technologies in Care Settings

Sicong's research investigates the possibilities of AI technology to improve service quality in residential care homes. Gathering data from those situated within care home settings through design research, Sicong intends to use public IPAs (Intelligent Personal Assistants) to make use of information that is often overlooked. Observation will be the primary method of design discovery, supported by AI monitoring to generate detailed lived experience data. This data will be utilised to deliver an algorithmic prototype - The "Carehome Brain" as a hypothesised route to create more personalised and positive care home services and experiences.

Top Left: Rute Fiadeiro; The Influences of Gendered Structures on Disaster and their Response. The diagram is a brief overview on how gendered structures interact with the various actors within the humanitarian response to disasters. Far Top Left: Muyao He's study looks at the art museum experience from the perspective of blind and visually impaired people. Far Left Bottom: Silke Hofmann's practice-based research into alternative bras for women affected by breast cancer. Top Right: Laura Salisbury, Microscope Image of Yarn Specimen. Credit: Salisbury, Alrai, Ozden-Yenigun and Cebeci, 2019. Bottom Right: Peiqi Wang's work on neonatal care in China, creating conversation between parents and doctors

PEOPLE PATHWAYS

Above: First Prototype Garment, Laura Salisbury

RALF ALWANI

I first came across inclusive design through my work delivering the Helix Centre for the RCA and Imperial College, tasked to land a pop-up space in which designers engaged with doctors and patients on the forefront of the NHS. I then again encountered it when dealing with political and social legacies of a 6-mile riverfront challenged with suicide concerns for HHCD known as Our Future Foyle. In my practice today at Urban Scale Interventions, inclusive design fronts everything we do. It adds value for us through gaining inspiration, awareness, validation and buy-in of every project we undertake from the public interface of a new railway station to an online platform that tackles our mental health concerns.

DR WILL RENEL

For me, inclusive design has grown organically as a practical and people-centred way of problem solving and challenging social and societal issues. It has had a meaningful impact on my career and life, giving me the confidence and tools to work collaboratively with a wide range of people by championing creativity and lived experience. With the contemporary backdrop of austerity, neoliberal and late capitalism and growing disparities between individuals and groups across the globe, it feels more important than ever that designers and disciplines like Inclusive Design remain critical, politicised and connected to the real-world experiences of people.

From Top to Bottom: Ralf Alwani, Juliette Poggi, Dr Will Renel and Cecilia Zecca

JULIETTE POGGI

I always had a passion for design: how something beautifully designed can bring a sense of fulfillment and satisfaction. Through my education and career I had the privilege to learn in the most interesting environments how to design beautiful things... and it always starts with people. The people you design for and the people you design with. This is what inclusive design means to me: the process of collaboration from concept until delivery. It is a way to share the endeavour as well as feeding the creative process. It is a 360-degree team effort.

DR CECILIA ZECCA

I am an architect and a postdoctoral researcher working on innovative later living housing models. The work is a two years KTP project developed through a collaboration between Cartwright Pickard Architects and HHCD. Inclusiveness, creativity and cooperation are to me the result of the Latin meaning of cum-laborare, empathically working together with the environment, with users, and with a combination of experts to develop human-centric solutions and to improve the vision of the space and the world we experience.

Being part of HHCD engages me within a stimulating confrontation and within a supportive environment where diversity and inclusiveness represents a form of mutual enrichment.

IN COVERSATION WITH LAURA SALISBURY

Thea Stanton – Content Officer

TS: What drew you to inclusive design?
LS: Maybe inclusive design chose me! During my MA I wanted to make a difference, and thought there's something else that the fashion industry can do in this space: I needed to learn more about the people who wear my garments, which drew me to inclusive design. I started investigating new ways of pattern-cutting to make clothes and new fastenings, which emerged from working with a local hospice.

The hospice was looking for comfortable garments for people at the end of life. Thereafter, a fashion company approached me to work on a similar project to enable those with Parkinson's or arthritis, and stroke survivors, to dress easily.

I didn't know I was using inclusive design. I was just doing what was natural, and supporting the people needing the garments.

TS: What does the HHCD, or inclusive design, mean for you in terms of your practice development?
LS: It's super important! I don't think inclusive design gets enough credit. Sometimes it's misinterpreted, especially within fashion and textiles. I am an intuitive practitioner: once I learnt about inclusive design it felt right to start researching with the HHCD. I remember the fantastic induction when I started: I met great people, and really liked how the space was laid out – very open and collaborative. The HHCD has given me many skills to develop my personal practice – it inspires designers to make designs that work for everyone.

TS: What is your vision for inclusive fashion?
LS: Inclusive design can be applied to fashion in so many ways. Students and young designers often don't know how to use inclusive design, so I want to support that. We need to better integrate inclusive design within fashion. I want to apply this thinking within remote healthcare to address things like compliance with medical devices on and around the body. It's important to make we make healthcare more accessible, desirable and comfortable.

TS: Why is addressing ableism in fashion important?
There are ideologies that permeate society, and we create our clothes, image and identity in a specific way. We are more aware of people who don't fit the one-size -fits-all model: identity and behaviour cross a wide spectrum that society needs to accept.

I began to question whether we need to treat disability at all, or do we just encourage society to accept it, and create design that supports people with different abilities? Ultimately, this project proved the need to bring the medical and the social models together. But the debate remains. We need to understand that we don't need to all be the same; fashion has a vital role to play in this.

TS: Congratulations on the recognition that your work is currently receiving. What's next?
LS: Thank you! It's a team effort, I work closely with diverse stakeholders to develop and consistently test our prototype. We've recently received the Mayor of London's Award and founded a new start-up, KnitRegen, based in Innovation RCA. I'm also embarking on a UKRI Future Leaders Fellowship, deepening the research of the technology and developing a new research lab in the RCA, forging inclusive fashion with remote medicine. It's really exciting!

WITH THANKS...

PEOPLE

- Rama Gheerawo – Director
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- Dr Chris McGinley – Senior Research Fellow
- Jonathan West – Senior Research Fellow
- Dr Ninela Ivanova – Innovation Fellow
- Dr Katie Gaudion – Senior Research Associate
- Gail Ramster – Senior Research Associate
- Gianpaolo Fusari – Senior Research Associate
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- Indira Knight – Research Associate
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- Juliette Poggi – Research Associate
- Imran Nazerali – Research Associate
- Laura Salisbury – Research Associate
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- Melanie Andrews – Design Manager
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- Georgina Lee – Community Lead
- Victoria Patrick – Impact Manager
- Ruzina Choudhury – Administrative Assistant

PhD Candidates
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- Nick Bell
- Judith Buhmann
- Brendan Commane
- Sarah Britten Jones
- Rute Fiadeiro
- Muyao He
- Silke Hofmann
- Laura Salisbury
- Peiqi Wang
- Sicong Xiao

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