



UNIVERSITY OF  
LEICESTER

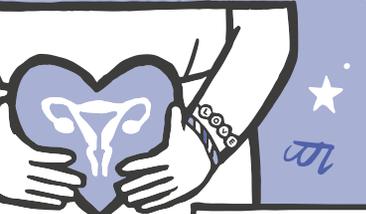
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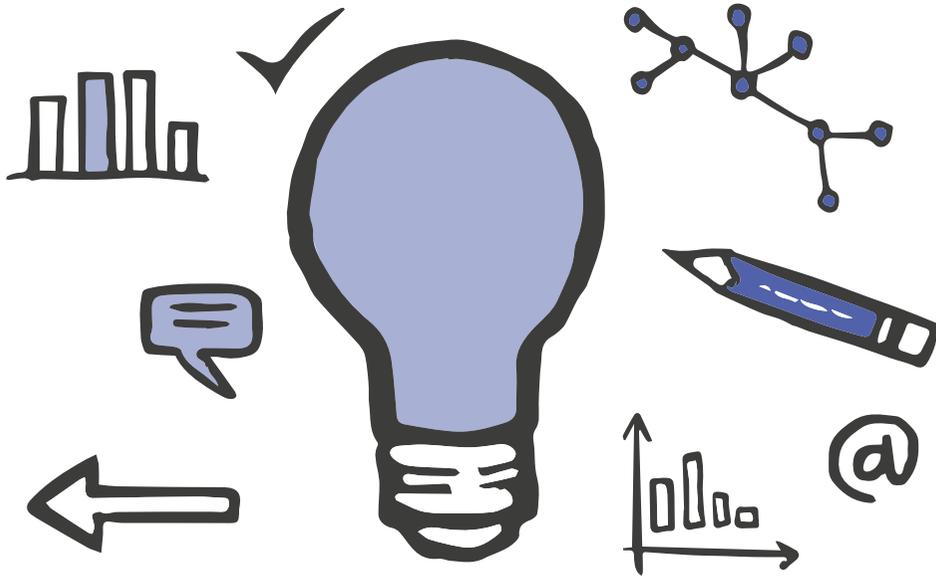


LEICESTER INSTITUTE FOR ADVANCED STUDIES

# LIAS Projects Showcase

A selected anthology of our  
research projects





## Introduction

The Leicester Institute for Advanced Studies (LIAS) is an interdisciplinary centre of excellence. Dedicated to creating a collaborative and inspiring environment, it brings together researchers from across all disciplines to deliver ambitious, transformative, and impactful research.

This initiative is intended to help break down the silos that have traditionally been a feature of higher education research. It represents a step change in approach, allowing academics to be even more innovative and to bid for more ambitious research funding in the future.

The benefits of interdisciplinary research are plentiful. By bringing together diverse methodologies and conceptual frameworks, interdisciplinary research collaborations enable real-world challenges to be addressed, be that locally, nationally and globally.

This Anthology celebrates some of the diverse interdisciplinary research projects awarded by The Leicester Institute for Advanced Studies. It invites readers to learn more about the projects taking place at the University, and to better understand the breadth of opportunity made possible through interdisciplinary research.





# Pastoralism

**Dr B. Batbuyan of the Centre for Nomadic Pastoralism Studies, Mongolia, took up a LIAS Fellowship to work with Professor Caroline Upton on critical approaches to ‘resilience’ amongst Mongolian pastoralist communities in response to short and long-term environmental shocks and the role of Earth Observation (EO) and Remote Sensing (RS) technologies and products therein.**



The LIAS Fellowship enabled them to build on their previous and ongoing research, for example under the UK Space Agency-funded SIBELIUS project and the preceding GCRF-funded Resilient Pastoralism project. In both these cases Batbuyan and Caroline worked collaboratively with Mongolian herders, herding communities

and government stakeholders, as well as academic and industry partners, to co-develop research agendas on normative approaches to ‘resilience-building’, the ways in which these were locally contested and transformed, and on the roles of diverse information sources and knowledges in

shaping pastoralists’ decision-making and mobilities.

Batbuyan was able to consolidate key insights and lessons from the above work during his Fellowship to feed into Mongolia’s evolving policy context on climate-resilient development and rural livelihoods. He was also able to strengthen existing and forge new research networks and, with Caroline, to develop successful applications for further research funding awards in this field.



PHOTOGRAPHS DR B. BATBUYAN





## Latinx Studies

**Latino/a, Latin@ or, in its most common contemporary form in English, Latinx Studies, is a long-established academic field in the USA. Its first roots were planted by the Chicano and Puerto Rican cultural movements of the 1960s, and since that time there has been an ever-growing presence in Latin American studies departments and conferences in North America. As an academic discipline, the field has made important contributions to the visibility of the USA's largest minority population group.**

The UK-based study of US Latinx histories and cultures, however, remains a burgeoning field, even within our very strong fields of American Studies and Latin American Studies. For example, there is a noteworthy lack of focused discussion of Latinx topics in key fora such as the annual conferences of the largest UK societies for American (BAAS) and Hispanic (SLAS, AHGBI) Studies.

Moreover, and critically, the field of British Latinx Studies – as in the study of the richly diverse Hispanic heritages that underpin the lives of those belonging to the UK's own 8th largest minority group –, remains to be established. That community remains largely invisible in UK society, in spite of the

long-standing connections between the UK and Spain and Latin America, and the deep roots of these members of our society. British Hispanic Studies has, we should acknowledge, lost pace with these social shifts.

Our project seeks to contribute to the visibilisation of Latinx peoples and cultures in the UK via the increased visibility of Latinx Studies as a field in UK HE, in both its US- and UK-focused forms. We aim to gather, connect, highlight and explore the work being carried out within UK Latin American, American, and English Studies, and to thereby establish a knowledge exchange network between communities, artists and scholars that can have meaningful social and intellectual impact.



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CULTURES AND  
SOCIETIES

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## Tactile Space

**Tactile Space is a public engagement project that includes a set of tactile resources so that space science can be accessed by visually impaired and neurodiverse people.**



Images representing various aspects of space science have been rendered as surfaces to be touched in small, portable plates, measuring approximately 13 cm square.

We have so far produced images that represent the core areas of science research in the Planetary Sciences group in the School of Physics and Astronomy, from either real observational data, or cartoons or schematics that illustrate a science concept. These include images of the aurora from space, a comparison of the sizes of Mars and Earth, and the rings of Saturn.

Each plate is labelled with a title bar in Braille script. Each plate includes a printed description of the image on the reverse side, plus a QR code that links to our dedicated website <https://tactilespace.le.ac.uk/>. These descriptions can be easily read by webpage readers.

Tactile Space follows from the work of Tactile Universe from the Centre of Cosmology, University of Portsmouth, and we are grateful to Tactile Universe for their guidance and collaboration with this project. We have been supported by both LIAS and the L'Oréal For Women in

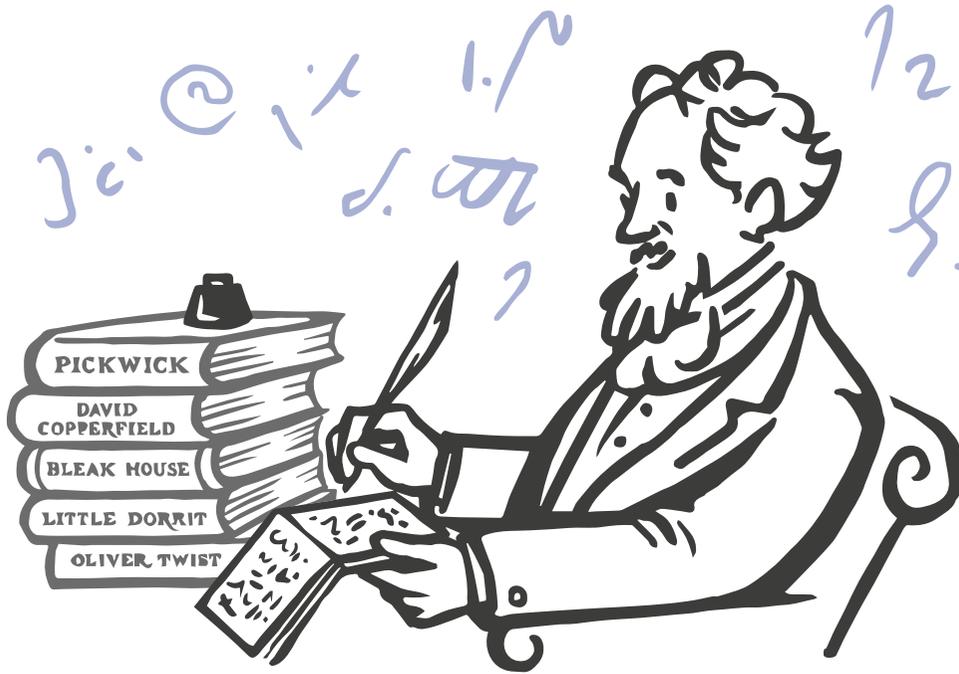
Science STEM ambassador schemes for this work.

We have a collection of tactile plates, and/or can tailor a set of customised plates, that can be lent out to interested people for use at their own public engagement event.



MARS AND THE EARTH,  
TACTILE PLATE WITH BRAILLE LABEL

For Key stage 2 and 3 we have produced accompanying educational materials that link subsets of the plates into various workshops. A set of plates is also under trial with the School of Education, to be used by Key Stage 3 trainee science teachers in a mainstream setting. Future collaborations are anticipated with local charities.



## The Dickens Code

Victorian author Charles Dickens is world famous, yet there are texts in Dickens's hand that remain unread, because they are written in his personal shorthand. Dickens used a complex system called Gurney's *Brachygraphy* – but adapted the rules and invented new symbols of his own.

Supported by AHRC funding, Dr Claire Wood (University of Leicester) and Professor Hugo Bowles (University of Foggia, now University of Buckingham) set out to solve this 150-year-old mystery and bring shorthand culture to wider public attention.

The project assembled an academic network, drawing expertise from Dickens studies, shorthand studies, digital humanities, forensic linguistics, and informatics. However, the expertise of the Dickens Decoders – volunteers from across the world with an interest in puzzles and codes – proved just as important.

The efforts of the Dickens Decoders, combined with contextual research by academics, enabled crowd-created transcription of the mysterious 'Tavistock' letter, illuminating a fraught period in Dickens's personal and professional life. In addition, collaborative deciphering uncovered a series of short texts, including some unknown stories, copied into the notebooks of Dickens's shorthand pupil, Arthur Stone. You can read these transcripts and find out more about the role of shorthand in Dickens's life and work by visiting our online exhibition: 'Decoding Dickens: The Shorthand Mysteries'

<https://dickenscode.omeka.net>

The Dickens Code project is also involved in the innovative area of automated deciphering of difficult scripts. Supported by LIAS-funding, the lead researchers are working with Professor Huiyu Zhou and his team in informatics at the University of Leicester to develop a novel neural network, trained on Dickens's shorthand, which potentially opens up new avenues for our ability to decipher unreadable texts.

(1)

The ALPHABET.	Letters.	Words.
/ a.	ade	assault
↑ b. be, but	begn	barquin
c. k. sec	cmpr	compare
\ d. did	dplor	displeasure
✓ e. he	emst	essential
∩ f. if	fta	fortune
∩ g. God, good	grm	grammar
L h. have	ilstrn	illustration
✓ ij. Jesus, high	kindus	kindness
✓ L. lord, lordship	lmtan	lamentation
∩ m. him, am	msngr	messenger
- n. in	nmbr	number
- o. how	ocsn	occasion
∩ p. people	plnt	pleasant
q. question	qfscn	qualification
r. are, her, here	rdcn	reduction
∩ s. is, his	spnstr	spinstor
o s. eng. ong	stpfen	stupidification
∩ t. it	tndrn	tenderness
∩ u. you	unpnsn	unpension
∩ v. v. which	vn	vision
x. Christ	wsdm	wisdom
∩ y. w. why, ye	strm	extreme
∩ z. ze.	yngr	younger

THE BRACHYGRAPHY MANUAL



LIAS WORKSHOP

# Multilingualism: Languages and Power from the Ancient World to the Present Day

**Date:** 14th June 2024

**Location:** Leicester Innovation Hub, Regent Road, University of Leicester

**Workshop team:**

**Dr. Rabah Aissaoui**  
(SCHOOL OF ARTS, MEDIA AND COMMUNICATION/MODERN LANGUAGES)

**Dr. Zalfa Feghali**  
(SAMC/ENGLISH/CENTRE FOR AMERICAN STUDIES)

**Prof. Sarah Knight**  
(SAMC/ENGLISH/CTIS)

**Dr. Jan Haywood**  
(SCHOOL OF ARCHAEOLOGY AND ANCIENT HISTORY)

**Dr. Michelle Harrison**  
(SAMC/MODERN LANGUAGES/CENTRE FOR TRANSLATION AND INTERPRETING STUDIES)

**Prof. Andy Merrills** (SAAH)  
**Dr. Alice Samson** (SAAH)

Funded by the Leicester Institute for Advanced Studies and the School of Arts, Media and Communication at the University of Leicester, this one-day workshop offered the chance for researchers in the Arts and Humanities interested in the associations between languages and political and educational power to meet and discuss those interests. Participants discussed multilingualism across an ambitious range of historical periods, geographical contexts and disciplinary approaches represented by participants' work. The workshop included short 10-minute research talks, focussed on conversation and discussion of ideas and practice. We particularly welcomed the contributions and participation of early career researchers.

Teaching and research specialisms of the workshop team span two millennia and stretch across the world, from early Greek historiographical texts and their broader cultural, literary and historical contexts to the transformation of the post-Roman world across Europe and Africa (c. 300-700) to the polyglot

Renaissance 'Republic of Letters', to cross-cultural exchanges between early modern European subjects and the Ottoman world, as well as the pre-Columbian and colonial Caribbean, to colonial and post-colonial France, and Algeria from the nineteenth century to the present day, to border and citizenship studies in the Americas, to sociolinguistics and minority language studies including regional languages of France and community languages in Leicester.

Participants in the workshop were invited to consider our three fundamental research questions: 'How is multilingualism mobilised as a concept, practice, lived experience, and methodology across different disciplinary contexts, geographies, and historical periods?'; 'How can interdisciplinary studies of multilingualism create spaces of dialogue and scholarly exchange?'; and 'What is the relationship between multilingualism and multiculturalism?'





## Entrepreneurial Competencies Development for Aspiring Disabled Entrepreneurs

This project aims to improve the understanding on entrepreneurial competences for disabled entrepreneurs.



Entrepreneurship is a key policy idea to support the disabled people towards their economic independence, owing largely to the discrimination in the job market. While the potential of disabled entrepreneurship is clear, how to achieve it is much less so.

Our intention is that, to support disabled entrepreneurs in a sustainable manner, it is necessary to better understand what makes the set of competences that correspond to both individual and structural challenges. Our project therefore involves two stages. First, the exploration of competences and skills through interviews with successful disabled entrepreneurs. At this stage, we are interested in finding out on entrepreneurial competence among disabled entrepreneurs – How is it understood? How can it be developed? What are the barriers to understanding of entrepreneurial development? Our partner, Ability Connect, played a pivotal role in recruiting participants. We conducted in-depth interviews with the total of 25 successful disabled entrepreneurs. Second, development of an intervention programme for aspiring disabled entrepreneurs, intended for subsequent wider use. This stage applied the intervention derived from the research findings from stage one. A competencies development training programme was delivered in a workshop style

for two consecutive days in May 2023, attended by 12 disabled entrepreneurs. Intended as a small-scale demonstration, the competencies development programme contained usual elements such as business model, financial planning, digital and social media marketing and entrepreneurial resilient mindset, but the emphasis was also on dialogue and collective reflection of problems and opportunities. The programme was well-received and were commended by the participants:

*"...what I really wanted from that was just insights how to navigate in the early stages as an entrepreneur with a disability. So, I really found the session at the end where it answered questions to be really helpful."*

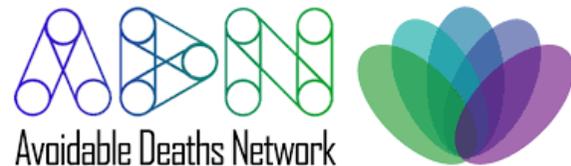
As a result of the success of the intervention programme, the 2nd iteration of the training was delivered in February 2024 and the next iterations of the programme will be planned in the near future. <https://le.ac.uk/school-of-business/working-with-business/aspiring-entrepreneurs-with-disability-development-programme>



# Avoidable Snakebite Deaths in India

**India is the global hotspot for snakebite deaths with annual deaths around 58,000 and a further 140,000 incidents leading to various disabilities including limb injuries and amputations.**

Envenoming occurs when particular types of snakes inject a toxic secretion via a bite delivered to victims. About 75% of snakebite deaths in India occur in rural areas before reaching hospitals, and half of all deaths occur from June to September during the monsoon season.



Avoidable Deaths Network

This season is notorious for flooding in the South Asian sub-continent. Deaths from snakebites during floods or disasters are known as indirect disaster deaths. Reducing disaster deaths is currently the United Nations 'Sendai Framework for Disaster Risk Reduction' first global target. This global target is consistent with the World Health Organisation's Snakebite Envenoming Strategy for Prevention and Control, which urges national governments to halve snakebite deaths by 2030. The Government of India has ratified both Frameworks, as such, it is imperative that reducing snakebite deaths is given utmost priority for disaster-resilient sustainable development.

The project led by Professor Nibedita Ray-Bennett in collaboration with 14 organisations explored who are responsible for reducing snakebite deaths and how can they be leveraged for networking to bring positive change. The project found six broad categories of stakeholders who are responsible for reducing snakebite deaths. Funded by the Institute for Environmental Futures

and the Institute for Precision Health, the findings of this project were disseminated through six outreach workshops in March and April 2024 in the district of Ganjam in Odisha, India. Ganjam District carries the highest burden of snakebite deaths in Odisha. The target groups for these workshops included high-risk populations: rural women, children, farmers, and herders.

## The outcome of this project includes

- the launching of a Case Station for Avoidable Snakebite Deaths (CaSA) in Burujhari village of Ganjam District ([SEPTEMBER 2024](#))
- the launching of a Knowledge Exchange Network (KEN) for technical experts ([APRIL 2024](#))
- the mobilisation of 21 community ambassadors or dooto for Local-level Action Network (LAN) or Sthaniyo Kormo Solanjhijona (SKS) for high-risk groups ([MARCH 2024](#))
- a short film using spoken words poetry to raise awareness on snakebite deaths in Sub-Saharan Africa ([MARCH 2024](#)).



# Creative Climates: Creatively Communicating the Environmental Emergency

**Do you believe we should get a second chance?  
That we can get it wrong, be sorry and try again?**

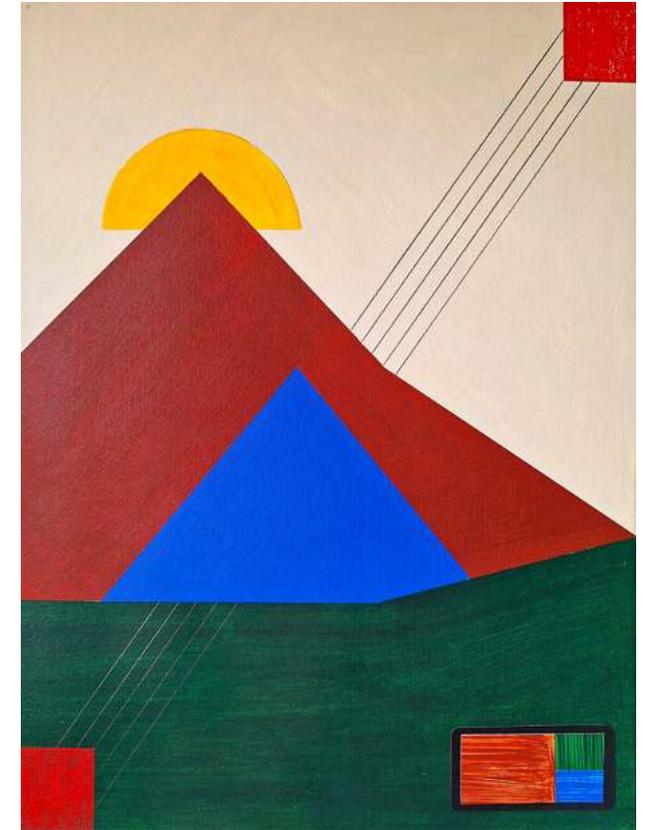
FROM 'NO ANSWERS' BY JOHN BERKAVITCH,  
A POEM COMMISSIONED FOR THIS PROJECT

“Creative Climates” investigates how the Arts can more effectively participate in communicating the Environmental Emergency. It does this by connecting artists and writers with current local environmental research and action projects to commission new art. The project educates the artists and writers in ‘environmental communication studies’

methodologies and then follows their work through creation and launch, and beyond, investigating audience and artist response through a variety of qualitative and quantitative methods, including video ethnography.

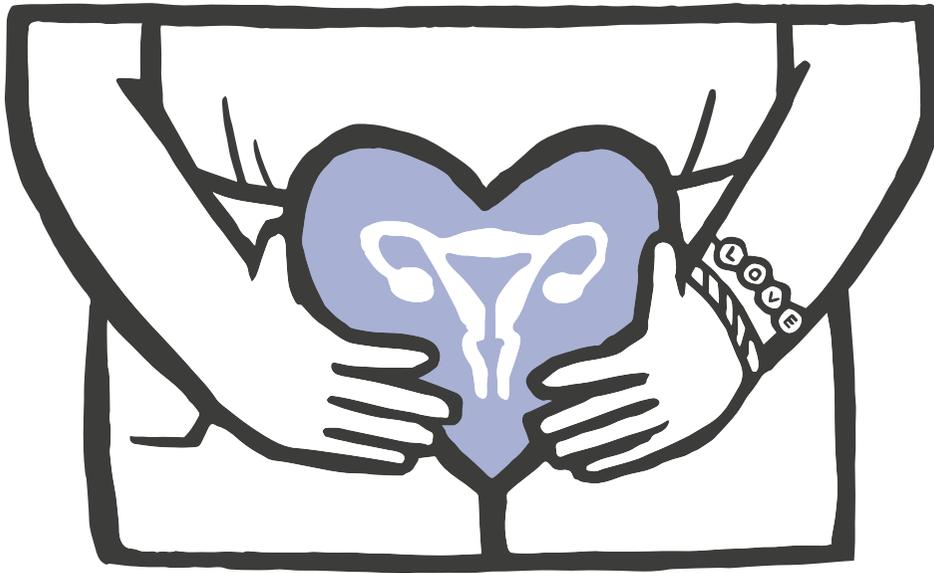
LIAS funding allowed the nascent project to organise a key meeting with several of the region’s major arts organisations - Curve Theatre, Phoenix Cinema, Attenborough Arts, Dahlia Books Publishing House – to discuss their collaboration as arts commissioning partners. It employed a PhD

student to generate a new podcast site for the project. It allowed a pilot project to commission two artists – spoken word poet John Berkavitch and artist Lucy Stevens – to produce new art based on local environmental research. This art is, at the time of writing (May 2024), displayed as a small



'AIR POLLUTION EXPOSURE (MORNING COMMUTE)'  
ARTWORK BY LUCY STEVENS

exhibition in the university library where audiences are invited, via QR Code, to complete a form discussing their response to the works. The LIAS funding has been critical in developing a project presence for an AHRC standard research application bid.



## A Qualitative Exploration of Uterine Cancer Care Experiences and Care Provision for Lesbian, Gay, Bisexual, Trans, and Queer (LGBTQ+) Patients in the UK: Shifting from Equality to Equity

**Significant disparities in both cancer and gynaecological care are reported by people identifying as lesbian, gay, bisexual, transgender, and/or queer/questioning (LGBTQ+).**

Existing concerns include the invasive clinical examinations and procedures that are needed to diagnose and treat gynaecological cancer, and that identify disclosure related to gender and/or sexual orientation may have a negative impact on care received. Uterine cancer, also known

as womb or endometrial cancer, is the commonest gynaecological cancer in the UK. The incidence has been rising steadily over the past two decades, with nearly 10,000 new cases diagnosed every year in the UK. Yet, because there is limited qualitative work done in this area, and we do not know the needs of those who are diagnosed with uterine cancer and identify as LGBTQ+.

We conducted a study to understand the uterine cancer care experiences for LGBTQ+ individuals. This was achieved through exploring the patient's perspective, as well as that of healthcare professionals and cancer charity staff who support and advocate for patients. Participants were recruited to a virtual qualitative interview and the data was analysed using inductive reflexive thematic analysis. Three main themes were identified from the data: **1) identity disclosure; 2) not fitting in; and 3) righting the wrongs.** Uterine cancer care and information was viewed as feminising and gendered, and many participants reported negative experiences with healthcare professionals that

were underpinned by cis-heteronormative assumptions and a lack of awareness, which led to feelings of marginalisation and neglect. The potential impact, relevance and opportunity for disclosing identity was raised by many participants as was the need for people's personal preferences to be balanced with routine collection of sexual and gender identity (SOGI) data. A lack of post-treatment information tailored to support LGBTQ+ patients was highlighted as negatively impacting cancer survivorship journeys.

This study identified that there needs to be greater consideration for patients who identify as LGBTQ+ and are undergoing investigation or treatment for uterine cancer. In particular, more inclusive clinical services need to be developed along with training for healthcare professionals. Such training should address the specific needs of LGBTQ+ patients, but should also endorse care practices which are not bound by cis-heteronormative assumptions, in order to better support patients.



## LeicSurvey: An ethical and inclusive large-scale feedback tool

LeicSurvey is a digital survey tool that is rethinking feedback gathering and analysis via inclusive and ethical survey design



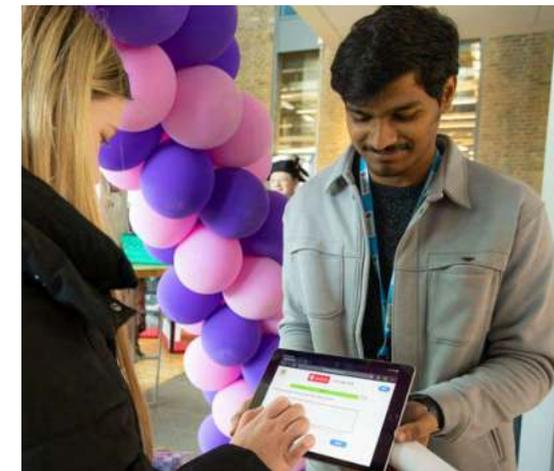
Understanding service-user experience is mission critical for the third sector. Gathering feedback is an effective way to achieve this. However, this process is challenging and non-linear, with huge variations in access to resources and expertise. Challenges include users' psychological inertia in offering feedback, non-inclusive survey tools/formats, barriers to data gathering, costly survey tools, uncontrollable events (the COVID-19 pandemic led to significant reduction in feedback rate for numerous sectors), and, critically, lack of inclusive survey tools (linguistic- and/or disability-based challenges discourage participation).

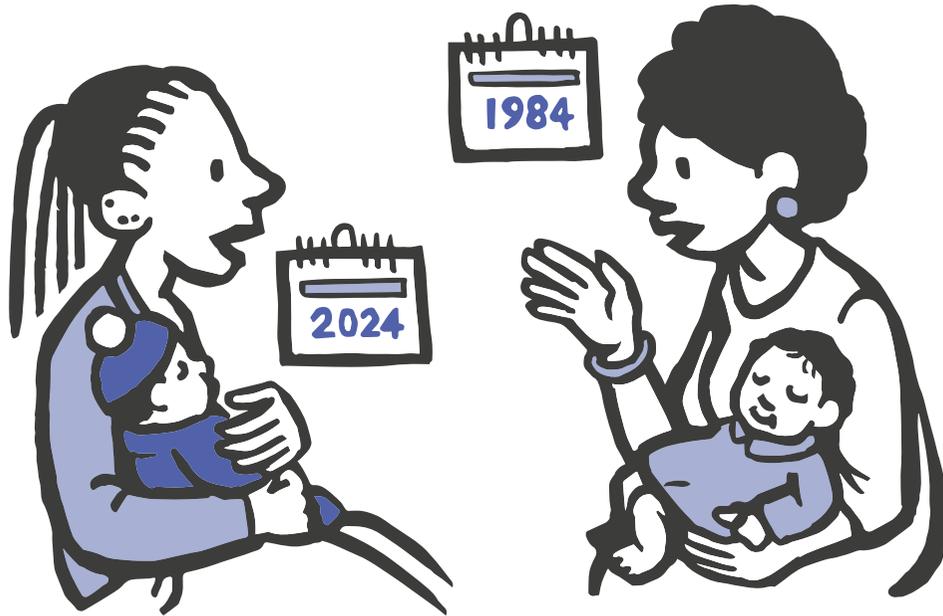
LeicSurvey couples frictionless, inclusive, rapidly customisable surveying with sophisticated data science and Artificial Intelligence to support the third sector in real-time, routine evaluation of programmes. LeicSurvey combines a simple and attractive user interface with powerful tools for collating and presenting complex data, including changes in user engagement and satisfaction over time. Our state-of-the-art analytic

pipeline enables mining, processing, and visualisation of multi-dimensional data, including integrated analysis of unstructured interviews with quantitative feedback, and trends that may otherwise be missed.

LeicSurvey has been used by >1000 people (patients, students, service users) to give feedback to 12 organisations across the UK and India. This equates to >10 hours of survey taking activity on our servers. We estimate that each organisation that switched to LeicSurvey saved at least £5000 p.a. and reduced their feedback-associated Carbon emissions by at least 20%.

PHOTO BY NICK OSBORNE





## Developing an Historical Understanding of Black Maternity and Motherhood Health Experiences in Leicestershire

Maternity care in the Leicester area is marked by health inequalities, particularly among Black mothers, who have been found to have poorer maternal outcomes such as rates of pre-term birth, maternal mortality and other pregnancy-related outcomes.



University Hospitals of Leicester  
NHS Trust



Leicestershire  
County Council



Leicester  
City Council

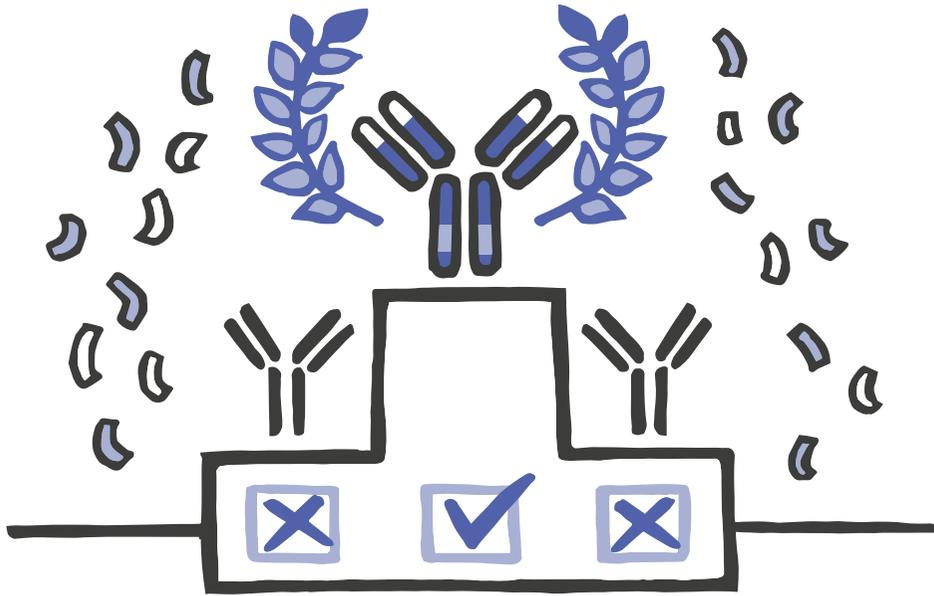


Leicester, Leicestershire  
and Rutland  
Integrated Care Board

Recent student research carried out at Leicester Medical School identified a need for more research gathering local intelligence to help health service providers understand the underlying factors behind these disparities. This recommendation is also supported by the recent Leicestershire & Rutland Local Maternity System Maternity Equity & Equality Analysis. The University Hospitals of Leicester NHS Trust is embarking on a wide-reaching project of quality improvement in maternity services, with support from Leicestershire County Council's Public Health team who assist with public health interventions in pregnancy in the community. The quality improvement programme's aims include goals to "understand populations", "work with people and communities" and develop "Good understanding of need at system, place and neighbourhood level".

In order to successfully inform improvement in these areas, we identified a need to understand the historical context of the Black community's maternity and early motherhood experiences within

NHS and public health services. Knowledge of past experiences, initiatives and challenges can potentially better inform identification of the social determinants of the health inequalities, and identify opportunities for improvement within a longitudinal local context. History and oral history research have often been successfully used within the Participatory Action Research paradigm in public health improvement research, and amplifying voices and experiences from the local Black community can engage community members in dialogue with local health services and improve relationships and partnership. Our project delivered an historically-contextualised understanding of experiences, initiatives and challenges in maternity and motherhood for Black women in Leicestershire under the NHS, particularly from 1984-2004, from the perspective of Black women/mothers, the way it shaped their relationship with healthcare practitioners involved in their care and their advice for the next generation of mothers.



## The Only Good Antibodies community

**Antibodies are one of the most important reagents used in biology and medical research. They are Y-shaped molecules that scientists use for their ability to recognise, and stick to, specific targets. They are used to identify which proteins are present in a biological specimen, and whether there is more or less of a given protein. This means they are used to work out which proteins might be important in disease. Data from antibody experiments informs drug design, and sometimes antibodies themselves are used as drugs.**



Unfortunately, a large proportion of antibodies used for research purposes do not recognise the target they are meant to, or they also recognise lots of other targets. Two large studies suggests that this is a problem for more than half of available antibodies. This leads to waste of resources and failures of research projects and drug development.

The reasons for this problem are complex, but include that it has been historically slow, expensive and difficult to perform all the best quality control experiments. Companies are improving their internal processes, and new innovative ways to efficiently perform quality controls in collaboration are also showing promise (see YCharOS Inc.). However, many researchers are not aware of the issue and do not find it easy to find the best antibodies, nor to perform the necessary quality control experiments. There is also a need to change the research environment and culture to address this problem.

The OGA community was established in April 2023 by a collaboration of biomedical and behavioural researchers from the University of Leicester. We are part of the wider movement to improve research integrity and reproducibility, we are an affiliate stakeholder in the UK Reproducibility Network. We are learning from this wider community, and our work also represents an opportunity for learning in the wider context of research reproducibility and integrity.

We are a diverse collaboration of basic, clinical, data and behavioural scientists and technicians from academia, industry, and non-profit organisations.

A good antibody will be consistent and give reliable data.

### Our Mission

**The OGA community will work with all stakeholders to accelerate scientific and drug discovery research by:**

- 1. Increasing the availability and use of good antibodies**
- 2. Eliminating the use of poorly performing antibodies**



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