

Interdisciplinary Walks: Investigating the benefits of walking for research

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Summary: The Interdisciplinary Walks project was funded by the Leicester Institute for Advanced Studies (LIAS) between May and July 2022. It set out to encourage staff members to think outside their own disciplinary silos whilst getting familiar with University of Leicester surroundings, from the main and north campus to the School of Business at Brookfield, and the Space Park. Consultations with 29 members of staff asking about their interdisciplinary research and favourite walks were conducted via Zoom and recorded for use on the WordPress site <www.leicias.le.ac.uk>. Intended outputs from the Interdisciplinary Walks project included an A5 map booklet (with a print run of c.500 copies) drawn by illustrator Amy McKay, web content including edited audio recordings of consultations and accompanying transcripts, and six visualisations of the audio clips created by visual storytelling agency Nifty Fox Creative. This working paper provides an overview of the project as it progressed, with the final sections reflecting upon the benefits and challenges of interdisciplinary research and the value of walking and thinking as viewed by academic researchers. The consultations recognised the importance of access to parks and green spaces, and identified four key walking behaviours: walking alone, together, to disconnect, and to focus. The project concludes that by understanding individual preferences in how we walk, researchers can harness the potential of walking as a tool to improve mind, body, and research.

Introduction

LIAS set out to investigate the value of walking and thinking to interdisciplinary research, with the primary purpose of producing a resource that would link different disciplines across campus through three or four walks that could be undertaken in person with a paper map, or online. These routes would highlight the interconnectedness between departments, including the main and north campus, the School of Business at Brookfield, the Botanic Garden and Attenborough Arboretum, and Space Park Leicester. In showcasing the breadth of the University's interdisciplinary research and collaborations, LIAS anticipated that academics would be inspired to think outside their disciplinary silos and adopt new ways of thinking and collaborating to produce impactful research. Although the core audience for the resource would be current colleagues and new members of staff, it could also be used by students, and for student and staff support and training more generally.

Walking can mean different things to different people. Here, it is taken to signify an act of movement, being out of doors, getting a breath of fresh air, and taking in natural surroundings. In short, walking represents the opposite of our intrinsically interior – and often static - working environments, including the office, laboratory, or library. Walks can be solitary or shared, long, or short, often defined by the weather, the accessibility of the route, and how much time we have to spare. For the academics consulted at the University of

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Leicester, walking serves various functions; it can be the means to unlocking thought, or to provide distraction from a busy working day, or simply a way of getting from one place to the other. Frédéric Gros's work, *A Philosophy of Walking* draws attention to thinkers - from Thoreau and Rimbaud to Rousseau, Nietzsche, and Kant - who felt that walking was central to their practice.² Rousseau had to walk to think, Nietzsche in order to write, while Kant walked to distract himself from contemplation. Clearly, walking has never been a solely male, or indeed white, activity; Kerri Andrews' *Wanderers: A History of Women Walking* explores the walking lives of female thinkers, from Wordsworth and Martineau, to Woolf, and Nin, arguing that women have written about their walking, and their thinking for centuries, although they walk differently from men.³ Walking can also act as a means to discovery, to understand our surroundings from different viewpoints, as evidenced in the success of educational companies such as London's Black History Walks,⁴ or the rise of so-called 'uncomfortable' tours across the country which address narratives of empire and colonisation. These include the University of Bath's creative engagement 'Walking Bath's Uncomfortable Past' tour.⁵

Studies on the health and wellbeing benefits of walking argue that contact with nature and green spaces improve psychological health by reducing stress, enhancing mood and replenishing mental fatigue.⁶ A 'walking-for-thinking' approach is a developing area of study; Mia Keinänen's qualitative investigation among nine Norwegian academics identified a specific form of walking that has a steady rhythm and a specific individual speed that is experienced as most conducive to thinking.⁷ Furthermore, Keinänen's study found that subjects - a mixture of university professors, research and development professionals, researchers and a university president - experienced walking-for-thinking as an interplay between person, environment, and thought, where the rhythms of the body while walking enhanced memory and creativity. Building on this, Catherine Manathunga et. al. argued that digital timescapes have reduced academic life to an endless achievement of metrics, something that forces us to disconnect from ourselves, the natural world, and each other.⁸ Focusing on the role of the beach as a liminal, creative and critical space, the authors devised a walking methodology of 'thinking in movement', where the goal was not to achieve a step count, but to foster creative and critical thinking. These studies advocate that walking

² F. Gros, *A Philosophy of Walking* (London: Verso, 2014).

³ K. Andrews, *Wanderers: A History of Women Walking* (London: Reaktion, 2020).

⁴ Black History Walks, London <<https://blackhistorywalks.co.uk/>>.

⁵ Walking Bath's Uncomfortable Past self-guided walk, developed by Christina Horvath, Ben Van Praag and students from University of Bath's Vertically Integrated Projects (2021) <<https://www.bathscape.co.uk/activity/walking-baths-uncomfortable-past-self-guided-walk/>>.

⁶ See, for example, J. Barton, R. Hine & J. Pretty, 'The health benefits of walking in greenspaces of high natural and heritage value', *Journal of Integrative Environmental Sciences*, 6:4, (2009) pp.261-278, DOI: 10.1080/19438150903378425; M. Carpenter, 'From 'healthful exercise' to 'nature on prescription': The politics of urban green spaces and walking for health', *Landscape and Urban Planning*, 118, (2013), pp.120-127, DOI: 10.1016/j.landurbplan.2013.02.009.

⁷ M. Keinänen, 'Taking your mind for a walk: a qualitative investigation of walking and thinking among nine Norwegian academics', *Higher Education*, 71, (2016), pp.593-605. DOI: 10.1007/s10734-015-9926-2. See also, M. Keinänen & E.E. Beck, 'Wandering intellectuals: establishing a research agenda on gender, walking, and thinking', *Gender, Place & Culture*, 24:4, (2017), pp.515-533, DOI: 10.1080/0966369X.2017.1314940.

⁸ C. Manathunga, A.L. Black & S. Davidow, 'Walking: towards a valuable academic life', *Discourse: Studies in the Cultural Politics of Education*, 43:2, (2022), pp.231-250, DOI: 10.1080/01596306.2020.1827222.

as a form of thought, or as a means to facilitate it, should be regarded as an alternative space for research at a time when being sedentary has been identified as carrying health risks. It is this area of research, of acknowledging the role of movement within our research practice, that the LIAS Interdisciplinary Walks project aimed to develop.

The LIAS Interdisciplinary Walks project commenced in May 2022. Dr Anna McKay, a historian with public history and policy experience, was appointed as lead Research Associate, joining the LIAS project team including Professor Clare Anderson, Director of LIAS, Dr Diane Levine, Deputy Director and Manager, and Charlotte King, Fellowship and Communications Coordinator. Initial consultations defined the project's milestones and deliverables, including: M1: Generate and narrow down list of interviewees; M2: Complete consultation phase; M3: Edit consultations and circulate for feedback (with transcripts); M4: Decide routes; M5: Artist complete mock-up version; M6: Circulate for feedback. Deliverables: D1: Print copy; D2 Website/blog; D3: Filmed video walk. All milestones and the first two deliverables were to be carried out within the three-month project timeline (13 weeks), with the design of the map resource occurring simultaneously with the consultation phase. Initial discussions considered accessibility issues, and the longevity of the project resource. From a technology standpoint, LIAS chose not to base the design around an App which might fall out of use, whereas changes to the structural landscape of the University were addressed by choosing to omit some buildings from the walking routes where their use was known to be developing.

Route Planning: Designing the Maps

The first stage in the Interdisciplinary Walks project was to create a rough design of the map resource that could be sent to an illustrator. This was facilitated in Week 1 by conducting a survey of other HE Institutions' walking routes and identifying any relevant tourism or museum maps and self-guided tours that could be used as a basis for the template. The current University of Leicester campus map is interactive and designed primarily for student use.⁹ Its format is accessible and includes 'what's here' and 'worth knowing' sections, alongside guided tour videos for each building. However, the map only conveys basic information, allowing little room for creativity. A key aim of the Interdisciplinary Walks project was to create a resource that was unique and did not repeat information that existed elsewhere on the University of Leicester's web pages. In addition, many UK HEI maps consulted connected their walking routes with health and wellbeing; from the outset, LIAS chose not to directly address this in its own resource, as the University of Leicester had its own strategy in this area for staff and students.

Several user-friendly maps were identified in the initial survey, including the University of Warwick's campus walks,¹⁰ the National Library of Scotland's Frederick Douglass in Edinburgh map,¹¹ and the University of Portsmouth's self-guided campus tour.¹² Warwick's

⁹ University of Leicester Campus Map <<https://www.le.ac.uk/maps/>>.

¹⁰ University of Warwick Campus Walks <<https://warwick.ac.uk/services/estates/campus/walks/>>.

¹¹ National Library of Scotland Frederick Douglass Interactive Map <<https://www.nls.uk/exhibitions/frederick-douglass/maps/>>.

¹² University of Portsmouth Self-Guided Tour <<https://www.port.ac.uk/study/open-days/self-guided-tour>>.

designs were simple PDFs that provided screenshots of Google Map satellite with an annotated route. The walk length was clearly labelled and flagged up a lack of signage for users along the routes. The National Library of Scotland map revealed places where Frederick Douglass lived, held meetings and gave speeches during his antislavery campaign in Edinburgh. Its format was a digitised and interactive historical map, containing markers, or pins, that users could select to read more on the significance of key locations. The Portsmouth tour was aimed at undergraduate students and had a clear design containing photos of the city, information on campus cafes and bars, alongside photographs and testimonies from current students. Its walking route was broken into four sections, each with detailed directions and hyperlinks to buildings and departments embedded into the text. At the base of the page, a Google Map labelled each campus building and showed the distance between the campus in relation to the city centre.

Self-guided tours offered by the University of California, Berkeley provided further templates to consider, in particular its College of Engineering Tour.¹³ This guide, available to download as a PDF, included a list of numbered buildings and summaries of information about their histories, from architectural merit to scientific discoveries that took place. A clear 3D-style map linked up to the numbered buildings and included a route line marked out with red arrows. The campus Public Art + Architecture Tour¹⁴ also featured some elements that the team felt were worth incorporating into the Interdisciplinary Walks resource, including a QR code, an introductory overview, and estimated times for each route. LIAS project members considered the strengths and weaknesses of these designs and drew up a shortlist that could be enveloped in the final product. These included 3-4 walking routes, or loops of the campus and university buildings further afield, an introductory overview, potted histories of campus buildings, and a QR code linking to the centre homepage. Limited to a select number of pages due to the A5 format, it was decided that any additional blank spaces would be filled with quotes from staff consultations, maintaining a disciplinary, gender, and ethnicity balance. This use of quotes provided one further way of strengthening the overall purpose of the resource, to make links between interdisciplinary research and walking.

A primary concern was maintaining a balance that adequately represented places of work across three routes, or loops. Having examined a range of self-guided walks and tours, it was decided that Route 1 could represent the University of Leicester's main campus (see Figure 1). Although initially reluctant to include Victoria Park in the walking routes as it was not strictly a university space, consultations with staff members made it clear that the Park was a central aspect of many daily short walks out and around the campus. As such, Route 1 incorporated a stretch of the park within its loop, and, arising out of further testimonies, an optional loop through Welford Cemetery. To incorporate the School of Business at Brookfield, Route 2 began on main campus and took a route through Victoria Park and onto London Road. LIAS later chose to lengthen the walk by including a box that showed directions to the Botanic Garden and Attenborough Arboretum. Route 3 was the longest, starting on University Road at the School of Museum Studies, progressing down New Walk

¹³ University of California, Berkeley College of Engineering Tour <<https://engineering.berkeley.edu/wp-content/uploads/files/docs/EngineeringWalkingTour2017v2.pdf>>. For all University of Berkeley self-guided walking tours, see <<https://visit.berkeley.edu/campus-tours/self-guided-tours/>>

¹⁴ University of California, Berkeley Campus Public Art + Architecture Map, available to download via <<https://artsdesign.berkeley.edu/about/visit>>.

and along river and canal paths, then through Abbey Park to reach the Space Park. Later additions to this route included a return route through the City Centre, which could be taken by wheelchair users as an alternative to the canal and river paths, and an optional starting point at Leicester Royal Infirmary, to appeal to clinicians and researchers practising at the hospital. Following Berkeley and Warwick's examples, each route contained a text box detailing the estimated length of each walk, and a small overview describing the walk.

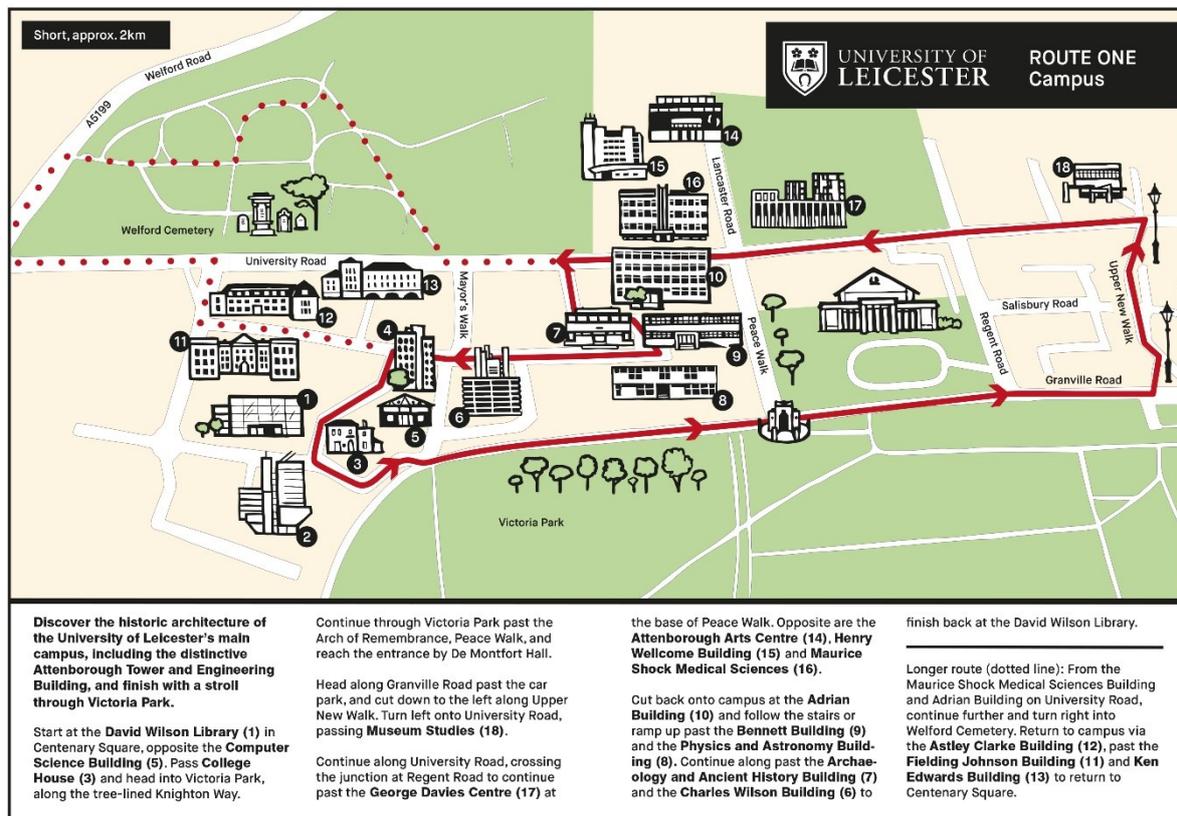


Figure 1. Route 1: Campus circuit (illustrated by Amy McKay).

Each University department was initially plotted on three Google My Maps templates. These were shared with members of the team for discussion, and once the routes had been decided, they were then sent to illustrator Amy McKay to draw up rough drafts. These were edited every week and circulated for feedback. As the project developed, the sections that focused on the varied histories of selected campus buildings were removed from the design, to avoid repeating existing University web content. However, the illustrations of these buildings were still used as a key at the back of the resource with the name of each building in full, helping to bring together the numbers on the maps, and linking up to the route text. It was decided that buildings would only be featured when they were directly linked to research; therefore, campus buildings such as the Percy Gee Students' Union, and Danielle Brown Sports Centre were omitted. Further omissions included some of Leicester's hospitals; Route 2 and 3 used arrows to indicate the locations of Glenfield Hospital and Leicester General Hospital, illustrations of which were commissioned to use in future promotional materials. Correspondence with staff members who worked in these spaces suggested that referencing the buildings in the maps using arrows was sufficient, as they were not directly connected to the three routes (with the exception of Leicester Royal Infirmary).

Accessibility: Printed Map and Blog

One aim of the Interdisciplinary Walks project was to commission a print run of the map resource, around 500 copies of A5 booklets, which would be accompanied by a web version. LIAS identified several issues around accessibility, considering how disabled people might undertake the routes; for example, it was evident that river and canal paths suggested in Route 3 (Space Park) may not be suitable for all wheelchair users, and so an alternative city route was included within the map. One discussion with a campus-based member of staff brought up some ways to make the resource more accessible for people with autism; these included being aware of bright lights, noises, smells and textures. As the walking routes took place outside, some of the sensory concerns were less applicable, but it was noted that arranging the routes away from main roads to avoid sirens and choosing pathways that had adequate signage would be more sympathetic. Signage posed a problem, so LIAS flagged this up in a dedicated 'Safety and Accessibility' section in the map booklet's introduction. Natural environments, such as the parks and green spaces that each route featured, were seen to be the most quiet and sympathetic for autistic users. Following this input, LIAS sought an internal accessibility review, which was provided by the AccessAbility Centre, who assessed drafts of the illustrated maps. Many of the accessibility principles were similar between print and digital, and addressed sizing, font use and typographical choice, use of colour and patterned backgrounds. These suggested changes would make the printed and web content more accessible for dyslexic, partially sighted and blind users.

Early drafts of the illustrated A5 map contained red numbering, mixed serif and italicised fonts, and some text smaller than 12 point. Following feedback, illustrator Amy McKay implemented as many of the recommended changes as possible. These included: removing all use of italics; changing the white-on-red colour scheme to match the University of Leicester logo to a white-on-black version, including logo colour change; ensuring consistent usage of sans serif font (Maison Neu); designing a title page with large text centred in a white box; toning down the colour scheme of the maps to a paler version, and adding arrows to the route lines for clarity. The A5 sizing restricted changes to font size (set to point 9). To address this, LIAS decided to print a limited run of larger A4 copies for distribution, and to make sure to upload accessible MS Word formats online on the project blog site. The map routes would also be uploaded onto the blog as PDFs, so that users would be able to zoom in and print them out larger if desired. As advised by Systems Specialists in Estates and Digital Services, LIAS chose an 'Accessibility Ready' format for the WordPress theme, in line with legal obligations.

Web Content: WordPress Site

In the early stages of the project, there was scope to find a suitable App that could be used to host an interactive version of the map, such as an embedded Google Map. However, the longevity of the App could not be guaranteed, and furthermore it was clear from the consultations that walks present an opportunity for users to disconnect from their phones and technology and connect with natural surroundings. It was therefore decided that a mobile-friendly WordPress blog site would host the maps (and accompanying accessible formats), the audio clips and transcripts, and feature a link to a research project, papers, publications or promotional videos of those consulted. All these resources would be

available to download while walking or print on demand. LIAS chose a WordPress template that felt similar to the design of the main University of Leicester website (TwentyFifteen), and in light of the accessibility feedback, clear labelling and black-on-white text was used throughout, with no use of patterned, or clashing backgrounds. The site incorporated illustrations drawn by the illustrator, including the LIAS brain and lightbulb logos. The menu included an 'About' and 'Contact' page to increase subscribers to the newsletter, alongside dedicated sections on previous projects, including the 'Interdisciplinary Pop-Up' (2022), 'Comfort Food for Thought' (2020/1) and Christmas campaigns (2020-20), with the scope to add more sections in the future (see Figure 2, below).

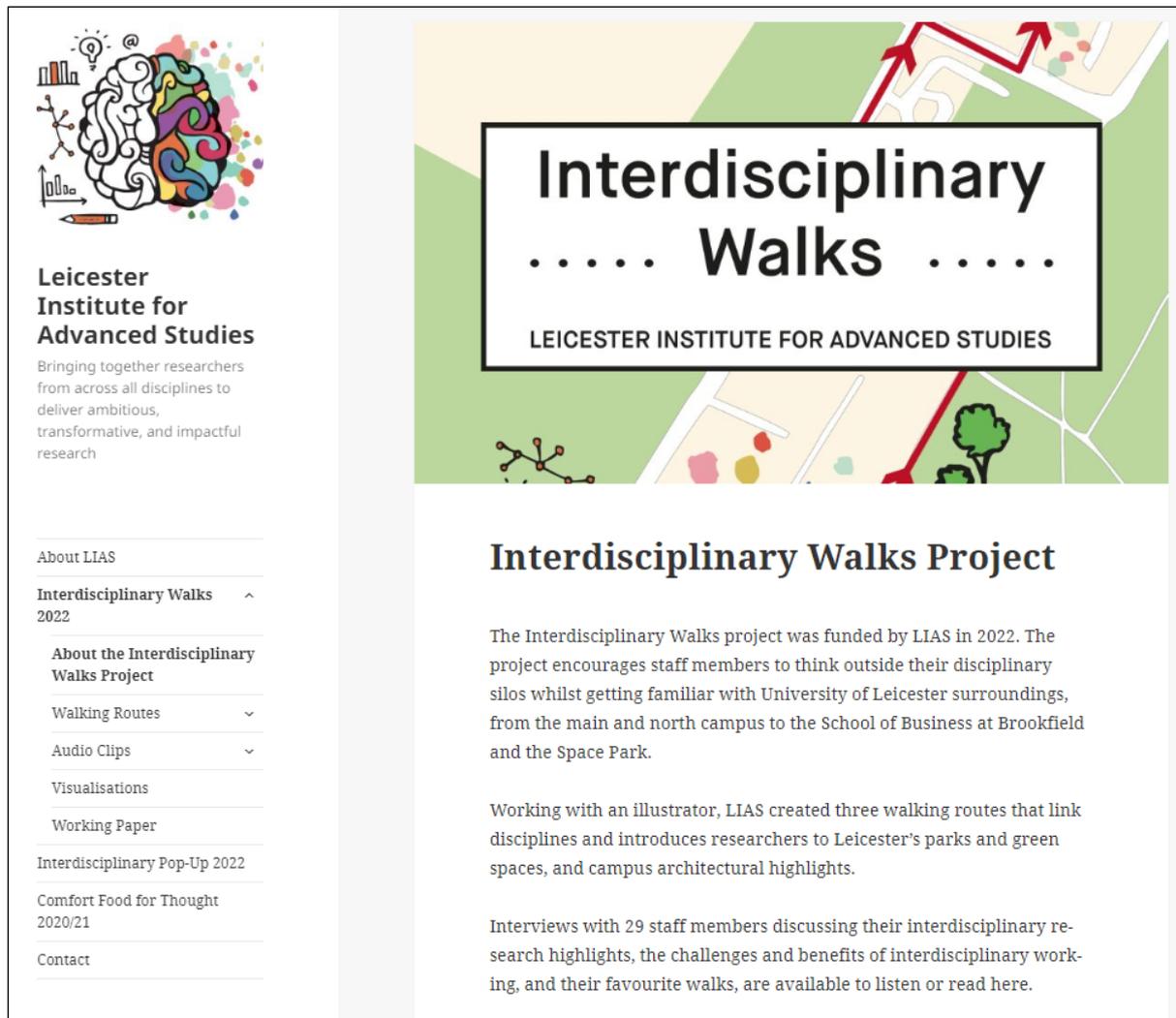


Figure 2. Screenshot of WordPress site <<https://www.leicias.le.ac.uk/>> (date taken: 23.08.22)

In addition, six visualisations of audio clips created by design agency Nifty Fox Creative would be hosted on the blog, offering a visual means of displaying the audio material. A consultation with Nifty Fox's Director Laura Evans-Hill brought up various ways of using the audio clips; these included 'explainer animation', downloading QR codes across campus, illustrated maps, and virtual reality. Six audio clips were selected from the recorded consultations to be drawn up as visualisations, following participant approval: Professor Huiyu Zhou, School of Computing and Mathematical Sciences; Dr Winfred Onyas, School of Business; Professor Martha Clokie, School of Biological Sciences; Dr Alice Tilche, School of

Museum Studies; Professor Mark Jobling, Department of Genetics and Genome Biology; and Professor Manish Pareek, Department of Respiratory Sciences. In choosing the six clips, LIAS was keen to avoid placing emphasis on department heads, or the heads of research centres, preferring to give a platform to the work of a mixed group of academics spread across the disciplines. Hosted on the project WordPress site, the visualisations would also be used by LIAS for promotional purposes, including gazebo displays, poster exhibitions, and conference stands, featuring a QR code that linked to LIAS's University of Leicester home page.

Consultation Phase: Participants and Question Design

Having compiled a list of the University of Leicester's research departments, centres, and institutes, LIAS drew up a shortlist of 22 potential staff members to consult, attentive to maintaining a disciplinary, gender and ethnicity balance. This list was then presented to the University's research deans for discussion. The final number comprised 29 members of staff across University of Leicester's research departments. Director Clare Anderson emailed these staff members asking if they would be willing to participate in a 20-minute recorded Zoom meeting with the project's Research Associate Anna McKay to talk about interdisciplinarity in their work, with the edited clip to feature on the project website. The team decided on an initial list of questions that centred around interdisciplinary issues, focusing on challenges, decision-making, and career highlights. The final questions were circulated to respondents in advance of the Zoom meetings:

- Introduce your name, your role, and where you are based.
- Which other disciplines have you worked with, research bodies, companies, etc.?
- What would you say has been an interdisciplinary research highlight for you at Leicester? For example, working with a certain research centre, individuals, new perspectives gained, etc.
- In your opinion, what are the challenges and benefits that come from working across disciplines?
- How did you get into interdisciplinary work, and how would you recommend researchers start to think about incorporating these new perspectives/ways of thinking?
- What's your favourite area of campus/ Leicester to go on a walk?

At the beginning of each consultation, Dr McKay asked permission to record the sessions, so that edited content could be used on the website. The first consultation with Professor Tim Coats in the Department of Cardiovascular Sciences was edited down to a three-minute MP3 audio file and circulated to LIAS team members for feedback, where it was decided that clips would be presented in audio, rather than video format on the WordPress site, with the Nifty Fox graphics providing alternative visual formats. This choice sped up the editing process and anticipated end users downloading and listening to the clips whilst walking the routes, if desired. As the consultations progressed and further themes arose, two further questions were added:

- From the perspective of your research, what are the benefits of walking for you? E.g., helps formulate thoughts, refreshing way to have a meeting etc.

- Is there a research project/ website/ piece of written work you would like posted on the LIAS Interdisciplinary Walks blog alongside your audio clip?

The consultations took place over a series of weeks concurrently with the map design, thereby enabling greater flexibility to incorporate staff members' favourite walks into the three routes. In cases where academics in certain departments were underrepresented or could not take part due to annual leave or illness, alternative participants were contacted. Upon completion of the consultation phase, Dr McKay edited each audio clip to around three minutes, and produced a transcript of each conversation. These were then sent back to individuals to ascertain whether there were any issues, such as misrepresentation or general comprehension. In general, each clip provided an overview of the participant's research area, interdisciplinary highlights, and their favourite walking areas near their place of work. The consultation phase was met with a high degree of willingness and cooperation by staff members to contribute to the project and share their views and experience of interdisciplinary research. The consultations also consolidated the view that the project resources, including A5 map to blog content, should focus on people, their projects, and collaborations, rather than university buildings and associated points of interest. The following section will discuss the commonly occurring themes arising from the consultations, as well as reflecting on the benefits of walking, or 'walking as a form of thought'. Comments have been anonymised.

Reflections:

i. Commonly occurring themes

The consultations with staff members indicated that many saw interdisciplinary work as an exciting way of working. The 29 staff members spoken to showed a broad level of engagement outside their own disciplines, with many having worked with academics from other fields, across universities, artists and community groups, large companies and start-ups, alongside research bodies in the UK and globally. They had worked in small and large teams of researchers, from two to forty, and their levels of involvement in projects ranged from being project investigators to collaborators, advisors and consultants. The benefits of working across disciplines were seen as manifold; they included gaining new perspectives, creating lasting networks and partnerships, and pushing boundaries. Working across the disciplines provided new opportunities to look at problems through a different lens; by recognising someone's expertise and working collaboratively, a project could be strengthened and taken in new and unexpected areas. Attitudes towards interdisciplinary research were overwhelmingly positive, but many of those spoken to remarked on the challenges of this kind of working, including overcoming language barriers, having enough time within funding periods to work together, and convincing funders of potential benefits.

The consultations revealed that interdisciplinary working was motivated by individual and collective desires to find answers to complex problems. One professor in the Department of Cardiovascular Sciences commented, 'I had problems that I wanted to solve; I didn't have the skills to solve those problems myself, so I had to get in contact with a whole group of people that had the different skills that I needed.' Many were also driven by personal desires to 'face and deal with national challenges', whether this was helping to bring about new treatments for diseases or understanding the universe. For some, interdisciplinary ways of

working were intrinsic and natural; for example, those working in the College of Life Sciences mentioned the necessity of collaborating with engineers, clinicians, UK HEIs and research organisations. For others, the desire to work with others was what prompted their interdisciplinary work, with one lecturer commenting that 'I think research is a wonderful way to bring people together, to put people in dialogue with each other, and this is something I like to do and that I've always done in my work'. Making interdisciplinary connections was often seen as an individual responsibility, with one lecturer commenting that when they started a new project, 'the onus on us as researchers is to be able to identify, 'Who do I know in this area?' or, 'Who in my network can I contact?'" A lack of support structures within departments was also referred to, thus increasing the importance of LIAS to offer opportunities for academics to come together.

When asked about their interdisciplinary highlights, commonly occurring answers referenced projects that brought about measurable scientific and social impacts. These included projects that were taken over by community groups upon completion, or scientific models that were used by companies and NGOs. Second to this were novel collaborations that sparked new ideas and ways of thinking; research that changed perspectives was seen as highly rewarding. One professor in Medical Sciences described how a major research highlight of theirs was working with a colleague in the School of Arts, described as 'the biggest bridge that I had to cross.' Their research involved an investigation of perceptions behind 'virus fear', and the collaboration was seen as a highly valuable one, because 'in some ways, there's no point spending years developing a perfect product [...] if there's a huge backlash against using it'. Another professor, in the School of Computing and Mathematical Sciences, described how varied their interdisciplinary work could be, as on one project they collaborated with Biological Sciences to develop a computer system to monitor the behaviour of mice with Parkinson's disease, whereas another project worked closely with English to develop a system to decipher shorthand reporting of nineteenth-century novelist Charles Dickens. People spoke of the stimulation of working with others, stating that 'if you're truly asking a high, hard-hitting, impactful, ambitious question you are going to have to reach across disciplines.'

When asked, 'how would you recommend researchers start to think about incorporating these new perspectives/ways of thinking?', various recommendations were put forward. One professor suggested: 'go and talk to people you wouldn't normally talk to, go and listen to other people [...] there's quite a lot of opportunity to do that'. Other suggestions included looking out for staff email calls to get involved, attending departmental 'matchmaking' sessions, and tuning in to talks, seminars and conferences outside their field of expertise. Some PIs commented that they promoted an interdisciplinary outlook in their teams by making sure that funding proposals incorporated opportunities for researchers, PhD students and postdoctoral fellows to collaborate. For example, one PI commented that when drafting a project, 'we designed it so that every team member would be exposed to other research methods, and it was really important for us that we understood the kinds of work that we were each doing.' In this way, academics at every stage of development had opportunities to think outside their disciplinary practices and learn new skills and methodologies. One professor in the Department of Health Sciences explained that they asked their team members to recommend a piece of reading that explained clinical problems to lay audiences, theoretical approaches, and other concerns which they then collated in a pack to share, 'so we almost had a reference that we could all look at to try and understand each other.'

Working directly with LIAS was recommended by many of those consulted. One person suggested that others should start by looking at their projects from different perspectives or angles to identify gaps, ‘then it’s really important to engage with mechanisms at the University like LIAS to try and start identifying people with that expertise that you can work with.’ On working with LIAS, a professor based in the Department of Respiratory Sciences recounted how a Leicester migration network had been ‘re-energised’ through a LIAS ‘Migration, Mobility and Citizenship’ tiger team, which then became a network.¹⁵ This provided a new opportunity to work with clinicians, social scientists, human geographers and historians, amongst others. Academics recommended taking risks, being patient, and trying to understand different disciplines’ ways of working, as well as viewpoints. A lecturer in the School of Arts spoke of their participation in an international research network supported by LIAS called ‘A Manifesto for Pandemic Sexual and Gendered Citizenships: Practising Urgent Witnessing’.¹⁶ Within this network, discussions across the disciplines were fruitful and productive, as people allowed their own disciplines to ‘both come to the forefront of our conversations, but also fade into the background at the right time.’ Understanding each other and working to bring disciplines together in a cohesive way led to the creation of new knowledge.

Those consulted remarked that no collaboration was instant; individuals had to be open-minded, prepared to work at relationships, learn common languages, and teach others about their own disciplines. Language barriers across disciplines was a key point made across consultations. Many spoke of how individual words, such as ‘data’, or ‘survey’ could mean different things to different disciplines, equally so with theories and concepts. One academic saw themselves as playing the role of mediator between different parties, of ‘translating’ languages across teams. In some cases, defining a new common language also came to be necessary, which brought about its own challenges. As one lecturer remarked; ‘things may not translate from one field to the other, so you will have to come up with newer concepts, and that’s what’s exciting about this, but also that is exactly what the barrier is!’ Reconciling methodologies that may exist in tension with each other was another issue; one lecturer working between art and anthropology commented that ‘the way that we go about answering and engaging with these questions might be different but bringing these two aspects together is always fruitful.’ Although bridging the gap between disciplines might be difficult, incorporating new ideas through interdisciplinary ways of working was seen to open out new fields of research.

Other challenges included time management in building relationships and securing funding. One lecturer in the School of Chemistry remarked that ‘we have no idea what our collaborators are going through in order to do the experiments on our behalf, and so it’s really important to foster a close relationship where you have a good understanding.’ Another professor remarked that their institute spent a lot of time linking and building relationships across different areas of capability and expertise, because the reward when

¹⁵ Migration, Mobility and Citizenship (MMC) Network, Leicester Institute for Advanced Studies, <<https://le.ac.uk/research/areas/institutes/institute-advanced-studies/funded-projects/migration-mobility-and-citizenship-network>>.

¹⁶ ‘A Manifesto for Pandemic Sexual and Gendered Citizenships’, (Lead: Prof. Gavin Brown), Leicester Institute for Advanced Studies, <<https://le.ac.uk/research/areas/institutes/institute-advanced-studies/funded-projects/research-networks>>.

things fell into place was immeasurable. Regarding funding, while interdisciplinary research approaching problems in different ways was seen as a 'way of making your research stand out,' those consulted remarked that major funders had been slow to pick up on interdisciplinary work, and still held some resistance against it. One individual remarked that internal reviews were difficult because 'the language of the disciplinary silo was a little bit 'gatekeep' when it comes to the work that goes out.' Others commented that when they submitted proposals, their work across research areas could penalise them as on paper they were not seen to 'belong' to a particular discipline. When facing the pressure of deadlines and deliverables, many noted that it was be easy to revert to the comfort of a discipline, but feeling 'uncomfortable', often resulted in the pushing of boundaries.

Interdisciplinary research was seen by the majority of those consulted as offering huge rewards to work, life, and experience. Despite the challenges posed by bringing people together, reconciling often contradictory elements, and finding a common language, it was generally felt that 'we can only address a problem if we come together to address it from a range of different viewpoints.' Many agreed that the research that they produced would have been impossible without working across disciplines, and that collaborating with different researchers often brought up surprising questions that they had not considered. Asking 'why is this important', 'is this a generalisation?', 'why would anybody care?', and approaching a subject from a different angle brought about quite profound questions that many felt their research needed to address. Those consulted pointed out that working on different projects had shaped their research outlooks, and that reverting to their own disciplinary silos did not now seem a natural way of working. Keeping a singular disciplinary perspective was felt to put limits on the ability to provide a full and comprehensive picture of a problem. Maintaining a grasp of their own primary purpose, and 'who you are and what discipline you sit within' was key, but understanding the value of collaboration, and working towards a shared goal made any challenges worth overcoming.

ii. 'Walking as a form of thought'

When conducting consultations with staff members, it became clear that walking was seen as an integral part of daily life, and a highly valuable element within the research process. As one person commented, 'I'm all for walking of a form of thought, in fact I use walks exclusively to think through stuff [...] all the research I've done, all the writing I've done has been helped by going on walks.' The consultations confirmed that there are different ways of walking, as well as different ways of thinking; both are dependent on the type of person, and their individual preferences. As noted previously, an additional question was added to the survey mid-way through the consultation phase: 'From the perspective of your research, what are the benefits of walking for you?' This question arose because academics, in describing their favourite place to walk on campus, began to elaborate on the value of walking to them.

Of the 29 academics consulted, 17 were explicitly asked about the benefits of walking, and an analysis of their answers reveals that ways of walking and thinking can be roughly divided into four categories: walking alone; walking together; walking to focus; walking to disconnect. This is not to say that each category is set in stone; rather, they are fluid, and dependent on time, place, and mood. For those consulted, walking represented a circuit-breaker; a

necessary interruption to the typical working day spent sitting at a desk, staring at screens. Walking was a way to relieve tension, but crucially, it provided the space to mull over thoughts and clarify research ideas. As one professor stated, 'I find that if I'm working very hard on a project, and I'm getting bogged down or get stuck, then the obvious thing to me is to move myself out of that space where I'm stuck, and walk, and take a tour, and let my brain relax, let my brain take in things, let my eyes take in new things.' Another echoed the sentiment, saying that when they were struggling with a research idea, 'or a bit of writer's block or whatever the case may be, or something's just become really frustrating, I usually feel like if I get up and go outside and go for a walk, even if it's raining or cold or windy [...] that fresh air and stretching your legs and walking around – it just seems to clear your mind.' Walking opens up the free flow of ideas, increasing our creativity.¹⁷

Walking also gives us time to connect with nature, something that many of those spoken to commented on in light of the COVID-19 pandemic. The Office for National Statistics' 2021 study examining the impact of lockdown on usage of public green spaces and links between nature and wellbeing, argued that nature had become a source of solace for many.¹⁸ For academics teaching and working online during the pandemic, having a break from screen time through daily walks became highly important for mental wellbeing. One lecturer stated, 'I never realised about the power of walking until COVID came [...] getting out and being surrounded by nature, it helps enormously, and at least it's one hour that you don't have to think about COVID, don't have to think about 'what are you going to put online, what are you going to teach', and you can just let yourself enjoy and relax in the nice surroundings'. As we find new rhythms emerging from the pandemic, more academics are working from home, or in blended work situations, and the value of walking and connecting with nature has remained a priority. A professor in the School of Media, Communication and Sociology pointed out the importance of incorporating nature into breaks: 'for me going even in my garden [to] have a little look around and hear the birds is always helping you out in terms of coming back more refreshed to your desk.' Another professor discussed the sensory overload they experienced when first leaving the house after fourteen days' self-isolation: 'my brain and my eyes were just going, 'Wow!', and so it was completely transforming all of the chemicals in my brain, taking away all of that misery from being stuck inside all that time.' Green and natural spaces have never been more important for us.

The importance of walking for health was acknowledged by most staff members LIAS spoke to. A professor in the Department of Respiratory Sciences stated that, 'I think of walking as a tool to improve both your physical and mental health, but also sometimes to try and unpick things that are going on, it's quite a useful skill.' This approach to walking is a blended one; to improve mind, body and research. It was present across multiple staff consultations, with a notable bias towards walking to improve *mental* health, rather than anything expressly physical. It is well-documented that walking helps us to keep mobile, and stay fit, lowering blood pressure and diminishing cardio-vascular disease risk factors. But walking can also

¹⁷ M. Opezzo and D.L. Schwartz, 'Give Your Ideas Some Legs: The Positive Effect of Walking on Creative Thinking', *Journal of Experimental Psychology: Learning, Memory, and Cognition*, American Psychological Association, Vol. 40, No. 4 (2014), pp.1142–1152, DOI: 10.1037/a0036577.

¹⁸ Office for National Statistics, 'How has lockdown changed our relationship with nature?' 26 April 2021

<<https://www.ons.gov.uk/economy/environmentalaccounts/articles/howhaslockdownchangedourrelationshipwithnature/2021-04-26>>.

foster positive feelings; the more active we are, the higher our sense of autonomy and self-esteem. Walking helps us to feel better, more energised, and it was this aspect of walking that people were keen to discuss. One lecturer felt that being often desk-bound can take ‘a toll health-wise, mentally, just a sense of that creeps in when you’re at it day after day, and I think just having the opportunity to go out, and walk and just be outside is hugely uplifting, and [...] I always feel very revived when I do it.’ Equally, another person noted how they used walking as a form of stress-relief, particularly during periods of home working: ‘you can have days if you’re not careful you’re sitting at your desk at home for nine hours without having got any fresh air and gone outside, so I think it helps with managing your stress levels.’

Preferences for walking alone versus walking together was split equally. One person stated that their preference was to walk ‘solo, or [with] someone I can be quiet with’, but many academics discussed how they talked through research problems and ideas with colleagues and family members. Another commented that walking with a companion was always helpful when ‘I am trying to disentangle an intellectual knot, or work through a specific writing problem or conceptual problem that I’m having.’ Walking meetings are offering a new way to share ideas with colleagues in green spaces; one professor in the School of Geography, Geology and the Environment commented that walking together ‘takes the pressure off [...] if you’re just walking around in the sunshine having a chat rather than facing each other over a desk in a meeting, it can be a lot more productive!’ Another person praised the stimulation of walking meetings, ‘walking and talking I find really productive, so if you’re on campus and you want to engage with someone, just go for a walk with them, take a coffee, just get out there.’ Meeting outside also provided a less formal space to discuss interdisciplinary research collaborations; one person reflected that ‘generally if you’re meeting somebody else in a different discipline you’re in another office, so one of us can walk over to the other one’s office, or we’ll sometimes just walk over to the [...] coffee shop, so I’ll walk past the University buildings there, and there’s something nice about having those conversations with your collaborators not just in an office space, because you’re walking together, you know, just to discuss things – I don’t know that necessarily inside buildings is the best place to come up with ideas, it’s different surroundings.’ This point highlights the nature of interdisciplinary collaboration: how we are not only working outside our disciplines, but for many, we are also working in new spaces and sharing facilities. Taking ideas outside can provide a neutral meeting place.

Consultations showed another split in walking behaviour; people either chose to walk to switch off, or actively used walking as a thinking tool. On the latter, one person commented that busy schedules often lead academics to neglect to dedicate time to sit and think, stating that if there was a kernel of an idea formulating in the back of their mind, going for a walk for an hour often enabled them to address it, to ‘sort of formulate it and try and develop my idea and then reach out to my colleagues about how we might take that forward’. A professor remarked that walking could take either form: ‘sometimes it’s just escaping and having a ten-minute switch off, but I think also when you’re kind of thinking through an issue or wondering how to address it, sometimes just walking around is actually a really good way to get a different perspective on it.’ For one lecturer in the School of Criminology, walking was dependent on their work schedule; early morning walks might be for relaxation, whereas lunchtime breaks could provide space to think through a research problem. Another lecturer commented that walking in the morning acted as a meditative time to think about research

and plan their day, 'it happens in a sort of calm way that seems very manageable, and you know, new ideas often come up during those times.' For this individual, walking in the morning, at a slower pace was crucial: 'I think that also, the thoughts are kind of slower and, maybe the interdisciplinary side, they mix together with the environment, and somehow they seem less heavy and urgent.' All those consulted revealed that any form of walking and time spent away from the desk to mull over a problem was a way to clear the head and return to the desk feeling refreshed. One professor in the School of Criminology stated that 'by the time you get back to your desk, your head's clear and suddenly the thing you were stuck on just becomes easy to solve more times than not - not always!'

Across all 29 consultations with staff members, it was evident that Leicester's parks and green spaces and their proximity to the University were integral to researchers' walking and thinking practice, and general sense of wellbeing. The survey asked each person about their favourite walk; the most commonly occurring places were Victoria Park, Welford Cemetery, and New Walk. Key components of walks included enjoying trees, birdlife and flowers, observing other people, and incorporating trips to cafés and shops. Victoria Park was used by many campus-based academics as their primary place to think and walk, with a long or short circuit adapted to suit schedules. Welford Cemetery was seen as a quiet green site full of birdlife, offering a completely different environment to nearby office and lab spaces. Many commented on how they paused to read the inscriptions on gravestones, to think about the lives of previous Leicester inhabitants, and wonder about their individual stories. This was particularly mentioned by those working with human subjects in their research – past or present – from academics in health sciences to archaeologists. New Walk offered an alternative route to approach the University from the City Centre, avoiding the traffic on London Road; consultees commented on how they appreciated the Georgian and Victorian architecture, established trees, and key sites such as the Leicester Museum and Art Gallery and statues of historical significance.

The varied architecture of buildings on campus, from the Fielding Johnson Building to the School of Engineering, were also referenced by those spoken to, although some found the campus to be noisy and cramped during term time. In this case, proximity to adjacent parks and green spaces became even more important as places to reflect. The gardens of Brookfield, including its pond and allotments were popular with those based at the School of Business, whereas researchers at the Space Park referred to Ellis Meadows, a newly established green infrastructure wildlife area created as part of the City's flood defences, as a 'really nice natural capital asset to have right next to the place you work.' Those based in the Hospitals commented how they would modify their walks up towards the University's main campus to include parts of Victoria Park, or New Walk, stating that in relative terms, the campus felt quieter than the hubbub of the hospitals where they were usually based. The Botanic Garden and Attenborough Arboretum offered another refuge for those seeking peace and quiet further away from the city. What the consultations confirmed was that academic researchers found parks and green spaces to be highly valuable within their working lives. They actively sought them out, made detours, and modified routes to make them focal points. These natural spaces were used in several ways, as places to think about research, to disconnect from it, to talk through ideas with others, or to quietly mull over thoughts. It was universally agreed that taking a break to step out into the fresh air helped people to return to the workplace feeling refreshed and relaxed.

Conclusion

Leicester Institute for Advanced Studies' Interdisciplinary Walks project set out to understand how walking and thinking played a part in the interdisciplinary research happening across the University. Creating the map resource was one way of linking different disciplines through a series of three walking routes that were defined by assessing the favourite walks of current staff members. These consultations highlighted the breadth of connections and collaborations across departments on campus and further afield, giving a platform for each academic to discuss their research practice, their interdisciplinary outlook, and the benefits and challenges of working with others. Furthermore, the consultations offered an opportunity to gain insight into academics' perceptions on the value of walking in relation to their research practice, a little-explored area of study. What they revealed was the adoption of varied types of walking behaviours, and that access to natural environments adjacent to workplaces was seen to hold a heightened sense of importance in light of the COVID-19 pandemic and the need to look after our mental health and physical wellbeing. By presenting this material online, through creative visualisations, PDF walking routes, and MP3 audio clips and transcripts, as well as in paper format, LIAS hopes that academics will be inspired to think outside their own disciplinary silos, adopting new ways of thinking and working together, whilst also appreciating Leicester's parks and green spaces.

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