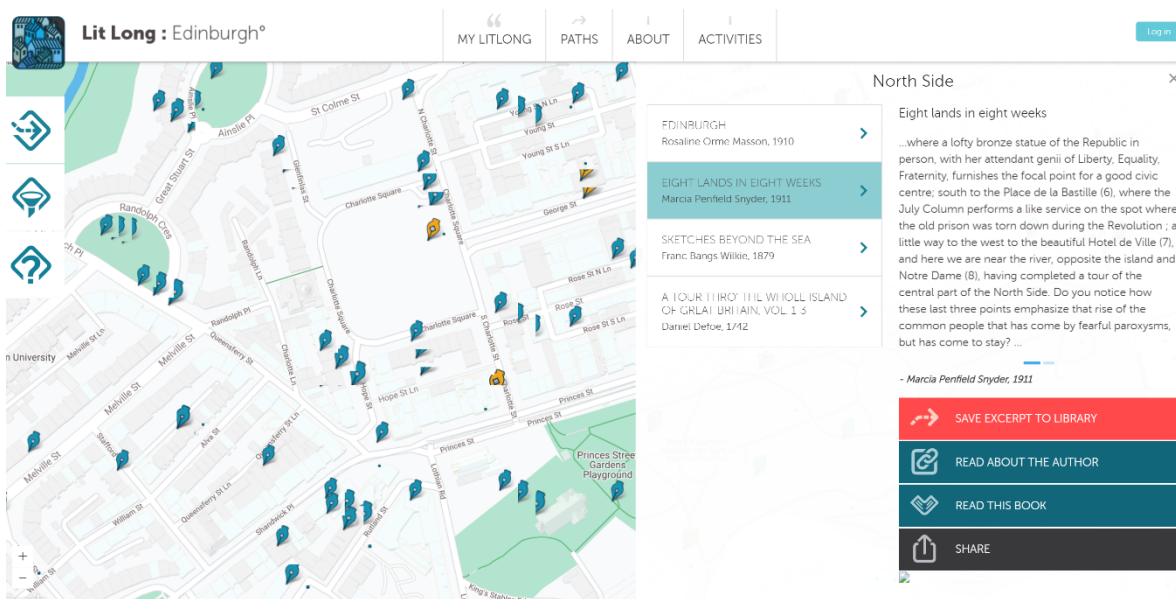


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|--|---|--|
| Institution: University of Edinburgh | | |
| Unit of Assessment: Panel D - UoA 27: English Language and Literature | | |
| Title of case study: LitLong: Transforming interaction with the first UNESCO City of Literature through digital mapping | | |
| Period when the underpinning research was undertaken: 2014 – 2020 | | |
| Details of staff conducting the underpinning research from the submitting unit: | | |
| Name(s): | Role(s) (e.g. job title): | Period(s) employed by submitting HEI: |
| 1. James Loxley | 1. Professor of Early Modern Literature | 1. 1997 to present |
| 2. Beatrice Alex | 2. Chancellor's Fellow | 2. 2006 to present |
| 3. Miranda Anderson | 3. Research Fellow | 3. 2011-2013 and 2014-2018 |
| Period when the claimed impact occurred: 2014 – 31 December 2020 | | |
| Is this case study continued from a case study submitted in 2014? N | | |
| 1. Summary of the impact | | |
| <p>LitLong is a digital transformation project to interactively map the ways in which Edinburgh has been used as a literary setting over the course of five centuries. Text mining and analysis of more than a million books has resulted in 47,000 mapped excerpts of scenes from Edinburgh. Since 2014, LitLong has been embedded in Edinburgh's UNESCO City of Literature digital and on-site programming, its character-led tours being a particularly popular innovation, which have also generated a new income stream for a heritage interpretation company. Through foregrounding marginalised voices, the project has inspired new work by over 80 of the city's contemporary poets and prose writers, and 15 new Wikipedia entries on female writers that have been viewed over 27,000 times. Latterly, its methods have been adopted by Edinburgh International Book Festival and its partner Jalada Africa to map a series of transcontinental journeys and trace trajectories of African writing in English.</p> | | |
| 2. Underpinning research | | |
| <p>Beginning in 2014 as a University of Edinburgh-led collaboration supported by the Arts and Humanities Research Council's (AHRC) Big Data Digital Transformations programme (AH/L009935/1; GPB476,501), LitLong – formerly Palimpsest – is a project to digitally map the ways in which Edinburgh has been used as a setting by myriad writers. By the completion of its second phase (AH/P009549/1; GBP160,942) in January 2018, it had mapped around 47,000 excerpts from more than a million books made available by the British Library, the National Library of Scotland and the Hathi Trust, collectively spanning five centuries of writing. Led by Loxley, the combination of input from researchers in literature, informatics and the digital humanities at three Scottish universities has enabled the development of an interactive map for a city that has both deep literary roots and a distinctive and complex topography. Researchers developed two visual interfaces for the project, one accessed through the LitLong.org website (3.1, see map on page 2), and a free-to-download app, which was available through the App Store (iOS) and Google Play (Android).</p> | | |
| <p>The UoA's Loxley, Alex and Anderson worked with collaborators to generate the dataset underpinning LitLong's digital map, using what Franco Moretti and other scholars refer to as "distant reading" methods: a combination of text mining and human engagement with narratives. The process started with the automated reading of large collections of digitised texts to select those set in Edinburgh, and continued with manual selection, including fine-grained geo-referencing. Texts ranked sufficiently highly were processed using the Edinburgh Geoparser, a system that recognises and disambiguates in-text place names using a specially-curated gazetteer (in this case, of Edinburgh locations). Prior applications of this tool had only geoparsed to the city or village level, but in the LitLong project the process was pursued to a lower level of granularity in the form of place names including names of streets, buildings, parks and monuments within the Edinburgh area. Overall, the methodology constitutes a new way of extracting relevant data from a vast body of literary</p> | | |

material and categorising it with pinpoint accuracy, making LitLong a unique exploration of the possibilities of big data for literary research.



As well as the map and its two visual interfaces, LitLong's outputs include several pieces co-authored by Loxley, Alex and/or Anderson and their collaborators. An article in *Digital Scholarship in the Humanities* details the project's mixed methods and how they have been used in other contexts (3.2). Another article, in *Language Resources and Evaluation*, explores geoparsing's potential for the analysis of fine-grained location names in literary texts while also highlighting the challenges researchers can encounter when using data mining techniques (3.3). Book chapters on the project offer new insights into Edinburgh's layered literary history, deepening our understanding of how different writers have engaged with and been shaped by the city (3.4), and describing how LitLong enables us to compare narratives from different periods clustered at one location, thereby providing insights into how perceptions and place change over time (3.5). The project also informed a white paper on the intersection of the humanities and data science for the Alan Turing Institute (3.6). Extracts have uncovered forgotten or overlooked texts by Edinburgh's female writers, bringing to light the work of previously under-researched figures such as Isabella Moncrieff (1775-1846) and Catherine Sinclair (1800-1864).

The LitLong research team

The project's Principal Investigator is **James Loxley**, Professor of Early Modern Literature at the University of Edinburgh (UoE). Its core team includes colleagues drawn from across the Schools of Literatures, Languages and Cultures and Informatics at UoE: Jon Oberlander (Professor of Epistemics, 2005-2017); Claire Grover (Senior Research Fellow); **Beatrice Alex** (Research Fellow, 2014-2018; Chancellor's Fellow since 2018); **Miranda Anderson** (Research Fellow, Palimpsest Project 2014; employed by UoE until 2018); and James Reid (Geospatial Services Manager). The core team also includes two further colleagues from other universities: Tara Thomson, Lecturer in Cultural Studies at Edinburgh Napier University; and Aaron Quigley, Chair of Human Computer Interaction at the University of St Andrews. The project was a British Library Labs Awards: Research Award runner-up in 2015.

3. References to the research

3.1 Loxley et al. (2017). *LitLong: Edinburgh*, version 2.0. <https://litlong.org/>

3.2 Alex, B., Grover, C., Oberlander, J., Thomson, T., Anderson, M., Loxley, J., Hinrichs, U. and Zhou, K. (2017). "Palimpsest: Improving Assisted Curation of Loco-Specific Literature". *Digital Scholarship in the Humanities*, 32(supp. 1), i4-i16. [doi:10.1093/llc/fqw050](https://doi.org/10.1093/llc/fqw050)

3.3 Alex, B., Grover, C., Tobin, R. and Oberlander, J. (2019). "Geoparsing Historical and Contemporary Literary Text Set in the City of Edinburgh". *Language Resources and Evaluation*, 53(4), 651-75. [doi:10.1007/s10579-019-09443-x](https://doi.org/10.1007/s10579-019-09443-x)

3.4 Anderson, M. and Loxley, J. (2016). "The Digital Poetics of Place-Names in Literary Edinburgh", in D. Cooper, C. Donaldson & P. Murrieta-Flores (Eds.) *Literary Mapping in the Digital Age*. Abingdon: Routledge, 47-66. ISBN 9781315592596 (Submitted in REF2)

3.5 Loxley, J., Alex, B., Anderson, M., Hinrichs, U., Grover, C., Harris-Birtill, D., Thomson, T., Quigley, A. and Oberlander, J. (2018). "'Multiplicity Embarrasses the Eye': The Digital Mapping of Literary Edinburgh", in I. Gregory, D. DeBats & D. Lafreniere (Eds.) *The Routledge Companion to Spatial History*. Abingdon: Routledge, 604-28. ISBN 9781315099781 (Submitted in REF2)

3.6 McGillivray, B., Alex, B., Ames, S., Armstrong, G., Beavan, D., Ciula, A., Colavizza, G., Cummings, J., David, D.R., Farquhar, A., Hengchen, S., Lang, A., Loxley, J., Goudarouli, E., Nanni, F., Nini, A., Nyhan, J., Osborne, N., Poibeau, T., Ridge, M., Ranade, S., Smithies, J., Terras, M., Vlachidis, A. and Willcox, P. (2020). *The Challenges and Prospects of the Intersection of Humanities and Data Science: A White Paper from The Alan Turing Institute*, 30pp. [doi:10.6084/m9.figshare.12732164](https://doi.org/10.6084/m9.figshare.12732164)

4. Details of the impact

Over the centuries, numerous writers have called Edinburgh home, while countless more have chosen it as the setting for their narratives. The city hosts the world's largest annual book festival and in 2004 was named the first UNESCO City of Literature. Thousands of literature fans flock to Edinburgh each year, previously with little awareness of the literary significance of many of its myriad streets, closes and wynds until LitLong brought together text and location in a digital map. As described by *The Guardian* (print circulation 174,941), the project has enabled readers "to explore the city's streets through the eyes of the authors they inspired", with Edinburgh's former makar (poet laureate) Ron Butlin adding that it has "really put its finger on making this magical interaction happen and making it possible for everybody to experience this" (5.1).

Edinburgh UNESCO City of Literature Trust, the organisation responsible for maintaining and promoting the city's literary status, has been using LitLong's deepened and enriched presentation of the city's real and imagined literary topography to underpin its engagement activities since 2014. Highlights of these activities include sell-out walking tours, readings and storytelling sessions at the Edinburgh International Book Festival (EIBF) in 2014, 2015 and 2017, and workshops for local younger readers. To mark Edinburgh's 500 years of publishing in 2016, the Trust and several partners drew on the research to create the Canongate Stars and Stories project, installing 24 custom-designed lightboxes in the city's Old Town to form an annotated, illuminated walking trail through its print and publishing history. The scheme was reprised the following winter and awarded a 2017 Scottish Thistle Regional Award for communities working together for tourism. Reflecting back on the project in April 2020, following a successful GBP20,000 funding application for a new collaboration with Loxley, the Trust's Director wrote that LitLong "provided [us] with an exceptional opportunity to use research-driven insight and expertise to meet our charity's objective to grow audiences for literature and help connect people of all backgrounds to Edinburgh's literary heritage and contemporary activity. In particular the LitLong events at the Edinburgh International Book Festival have proved hugely successful... [and, overall, Loxley] has pushed us to be more creative in our approach whilst constantly rooting our understanding in research and best practice" (5.2).

To make Edinburgh's literary history even more accessible, LitLong has commissioned new products and services from local businesses. For the EIBF walking tours, for example, it asked the heritage interpretation company Artemis Scotland to create four new literary characters as tour guides – ranging from the renowned Sir Walter Scott to the almost-forgotten Catherine Sinclair (pictured right). Prior to its engagement with LitLong, the company was “*very much focussed on the typical historical characters such as Mary, Queen of Scots and Queen Victoria. We had not considered costumed interpretation for authors of the past. This is a new income stream for the business*” (5.3).

Directly because of its engagement with LitLong, Artemis Scotland has been commissioned by the Edinburgh City of Literature Trust to deliver further literary characters, has developed walking tours around the city's New Town, and has seen its Director awarded full professional membership of the Association for Heritage Interpretation for its characterisation of Sir Walter Scott (5.3).



Through creative writing workshops and competitions, LitLong has inspired new work by Edinburgh's contemporary literary community. April 2016, for example, saw the publication of the first edition of *Umbrellas of Edinburgh*, an anthology of pieces composed through engagement with the project which quickly sold all 2,500 copies of its initial print run, was the focus of an episode of the Scottish Poetry Library Podcast with over 2,000 listens (5.4a) and was republished by Shoreline of Infinity in November 2020 with more maps and contributions (5.4b). The diverse mix of 80 writers featured in *Umbrellas of Edinburgh* include AJ (formerly known as Laura) Clay, author of *A Beltane Prayer*, who says that LitLong helped them “*see the city in a different light... a more literary kind of way... it really helped get a greater awareness of – and appreciation for – the city and its history*” (5.5). Similarly, the poet Helen Boden, who attended workshops and used the LitLong website when developing *Edge of Edinburgh*, felt the project prompted her to think more about Edinburgh as a place, with the workshops in particular providing creative stimuli that she wouldn't have experienced writing alone at her desk. She reflects: “*I was very pleased with this poem, which definitely wouldn't have come without that*” (5.6).

As emphasised on the LitLong website (3.1), one of the researchers' priorities has been to excavate and showcase the diversity of literary Edinburgh, past and present. When compiling *Umbrellas of Edinburgh*, the editors wanted to “*shift the existing (dead white men) focus through a more contemporary lens*” (5.7) – most of the anthology's contributors identify as women, and some are writers of colour, identify as LGBTQIA+, live with disabilities, and/or have lived outside Scotland. To redress the historical gender imbalance, LitLong facilitated a Wikipedia “Editathon” at the Being Human festival in 2017, in which users were trained to create pages on Edinburgh's women writers, generating 15 new webpages and improving one other. The new pages have now been viewed 27,304 times (5.8). Feedback from the workshop participants (majority identifying as female) indicates that the benefits of the Editathon ranged from developing skills in using Wikipedia to feeling a “*genuine link to contributing knowledge of a less well known but excellent literary figure*” (5.9, p.3).

In 2017, LitLong brought a “*particularly striking*” (5.2) digital dimension to the Edinburgh International Book Festival (EIBF) by installing touchscreen literary maps in the Festival's new “greenhouse” venues, an expansion onto one of the city's main commercial thoroughfares which saw EIBF achieve its highest footfall (250,000 visitors) since it began in 1983. On seeing the technology in action, EIBF partner and pan-African writers' collective Jalada Africa approached the team to discuss its use in Outriders Africa, a project in which ten acclaimed writers from around the world embarked on journeys across the African continent in early spring 2020, meeting local writers, discussing climate change, colonisation

and migration, and ultimately producing new work. Before travel restrictions imposed by the global COVID-19 pandemic forced the cancellation of EIBF 2020 and cut the planned journeys short, LitLong's methods were being used in the development of two online maps underpinning various Festival events and activities: one documenting the writers' journeys; and the other a co-curated LitLong for African writing in English, titled AfroLitMap. Regardless of the pandemic, Jalada Africa has reported that work on AfroLitMap is ongoing, with the visual design, backend of the website and underpinning database of 250 books complete (5.10), and that a follow-up series of journeys – this time across Europe – is planned for a future iteration of the Book Festival.

5. Sources to corroborate the impact

5.1 Edinburgh's literary history mapped at the click of a button, *Guardian*, 28th March 2015. <https://edin.ac/2Z9QvBH>

5.2 Testimonial from the Director of the Edinburgh UNESCO City of Literature Trust.

5.3 Testimonial from Artemis Scotland.

5.4 *Umbrellas of Edinburgh*

a. Podcast: *Umbrellas of Edinburgh*. <https://edin.ac/2UwOAao>

b. Email from *Umbrellas of Edinburgh* editor, 22nd May 2019.

5.5 Excerpt from a video interview (01.35 to 02.14) with AJ (formerly known as Laura) Clay.

5.6 Excerpt from a video interview (01.48 to 02:59) with Helen Boden.

5.7 A word from the editors, *Umbrellas of Edinburgh*.

<https://umbrellasofedinburgh.wordpress.com>

5.8 Page views of new Wikipedia pages created at *Being Human* Workshop, November 2017.

5.9 Feedback forms from Being Human Wikipedia Editathon event.

5.10 Progress report from Jalada Africa, April 2020.