Digital Literary Geographies:
A Spatial Analysis of Lake District Landscape Writings

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Introduction: 'Spatial Humanities: Texts, GIS & Places'

Spatial Analysis has created a step change in the Humanities over the past forty years, prompting numerous researchers to speak of 'spatial' or 'geographical' turns in their fields. In the case of Literary Studies, in particular, the use of GIS has recently opened new venues of inquiry and has encouraged the development of what has variously been called 'geocriticism' and 'critical literary geography'.

This European Research Council-funded project stands at the forefront of this development. Integrating techniques from Computational Linguistics and Spatial Analysis, our interdisciplinary team is creating tools and methods for scholars who are interested in exploring literary texts within a GIS environment. One of our cardinal ambitions is to open up methodological and critical space for Literary Studies by producing an exemplary Literary GIS project. Thus, we are currently conducting a major applied study of a clearly defined corpus of letters, journals and guidebooks in order to chart the cultural evolution of one of the most famous literary geographies in the world, the English Lake District.

The English Lakes: A Literary GIS

The Lake District is a small, but geographically dynamic, region contained within the modern, integrated county of Cumbria. It is a region whose 'spatial history' has been 'shaped', as two critics have recently remarked, 'by an inextricable interweaving of topographical singularity and artistic representation.' Largely known due to the writings of William Wordsworth and his 'Circle', the Lake District has long been celebrated as one of Britain's richest literary terrains.

Fig.1 The Lake District and references to places outside the UK identified in the corpus.

In 2007-08, along with Dr Sally Bushell (Lancaster), part of our team conducted a pilot study, entitled 'Mapping the Lakes'. Focusing on the writings by the picturesque tourist Thomas Gray (1716-1771) and the romantic poet Samuel Taylor Coleridge (1772-1834), this study sought to investigate how the use of GIS could enhance our understanding of the Lake District's literary heritage.

Our current research seeks to go beyond this pilot study by creating a fully geo-referenced corpus (comprising 80 texts, and over 1,000,000 words) that will allow us to analyse how the literary geography of the Lake District evolved between the 17th century and the early 20th century. Our work involves the automatic identification and extraction the place-names mentioned in each text. Working with the Edinburgh Geoparser, we then proceed to establish a gazetteer reference for each place-name, thus creating a literary GIS database to facilitate the spatial analysis both of each text and of the corpus as a whole.

In order to refine this approach, we are currently in the process of creating a 'gold standard' dataset using 26 randomly selected texts (roughly 1/3 of the total corpus) and seven specific case studies presented here, including works by John Brown (1715-1766), Thomas Pennant (1726-1798), William Wordsworth (1770-1850), John Henry Manners (1778-1857), John Keats (1795-1821) and Hebert Rix (1850-1906).

Preliminary Spatial Analysis of the Texts

Our overarching aim is to identify large-scale patterns and trends within the gold-standard dataset and to investigate the historical causes underlying them. Ultimately we want to demonstrate how the identification of large-scale patterns can be informed by specific critical enquiries. In this specific case, for example, we set out to explore the spatial characteristics of the texts using the work by the seven authors mentioned in the previous section. With this goal in mind, we have created a series of distribution and density maps in order to assess both the location of the places referenced in each text and the frequency with which each place was referenced.
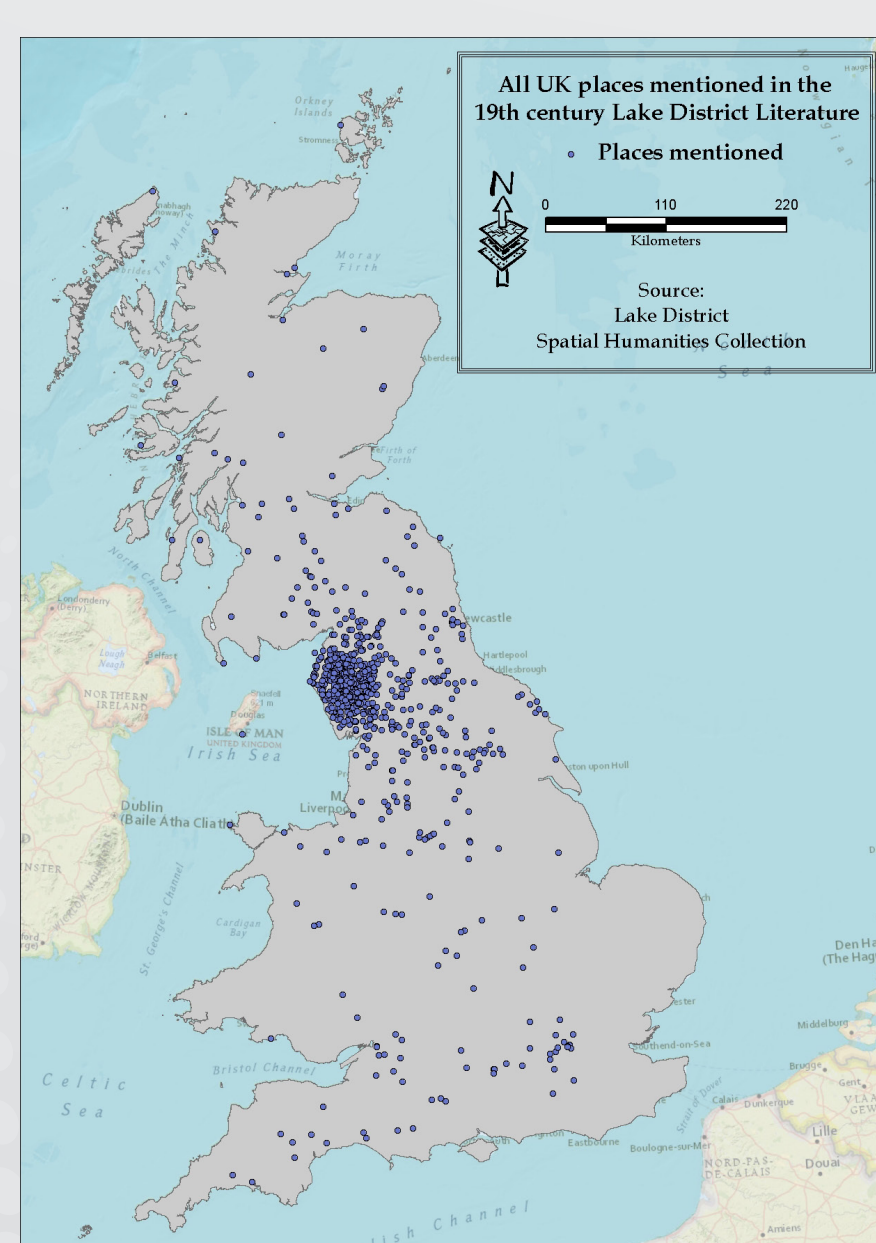

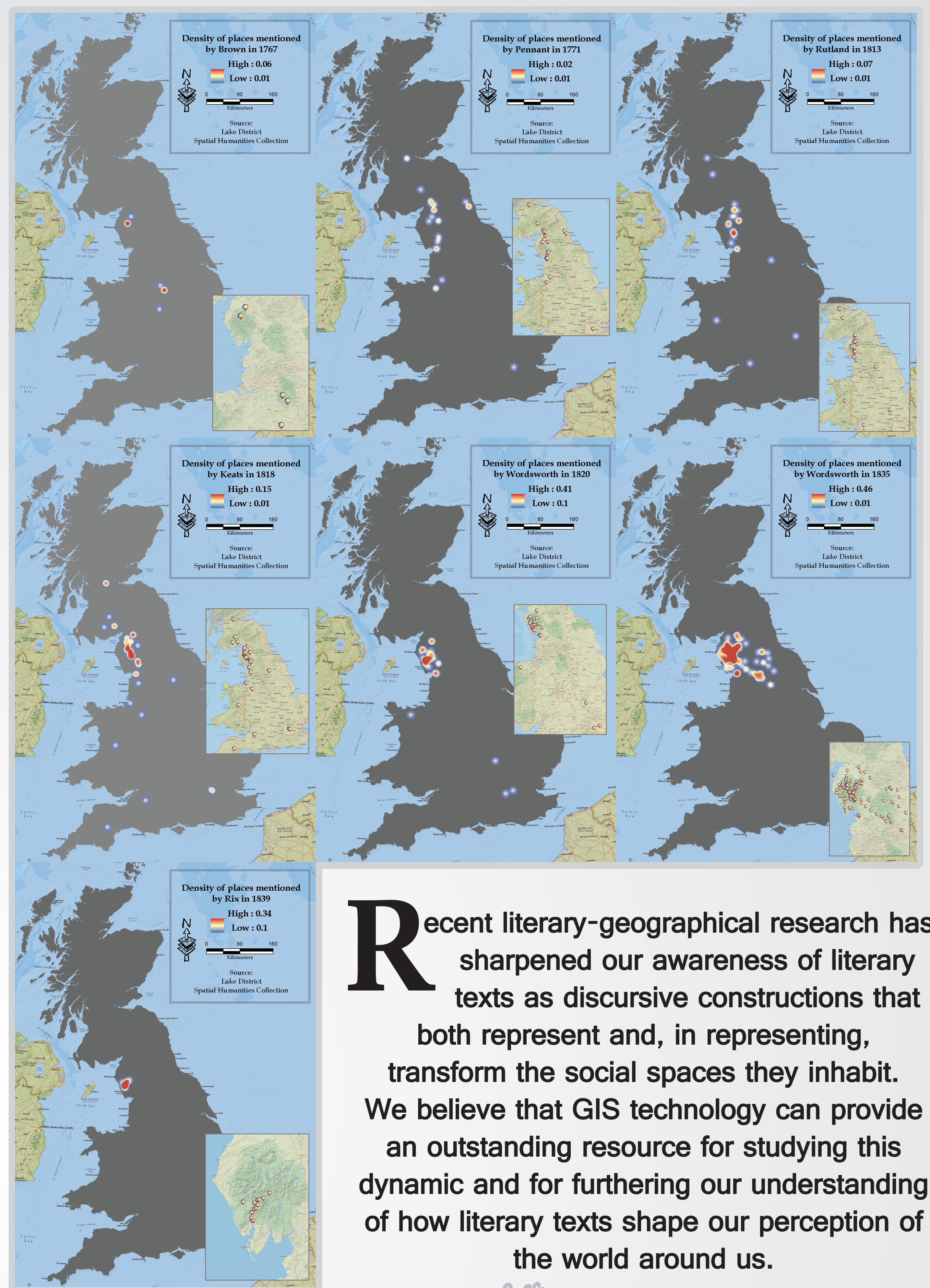Fig. 2 Distribution of all places mentioned in the texts.

Fig.3 Density analysis of places mentioned by each author in this case study

Recent literary-geographical research has sharpened our awareness of literary texts as discursive constructions that both represent and, in representing, transform the social spaces they inhabit. We believe that GIS technology can provide an outstanding resource for studying this dynamic and for furthering our understanding of how literary texts shape our perception of the world around us.

Results

A chronological comparison of the density maps reveals two significant spatial patters:

In the first place, it is evident that early accounts of the Lake District were written by travellers who passed the region while journeying to or from other parts of the Britain, chiefly Scotland.

In the second place, it is evident that this tendency began to change by the 1820s, as travellers and writers began to focus on the region, or parts of the region, as a tourist destination.

Significantly, these spatial patterns correspond to two discernible trends in the history of Lake District travel and tourism:

I. **A Shift in Dominant Genres:** Whereas the earliest accounts of the Lake District tend to appear within treatises on British history and topography, by the early 19th century the region was increasing featured in publications, such as handbooks, poems and traveller's guides, all of which helped to fuel the emergence of the Lakeland tourist industry. No longer simply a place to visit while on the road elsewhere, the Lake District had become a destination.

II. **A Shift in Touristic Tastes:** Whereas early travellers, such as Thomas Pennant, visited the Lakes as part of a general survey of previously overlooked or unexplored parts of the British Isles, by the early 19th century travellers were chiefly interested in the region's picturesque landscapes and its literary associations. Hence, the correspondence between Rix's 1893 tour and itinerary described by Wordsworth in 1820.

Conclusions

Clearly, the spatial analysis of literary texts poses a series of technical puzzles and interpretive challenges. Nevertheless, as our preliminary findings affirm, the development of Literary GIS can facilitate the identification of new trends, the experimental articulation of new ideas and, finally, the discovery of new ways of analysing textual representations of culturally over-determined landscapes.

Ultimately, this project is helping us refine methods and techniques that are capable of enhancing the study of any literary corpus and, therefore, of demonstrating the qualitative interpretive possibilities afforded by the use of quantitative research tools.

Acknowledgements