Mapping Digitally, Mapping Deep: Exploring Digital Literary Geographies

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In 1955, W. G. Hoskins's *The Making of the English Landscape* breathed new life into popular and academic understandings of the nature of landscape. Landscape, as Hoskins insisted, is not just the province of the natural sciences. Rather, it is a living record of a nation's social and cultural history. "Behind every generalization," he wrote, "there lies the infinite variety and beauty of the detail; and it is the detail that matters, that gives pleasure to the eye and to the mind" (210). Implicit in Hoskins's reading of landscape is the movement of a cartographic eye that embraces both scientific and humanistic approaches, and applies the information found on maps to close readings of the terrain. Such a viewpoint is familiar to literary geographers and, more generally, to anyone interested by the geographies represented or embedded in literary works. It treats place as a series of complex, palimpsestic texts where to pay attention only to what we might now think of as the "big data" available to us in a macroscopic reading is largely to miss the point. That is not to say that such macroanalysis, to use Matthew Jockers's term (2013), is redundant; rather, the point is that the sorts of "generalization[s]" that macroanalysis advances should lead the attentive reader – of either text or landscape – into the "infinite variety of detail" that composes them. In this piece, we want to explore that tension – between generalisation and detail – as it pertains to digital humanities approaches to the study of literary geography. In particular, we explore how recent

scholarly innovations have begun to combine a distant gaze with close readings to offer new ways of understanding place and space in literary works.

Our central thesis here is that Hoskins's intuitions about the nature of the physical landscape are equally applicable to the digital. A full appreciation and understanding of texts, places and spaces depends upon an ongoing interplay between generalisation and detailed inquiry. In the wake of Franco Moretti's influential advocacy of "distant reading" (2013), debates in the humanities have become increasingly polarised between adherents of close reading and proponents of new methods of textual analysis. Thus, whereas Adam Hammond, Julian Brooke and Graeme Hirst have recently contended that "computational analysis can thrive only in an ecosystem of close reading" (Hammond et al 2016, 50), Michael Tavel Clark and David Wittenberg encourage scholars to reject close reading in favour of the macroanalytic techniques that they see as being more suitable for literary study in the digital age. Digital approaches to literary geography have provided a productive focal point for such negotiations of scale, and digital literary cartography in particular has provided a fruitful area of study for generating and staging them (Cresswell 2015). Indeed, if, as Barbara Piatti and Lorenz Hurni have claimed, literary cartography is an "ancillary science" of literary geography, it is nevertheless an approach that has come to drive the study of landscape as a subject of human inquiry (218).

These digital humanities methodologies present a number of challenges. As Roger Whitson has put it, such work attempts to grapple with a "dizzying cultural environment" that produces "a humanities practice that is as comfortable with material tinkering, engineering diagrams, and programming languages as it is with close reading and historical contextualization" (Whitson, 5). We propose that this assertion is particularly

true to the digital study of literary geography, which "challenges literary studies to move beyond close, or even distant, readings" by embracing more fluid and dialectic interpretative approaches (Whitson, 5). Digital literary geography – and, specifically, the digital cartographies that are its main expression – encourage precisely such an approach. They are capable of challenging traditional hierarchies of research practice, generating new modes of knowledge production and advancing new means of expression. In recent years, these modes have taken a number of forms, from the sort of location aware media experience developed by projects like James Loxley's *Palimpsest: Literary Edinburgh*, to desktop-based mapping environments, such as Matthew Sangster's *Romantic London*.[1] In addition to these resources, scholars have also continued to experiment with developing literary atlases through the use of specialised software, including Geographical Information Systems (GIS), and through the implementation of exploratory approaches such as deep mapping. It is on these latter two topics that we want to focus for the remainder of this piece.

Of course, mapping literary geographies is not a new endeavour: literary atlases have been in circulation since the late nineteenth century, and early quantitative experiments in literary cartography followed shortly thereafter (Reuschel and Hurni 2011, 293). The questions that arose in these early years of literary mapping have remained much the same: namely, why do we map literature, and how do we go about it? Anne-Kathrin Reuschel and Hurni, for example, have proposed two basic methodological approaches to literary mapping: maps might either "depict individual texts in order to get a deeper, analytical insight into the spatial structure of a story," or they may focus on a

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[1] *Palimpsest: Literary Edinburgh* <http://www.ed.ac.uk/literatures-languages-cultures/english-literature/research/palimpsest> [accessed 12 September 2017]; *Romantic London* <http://www.romanticlondon.org/> [accessed 12 September 2017].

group of features to draw out the literary geographies of an author, genre, motif or epoch (2011, 293). The application of digital resources in the study of literary geographies have facilitated the development of these approaches. It has encouraged literary geographers to ask challenging questions about the relationship between text and place, and to explore these questions by using sophisticated modes of cartographic modelling.

GIS are one form of highly specialised cartographic software to which digital literary geographers have turned increasingly over the last decade or so. Literary GIS (Cooper et al 2016), like its precursor and counterpart Historical GIS (Gregory and Ell 2007), conventionally rely on structured data that can be mapped onto a real-world location. GIS are a software that provide powerful data management and analytic tools, and this has made the technology especially attractive for the study of large corpora of texts.

(Figure 1 [CAPTION: Emotions of London *indicates the relative stability of London's fictional identity in the eighteenth and nineteenth centuries. Image credit: Stanford Literary Lab (CESTA), http://news.stanford.edu/2017/03/20/mapping-emotions-london/])*

Projects such as *Emotions of London* (Heuser et al 2016a & 2016b), *The Literary Atlas of Europe* and *Geospatial Innovation in the Digital Humanities* have demonstrated ways in which GIS can be used to draw out diverse textual geographies based on, for example, fiction (Heuser et al 2016b) or aesthetic categories (Donaldson et al 2017).[2] Such thematic maps, or "distant cartographic readings," as Marko Juvan terms them, can aid scholarly interpretation in a variety of ways. They can assist in the identification of

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[2] *The Literary Atlas of Europe*, www.literaturatlas.eu; *Geospatial Innovation in the Digital Humanities*, wp.lancs.ac.uk/lakesdeepmap.

broader patterns that may otherwise be obscured by the reading of only a small selection of works. Moreover, such maps can become what Juvan calls "meta-texts:" cartographic-literary hybrids that require careful analysis in light of the geographical data and written works on which they are based (89-90). This combination can facilitate approaches that bring together distant and close readings. As Adam Hammond, Julian Brooke and Graeme Hirst have suggested, such multi-scalar methods have the potential to lead to new insights and interpretations (Hammond et al 2016).

Figure 2 [CAPTION: Geospatial Innovation in the Digital Humanities *has shown how certain aesthetic categories, such as* beautiful *or* sublime*, were used in relation to specific places and developed distinct spatial identities as a result. Image Credit: the authors.]*

A problem with GIS, though, remains that it resists what Sally Bushell calls the "slipperiness" that she sees as inherent to literary geographies (2012). Because GIS represent settings using points, lines and polygons based on what Reuschel and Hurni call the real 'geospace' (2012, 294), the ontologies of the text are disrupted (Juvan 2015, 89). This is an especially pertinent issue in attempts to represent fictional places: even where a fictional map is imported into the GIS, it is still mapped according to Euclidean geometry. Even though the links to real locations are loosened, in such instances the fictional place is still bound by the rules of real-world cartographies.

A significant challenge for digital literary geographers, therefore, is to determine a consistent way of representing the non-physical qualities of fictional places, such as semantic, emotional or social characteristics (Nicolaisen 2001); Bushell's current project, *Creating a Chronotopic Ground for the Mapping of Literary Texts: Innovative Data Visualisation and Spatial Interpretation in the Digital Medium*, promises to address precisely this issue. Previous projects have experimented with such representational

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challenges by indicating 'slipperiness' in the way the data is visualised. Density smoothing, as in Figure 2, goes some way towards resolving this problem by making mapped points indistinct. Although this example mostly uses literary geographies from travel writing that are explicitly based in the real world, it offers an indication of how density smoothing might helpfully be utilised in the mapping of less certain or fictional places. Alternatively, fuzzy boundaries – such as those used by Barbara Piatti's team on *The Literary Atlas of Europe* – can indicate fictionality and re-introduce some of that "slipperiness" into the literary GIS. For Piatti et al, a fictional space is defined as much by its "gaps" as by its "presences;" it is a "foggy zone," and the fuzzy shapes on the maps generated by *The Literary Atlas of Europe* intend to "express a typical gesture for imprecision" (2009, 187). Nevertheless, the representation of these transitional stages continues to offer challenges to current literary-geographical work.

This issue runs deeper than GIS's reduction of textual or fictional spaces to shapes on a Euclidean plane. GIS run the risk of encouraging readings which imply that the geospace consists of adjoining quantifiable places. In fact, for literary geographers this geospace might be thought of more productively as an imbricated web of phenomenologies. In suppressing the "very private kind of cartography" that Stephen S. Hall has suggested frame individual understandings of the world, and each person's imaginative territory within it, GIS risk flattening out complex understandings of geographical experience as they are described in and enacted by literary works (2004, 15). As a result, scholars working in the spatial humanities have developed alternative ways of mapping texts and historical human experience that seem to remain more faithful to the hermeneutics of the sorts of close reading traditionally associated with humanities – and particularly literary – scholarship. A key focus here is the practice of "deep" (Bodenhamer 2015; Roberts 2016; Dodge 2017) or "thick" (Presner et al 2014) mapping,

which attempts to capture something of what it means to experience the world as more than the sum of its quantifiable, mappable parts.

Deep mapping involves the accumulation and layering of different kinds of geo-locatable media. Its aim is to facilitate investigations of the material, discursive and imaginative geographies that inform our conception of a location's topography and cultural identity. The deep map recalls eighteenth- and nineteenth-century antiquarian approaches to place, which included history, folklore, local traditions and natural history alongside geographical and geological data. In short, the antiquarian map, like the deep map, communicated a sense of a place's identity beyond its name and its status as a plottable Cartesian point. According to David Bodenhamer, Trevor Harris and John Corrigan, the deep map aspires to communicate the "discursive and ideological dimensions of a place" in ways that "bend spatial and other digital technologies to the intellectual traditions of humanists, thereby constituting a bridge between diverse avenues of investigation" (2015, 3; 2013, 170). For them, the deep map is "the essential next step for humanists who are eager to take full advantage of the spatial turn that already has begun to shape our disciplines" (2015, 1).

The open-ended and exploratory nature of deep mapping can make it more amenable than GIS visualisations for communicating and disseminating the complex palimpsestic nature of literary geographies (Fisher Fishkin 2011, 3). The perceptual interpretations of multiple agents can be represented through deep mapping, which can weave together multiple narratives onto one spatial plane (Ridge et al 2013, 178). Projects such as *Deep Maps: West Cork Cultures* and the *Literary Atlas of Wales*, as well as our work on *Geospatial Innovation in the Digital Humanities*, experiment with ways of incorporating and displaying geographical alongside textual data in order to express the

"multiple versions of events, of texts, of phenomena" that comprise literary space (Fisher Fishkin 2011, 3).[3] *Deep Maps: West Cork Cultures*, for instance, combines texts of various genres, including fiction and scientific treatises, alongside images, maritime data and geographic representation with the aim of "advancing a transdisciplinary understanding" of the coastline of County Cork (*Deep Maps*). In doing so, the project aims to connect literary and scientific understandings of this area with popular and local senses of identity.

Figure 3 [CAPTION: Extract from the multi-layered "Digital Map of Lough Hyne, West Cork," developed by Deep Maps: West Cork Cultures*. Image credit: Claire Connolly et al,* Deep Maps: West Cork Cultures*]*

Similarly, our prototype deep map for the *Geospatial Innovation* project (Figure 4) seeks to foster a deeper sense of connection between academic research and popular conceptions of another landscape of historical and literary significance: the English Lake District. One of our aims on this project has been to explore ways of displaying the integral connections between literature and landscape. More than that, though, in demonstrating this connection we hope to generate a deeper awareness of the tangible effects that literary texts can have on real-world geographies. Our research focuses on the specialised Corpus of Lake District Writing. We have explained the building and processing of this corpus elsewhere (Donaldson et al 2015; Gregory et al 2016; Murrieta-Flores et al 2016); here, it is enough to say that the corpus comprises 80 texts that include tourist guides, travel narratives, novels and poetry. It totals c.1.5 million words, and includes works by well-known writers such as William Wordsworth and John Ruskin, alongside examples

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[3] *Deep Maps: West Cork Cultures*, http://www.deepmapscork.ie/; *Literary Atlas of Wales*, http://literaryatlas.wales.

from less famous authors like Priscilla Wakefield and Edwin Waugh. We investigate how these texts have affected the way that the Lake District landscape has been managed and presented. As the recent awarding UNESCO World Heritage Site status to the region suggests, the Lake District is one example of a place where literary geography might blend into actual geography (*Nomination*), and the deep map seeks, in part, to elucidate the points of overlap and difference between the region's literary, historical and physical geographies.

Figure 4 [CAPTION: Prototype "Deep Map of the Lake District" that blends historical maps with Google Street View imagery alongside an extract from the Corpus of Lake District Writing that focuses on this location. Image credit: Alexander Reinhold.]

The digital map – and particularly the kind of digital deep mapping we have outlined – mediates between the reader and the text in putting forward a visible conception of what it might be to inhabit the same space. The rapid technological advancements we continue to witness promise to drive such mediations in the future. Virtual reality, for instance, promises to transform phenomenologies of space, but also offers the potential to recreate vicariously elements of historical places that may radically transform how we read literary responses to spatial experiences (De Warren 2014). Digital literary geographies can refashion our understandings of and responses to the relationship between historical and contemporary places and spaces. These re-conceptions will continue to rely on interweaving the "generalization" of the distant, cartographic gaze with attention to "the infinite variety and beauty of the detail" that Hoskins valued in the natural landscape, and which remains one of literary studies' most important assets.

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