## Digital Maps and Mapping in Victorian Studies

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Cartography ruled in Victorian Britain. No science did more to shape the Empire; none so thoroughly affected the British worldview. True, the Ordnance Survey (OS) was already 46 years old when Victoria became queen, but its influence on the national consciousness was first truly felt during her reign. By the 1870s, as Rachel Hewitt has written, a wide range of people in England and Wales could own 'a lifelike cartographical mirror of their counties'.<sup>1</sup>

Such 'mirrors' had once been the preserve of the elite. Now, they could be purchased for a half crown. Similarly, during the later phase of Victoria's monarchy, many subjects could survey Britain's dominions coloured in pink on world maps. In 1886, the Imperial Federation's map of the Empire was sold as part of a supplement in *The Graphic* for nine pence. In short, between 1837 and 1901, maps became an increasingly accessible and important part of the way people in Britain made sense of their world. Notably, the members of the History of Cartography project have dubbed the nineteenth century 'the *era of cartography*'.<sup>2</sup>

It seems fitting, therefore, that maps and mapmaking have long been important to scholarly attempts to make sense of the Victorian period. The development of new digital resources and methods for studying historical maps has intensified such efforts. So, too, has the proliferation of digital resources and methods for creating maps to organize, visualize and analyze historical sources.

In this Digital Forum, we feature contributions from three projects that are applying such resources and methods in experimental research. The first contribution, 'Maps of a Nation?', comes from an interdisciplinary investigative team at the Alan Turing Institute and the British Library. This team is part of the Living with Machines project, and their article explores the challenges and opportunities presented by working with large collections of digitized historical maps. As Katherine McDonough and her co-authors explain, the existence of resources like the National Library of Scotland's collection of digitized OS maps affords a wide range of possibilities for computationally informed historical research. The ability to distant read thousands of OS maps in sequence has the potential to revolutionize our understanding of the social, industrial and economic history of modern Britain.

McDonough and her co-authors demonstrate this potential by applying Computer Vision and Machine Learning methods to assess 'the spatial impact' of the expansion of Britain's railways from the 1840s onwards. But she and her colleagues are also quick to point out the risks inherent in working with historical OS maps 'at scale'. Such maps, they caution, are affected by 'biases and lacunae'. Some maps, moreover, contain distortions caused by the limitations of the

<sup>&</sup>lt;sup>1</sup> Rachel Hewitt, Map of a Nation: A Biography of the Ordnance Survey (London: Granta, 2010), p. 306.

<sup>&</sup>lt;sup>2</sup> Roger J. P. Kain (ed.), The History of Cartography Volume 5: Cartography in the Nineteenth Century.

<sup>&</sup>lt;<u>https://geography.wisc.edu/histcart/volume-5-cartography-in-the-nineteenth-century/</u>> [accessed 15 February 2021].

technology used in their creation or subsequent digitization. In sum, as McDonough and her coauthors conclude, historical maps demand 'detailed source criticism', and digital historians would do well to bear that in mind when conducting distant readings of 'cartographic material'.

Karen Bourrier and her co-authors make a similar point in the second contribution to this Forum, 'Mapping Victorian Homes and Haunts'. This article provides an introduction to the Mapping Victorian Literary Sociability project at the University of Calgary. As Bourrier and her co-authors clarify, the purpose of their project is to enhance our collective understanding of 'the role of neighbourhood social networks in the careers of women writers' by geolocating and spatially analyzing the addresses at which 'fifty key Victorian writers, illustrators, editors and publishers' lived over the course of their lives.

This undertaking, as Bourrier and her co-authors stress, involves combining 'a wide variety of online geospatial resources' to identify and locate historical buildings, including ones which no longer exist or whose name or location has changed. In addition to offering an overview of these resources, Bourrier and her co-authors also outline the mark-up standards they used to encode the data assembled through their research. These standards, as they explain, are necessary to ensure the transferability of their data and its availability in the long-term, and they have been devised in order to account for the kinds of spatiotemporal uncertainty and ambiguity that are inherent in historical cartographic research.

Addressing issues of uncertainty and ambiguity is also a central concern of the final article featured in this Forum, 'Chronotopic Cartography'. This contribution comes from the investigative team of the Chronotopic Cartographies project at Lancaster University, and it tackles a fundamental challenge in literary cartography: the fact that the 'spaces to which literary works refer often have tenuous relationships with real-world geographies.' As Sally Bushell and her co-authors explain, their work moves beyond the kinds of referential mapping that has defined much literary-cartographic research to date.

Whereas previous projects have generally sought to link literary works to 'real-world locations', the Chronotopic Cartographies team combine close reading and encoding to generate visualizations based on the language used to represent space and time in literary texts. This approach, anchored as it is in Mikhail Bakhtin's concept of the 'chronotope', enables a kind of literary cartography that is sensitive to the unique spatial and temporal concerns of individual literary works. Bushell and her co-authors model their methods through a chronotopic analysis of two very different works of Victorian literature: Charles Dickens's *Oliver Twist* and Robert Browning's 'Childe Roland to the Dark Tower Came'.

Cumulatively, the three articles included in this Forum indicate a new turn in the application of digital maps and mapping in Victorian studies. The projects featured herein each demonstrate that it is insufficient to regard maps as mere containers for knowledge. Instead, these projects affirm maps and mapping to be a critical framework for interpreting both historical and fictional Victorian spaces.