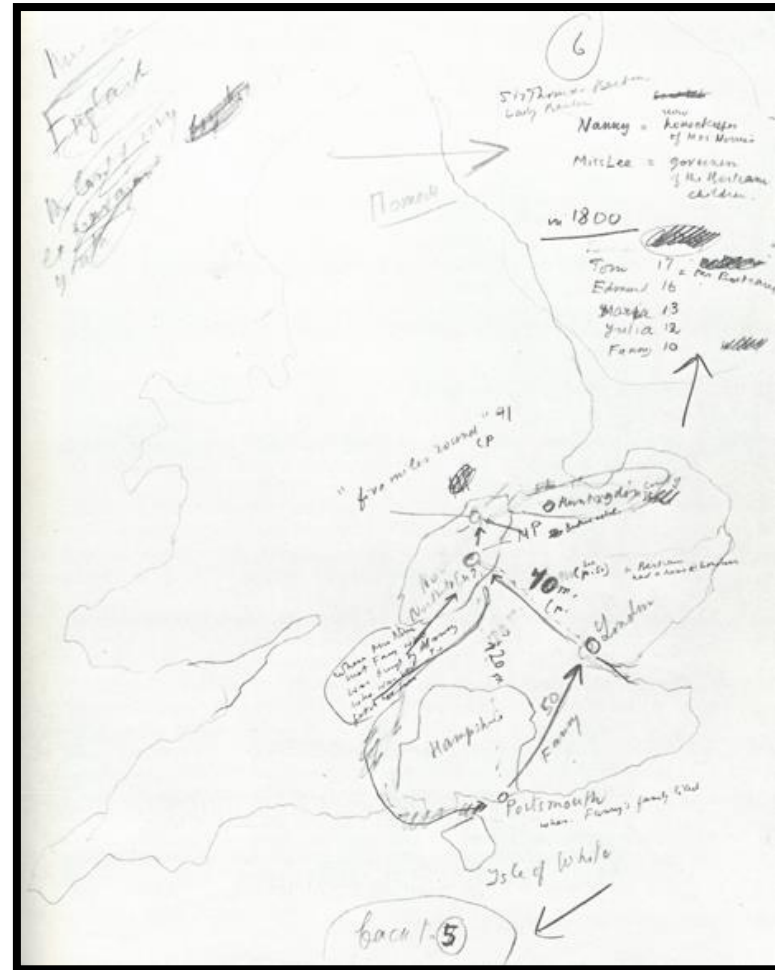# Spatial Humanities

Julie Jones, GIS & Map Librarian / Librarian for Geography, Simon Fraser University

Daniel Beaulieu, bibliothécaire, Université de Saint-Boniface
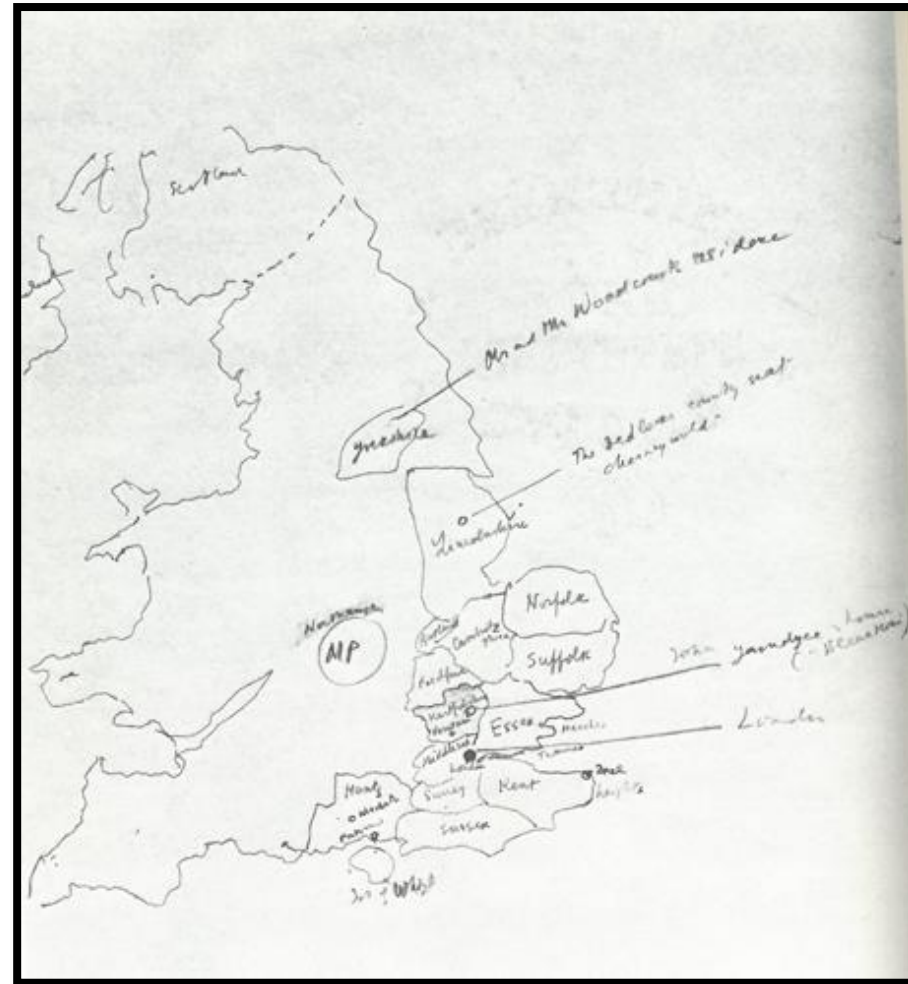
November 30, 2016

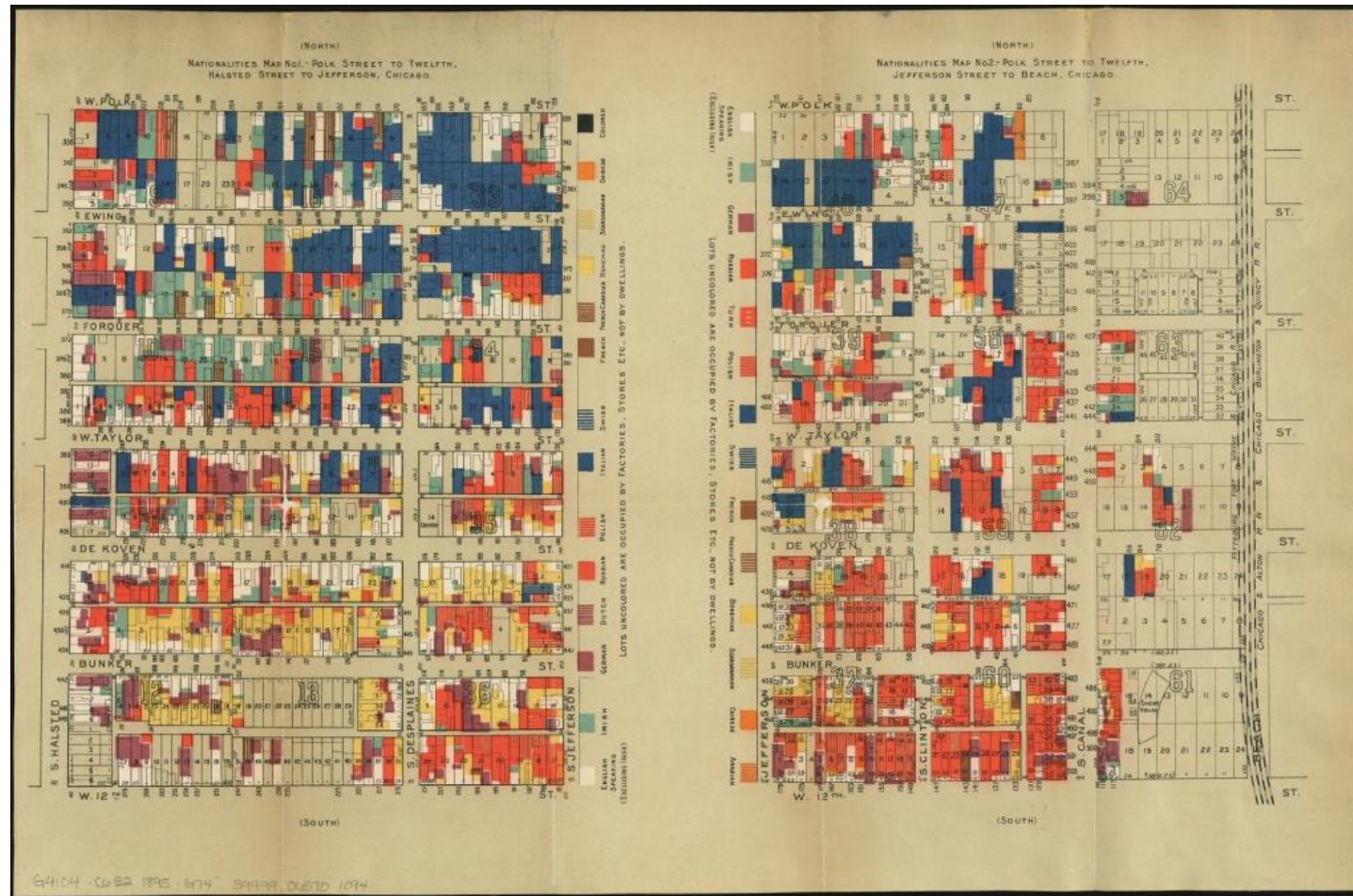ACCOLEDS 2016, University of Victoria, Victoria, B.C.

Nabokov's map of England locating the action of *Mansfield Park*

# Nabokov's map of Great Britain locating the action of *Bleak House*

GIS = Geographic Information Systems

Agnes Sinclair Holbrook (1895), Nationalities Map No. 1. In *Hull-House maps and papers: A presentation of nationalities and wages in a congested district of Chicago, together with comments and essays on problems growing out of the social conditions*. New York: T.Y. Crowell.

GIS = Geographic Information Systems

- A GIS allows for the simultaneous representation of the where and the what
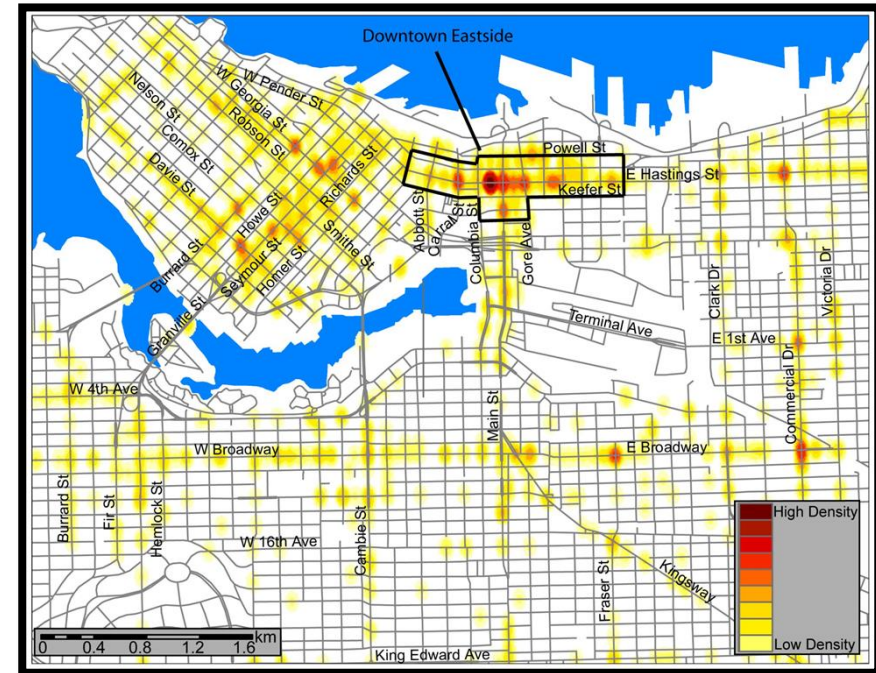

Kernel density map of pedestrian hotspots in Vancouver, 2000-2006. In Schuurman, N., Cinnamon, J., Crooks, V. A., & Hameed, S. M. (2009). Pedestrian injury and the built environment: an environmental scan of hotspots. *BMC public health, 9*(1), http://dx.doi:10.1186/1471-2458-9-233

Spatial relationships

- By overlaying different layers, we can compare the spatial relationships between features

- For example, we can ask which features are nearest others, which ones cross others, which ones are contained by others, and which ones are adjacent to others

- If we have data that spans different points in time, we can ask questions about the features over time
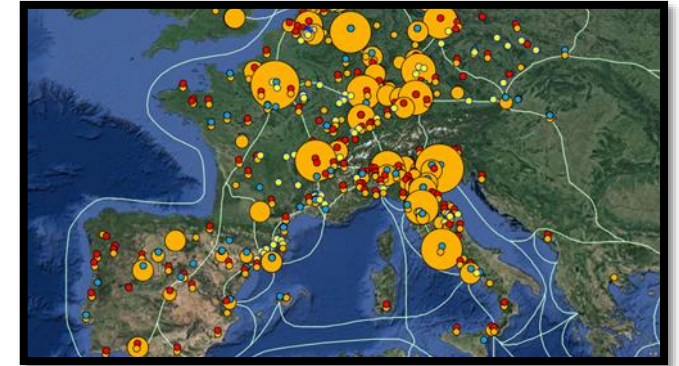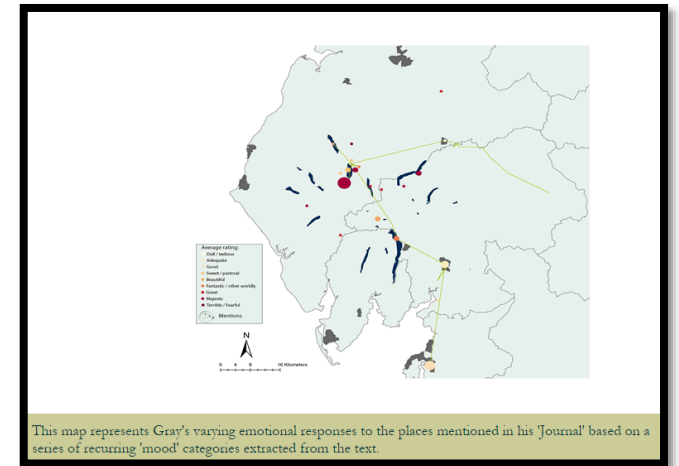
Dr. John Snow's cholera map: London, 1854
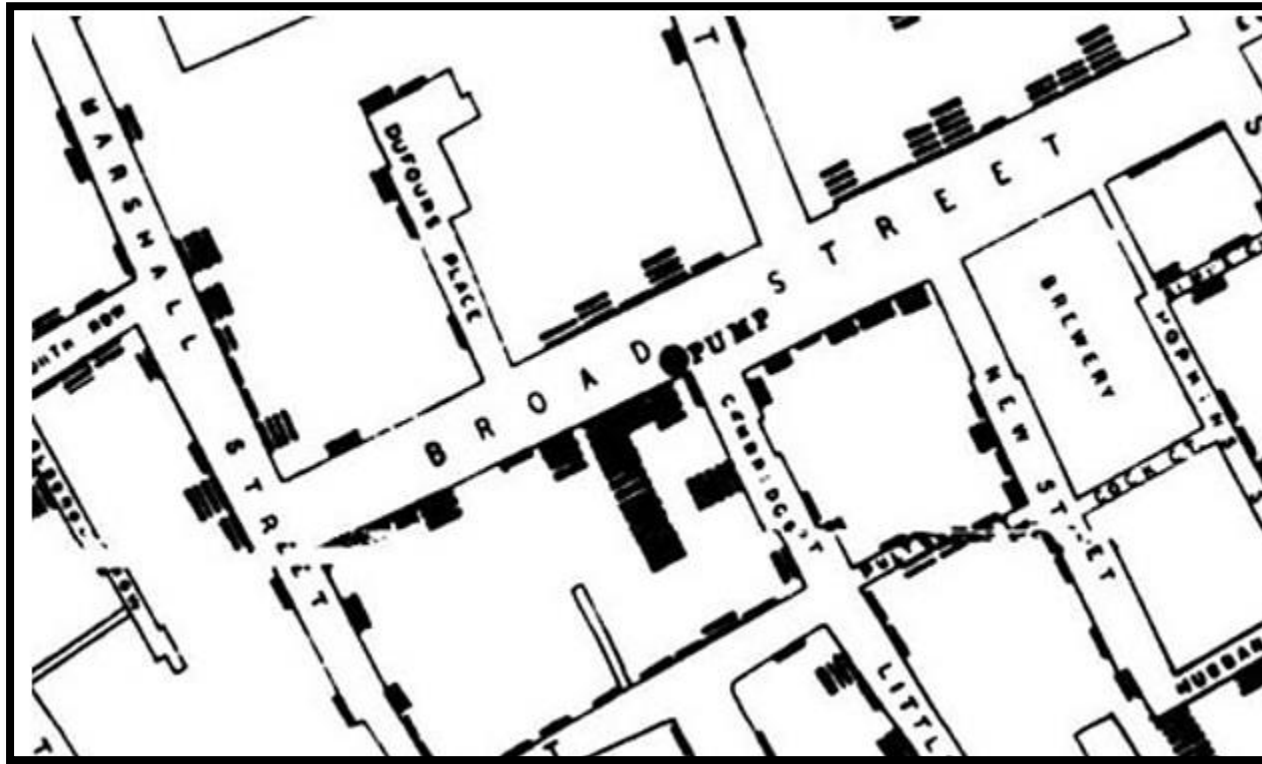
Source: **Mapping the 1854 London Cholera Outbreak**
https://www.udel.edu/johnmack/frec682/cholera/

GIS: Why does it matter?

- Visual explanation over text-based

- New understandings

- Efficient, jargon-free communication of knowledge

- Often interdisciplinary and multilingual

- Can be participatory

- Information synthesis

- Visually compelling, aesthetic beauty

- Plurality: can allow for simultaneous representations of experiences, history, time, space, and place

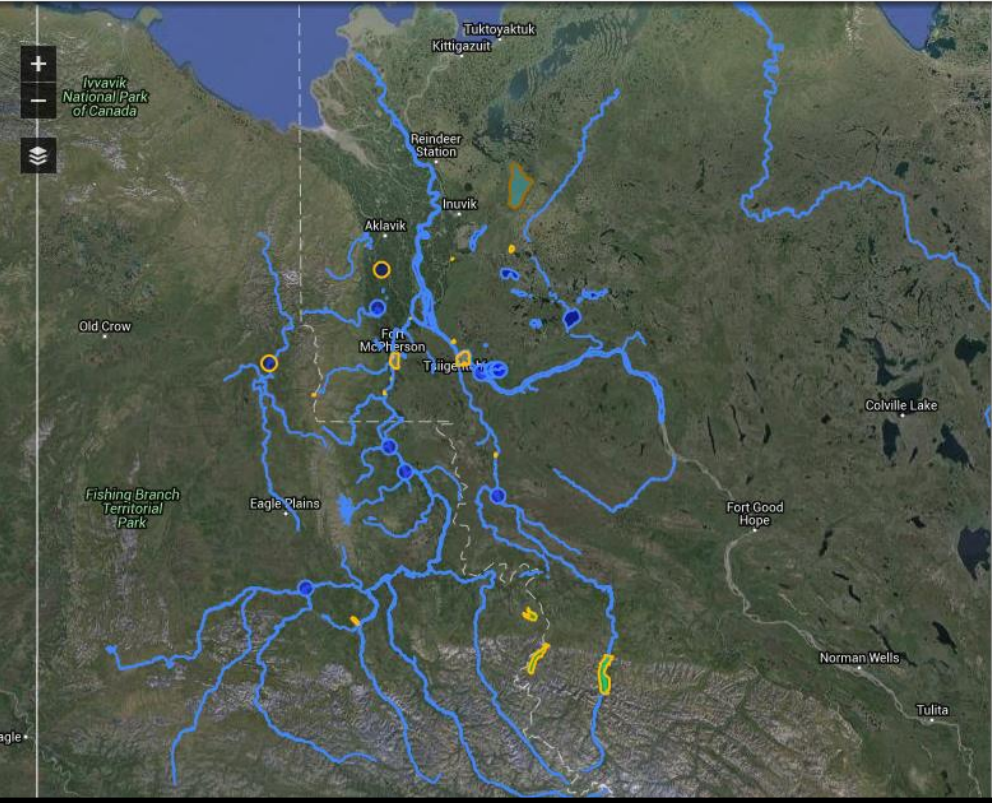
Atlas of Early Printing. University of Iowa Libraries.
http://atlas.lib.uiowa.edu/

This map represents Gray's varying emotional responses to the places mentioned in his 'Journal' based on a series of recurring 'mood' categories extracted from the text.

"Gray Mood Map". Mapping the Lakes: A Literary GIS. Lancaster University.
http://www.lancaster.ac.uk/mappingthelakes/Gray%20Mood%20Map.html

Gwich'in Place Names and Story Atlas

Montréal Sound Map

Montréal Sound Map
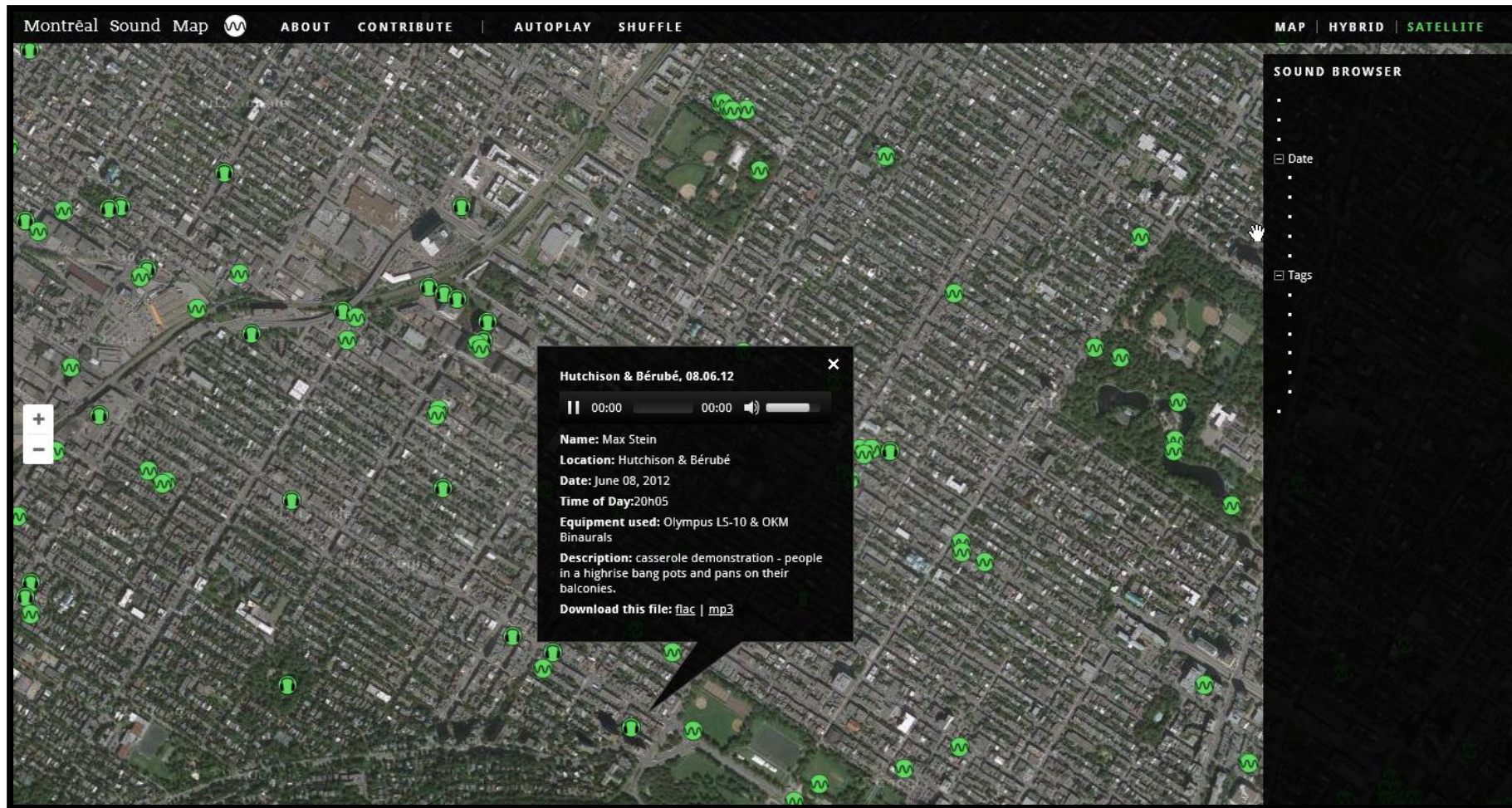
Geospatial data and GIS

- Geospatial data = data that is attached to a geographic (spatial) location

- GIS (geographic information systems) = computer applications that let us visualize data geographically and thematically at the same time

- A GIS lets us visualize, question, analyze, and interpret data to understand relationships, patterns, trends, and stories that might not be observable or articulated otherwise

GIS = Geographic Information Systems

- A GIS map is made up of layers, or collections of items that are alike, attached to geographic locations and defined by a visual symbol

- By adding a few or many layers, we can see relationships between different objects and features

STREETS

PARCELS

ELEVATION

LAND USAGE

REAL WORLD

Toolbar

Table of contents/layers
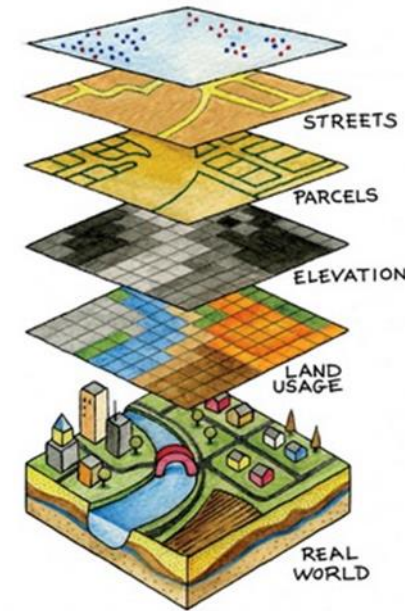
Map viewer
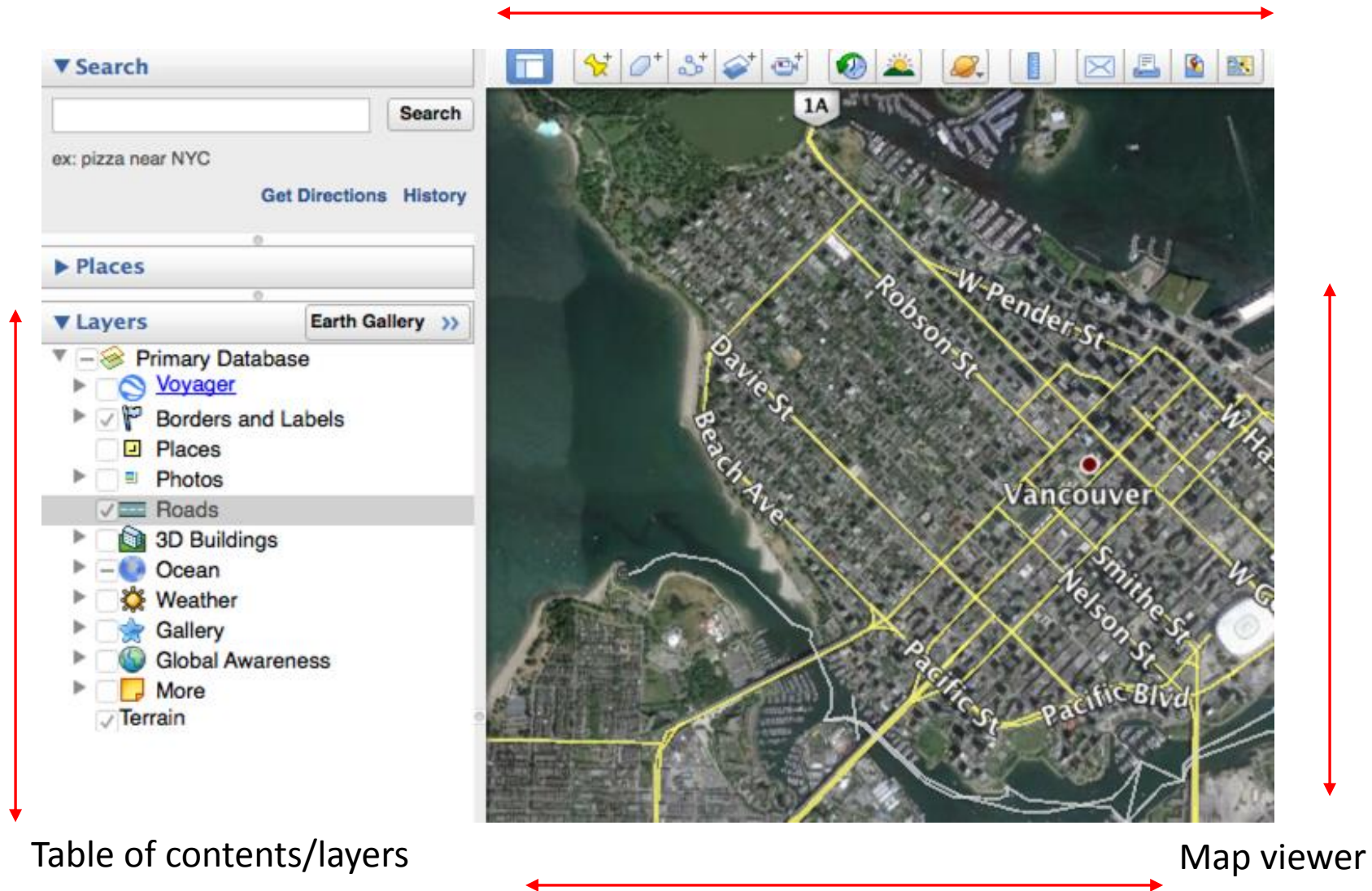
Location

- The location of a feature on a map is defined by a coordinate system
    - Points – x,y coordinate pair
    - Lines – two pairs of coordinates
    - Polygons – coordinate pairs for points all around the perimeter of its shape
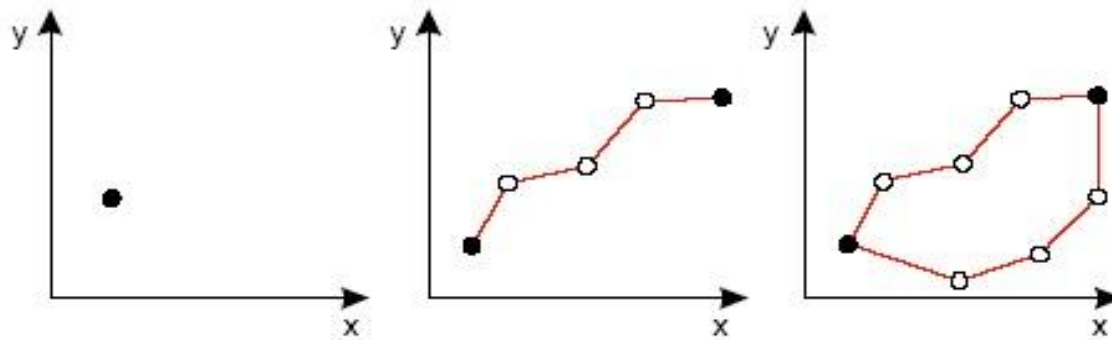
Common file formats for geospatial data

- "SHP" — ESRI shape file format (.shp)
- "KML" — Google Earth geographic data format (.kml, .kmz)
- "GPX" — GPX global positioning data format (.gpx)
- "GeoTIFF" — annotated TIFF raster files (.tif)

Georectification

- The digital alignment of an image of a map, or aerial or satellite image, with a map of the same area

- The image is adjusted to the coordinate system of the map that it is overlayed on

Thinking about Humanities information as data

- When is spatial inquiry interesting for humanities content? Is my content (my data) well-suited to this type of exploration?
- Think about your where and your what: Is there a where? Is there spatial content?
- A map can facilitate a different way of understanding and seeing
- Think about the types of data needed, how to approach data gathering
- Look at other projects – what layers of data are used in projects that you find compelling? How is analysis conducted?

THOMAS GRAY, SAMUEL TAYLOR COLERIDGE AND
GEOGRAPHICAL INFORMATION SYSTEMS: A LITERARY GIS OF
TWO LAKE DISTRICT TOURS

IAN N. GREGORY AND DAVID COOPER

Abstract There have been growing calls to develop the use of Geographical Information Systems (GIS) across the humanities. For this shift to take place, two things must be demonstrated: first, that it is technically possible to create a useful GIS of textual material, the main medium through which humanities research is conducted; and, secondly that such a database can be used to enhance our understanding of disciplines within the humanities. This paper reports on a pilot project that created a GIS of two textual accounts of tours of the Lake District: Thomas Gray's 1769 excursion and Samuel Taylor Coleridge's self-styled 'circumcursion' of 1802. It describes how these accounts were converted into a GIS and explores various methodologies that can then be used to explore the spatialities embedded within their respective tours. The resulting material has been placed on the Internet at http://www.lancs.ac.uk/mappingthelakes. The pilot demonstrates that it is both possible, and conceptually fruitful, to move GIS beyond the quantitative arena in which it currently resides and into more qualitative areas of humanities research.

Keywords: Humanities GIS, Lake District, Literary Studies

Gregory, I. N., & Cooper, D. (2009).
"Thomas Gray, Samuel Taylor Coleridge
and geographical information systems:
A literary GIS of two Lake District tours."
*International Journal of Humanities and
Arts Computing* 3.(1-2), 61-84.

Cooper, D., & Gregory, I. N. (2011).
Mapping the English Lake district: A
literary GIS. *Transactions of the Institute of
British Geographers 36*(1), 89-108.

Mapping the English Lake District: a literary GIS

David Cooper* and Ian N Gregory**

To date, much of the work that uses Geographical Information Systems (GIS) to study human geographies applies a social science paradigm to quantitative data. There is a growing recognition of the need, however, to test whether GIS can be used to map out the qualitative 'data' provided by the articulation of subjective spatial experiences. This paper expands the conceptual possibilities opened up by the use of GIS technology through an exploration of the theoretical potentiality of literary GIS. Drawing on work carried out as part of an interdisciplinary project, 'Mapping the Lakes', the paper focuses on the ways in which GIS can be used to explore the spatial relationships between two textual accounts of tours of the English Lake District: the proto-Picturesque journey undertaken by the poet, Thomas Gray, in the autumn of 1769; and Samuel Taylor Coleridge's self-consciously post-Picturesque 'circumcursion' of August 1802. Alongside this text-specific focus, the paper also draws on recent spatial literary criticism to reflect, more generally, on the critical possibilities and problems associated with the digital mapping of space and place in literature. Ultimately, the paper seeks to open up methodological and critical space for the ongoing development of literary GIS.

*Department of English and Creative Writing, Lancaster University, Lancaster LA1 4YD
email: d.cooper1@lancaster.ac.uk
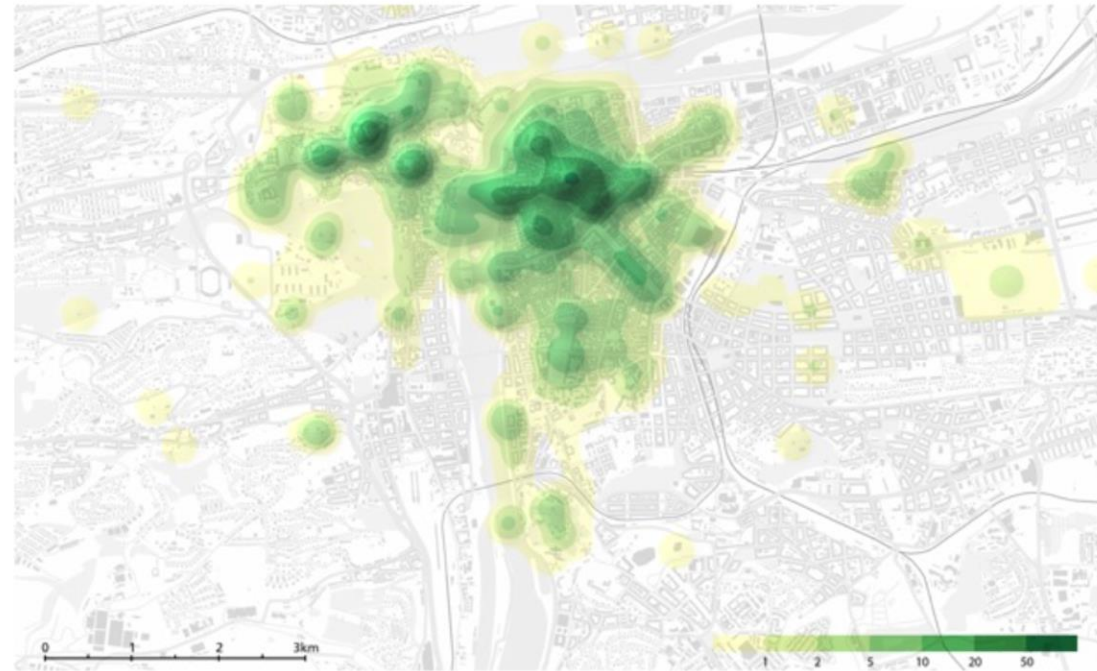**Department of History, Lancaster University, Lancaster LA1 4YG
email: i.gregory@lancaster.ac.uk

Bär, H.R, & Hurni, L. (2011). Improved density estimation for the visualisation of literary spaces. *The Cartographic Journal 48*(4), 309-316.

A LITERARY ATLAS OF EUROPE

HOME   PROJECT ▾   CURRENT RESEARCH ▾   PUBLICATIONS   RESEARCH MATERIAL ▾   RESEARCH TEAM

DENSITY ESTIMATION OF LITERARY SPACES

Posted by literaturatlas on Saturday, March 3, 2012 · Leave a Comment

Little Italy

Photo by Shelbie Vermette-Grant

66

Across a cafe in Toronto's "Little Italy,"
Let us play our mandolins
And sing O Sole Mio! The joy is ours.

—

Il Sangue
By Leonard Gasparini
Published in _Selected poems_ ⬀

66

Jersey Avenue with its elbow turn
and string of workers' cottages
facing a row of garages like broken teeth --
the street where my grandparents made
their first home, the one I never visited.

—

My own Veins
By Maureen Hynes
Published in _Descant (Spring 2013)_ ⬀

Home   Authors   Locations »   About   Search this site...
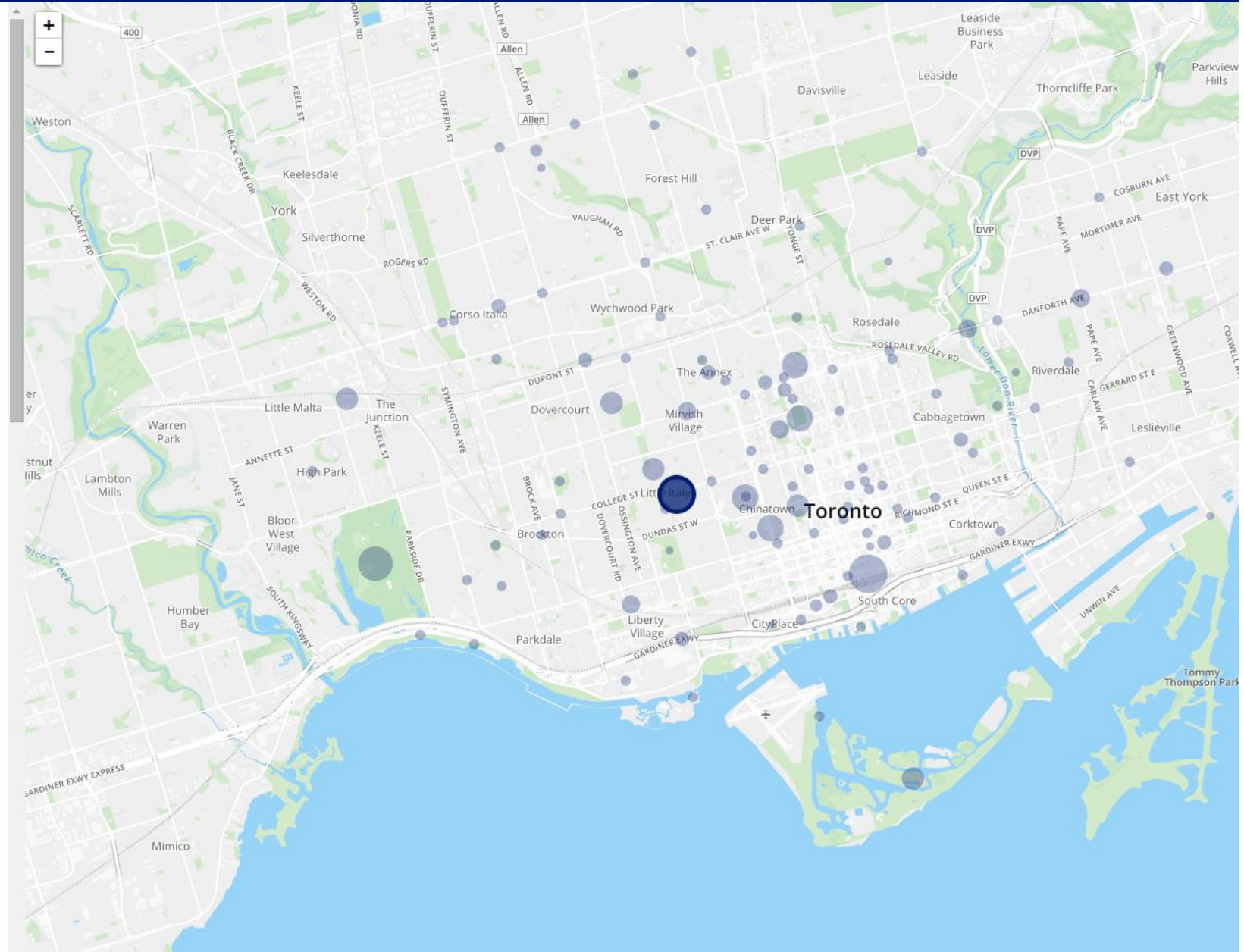
W.P. KINSELLA

Former residence, 1188 Howe St.

Plaque is on lamppost in front of the above address.

W.P. (Bill) Kinsella lived here in a condominium in the late-1990s. His short story called *Shoeless Joe Jackson Comes to Iowa* was the basis for his novel, *Shoeless Joe*, which, in turn, became the basis for the 1989 Kevin Costner movie *Field of Dreams.*

More Information »

Toggle List View
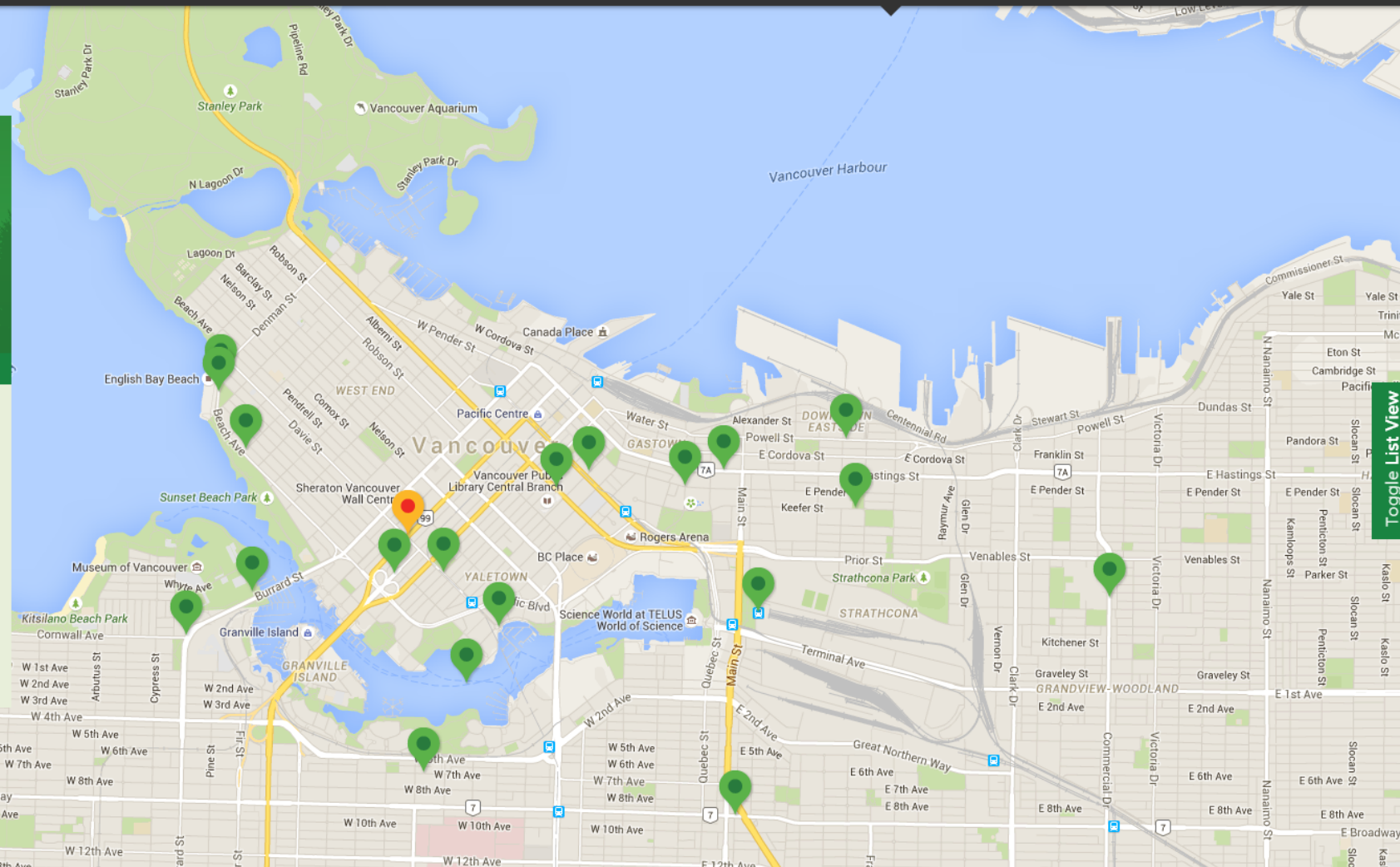
VPL Vancouver Public Library   BC BOOKWORLD   VPL Vancouver Public Library FOUNDATION

The Map of Early Modern London
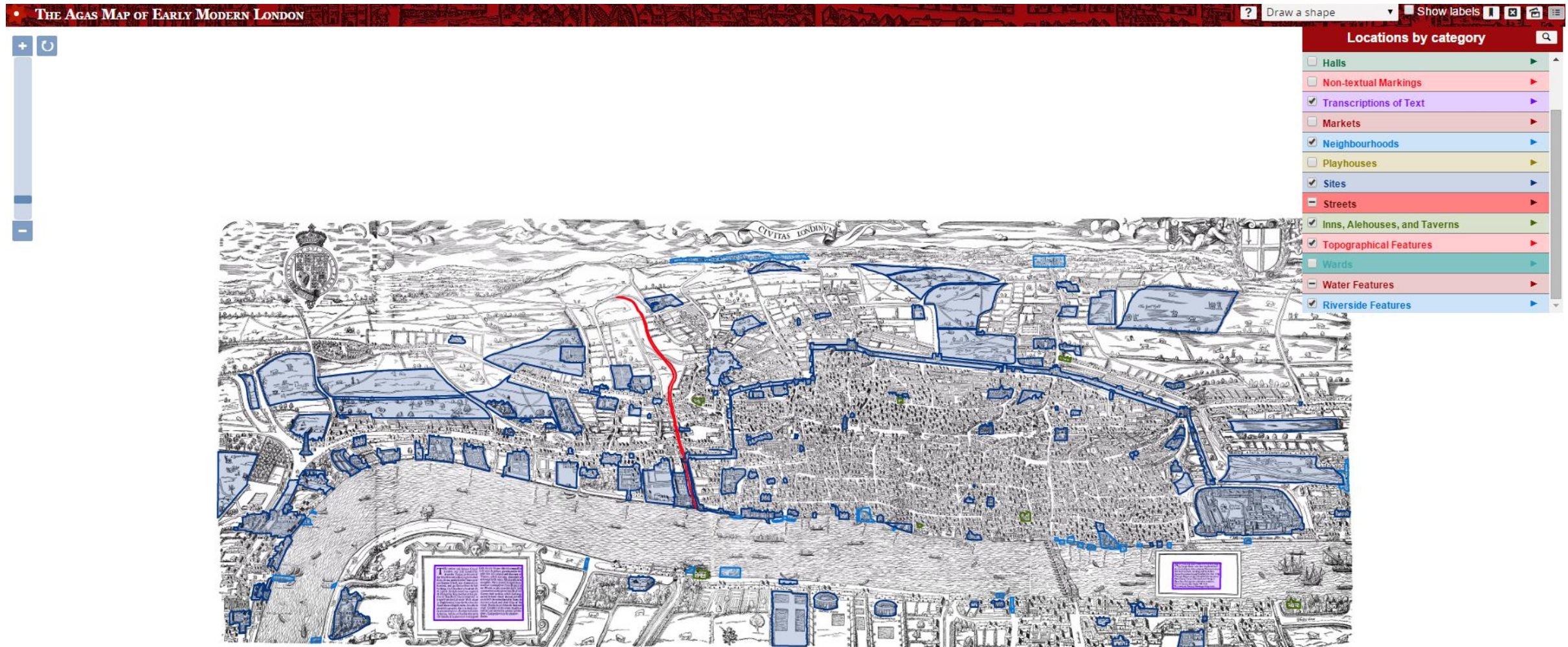
Thinking about Humanities information as data

Kitsilano Point
ghost muskrat swamp
our home's on native land

WES HARTLEY

August Jack Khahtsahlano told Major Matthews
Kits Point used to be a sprawling muskrat swamp
black willows hardhack cattails heron nest trees
from Snauq longhouse where Burrard Bridge abutment sits
across to Skwayoos summer fishing campground on the beach

A salmon stream ran downhill under Cypress Street
curved west at Cornwall and crossed the tree streets
Walnut Maple Laburnum and Arbutus into English Bay
at Kits Beach bathhouse, Skwayoos campsite
where beachcombers still find arrowheads in the gravel
The CPR dumped thirteen feet of sand in the creekbed
at Maple Street when the railroad tracks were laid down
trucked in fill to the swamp when the streetgrid was laid out
disappeared salmon run, disappeared muskrat swamp
Molson built the brewery on top of Snauq Graveyard

Hartley, W. (2009) Kitsilano Point ghost muskrat swamp our home's on native land. In G. McWhirter & E. D. Von (Eds.) *A Verse Map of Vancouver* (p. 30). Vancouver: Anvil Press.

Online map collections

- [David Rumsey Map Collection](#)
- [MapWarper](#)
- [NYPL MapWarper](#)
- [Old Maps Online](#)
- [Perry-Castañeda Library Map Collection](#)

GIS software

Proprietary

- ArcGIS

Open Source

- QGIS
- OpenJUMP
- GRASS GIS
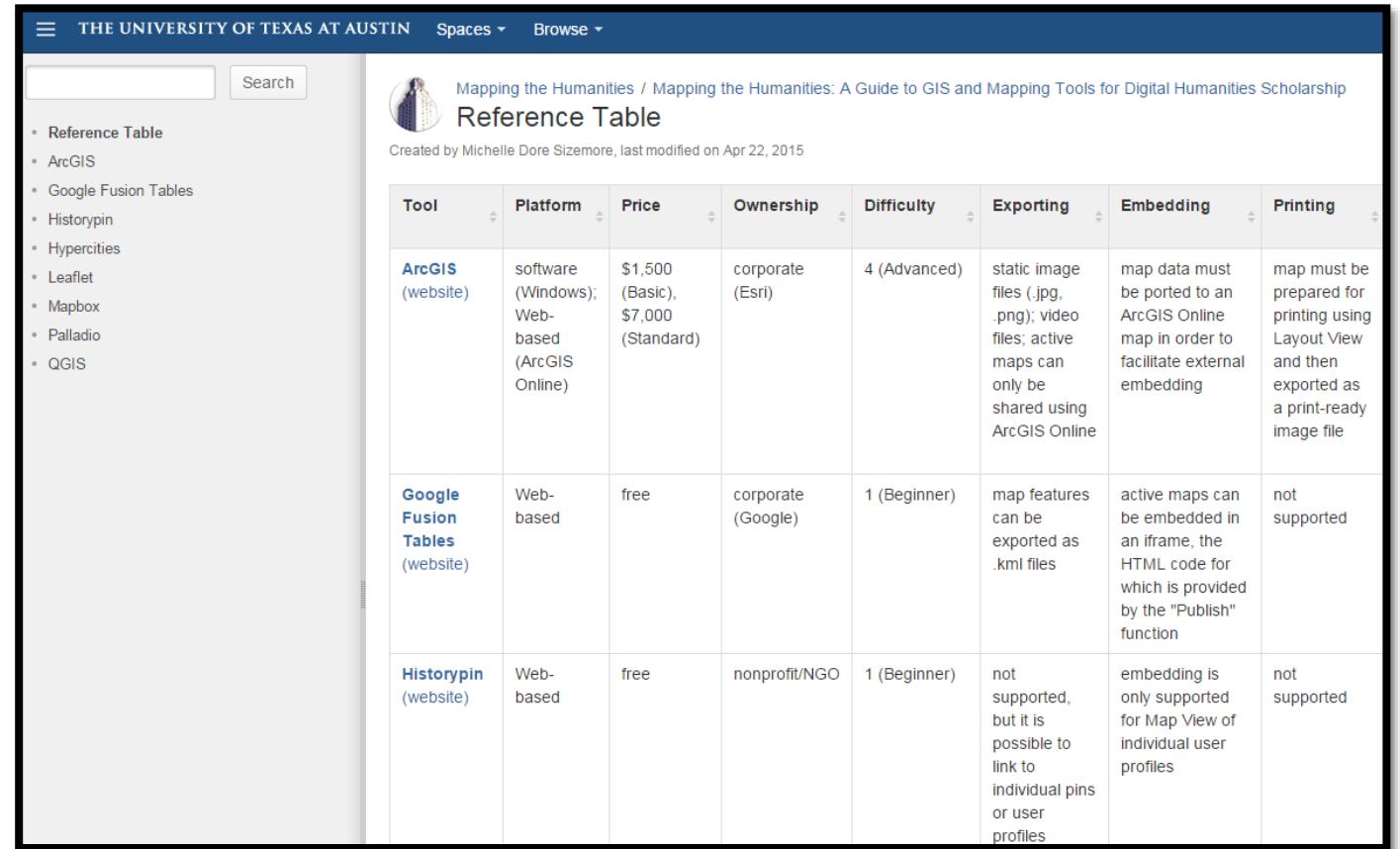
Online mapping tools

- ArcGIS Online
- Story Maps
- Google Earth Pro
- Google My Maps
- Google Maps
- Neatline (Omeka)

- Mapbox
- Open Street Map
- Carto (fomerly CartoDB)
- Ushahidi Crowdmap
- OpenLayers
- Polymaps

Understanding the tools and technology

[Mapping the Humanities Reference Table](#)

The University of Texas at Austin

Understanding the tools and technology

Mapping Tools
Digital Research Tools (DiRT) Directory
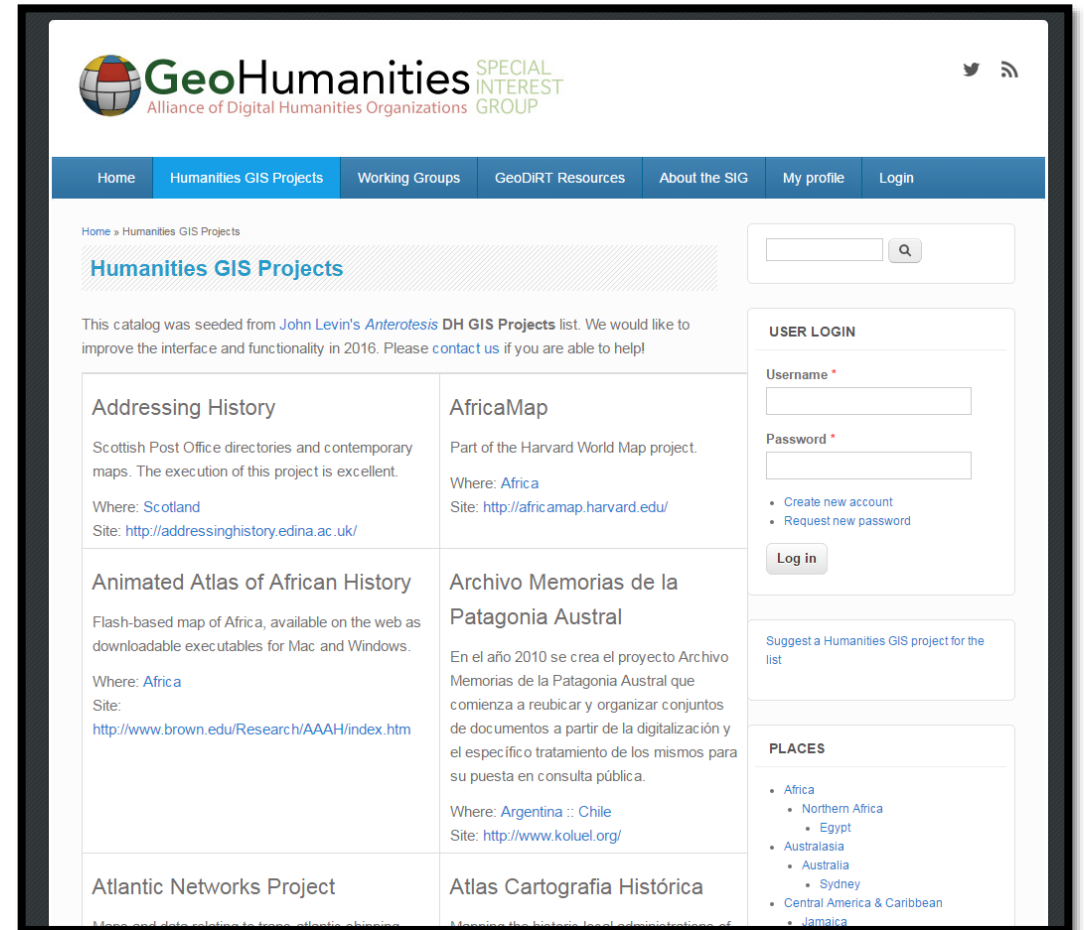
Spatial Humanities Communities

[GeoHumanities](#)

Special Interest Group of ADHO

Includes a directory of Humanities GIS projects

Further resources

- Spatial Humanities Zotero Library
- Spatial Humanities (Scholars' Lab)

- Programming Historian (Google Earth, QGIS)
- Mapping the Humanities: A guide to GIS and mapping tools for Digital Humanities Scholarship

Thanks for your time!

Julie Jones, GIS & Map Librarian / Librarian for Geography,
Simon Fraser University
Daniel Beaulieu, bibliothécaire, Université de Saint-Boniface

November 30, 2016
ACCOLEDS 2016, University of Victoria, Victoria, B.C.