

Spatial Humanities

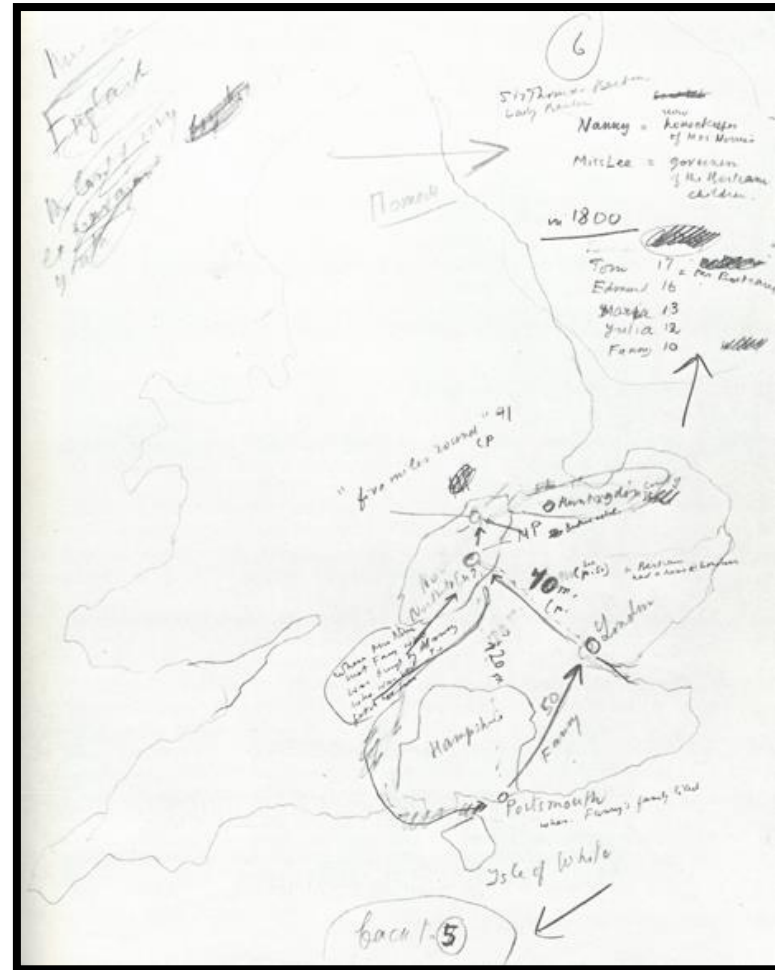
Julie Jones, GIS & Map Librarian / Librarian for Geography, Simon Fraser University

Daniel Beaulieu, bibliothécaire, Université de Saint-Boniface

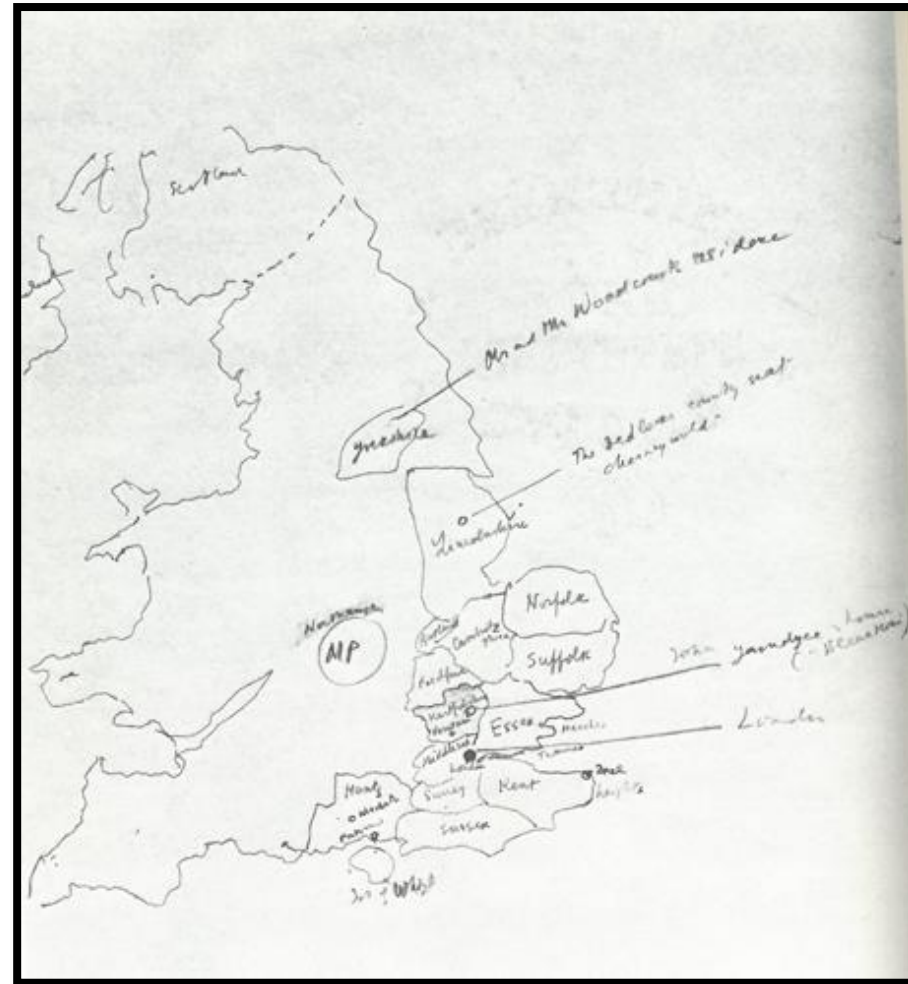
November 30, 2016

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

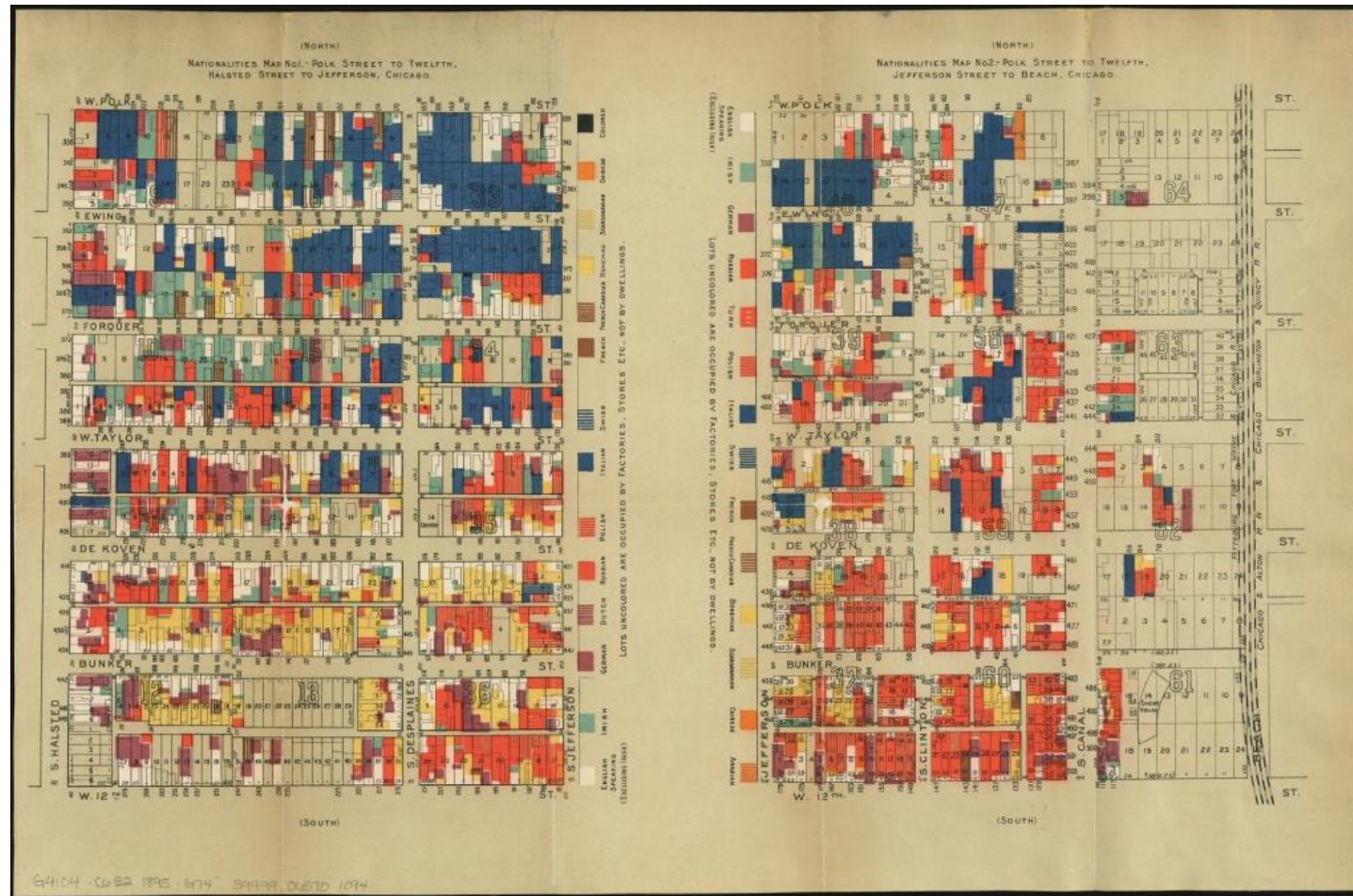
Nabokov's map of England locating the action of *Mansfield Park*



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



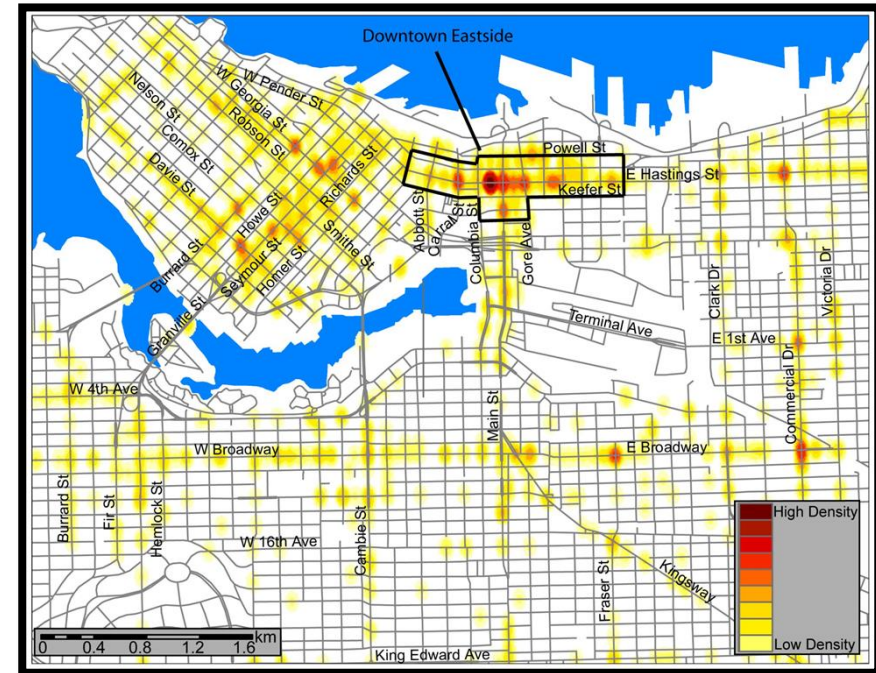
GIS = Geographic Information Systems



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

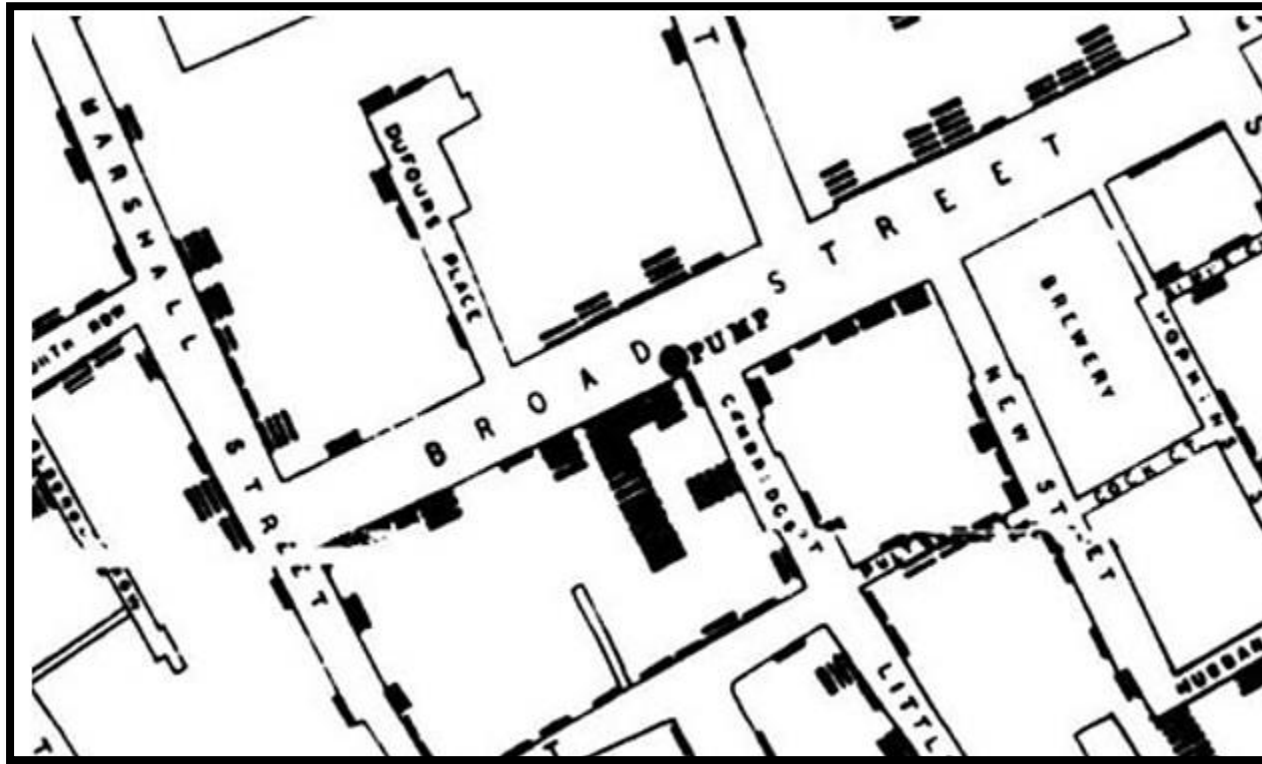


Kernel density map of pedestrian hotspots in Vancouver, 2000-2006. In Schuurman, N., Cinnamon, J., Crooks, V. A., & Hameed, S. M. (2009). Pedestrian injury and the built environment: an environmental scan of hotspots. *BMC public health*, 9(1), <http://dx.doi.org/10.1186/1471-2458-9-233>

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

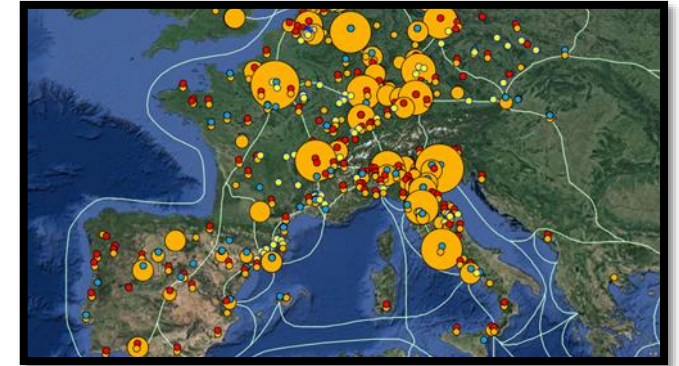
Dr. John Snow's cholera map: London, 1854



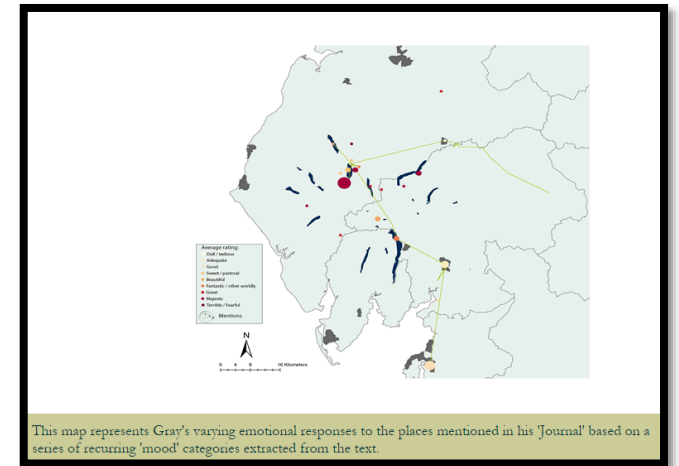
Source: **Mapping the 1854 London Cholera Outbreak**
<https://www.udel.edu/johnmack/frec682/cholera/>

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/>



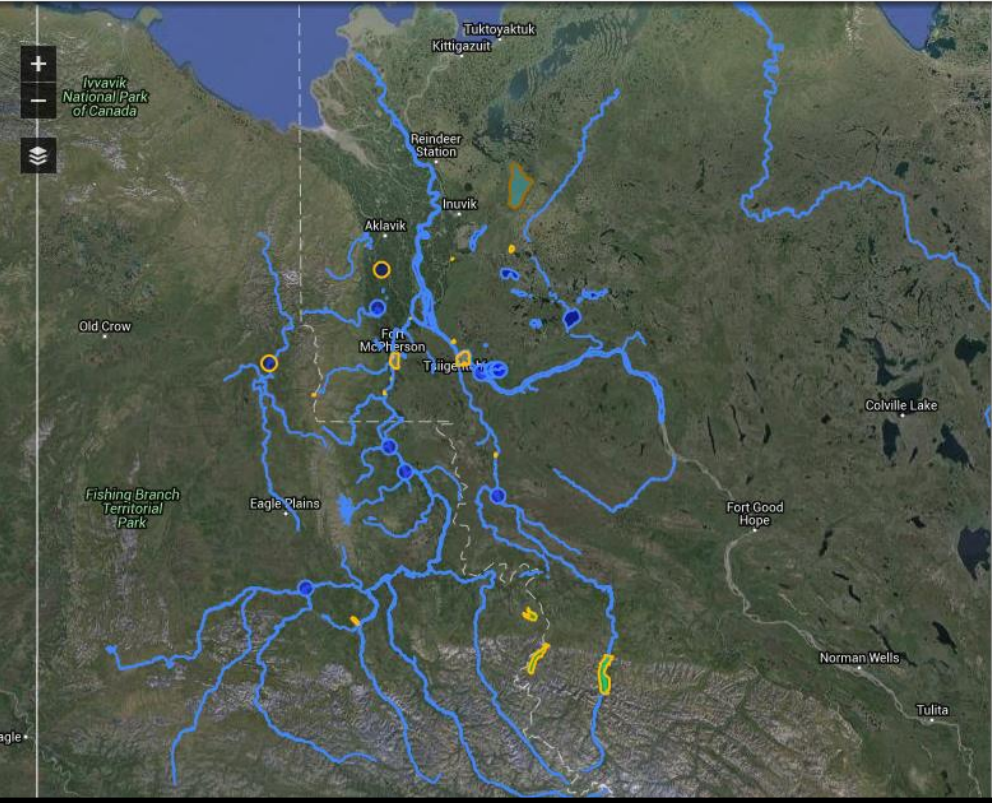
"Gray Mood Map". Mapping the Lakes: A Literary GIS. Lancaster University.
<http://www.lancaster.ac.uk/mappingthelakes/Gray%20Mood%20Map.html>

Gwich'in Place Names and Story Atlas

**Gwich'in**
Social and Cultural Institute


Gwich'in Place Names AtlasPDF MapsAboutCreditsWelcomeLogin

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MediaGeometryGwich'in PlacenameGwich'in GroupAll

Add Related Item ▼

Sitr'ijyeh Van

Skin rash-lake

Sitidgi Lake

This place name refers to a large lake northeast of Campbell Lake in the Inuvik area.


This place name refers to a skin rash that people would get if they ate the loche livers from this lake. The livers are extremely rich and would make your skin peel. The loche in this lake are large and black in color.

There is an old trail which runs between the north end of Campbell Lake and Sitidgi Lake. This trail goes up Campbell Creek and through a series of lakes with one portage at the height of land and again through another series of lakes and creeks which flow into Norris Creek, Nehdoh Njaa Niilajj and then into Sitidgi Lake. The portage part of the trail was described as being a foot deep by a foot wide with poles laid on top of the ground.

Geometry (key_: 482)

1412Speaker – George Niditchie


Montréal Sound Map


Montréal Sound Map  ABOUT CONTRIBUTE | AUTOPLAY SHUFFLE

MAP | HYBRID | SATELLITE

SOUND BROWSER

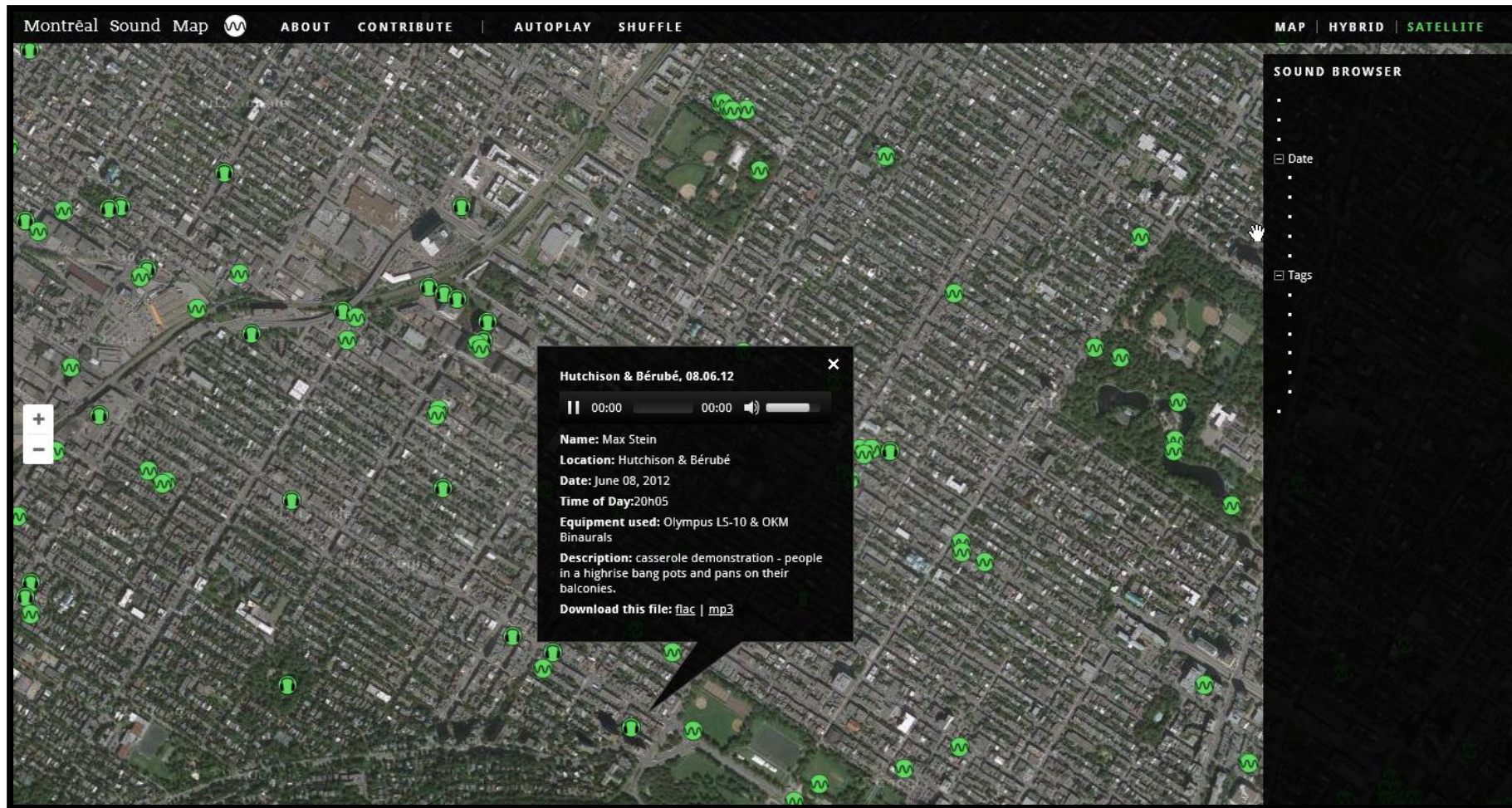
151 Villeneuve O., 13.09.10



00:00 00:00 

Name: Amelia Schonbek
Location: 151 Villeneuve O.
Date: September 13, 2010
Time of Day: 06h30
Equipment used: Sony digital recorder
Description: The sounds heard from my back balcony on a late summer evening: some quiet street noises, my neighbours poking around the garden, and the faint sounds of somebody playing the violin.
Download this file: [mp3](#)

Montréal Sound Map

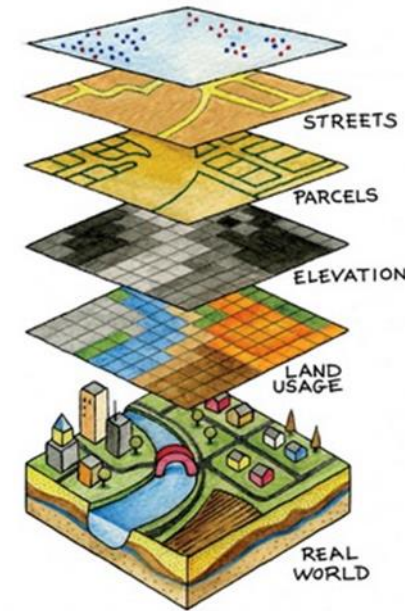


Geospatial data and GIS

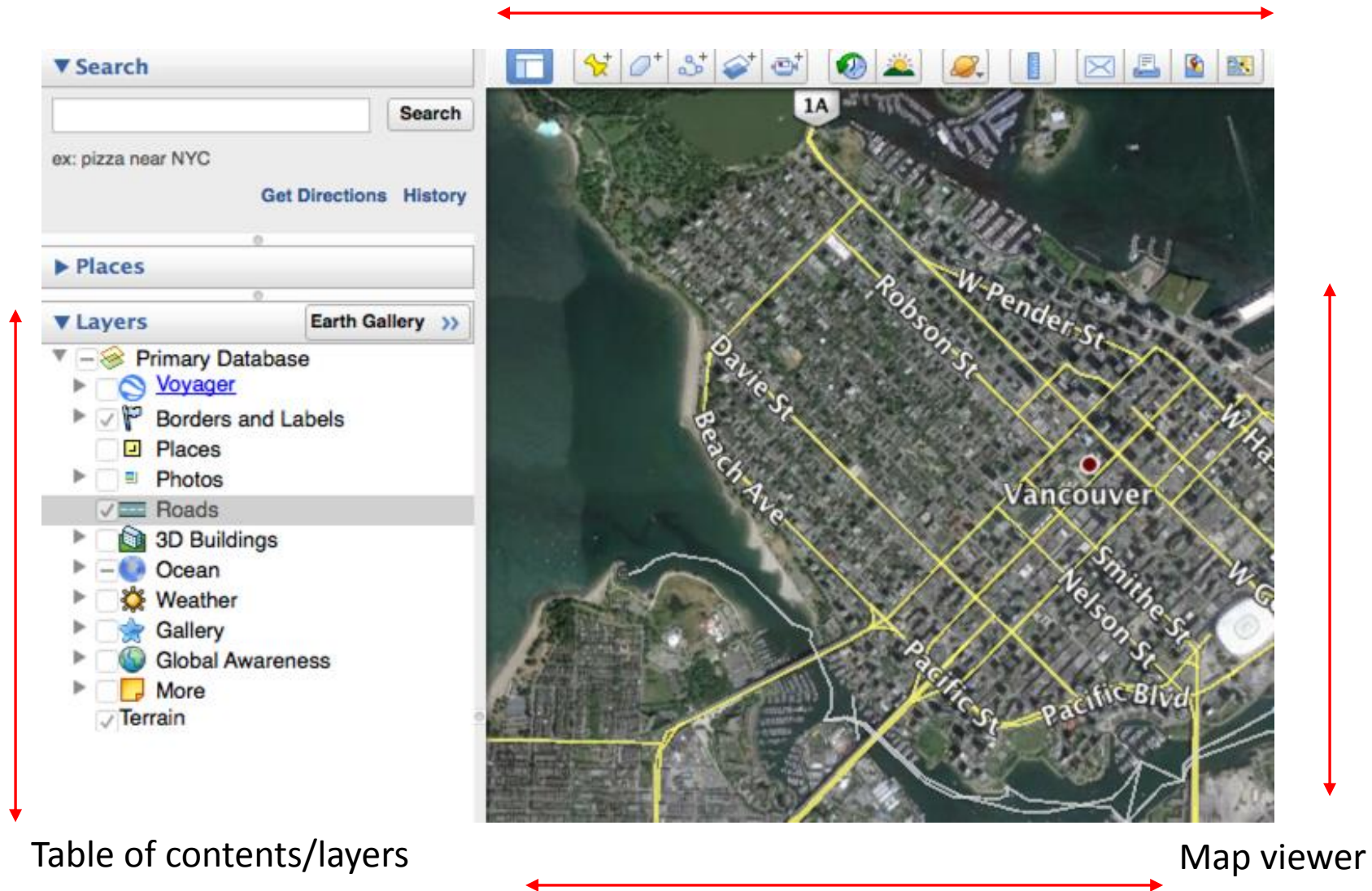
- Geospatial data = data that is attached to a geographic (spatial) location
- GIS (geographic information systems) = computer applications that let us visualize data geographically and thematically at the same time
- A GIS lets us visualize, question, analyze, and interpret data to understand relationships, 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

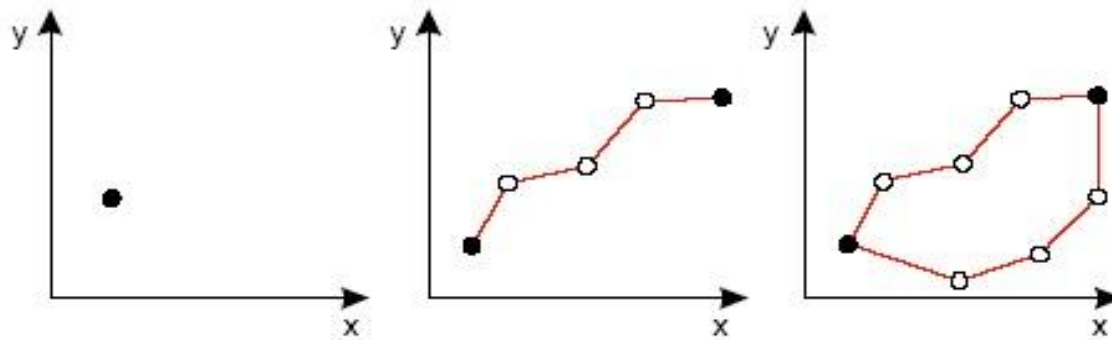


Toolbar



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 overlaid 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.

key words literary studies English Lake District GIS spatial theory
literary cartography digital humanities

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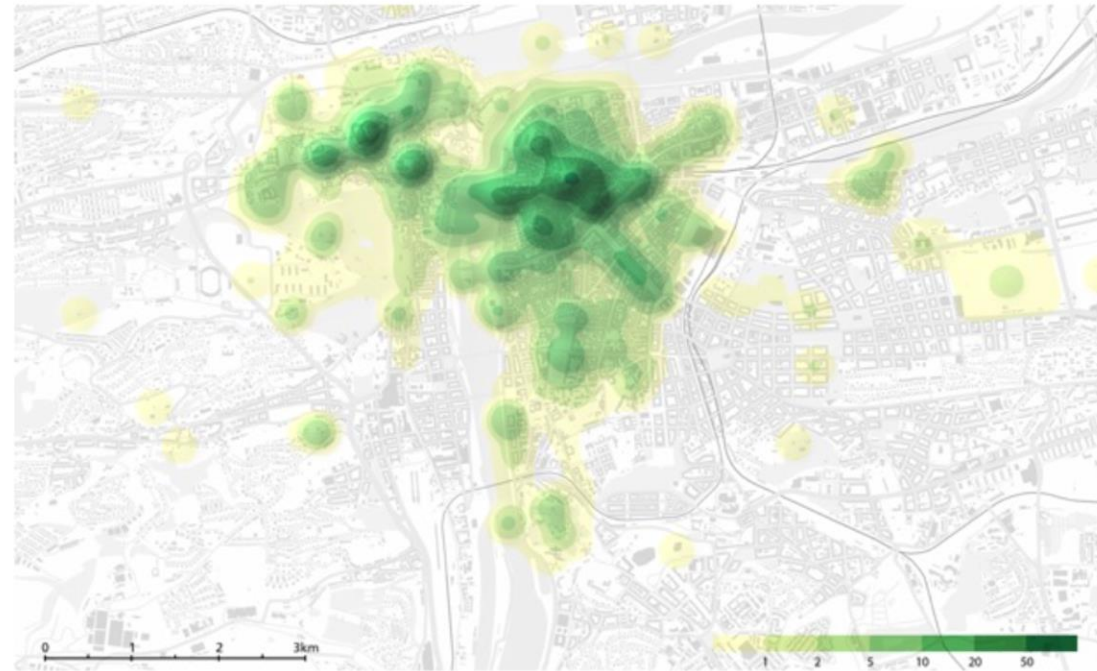
email: i.gregory@lancaster.ac.uk

© 2009 The Authors. Journal compilation © 2009 Blackwell Publishing Ltd

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 Sheldie Vermette-Grant

“

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

—

Il Sanguine

By Leonard Gasparini

Published in [Selected poems](#)

“

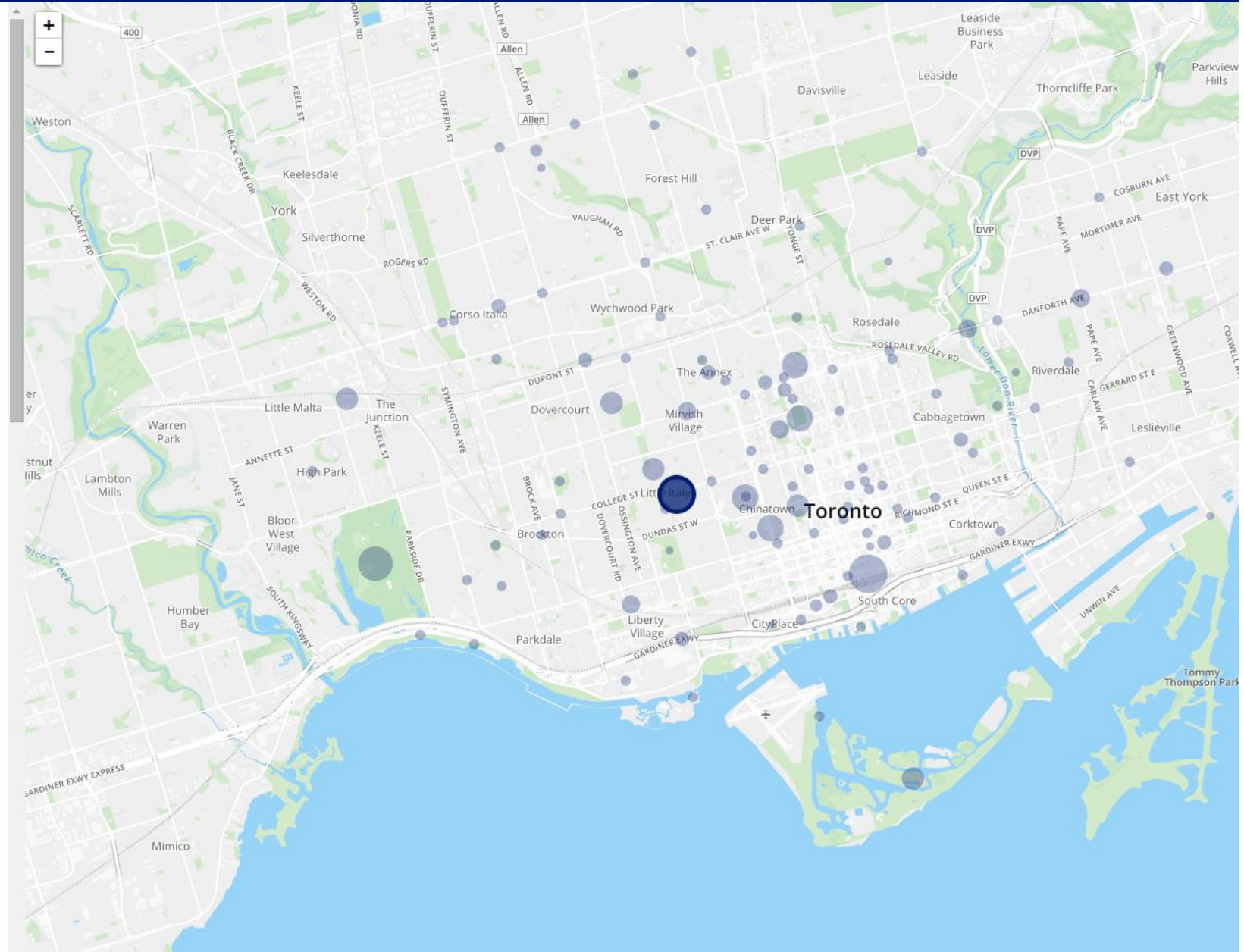
Jersey Avenue with its elbow turn
and string of workers' cottages
facing a row of garages like broken teeth --
the street where my grandparents made
their first home, the one I never visited.

—

My own Veins

By Maureen Hynes

Published in [Descant \(Spring 2013\)](#)





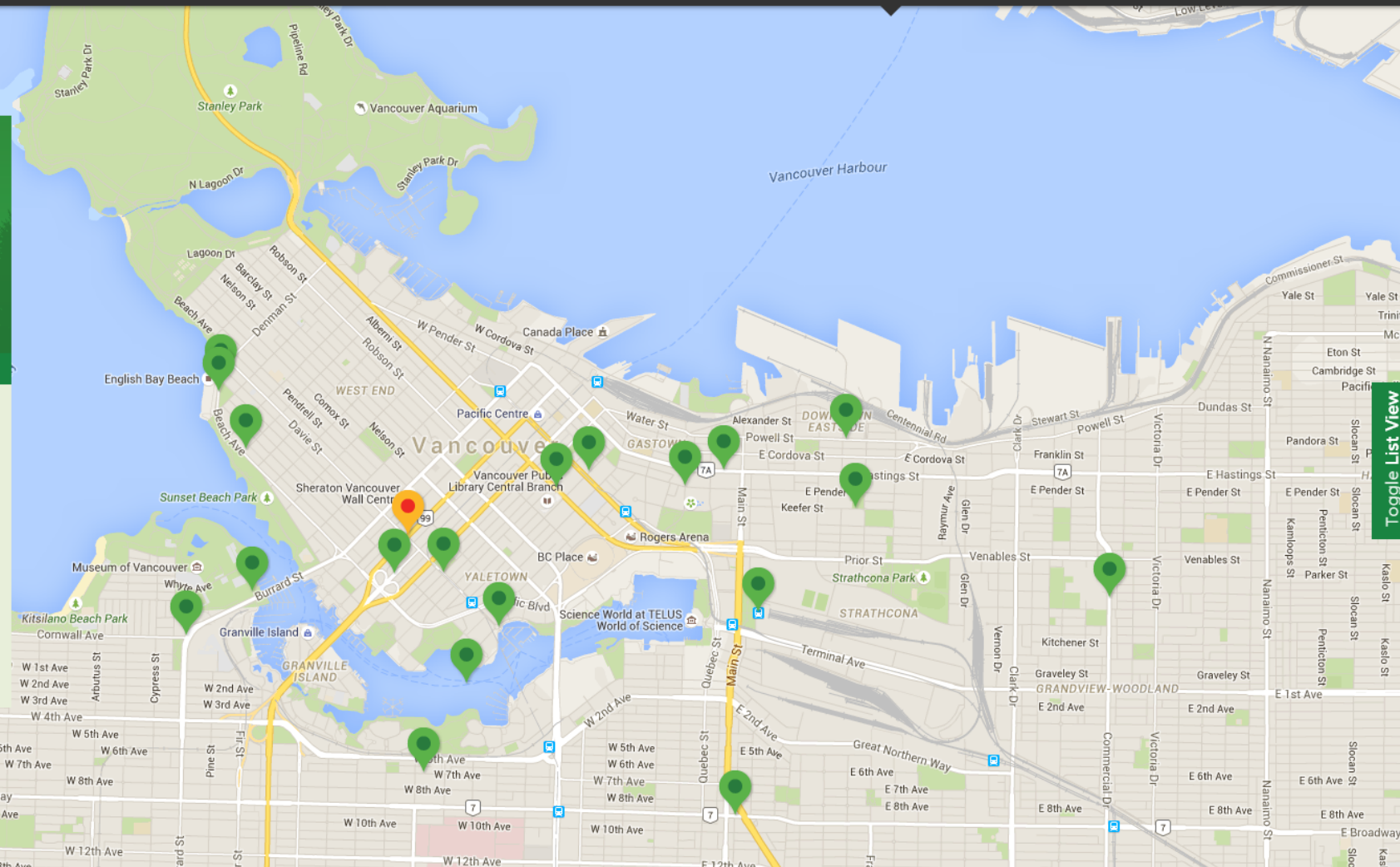
W.P. KINSELLA

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](#)

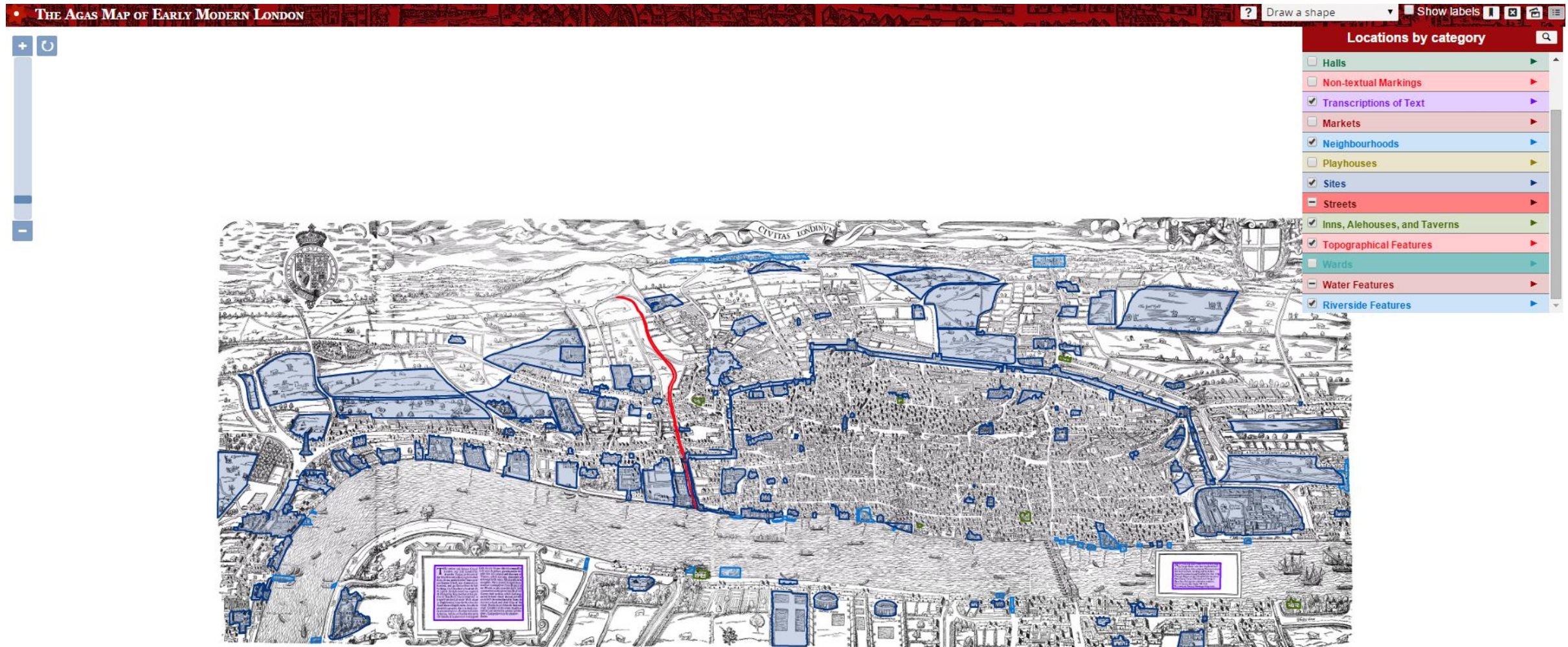


Vancouver Public Library



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

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](#)

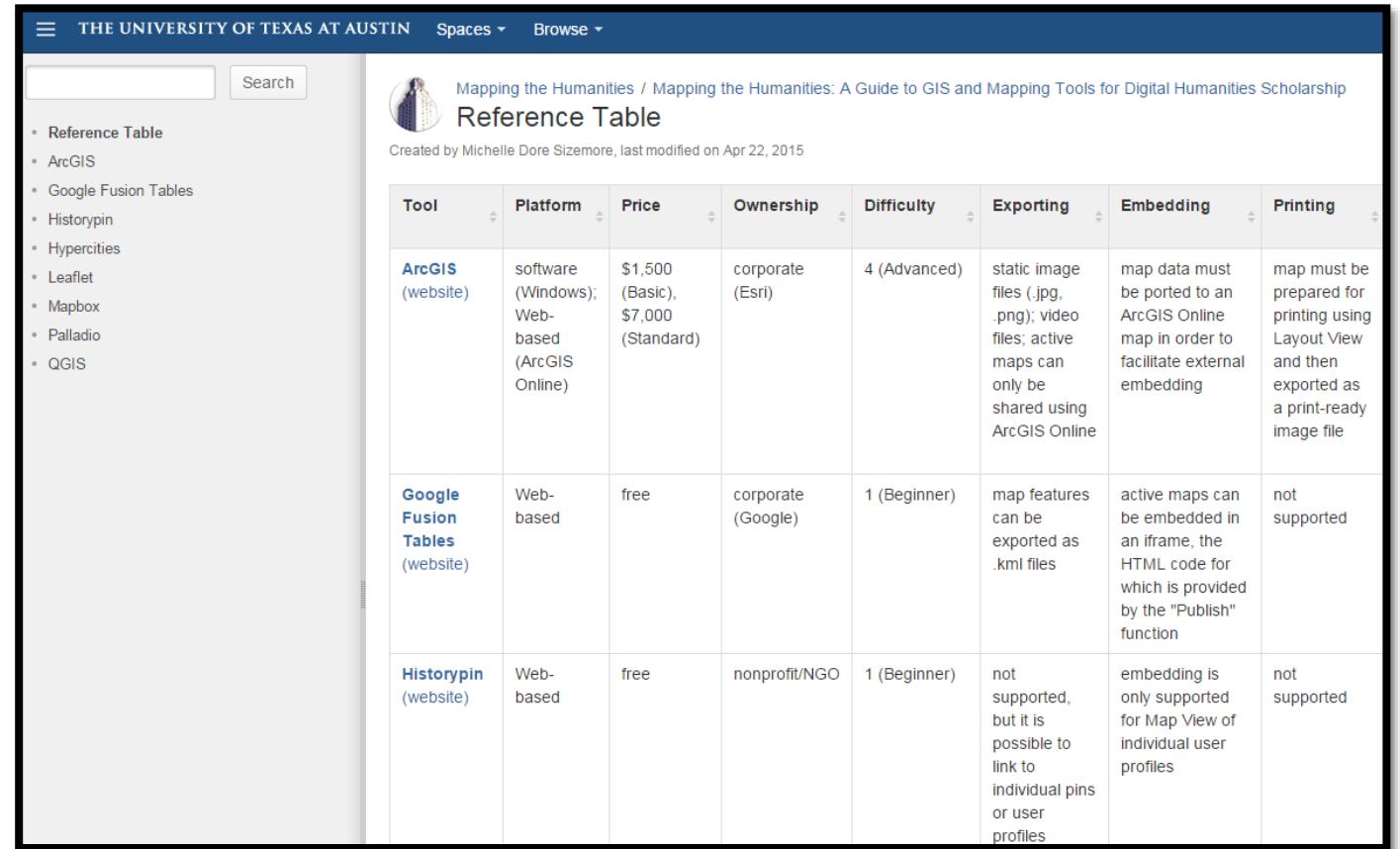
Online mapping tools

- [ArcGIS Online](#)
- [Story Maps](#)
- [Google Earth Pro](#)
- [Google My Maps](#)
- [Google Maps](#)
- [Neatline \(Omeka\)](#)
- [Mapbox](#)
- [Open Street Map](#)
- [Carto](#) (formerly CartoDB)
- [Ushahidi Crowdmap](#)
- [OpenLayers](#)
- [Polymaps](#)

Understanding the tools and technology

[Mapping the Humanities](#) [Reference Table](#)

The University of Texas at Austin



The screenshot shows a web application interface for 'Mapping the Humanities'. At the top, there is a navigation bar with 'THE UNIVERSITY OF TEXAS AT AUSTIN' and links for 'Spaces' and 'Browse'. Below this is a search bar and a sidebar menu. The sidebar menu includes a 'Reference Table' link, which is currently selected, and a list of other tools: ArcGIS, Google Fusion Tables, Historypin, Hypercities, Leaflet, Mapbox, Palladio, and QGIS. The main content area displays the 'Reference Table' title, a subtitle 'Mapping the Humanities: A Guide to GIS and Mapping Tools for Digital Humanities Scholarship', and a note 'Created by Michelle Dore Sizemore, last modified on Apr 22, 2015'. The table itself has eight columns: Tool, Platform, Price, Ownership, Difficulty, Exporting, Embedding, and Printing. It contains three rows of data for ArcGIS, Google Fusion Tables, and Historypin.


Tool	Platform	Price	Ownership	Difficulty	Exporting	Embedding	Printing
ArcGIS (website)	software (Windows); Web-based (ArcGIS Online)	\$1,500 (Basic), \$7,000 (Standard)	corporate (Esri)	4 (Advanced)	static image files (.jpg, .png); video files; active maps can only be shared using ArcGIS Online	map data must be ported to an ArcGIS Online map in order to facilitate external embedding	map must be prepared for printing using Layout View and then exported as a print-ready image file
Google Fusion Tables (website)	Web-based	free	corporate (Google)	1 (Beginner)	map features can be exported as .kml files	active maps can be embedded in an iframe, the HTML code for which is provided by the "Publish" function	not supported
Historypin (website)	Web-based	free	nonprofit/NGO	1 (Beginner)	not supported, but it is possible to link to individual pins or user profiles	embedding is only supported for Map View of individual user profiles	not supported

Understanding the tools and technology

Mapping Tools

Digital Research Tools (DiRT) Directory

[About](#) [Tools](#) [Contribute](#) [Users](#)


Digital Research Tools

Mapping

Platform
- Any -

Cost
- Any -

Exclude
- Any -

License
- Any -

Research objects
- Any -

Sort by
Updated

Order
Descending

Reset

What kind of data should the tool work with?

Alpheios

The goal of the Alpheios project is to help people learn how to learn languages as efficiently and enjoyably as possible, and in a way that best helps them understand their own literary heritage and culture, and the literary heritage and culture of other peoples throughout history. One of the principal tools, a Firefox plugin, allows a reader to browse a web page with Latin, ancient Greek, or Arabic, click on a word, and get a definition and morphological analysis of the word.

Website: <http://alpheios.net/>
Code license: Open source, GNU GPL
Last updated: 5 Jul 2015

OpenLayers

OpenLayers is a Javascript library that can display map tiles and markers loaded from any source in web browser. It provides an API for building rich web-based geographic applications.

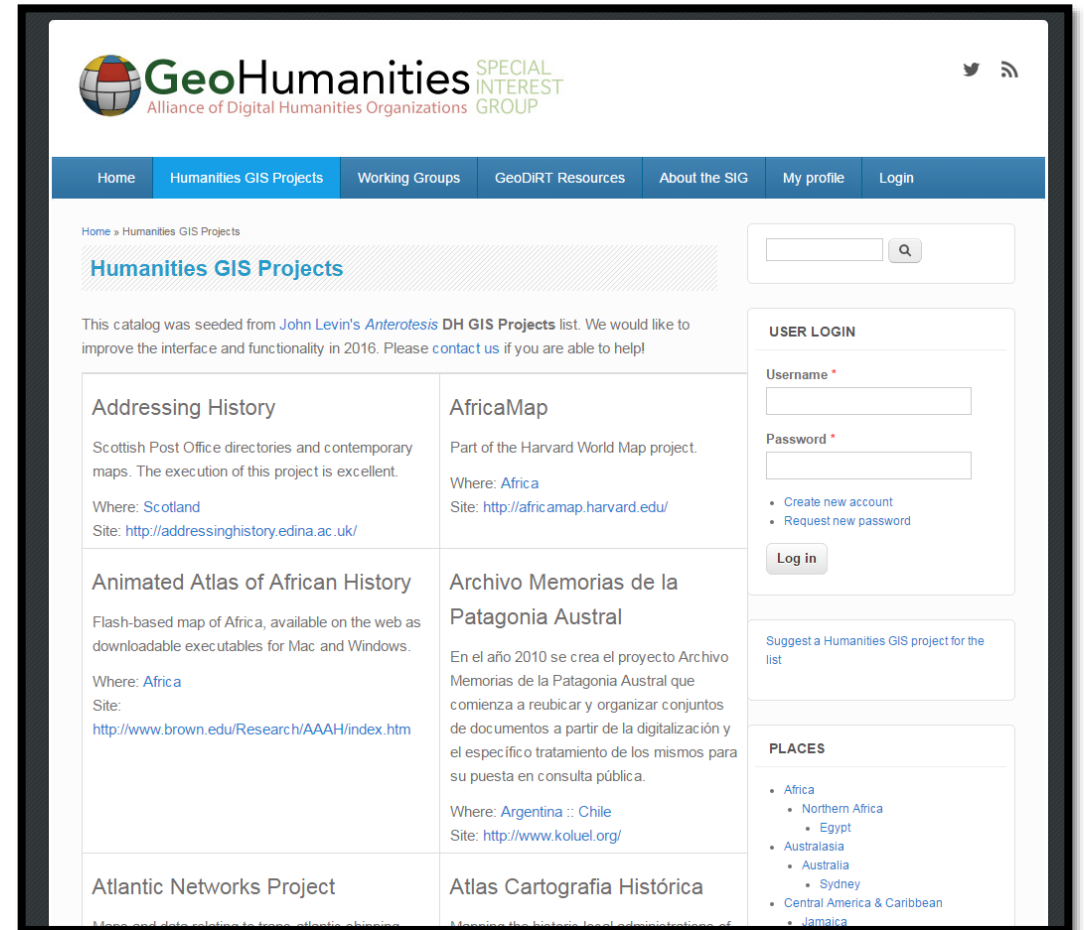
Website: <http://openlayers.org/>
Code license: Open source, BSD

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
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