Digital Scholarship Foundations: Digital Mapping

Week 1: An Introduction to Mapping and Spatial Data

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DSF Workshop Series Objectives

- Participants will apply version control methods
- Participants will recognize different types of data, the file types that support them, and how to use them.
- Participants will effectively manage project repositories.
- Participants will learn the building blocks of the web and digital publication.
- Participants will develop their own project or proof of concept.
- Participants will discuss the ethics and responsibilities of working with data and digital maps.

So what does that mean?!

DSF Overview

We will:

- Learn a range of transferable skills
- Discuss sustainability and preservation
- Think critically about the application and limitation of digital methods

Our approach:

We will build a series of map that use common digital tools and work through the full research life cycle.

My Lens: Spatial Humanities

Definition: An interdisciplinary field and collection of methods that utilize geographic information to analyze and interpret different spatial forms

Some key questions:

- How can we think about and engage with space?
- What tools will help us create maps that further our research agenda?
- How do we address the tension between the supposed precision of mapping and the ambiguity and uncertainty of our research?

Why Digital Mapping?

Spatial Analysis

Representations and/or Illustrations

Storytelling

Today’s Objectives

- Introduce the benefits and challenges of digital mapping
- Identify key technical and methodological concepts of digital mapping
- Review different file and data types
- Become comfortable with a text editor
- Discuss the relationship between data and visualization

The Digital Map Mapmaker's Toolkit

Plain text files

Text editor

Geocoder

Visualization platform

Publishing mechanism

Thinking Spatially About Your Research

What in your research can be represented on a map?

What data do you have already? And what data do you still need?

How does spatial information need to be structured for mapping and what are the main types of spatial data?

What challenges do you anticipate with your map/data?

Geographic information

Spatial Humanities: An interdisciplinary field and collection of methods that utilize geographic information to analyze and interpret different spatial forms

Vector and raster data are types of geographic information.

Raster data

a matrix of pixels or cells

use when representing continuous fields or surfaces

We will create raster data when we georeference a map

Vector Data

Potential representations

- Points
- Lines
- Polygons

Visual Studio Code and Text Editors

What is VS Code

- Lightweight, but powerful text editor
- Popular with programmers and others
- Integrated Development Environment (IDE)

Why VS Code or another text editor

- Easily read and edit plain text files
- IDE allows for predictive code and other development features all in one space

Open VS Code

Getting Started: Questions about Data

What data do you have?

What data might you need?

What is the most important data you want to show?

How do you want your data to relate to each other?

Structuring Your Data

Structuring: Organizing your data and gathering additional data

Questions to ask yourself and of your data:

- What do you want your map to display?
- What columns do you need to organize and add data?
- What data will be visible to the end user?
- Is your data consistent?
- How do you make your data mappable?

Our Research: What Data Do We Need to Transform?

Photographs as JPEGs

Hand drawn map as PNG

Metadata spreadsheet as Google Sheet