Final Project

Examine Demographic and Socio-Economic Profiles of the US Population in a Spatial Context as they relate to the 2016 Presidential Elections.

In the final project we will take a look at the demographic and socio-economic population profile in the US (by zip code), as it relates to the 2016 Presidential Elections. In specific, our goal is to understand the unprecedented historical moment created by the Bernie Sanders campaign, which was funded primarily by ordinary people. It is estimated that there were ~9 million contributions (~$27 each), made by ~2.5 million people. We want to understand who were these people: http://www.latimes.com/projects/la-na-pol-sanders-donors/

In order to answer this question, we will use public data from the **Federal Elections Committee**[i] and the **US Census Bureau** (census.gov). Each group can pick any two states as its study area. States do not need to be adjacent. Each group will examine at least 10-12 variables (indicators).

What will we learn through this project?

- Work with socio-demographic and secondary data that are not inherently geospatial and that do not explicitly represent the physical environment.

- Create a Geospatial Data Library of 10-12 variables, by collecting, evaluating, and standardizing publicly available data that were not originally in a geospatial format.

- Use spatial analysis methods to be able to summarize Geospatial Data into meaningful information expressed analytically and cartographically in a manner that is easily understood by broad audiences.

How will we reach these learning goals?

This project is wide open. There are no constraints on what and how to use the data, as long as the final goal is to shed light into patterns that are not easily seen in the noise of too much (and not geographic) data.

You should come up with two or three themes you want to focus on, at the start of your project before setting out to find answers via data and spatial analysis. These themes, or hypothesis, or research questions, could for example be shaped to discover if there is a relation between contributors and variables such as poverty, wealth, education attainment, age, or incarceration rates, etc.

Once you have decided what you want to examine, your first step is to find the corresponding data, and then to create the Geospatial Data Library for the project.

Preparing the Geospatial Data Library

In this project we will use Measures and Indicators. Out of many available indicators, you will pick the ones that relate to your research questions. You will download the data, from **census.gov** (or other sources if you want) in an Excel format, and convert it to GIS. If needed, you will clean and standardize the data per the needs of your project. See the step-by-step guide for going from an Excel to a Shapefile with a world countries example.

Example of your Geospatial Data Library

Measure – Quality of Life (2 indicators)
Life expectancy
Infant mortality

Measure – Education Attainment (2 indicators)
Percent of people with graduate degrees
Percent of people with high school diploma

Measure – Economic Conditions (6 indicators)
Poverty
Wealth
Income
Networth
Unemployment
Incarceration

When your Geospatial Data Library is ready, and you have taken care to document the definitions for each of your variables, you can then start the analysis process and develop your method. You can consolidate your method with one state first, and then apply it to the other state. As part of your method, at the end you can also create state profiles of composite indexes (weighted if you want) from these measures and indicators (for example you can make up a composite index of progress by combining education, economic conditions, etc.).

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[i] This data downloaded from:
https://archive.org/details/actblue-fec-filings-april-2015-to-feb-2016