Tyler Hegwood
MAP673 – Module 6,7
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PART II

Mapping scenario: My concept is ambitious, but with success could prove useful as a sound display of skill, and conceptual thinking. Using data provided by the Bureau of Economic Analysis – "Contribution to GDP by major metro area", I would like to create an interactive web map that allows for the geographic data sub-sets of industry percent contribution to GDP be displayed in comparison to at least one other demographic variable (age, median income, or similar variable capable of being visualized by a sliding scale). The table referenced above includes 13 industries that contribute to the overall net increase or decrease from each major metro, which there is 380 of. Going beyond the individual industry, I would then attempt to incorporate data that supplies age groups that contribute to the specific industry sector and be able to use a slider input to compare at least one if not all industry sectors at once to ultimately answer the question, "Where does a 34 (or 44, 57) year old contribute most to mining and natural resource GDP?" or "What age group contributes most to GDP earned from information technology in Seattle-Tacoma, and how does it compare to San Francisco?". There may be way too much data webbing to make this work exactly as beautiful as it sits in my head, but I'd love to find out the hard way, and learn figuring it out.

What do I want to get out of this project: From this project I would like to achieve a useable result from a complex set of data, proving my working web mapping knowledge and skill applicable to the real world.

What do I want the users to get out of this map: This map may be used widely for comparing various demographic variables in a visual, geographic presentation.

Content requirements:

- Establish geographic context on base map of United States.
- Provide markers capable of displaying information in at least two 'voices'.
- May heavily rely on marker style and display to convey information..
- Provide some info window or panel to display aggregate data.
- Useable data……re-formatted to work for me.

Functional Specifications:

- Bring in map tiles, with constraints to subject area, no need to drag beyond original screen load position, but allow for zoom.
- Create relative size markers, or discover the option of other available multi-attribute display markers.
- Allow for data input via some UI selector – worst case is drop down, but would like to discover other solutions.
- Popup or some method to display data, 13 different attributes is likely way too busy to display with different markers in 380 locations across the US.

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Data Sources:
The main chunk is coming from the bea.gov report that I have already geo-referenced for the 380 metropolitan areas that it has reported on for 2014.
http://www.bea.gov/regional/index.htm
"GDP by metro for all areas and components"
"Personal income by Major Component and Earnings by Industry"

Part III.

Anticipated Technology Stack

- QGIS/desktop GIS software – Information processing, Geo-referencing.
- Leafleft.js – main infrastructure for web map display functionality.
    - In conjunction with HTML and CSS formatting with the use of Jquery.
    - Mapbox/leaflet Omnivore as a plugin to handle data import to javascript.
- Github pages to host project repository.

MODULE 07 Portions

Identification of anticipated thematic representation

Values representing industry data per each metropolitan area will be represented by a circle marker with a corresponding radius. Industry identification will be done by using varying color schemes, or, if possible – a marker similar to these:
http://bl.ocks.org/bbest/2de0e25d4840c68f2db1
http://bl.ocks.org/mbostock/3887193

Content and requirements list

The content that will be crucial and informative to display:

- Metropolitan area
- Industry Name
- Percent Contribution to Local GDP
- Employee Compensation by Industry

Description of the anticipated user interaction

Using this mapping tool, a user will select one of 13 industries via dropdown. Following industry selection markers will display the metropolitan's contribution to GDP as a percent of the whole, as well as local employee compensation by industry. Additional option may be a time frame slider for years 2001-2014.