Making Maps of Census Data Using American Factfinder

Introduction

American Factfinder is a public service of the U.S. Census Bureau. It provides tables and maps of Census 2000 data for all geographies down to the block level. Using Factfinder you can make your own thematic maps of any Census variable available for every geographic region in the country. Unlike many other web-based mapping systems, Factfinder allows the user to customize the legend (i.e. choosing your own cutting points and number of categories). However, Factfinder' user-friendliness translates into somewhat limited functionality. Much more can be done in ArcView and ArcGIS. The purpose of this exercise is to introduce you to some of the key components of mapmaking (e.g. creating legends, choosing an appropriate geography, etc.) in a controlled system where the data processing and manipulation is done for you.

1. Using Internet Explorer log on to Factfinder: http://www.census.gov --- then click on American Factfinder.
2. Once the Factfinder page appears click on **Data Sets,** a sub-menu will appear (it will "fly out"), select **Decennial Census**. This new page provides some background information about census maps and geography.
3. At the top of the new page you will see two tabs, on is for Census 2000 the other is for 1990 Census, make sure 2000 Census is selected. For this lab select the button for **Census 2000 Summary File 3 (SF3) Sample Data**. This is where the more detailed social and economic characteristics from Census 2000 can be found. Select the **Thematic Maps** option from the menu that appears on the right**.**
4. This takes you to another new page. Now choose a geography type. We will be looking at Brooklyn (Kings County). To get there, select a **County** in **New York**, then **Kings County** (new and appropriate sub-menus appear after selecting each of these variables).
5. **Next** takes you to a menu where you select a variable to map. Use the tabs (subject or keyword) and work through the menu until you locate **Percent of Persons Who Are Foreign Born: 2000**. Select it and **Show Result**.
6. This brings up a map. By default, the system maps the variable by census subdivisions. You can choose census tracts instead using the **Display map by:** menu. Experiment with the zoom in and out and pan tools, and the zoom bar, to look more closely to those parts of Brooklyn where you see a high concentration of foreign-born persons.
7. Click on **Data Classes** (upper left). A number of options will appear. You can modify the number of data categories, color and classing method of the legend. You can also turn on or off certain geographical features. Explore these options. Are **Natural Breaks** the best way to categorize the theme? Choose the **Equal**

Interval class and see what happens to the map. Now explore different colors and numbers of categories. Each time you change one of these options look carefully at how the information displayed on the map changes.

8. Can you set the cutting points (User Defined option) in a way that makes the differences in immigrant concentration look small – egalitarian Brooklyn? (Select cutting points of 0-50, 50-75, and 75-100). Can you make them look greater, showing a borough divided into immigrants and natives? (Try 0-25, 25-50, and 50-100.)
9. Now we'll explore how scale (i.e. the geographic unit of analysis) can affect the display of information on a map. Change to block groups. Now change the geographic unit back to census tract and view the map again. Do you see anything different? Zoom in and recenter in a part of the borough that seems most diverse. Now can you find "micro-neighborhoods" at the block group level that differ from their census tract?
10. Select the **print/download** option. Prepare a pdf file of the map and open it on your computer. Download an Excel spreadsheet of the data.

Exercise to do on your own:

There are two large immigrant neighborhoods on the north shore of Queens. The one on the east side of Flushing Meadows is called Flushing. On the west side is Jackson Heights. Select **county** as your unit of geography, and go to Queens.

1. Based on the racial composition of the population, which of these areas might better be described as a single homogeneous neighborhood? Which might better be described as several distinct neighborhoods? **Use SF1 data for this task, and map percent white alone, black alone, Asian alone, and Hispanic**.

2. How similar or different is your conclusion if you base it on tract or block group geography? What does this tell you about the geographic level at which groups are spatially clustered?

3. How is income level associated with immigration in this part of Queens? **Switch to SF3 data for this task**. In Flushing and Jackson Heights, which sections – the black, Hispanic, or Asian sections – have higher average incomes? Or is it just white neighborhoods that have higher incomes?

4. Notice that neighborhoods in southeastern Queens are moderately affluent, compared to immigrant zones. Confirm that these are largely black neighborhoods. Look closely at the percent West Indian in this area. Are the West Indian concentrations found in the poorer or more affluent part of this zone? What does this tell you about black immigrants' position in New York City?

5. Create a map in which it appears that Queens is sharply divided into rich and poor neighborhoods. Create a map in which it appears that most Queens neighborhoods have similar income levels.