Fundamentals of GIS

Fundamentals of GIS Session 5: Making Sense of the Census and Quantitative Maps

Download the census tutorial data-set.

Old Business: Some important and challenging categorical referencing systems.

- **QA on Categorical Mapping Tutorial**
- **Being hypothetical:** In your future work for this course, all the way to the final project, we want to frame our analytic projects as hypothetical proof-of-concept studies. This is discussed in more detail in Conceptualizing Decision-Making Situations.

Segue from last week: A map is useful if it conveys useful ideas into the mind of a map reader in a predictable way. There are certain logical traps that people are prone to fall into when interpreting data. Many of these traps fall into the category of mistaking data for a perfect representation of reality. It is our job to steer people away from these natural traps. Data are imperfect. Nevertheless, by being careful in our discussion and portrayal of data, we can convey useful ideas about a decision-making situation. The way you describe your map conveys an important idea about your credibility. By warning our readers against intuitively appealing mistakes, the analyst demonstrates that he/she understands the data that she or she is working with.

This week, we continue our exploration of the ways that data are transformed into graphics, and how the graphics are turned into ideas. A lot of folks believe that using GIS to make maps is all about software. In fact, when it comes to communicating with maps, almost of all of the important computing is what occurs in the mind of the map viewer. Communicating effectively, in a predictable way, requires engineering other people's thoughts through the arrangement of graphical references. As it happens, there are intuitive pathways for graphical interpretation hard-wired into our mammalian brains. Understanding these allows us to use powerful graphic conventions and predict how people will interpret our maps.

In this exercise, we use computers to create the maps, but the most important information-processing happens in the mind of your audience.

1. **About and Obtaining Census Data**

Break

2. **Mapping with of Quantitative Data**
    a. Normalization & Intuitive symbolization

3. **Look at this week's Exercise.**
4. **Mapping Census Data Tutorial**
5. Simple Select and Summary Models