Lecture Notes, Module 3

GEOG 319/658 **Peterson Chapters 3 and 4** **SPRING 2014**

- As we indicated in Module 1, Peterson's book alternates chapters of cartography/GIS material and coding approaches. In the present module, chapter 3 deals with cartography/GIS material (the "Meaning of Mapping"), and chapter 4 deals with coding (creating "A Map Gallery" using HTML coding).
- Since we wanted to focus on getting exercise # 1 rolling, we focus on that and chapter 4 in the textbook.
- Regarding exercise #1, we asked the students to talk about their success or failures in finding various file formats (GIF, JPG, etc.)
    - You may have found that you could not get the address of a particular file and so you had to download that file; if so, you will need to store it at the same level as your web hosting program (show in the web hosting service).
- Questions on getting web hosting going?

Slide 1: Intro slide for chapters 3 and 4 in Peterson

- Stress that we definitely will cover only some of this material. We want you to get rolling with exercise #1.

Slide 2: Chapter 4

- Hold off on chapter 3 and focus instead on some material in chapter 4.

Slide 3: HTML

- Main language of Web pages
    - In some ways it is less interesting and useful than JavaScript and Python, but we need it as a wrapper
- Defines the layout of web pages
    - Technically we can also use CSS (Cascading Style Sheets) to define the look and formatting of HTML, but still that must be imbedded within HTML

Slide 4: HTML (cont.)

- Make sure that we are on the same page with respect to terminology
- Basic element consists of start tag, end tag, and text in between…
- Tags consist of keywords…
    - Note that keyword is somewhat of a misnomer, since the keywords are often single characters (as opposed to words)
- Stress that we presume that you are reading the Peterson text and using w3schools.com to learn about the various tags

Slide 5 Introduce 310 and exercise 1

- Go over the Using Computers in 310 handout
    - The good news is we have all new computers (see B of the handout)
    - Logging in will be very similar to earlier versions of the computer lab (seems to be a bit faster; computers definitely faster)
    - Storing data (G drive allows you to move easily between machines)
    - Since this is new operating system (Windows 8), you will need to experiment a bit.
        - This didn't seem to bother them, as many of them already had Windows 8 on their own laptops.
    - Data and Programs that we distribute
        - We had planned on distributing some data from room 310, but we ended up using largely Blackboard for this.
    - Logging off is a bit different in Windows 8…
    - Accessing Notepad
        - This is a key point for exercise #1…
    - Webhosting
        - Note that we refer to pp. 70-73 of Peterson for signing up for the webhosting service.

- Skim through exercise # 1
    - Focus initially on just the main tasks
- Show Xingong's program for parts b (his Single-page map gallery) and c (his Multi-page map gallery) http://xingongcloudmapping.comxa.com/MappingAndAnalysis/

- Go over part b of exercise #1 in detail
    - Go through each line
    - When I get to "how many pixels you wamt to display," note that you may want to use a different width to allow your image to fit on the screen
        - Peterson gives the example of 900 wide by 700 high; he raises the question "what if you want a width of 500"
            - To me, you are changing the 900 to 500, so it makes sense to multiply the 700 by 500/900 = 389
    - For Notepad++
        - Show how if you have selected HTML option (under Language), you can see how various lines of code connect with one another
- What can go wrong??
    - Ideally, instructors should illustrate what happens when you code things incorrectly. We probably didn't do enough of this.

- Note: can open SVG in Notepad++

Slide 6: Chapter 3

Slide 7: Two sides of the brain

- Peterson focuses on the two sides of the brain.
    - Left side associated with language, analysis, and reason
      (so things like math, science are here)
    - Right side associated with intuition, imagination, and artistic operations
      (so dance, art, music and maps fall here)
        - Note that cartographic textbooks often don't cover this issue
        - I tried to think back to where I've seen this covered: Muehrcke touched on this in a paper in the early 1980s, stressing that visualization falls in the right side of the brain
    - I've sent you an email with links to two papers: one from the NY times and one from Wired Magazine See http://www.nytimes.com/2008/04/06/technology/06unbox.html?pagewanted=all and http://archive.wired.com/wired/archive/13.02/brain.html
        - Pure computer programming is more of a left brain activity; argument is that we should be cautious in focusing on that too much because machines and "others" can do it
        - The future is the right brain, which involves more holistic and big picture thinking; in the context of this course, we might say it is understanding the range of approaches for creating web maps (e.g., how do we use a range of open source tools to map and analyze spatial data)
        - Get students' thoughts in this issue…Do you agree or disagree with these ideas?

Slide 8: Purpose of Maps

- Peterson talks about four purposes for maps (Communication, Analysis, Power, and Public Good)
- Communication we touched on when I contrasted it with Geovisualization; Peterson touches on visualization and seems to fold it into communication
    - Geovisualization often involves exploration and so it should not fall under communication; I would say it is closely allied with Analysis, where we use maps to analyze geographic problems – a classic example is Snow's map of death from cholera and the location of public pumps for obtaining water
- Public Good – Refers to government maps and data that are available for free to the public
    - Has been true in the U.S. for a very long time and is true in Canada; in many countries it is not
    - In the U.K. government data was locked; this just recently gradually changed (2011) as various forms of data are now available for free there
- Regarding Power there are a number of researchers who have delved into the notion of maps as Power
    - Probably best known is Denis Wood (see his book Rethinking the Power of Maps)

Slide 9: Power of Maps

- The way that I think about the Power of Maps is that maps often have hidden agendas or meanings; think of a typical road map (either one in a Rand McNally atlas or one that you might pick up at a tourist center)
    - What is the purpose of such maps?
    - What forces created the map?
    - Who benefits by you using the map?

- Ask similar questions about Google Maps…