Introducing Students to the Geography of Environmental Justice

Spatial Visualization and Social Science for General Education using PolicyMap

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Spatial Analysis in the Social Sciences

- Social issues are lived out in *spatial contexts*
  - How important is a zip code? "Place Matters!"
    - https://www.youtube.com/watch?v=saREW_BfxwY

- IT/CTAL 2014-15 Transformation Grant
  - "…create a general education course that integrates mapping and spatial data into the analysis of a variety of important sociological topics, without the need for any background in Geographic Information Systems (GIS), other mapping/spatial data analysis software, or sociology."
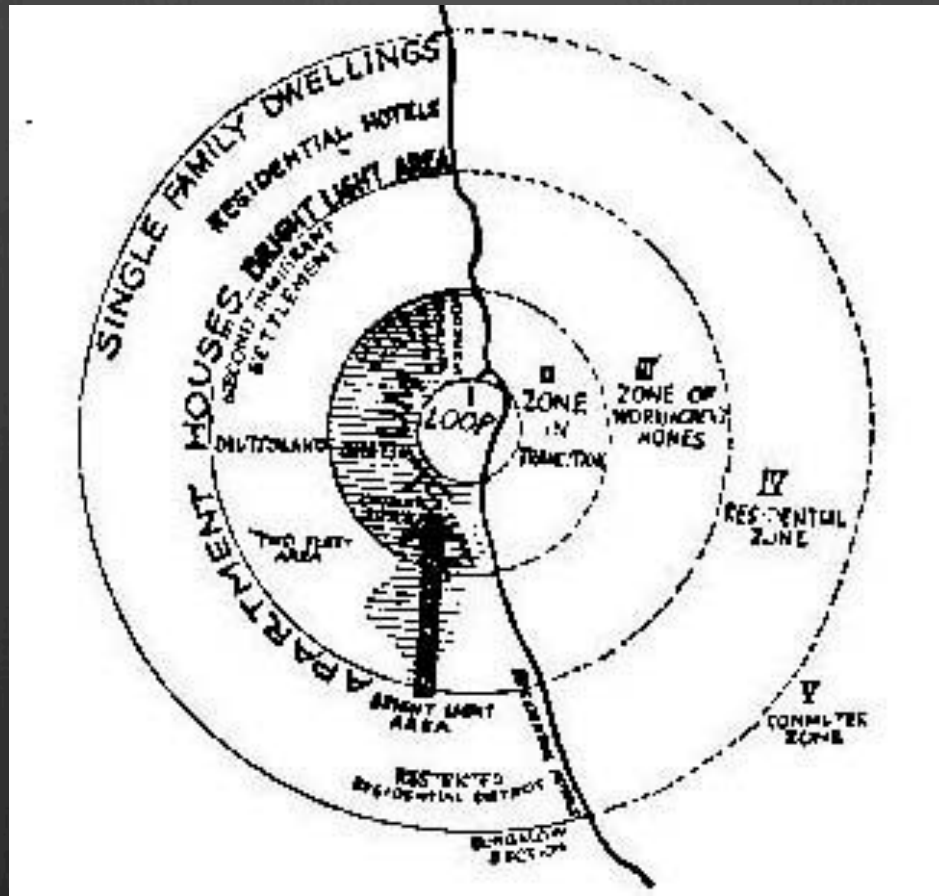
Why Maps Matter

"The promise of mapping technology for the social sciences lies in its ability to reveal the underlying spatial sources/dynamics of social behaviors and circumstances that we have demonstrated with other forms of evidence, pointing to issues such as resource placement and the context within which social activity takes place, and thus allowing for a deeper, richer form of understanding and theorizing." (Logan 2012)

Historical Example - Snow

Historical Example - Burgess

PolicyMap at UD

- Students can easily and powerfully see relationships between social phenomena in their lived environments
  - PolicyMap software through UD
    - http://udel.policymap.com/
    - The blog (full of resources, assignments, tutorials, etc.)
      - http://www.policymap.com/blog/

- "PolicyMap complements our objectives through simple data management, visualization, and analysis capabilities; varied and well-organized package data; and an intuitive user interface. Moreover, as cloud-based software, PolicyMap allows student access and use from any computer, facilitating out-of-classroom learning and expanding the range of classrooms where this class can be taught."

Mapping Environmental Justice

- What are the sociological characteristics of residential areas with environmental burdens?
  - Race, poverty, and brownfields in Wilmington, DE
    - As Logan (2012) stated, "The most powerful tool is the simplest- creation of a map that allows visualization of a spatial pattern" (pp. 509-510).
    - Instantly, students can see the spatial data (i.e., the spatial visualization) of how race and poverty co-exist (i.e., cluster) in areas with environmental burdens.

So What?

- Maps visually demonstrate statistical relationships between sociological phenomena
    - Race, poverty, and proximity to environmental burdens
    - Provide some spatial context for understanding role of race/poverty in residing in polluted areas

- Spatial patterns at the neighborhood level
    - Can lead to both quantitative/qualitative research in the area
    - Southbridge
        - Perceptions of environmental burdens
        - Perceptions of health effects of burdens
        - Community input/engagement to address the issues

Student Learning

- Limitless opportunities for assignments and learning:
  - http://www.policymap.com/blog/2015/02/mapchats-using-policymap-classroom/

- Course would involve a different sociological issue every week.

- " Using Policymap…create a *custom area* that encompasses the neighborhood in which you grew up."

- "On October 2, 2014 we were lead on a field trip to the Point Breeze section of Philadelphia…This was your introduction to the neighborhood…Point Breeze is definitely changing. In this assignment, I want you to answer the question: Is Point Breeze undergoing gentrification?"

Resources

- Summer Faculty Institute webpage:
  - http://sites.udel.edu/sfi2015/2015/02/14/363/

- UDaily story on PolicyMap:
  - http://www.udel.edu/udaily/2015/jan/policymap-011315.html

- Connect to PolicyMap off campus:
  - http://www2.lib.udel.edu/database/policymap.html

- Connect to PolicyMap on campus:
  - http://www.lib.udel.edu/db/trial/desc/policymap.html