Space for Digital Scholarship

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Thinking about digital scholarship

Data
Theories
Burning Questions

Processes
Techniques
Models

Dissemination
Visualization
Access
Thinking about digital scholarship

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But space is special
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Tobler’s First Law of Geography:
Everything is related to everything else, but near things are more related than distant things. (Tobler, 1970)

http://www.mappiness.org.uk/
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\[ I = \frac{N \sum_i \sum_j w_{ij} (X_i - \bar{X})(X_j - \bar{X})}{\sum_i \sum_j w_{ij} \sum_i (X_i - \bar{X})^2} \]
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Urban Transition Historical GIS Project

America’s Urban Transition

The Urban Transition Historical GIS Project is directed by John Logan of Sociology at Brown University. It uses historical census data to document the scale of U.S. cities from the end of the 19th Century into the early 20th Century. These were the decades of America’s urban transition, fueled by rapid growth of industry and large scale immigration from Eastern and Southern Europe that was directed primarily into cities. In 1880 nearly half of total employment was in agriculture, but this share dropped to about 25% by 1920, and by this time about half of the population lived in urban areas.

Within the span of a few decades from the late 1890s to the early 20th century, the United States was transformed from a predominantly rural agricultural society to an industrial economy centered in large metropolitan cities. The decades surrounding 1900 were not only the age of industrialization in the United States, but were also the age of urbanization and immigration. These topics were the focus of recent efforts in American history, with the exceptions of the Civil War decades, when the urban population increased more than the rural population. In absolute numbers, the Industrial Revolution began in 1800 and extended to 1920. Social Science Research 36.897-920.

This website is the first step toward wider dissemination of research materials from the project. It establishes a baseline for studies of urban growth, spatial structure, and the incorporation of new groups of immigrants and minorities into cities. This is also the period when the Census Bureau, following the example of the IRS, took advantage of a unique data resource, the full transcription of the 1890 Census of Population made by the Church of Jesus Christ of Latter-day Saints and made widely accessible through the North Atlantic Population Project at the Minnesota Population Center.

As the population density map shows, in 1880 the American population was very heavily concentrated on the northeastern seaboard. But there were already patches of dense settlement in the Midwest, and the growth of cities like Chicago and Cleveland was already reshaping the urban hierarchy.

Population map of the U.S. in 1890, showing the density of settlement by county across the country. Click on this map for higher resolution.

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Typical university domains for spatial and digital research?
One of many potential solutions: S4 at Brown

S4: Spatial Structures in the Social Sciences.

A university initiative founded in 2003, with aim to, “make Brown a highly visible international center for research that investigates human behavior in its social and spatial context.”
In cooperation with these groups we:
• Teach courses in geography and GIS
• Offer specialized workshops and GIS training
• Coordinate an annual speaker series
• Provide technical expertise for projects
• Facilitate network development
• Offer financial support for projects
Some final thoughts from the perspective of my role in S4 Network-Building Outreach Teaching Research
Thank you.
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