Deep Maps, Deep Contingencies: The Promise of Spatial Humanities

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Spatial @ UCSB: Spatial Thinking
June 2012
Modern humanities begin in the 18th century with problem of collective identity, often grounded in landscape.

The 19th-century city: an alternate landscape—and a critique.

Post WWII turn to movement, exiles, borderlands, the infrastructure state; relationship of power and space; interior, cultural, and symbolic spaces; place.

Now, GIS and (re)discovery of the map: vision of rigorously measurable, infinitely sharable information across temporal and spatial scales.
An Epistemological Clash?

Traditional GIS
  empirical, rational, measurable, expert

Post-Modernism
  subjective, experiential
  contingency, ambiguity
  fluidity, simultaneity
  multiplicity, diversity
  emphasis on agency
  skeptical, especially of experts
What perspectives engage humanists?

• Multiple realities
• Interdependency
• Intercultural and trans-cultural
• Multi-scalar and inter-scalar
• Hybridity and complexity
Digital libraries
Initial goals focused on data
• Creation
• Access
• Preservation
• Exchange
Now, e-Science (or cyberinfrastructure) means grid-based collaboration

- Technical collaboration (e.g., networks, exchange protocols, middleware, etc.)
- Procedural collaboration (e.g., standards for access and use)
- Scholarly collaboration
- ICT-discipline/domain collaboration
Digital databases and scholarly editions
New tools for humanists
New centers and new positions
New curriculum
Project-based experiments
The Valley Project details life in two American communities, one Northern and one Southern, from the time of John Brown's Raid through the era of Reconstruction. In this digital archive you may explore thousands of original letters and diaries, newspapers and speeches, census and church records, left by men and women in Augusta County, Virginia, and Franklin County, Pennsylvania. Giving voice to hundreds of individual people, the Valley Project tells forgotten stories of life during the era of the Civil War.
Spatial Turn and GIS

Increased attention to space and spatiality, beginning in 1960s

New technologies support the spatial turn. GIS provides a tool-kit to manage, analyze and visualize spatial data, as well as an approach that focuses explicitly on space.

Critique of GIS
Emergence of GIScience
Ubiquitous and mobile
Speedy
Relatively non-technical
Connective
Collaborative
Open frameworks
Web 2.0 Platforms

- Wikis
- Mash-Ups
- Blogs
- Social networking
- Volunteered video
- VREs
- Games
- Mobile devices
New Framework for Learning

Unstructured interactions
No disciplinary boundaries
Global potential
Does not privilege expert
Open to experiential knowledge
Based on contributed information
Networked participant-collaborators
Spatial turn in humanities in 1990s
Space offers opportunity for:
  Integration
  Visualization
  Analysis
GIS-facilitated tools and methods
  Changing boundaries
  Spatio-temporal integration
New genres of scholarship in history, archaeology, cultural studies, etc. (e.g., Historical GIS)
“Relationships that jump out when presented in a spatial format such as a map tend to clog a narrative, choking its arteries, until—even if the narrative does not expire—the reader, overwhelmed by detail, is ready to die of tedium and confusion.”

Strategic spatial datasets
International collaborations
- ECAI, UK/EU/NEH initiatives, Expert Networks (EU)
National historical GIS projects
- US, Great Britain, Ireland, Belgium, Germany, China, etc.
Base maps and boundary files
**Electronic Cultural Atlas Initiative**

<table>
<thead>
<tr>
<th>About ECAI</th>
<th>Activities</th>
<th>Community</th>
<th>Atlases</th>
<th>Research</th>
<th>Technology</th>
<th>Participating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cultural Atlas Portal</strong></td>
<td>Link to example projects or browse cultural atlases in Google Earth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dynamic Map Catalog</strong></td>
<td>Search the <a href="#">ECAI Clearinghouse</a> of cultural material which uses place and time as a common element.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Community</strong></td>
<td>Participate in the ECAI community through twice yearly conferences and international working groups.</td>
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<td><strong>Technical Infrastructure</strong></td>
<td>ECAI technical infrastructure illustrates the vision of sharing distributed data and using time enabled mapping tools.</td>
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<tr>
<td><strong>Research &amp; Development</strong></td>
<td>Collaborate to identify research topics and</td>
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**ECAI uses time and space to enhance understanding and preservation of human culture.**

**Highlights**

**Upcoming:**

**ECAI / PNC 2011 Joint Meetings**

October 10-11, 2011
Sasin Graduate Institute of Business Administration of Chulalongkorn University
Bangkok, Thailand

**Past Events:**

Western Han Dynasty Exhibits
Virtual Masterpieces From Ancient China
April 16 - 22, 2011
CITRIS Tech Museum
345 Sutardja Dai Hall, UC Berkeley

ECAI Workshop: Visualization, Computation, and Analysis in Large Text Corpora and Cultural Collections
16 March 2011
Academia Sinica, Taipei, Taiwan

Joint Conference with KAIST & VSM
October 2010
COEX Conference Center, Seoul, Korea

ECAI / PNC 2010 Joint Meetings
Nov 30 - Dec 3, 2010
City University of Hong Kong, Hong Kong

ECAI Workshop, in collaboration with the Central Library of Fudan University
May 2010
Fudan University, Shanghai, China

**Projects:**
Welcome to the David Rumsey Map Collection Database and Blog. The Map Database has many viewers and the blog has numerous categories.

The historical map collection has over 27,000 maps and images online. The collection focuses on rare 18th and 19th century North American and South American maps and other cartographic materials. Historic maps of the World, Europe, Asia, and Africa are also represented.

Popular collection categories include antique atlas, globe, school geography, maritime chart, state, county, city, pocket, wall & case, children's, and manuscript maps. Search examples are United States map, Geology maps, California map, Afghanistan map, America map, New York City map, Chicago map, and U.S. Civil War maps.

Browse map categories Where, Who, When, or What. The collection can be used to study history, genealogy, art, explorations, local and family history. Learn more.

Watch 360 degree QTVR of the Collection Space
Browse Lists of the Collection’s many Atlases

View this Map in LUNA Browser
Launch Collection in LUNA Browser

Rand McNally Official Railway Map Of The Pacific Coast States Including Territory East To Denver; Rand McNally and Company, 1901; Case Map
Projects and Publications

Projects with HGIS Components
    Salem Witchcraft Trials, e-Williamsburg, etc.

Major HGIS Projects

Major Publications and Conferences in HGIS and Spatial Humanities
Salem Witch Trials: Accusations

MAP of SALEM VILLAGE, 1692, by W.P. Upham 1856.

Legend
- Accusers
- Accused
- Households

Layers
- Accusers
- Accused
- Households
- Townships
- Roads
- Rivers

Spatial Humanities

Public Fast Declared

Sarah Osburn

Tituba

Sarah Good

Dorcas Good

Martha Cory

March 1692
The Spatial History Project at Stanford University, a part of the Bill Lane Center for the American West, is made possible by the generous funding of the Andrew W. Mellon Foundation.

RECENT UPDATES

01 June 2011
Mostly mapping/spatial primitives
Requires technical expertise
Difficult to sustain
About space, not place
Where is time?
Contributions to scholarship debated
Scanty uptake by humanists
Spatial Humanities

Barriers

Systems
Data
Culture
Epistemology
Literacy

Spatial/Geographic
Visual
Pareto principle (80/20): 80% of the effects come from 20% of the causes. We often do not need the full analytical functionality of ArcGIS to accomplish what humanists need.
Re-booting

Moving beyond ESRI
Making GIS truly multimodal
Opening GIS to VREs and immersive environments
Creating collaborative spaces (PGIS)
Developing a new epistemology (nonlinear, fluid, reflexive)
Spatial humanities is an explicit recognition of the reciprocal influence of geographic and constructed space on culture and society. Embraces all spatial technologies but bends them toward the humanities. Multidisciplinary and multimodal. Links time, space, and culture dynamically. Joins humanities and GIScience.
“[M]aps will be more than the sum of their parts: they will possess ‘emerging’ qualities, which were not visible at the lower level….Not that the map is itself an explanation, of course: but at least, if offers a model of the narrative universe which rearranges its components in a non-trivial way, and may bring some hidden patterns to the surface.”

Space as the meeting ground and offers an integrated perspective on place
Web 2.0 as the toolkit; does not privilege a spatial technology or quantitative data
Open, participatory framework for experts and non-experts
Neogeography
Participatory GIS
Volunteered Geographic Information (VGI)
Virtual globes, APIs, mash-ups, and social networking
Gazetteers
Semantic searching
Text mining
Maps are supplemented by narratives. They can be enhanced with user comments.

Omaha Beach
By Serin Adam Matei
Visible Past > Modern > 20th Century > Omaha Beach

Visible Past utilizes as one of its showcase mapping environments a model of Omaha Beach fortifications at the time of the Allies’ landing on the morning of June 6, 1944 (D-Day). The model was produced by the Visible Past team.

Virtual Omaha Beach was built in Sketch up, a modeling platform distributed by Google for creating models compatible with the Google 3D mapping application Google Earth. The model includes the full set of two dozen German fortifications (Widerstandnest or in German military parlance WN) that the American 1st and 29th divisions encountered on the morning of 6 June 1944. Each WN includes a barbed wire enclosure and one or more points of fire: pillboxes, bunkers, mortar pits or field gun enclosures. Many of the artifacts were provided by 3D weapons collections found at the Google Earth 3D Warehouse repository; some of them were reconstructions produced by the Visible Past team members. The 3D artifacts were selected and evaluated according to the historical literature dedicated to Omaha beach.

All artifacts were placed in the field according to information provided by historical
Johannisburg Palace
Aschaffenburg, Germany
Click the play button below to continue tour
Virtual Reality and GIS
Interactive, immersive, and experiential visualization

‘a sense of being there’
Spatial Gaming

Serious gaming engine – XNA – using rules, rhetoric, avatars
What has emerged are new and exciting forms of convergence, focused on place.

Also, new types of scholarship and new collaborations, while retaining the best of spatial humanities 1.0.
Complex Visualizations

Spatial Humanities
Mapping the Lakes: A Literary GIS
hypercities is a collaborative research and educational platform for traveling back in time to explore the historical layers of city spaces in an interactive, hypermedia environment.

Recent Posts

Presner delivers Plenary lecture at Coalition for Networked Information
by presner | May 26, 2011 | in Uncategorized

How to Add an ArcGIS Server Map to a Rich Object
David Shepard | May 19, 2011 | in How To

HyperCities Now: Linking GIS and Twitter (Japan, Egypt, Libya)

CNI: HyperCities: Using Social Media and GIS to...
Spatial Humanities

Berlin 1650 and 2011
After the Holy Roman Emperor granted Friedrich and the Hohenzollerns land area in Berlin-Coln, construction of the castle began in 1443 (Ladd 48). The building housed the Hohenzollern dynasty and allowed monarchs to control the citizens of nearby towns despite their attempts to protect their own autonomy ( Ibid.).
Spatial Humanities

New Scholarship
New Geo-Visualizations

Chinese Canadian Immigrant Pipeline, 1912-1923
Exploring patterns of Chinese immigration by origin, occupation and age

January 1914

Ollie Khatwani, Stephanie Chan, Jake Coolidge, Kathy Harris, Erik Stelzer, Denise Fong and Henry Yu
University of British Columbia and Spatial History Lab, Stanford University
Spatial Humanities

Interactive Analysis

The Yellow Fever Epidemic of 1850

Scale, Time, Space

Death Information

January 2, 1850

Date Range: May 16 - May 22, 1850

Center of Yellow Fever Epidemic

Yellow Fever Heat Map

Tuberculosis Heat Map

December 29, 1850

P. Shannon, E. Stiner, W. Barry, R. Delaney, D. Saberi, M. Datta, T. C. Alves, Z. Frank / Spatial History Lab, Stanford University
Memórias Póstumas
A Novel and a Network in Five Minutes

The Posthumous Memoirs of Bras Cubas

Frederico Freitas, Erik Sleiner & Zephyr Frank

Spatial History Lab, Stanford University
Tenement Housing in Rio de Janeiro, 1870s-1880s

Choose:  **1870 1888**
- Tenements sized based on number of rooms
- Rent
- Streets
- Hills

Lorenz Curve of Property Inequality

Cumulative Properties vs. Cumulative Rent

Erik Steiner and Zephyr Frank

Spatial History Lab, Stanford University
Sound map - UK Soundmap

The UK Soundmap, the first nationwide sound map, invited people to record the sounds of their environment, be it at home, work or play. Over 2,000 recordings were uploaded by some 350 contributors during the period July 2010 to July 2011. [Further information]

- Accents & dialects
- Klaus Wachsmann Uganda recordings
- Wildlife recordings
- Soundscapes
- Music from India
- Jewish survivors of the Holocaust
- Traditional music in England
- Your accents
- UK Soundmap

Map of the United Kingdom with marked locations of sound recordings.
New Types of Public History

Walking Through Time

“SatNav for historical maps”
The iPhone app that combines GPS technology with old maps to allow users to walk through time.
Ramsay Garden is a series of apartment buildings that standout from the many stone buildings that populate Edinburgh’s Old Town. The influence of the English Art and Crafts movement is noticeable, and the buildings are full of small details with many eclectic architectural elements.
Growing Up Chinese

Posted by Paco Levine on 2011-03-03

Hosted by Alvin Eng. Filmed by Christina A. Voros. Edited by Lee Eaton and Suzanne Barber.

(3:48)

As a child, my parents ran a Chinese Hand Laundry at 29-10 Union Street in Flushing. We were one of a handful of Chinese/Asian families living there. By the time I graduated Flushing High School, my hometown had become New...
Life paths and spatial narratives
Networks
Virtual reality/immersion
Gaming and simulations
Practice theory
Deep mapping/deep contingency
New Vision

New collaboratories that allow

- Retrieval
- Contextualization
- Hypothesis building
- Flexible narration
- Integration into knowledge networks

Virtual Research Laboratories (VRL)

- GRID+Web 2.0+Spatial Technologies
Deep Mapping, Deep Contingencies

Multi-scalar (time and space)
Multiple agents, multiple perspectives
Alternate schemes and emergent realities
Experiential, simultaneous, dynamic
Visual and immersive, multi-media

Goal: Reveal the contingent and complex context of events and actions at every scale
Spatial Humanities

Spatial Narratives

Time geography
Text mapping
Geospatial semantic web

But how to:

Capture experiential/metaphorical space?
Enable deep contingency? Integrate structure, process, event? Space, time, place?
Understand the situatedness of the narrator(s)?
Represent the narrative(s)? Make the argument?
A unique post-modern scholarship with real and conceptual space as an integrating and animating framework:

Visual and experiential
Multiple perspectives
Complex environments
Emergent realities, deep contingencies
Spatial narratives, spatial arguments