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Re-imagining Religion: The Spatial Humanities as a Framework for New Scholarship

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Virtual Center for Spatial Humanities

New Technologies and Interdisciplinary Research on Religion

Harvard University

March 2010

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(Re)Emergence of Space

Spatial turn in humanities in 1990s

Space offers opportunity for:

- Integration
- Visualization
- Participation

GIS-facilitated tools and methods

New genres of scholarship in history, archaeology, cultural studies, etc.

Barriers

Spatial illiteracy

Highly technical

Expensive

Incomplete data

Team-based

Epistemological challenges

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GIS and American Religion

Long-standing interest in spatial patterns of American religion (e.g., Gaustad)

Key county-level, decennial data sets:

- US Census of Religious Bodies, 1906-1936
- National Council of Churches, 1952
- Glenmary Census, 1960-2000

Quantitative Data

Denominational members

Denominational adherents

Number of congregations

Value of property (US censuses)

Program information

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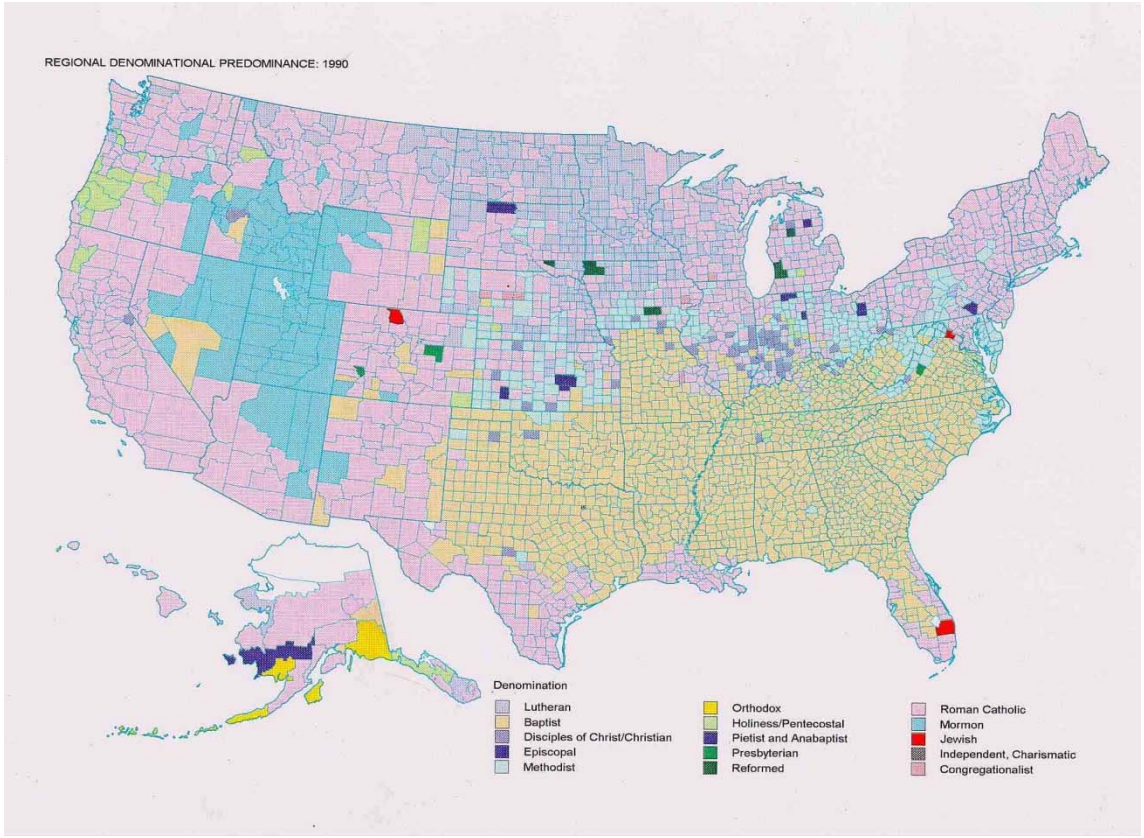
US Religious Geography



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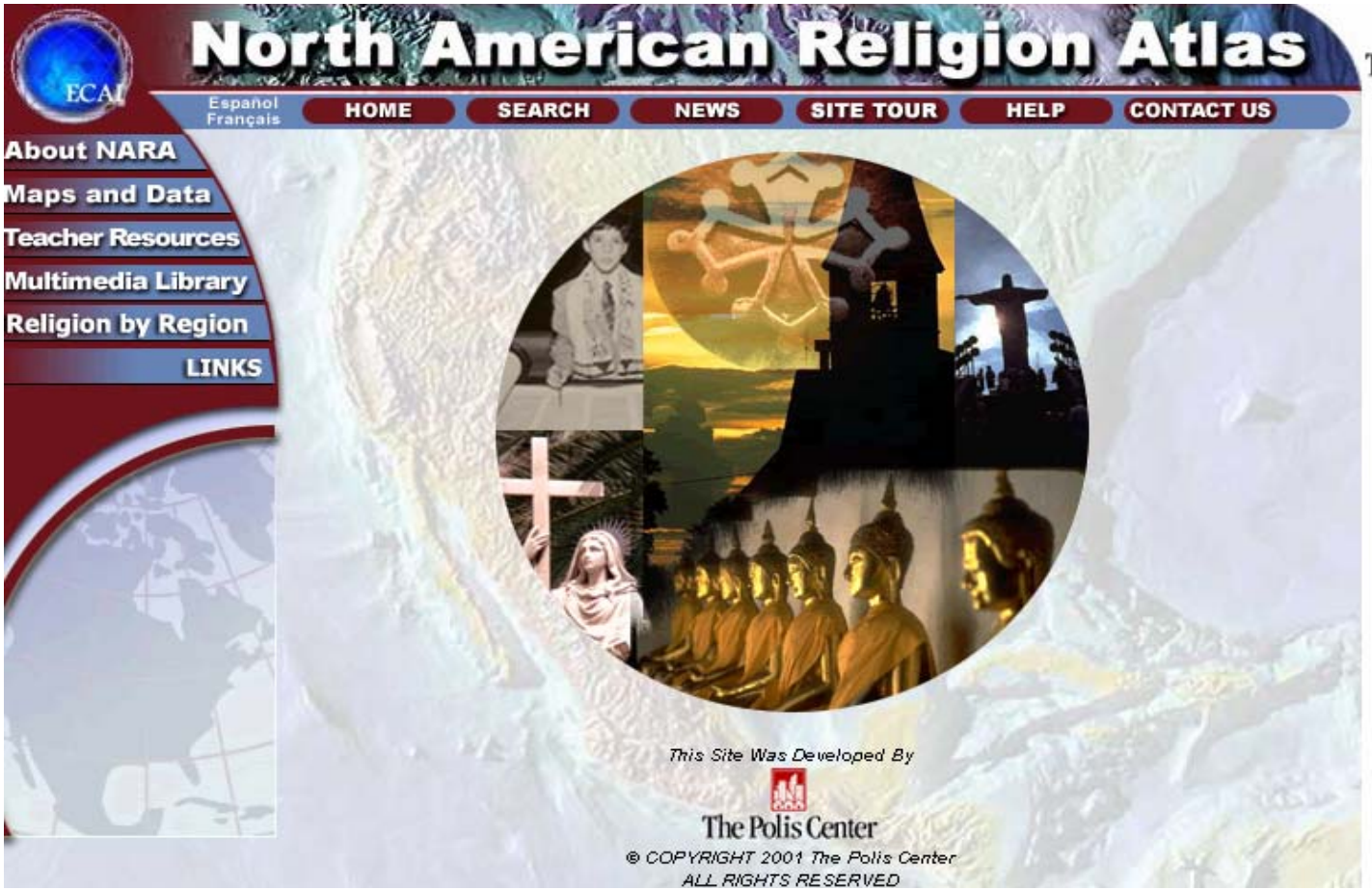
Web HGIS and Religion



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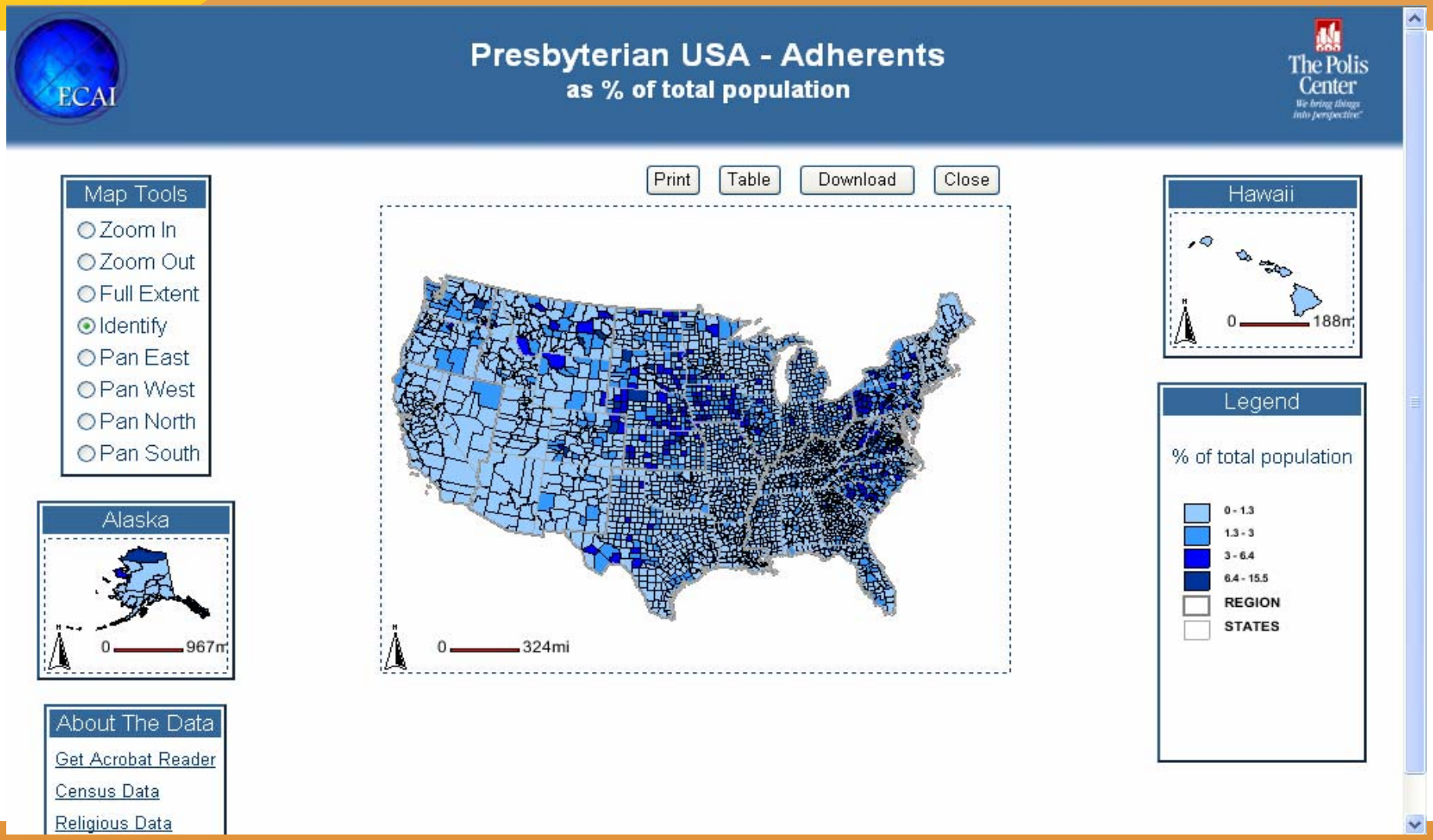
Denominational Geography



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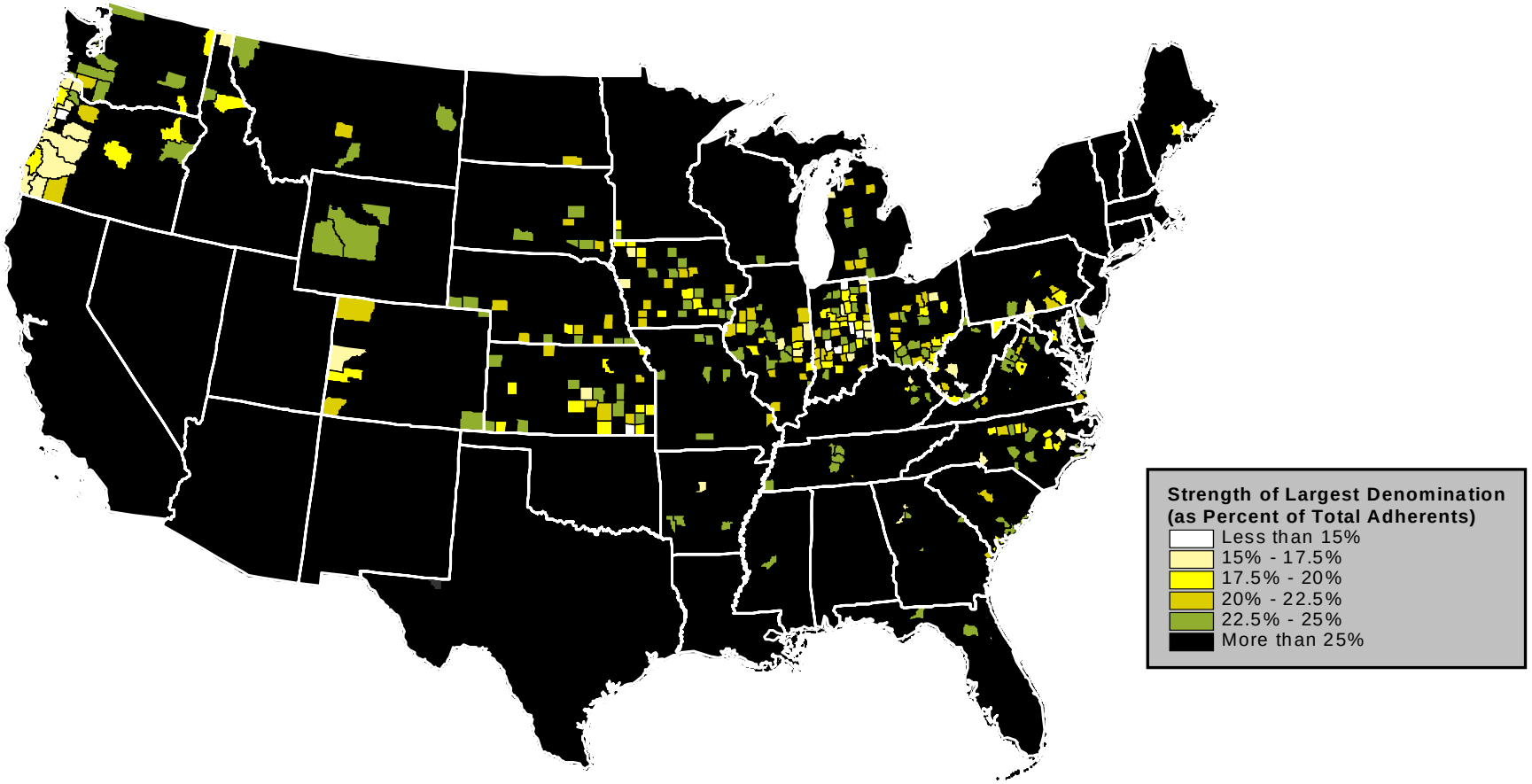
Dominant Religious Traditions



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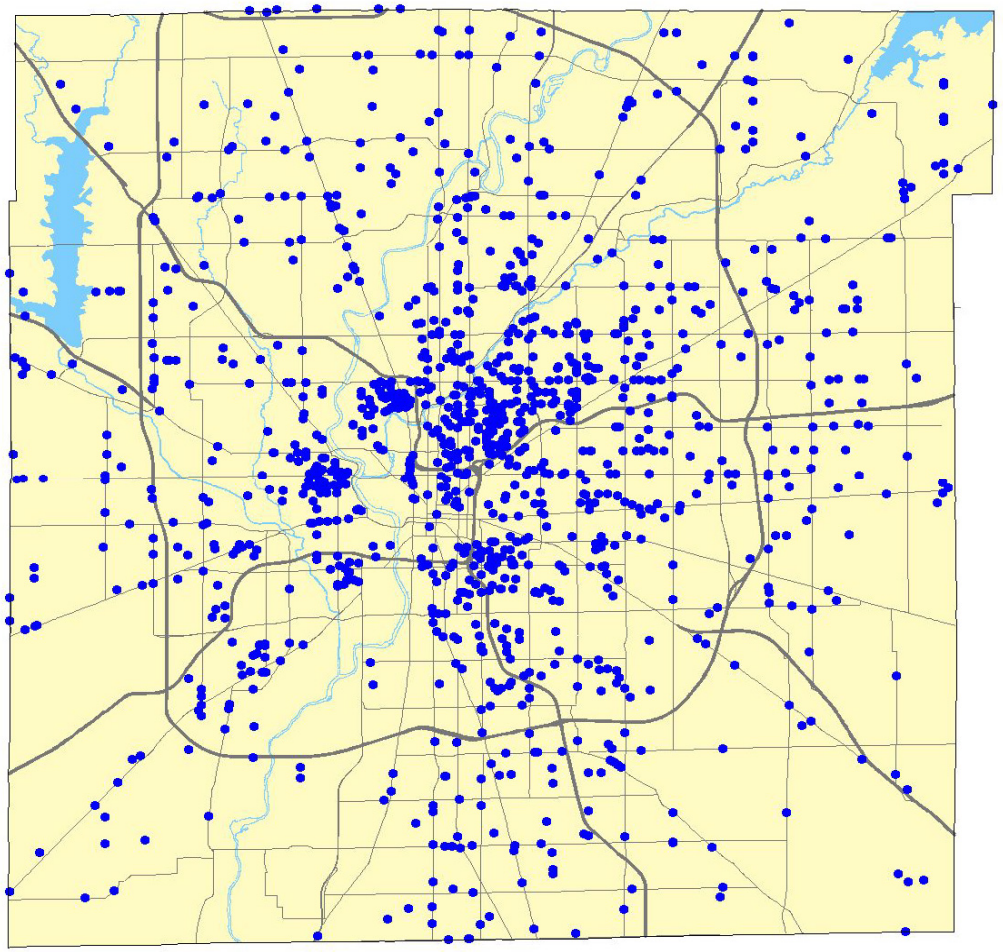
Religious Congregations in Marion County

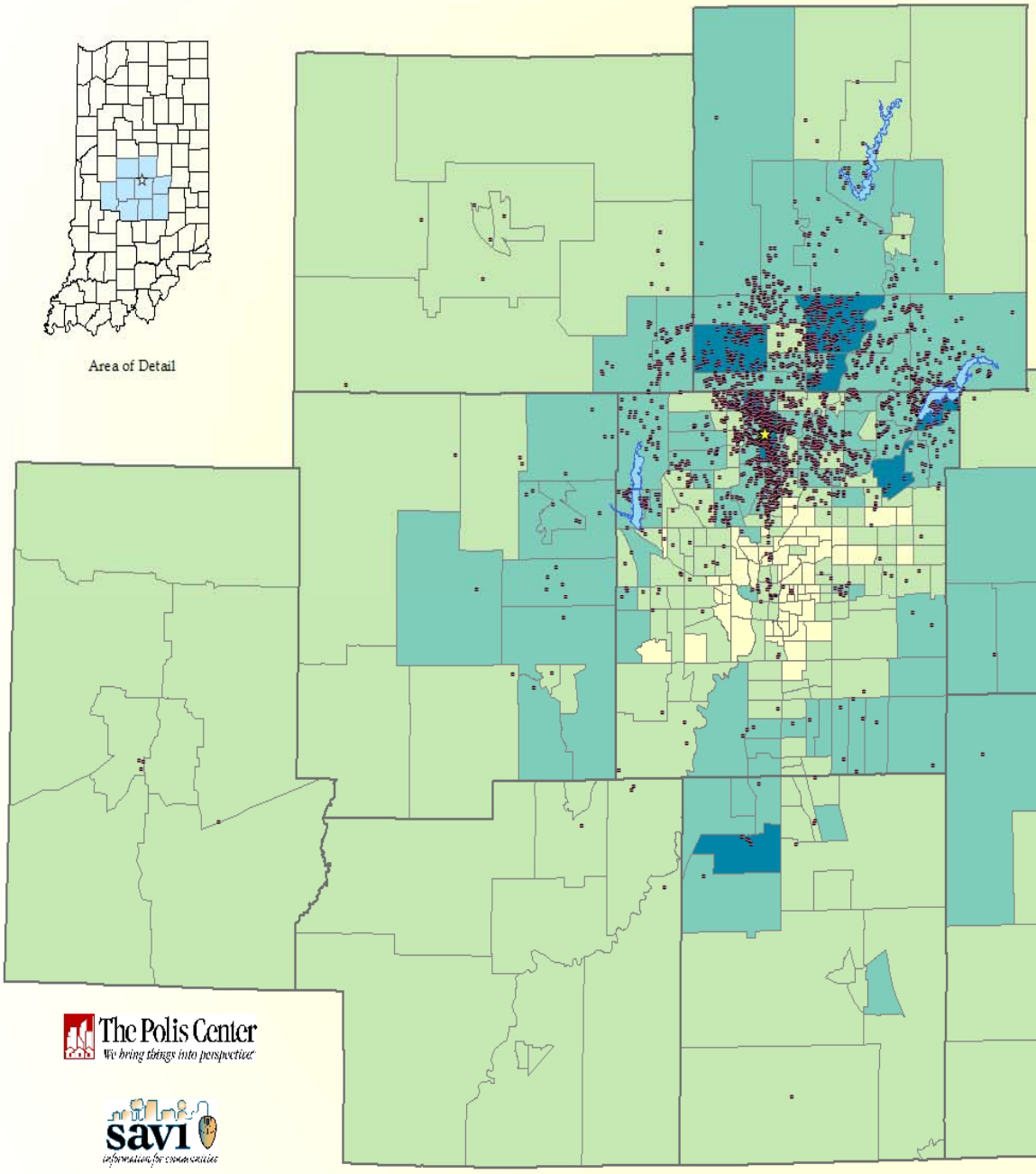


There are about 1,200 congregations in Marion County.

Second Presbyterian Church

Congregation Member Locations and 1999 Median Family Income

Area of Detail



☆ Second Presbyterian Church

· Congregation Member

Median Family Income by Census Tract

- Less than $35,000
- $35,000 - $60,000
- $60,001 - $100,000
- More than $100,000

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Miles

The Polis Center
We bring things into perspective

savi
information for communities

Source: SAVI

Map created: 10/20/2005

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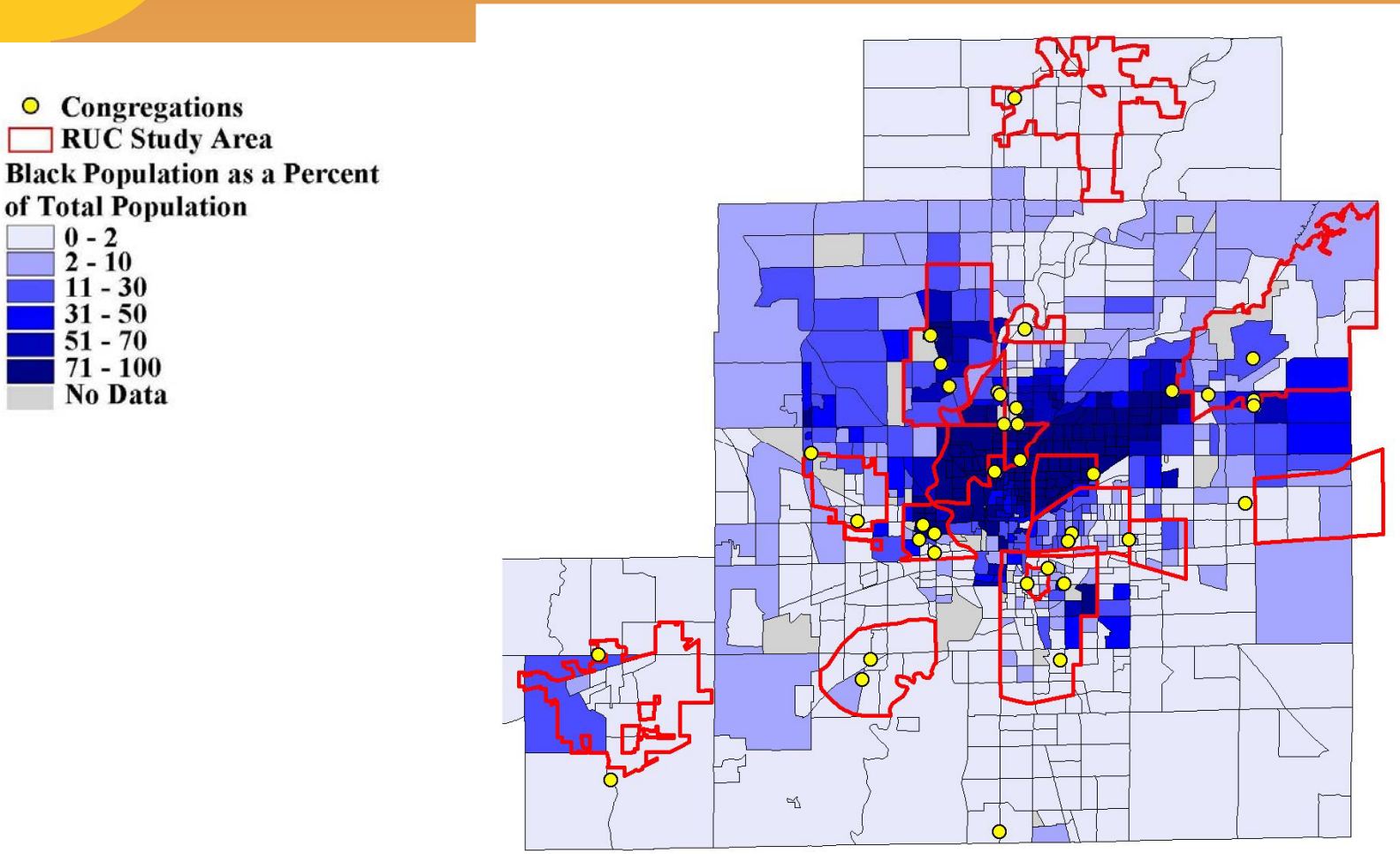
Multi-Racial Congregations



Problems

- No easy way to construct and trace denominational families across time
- Simplistic visualizations
  - Does not capture denominational complexity
  - Lacks range and proportionality

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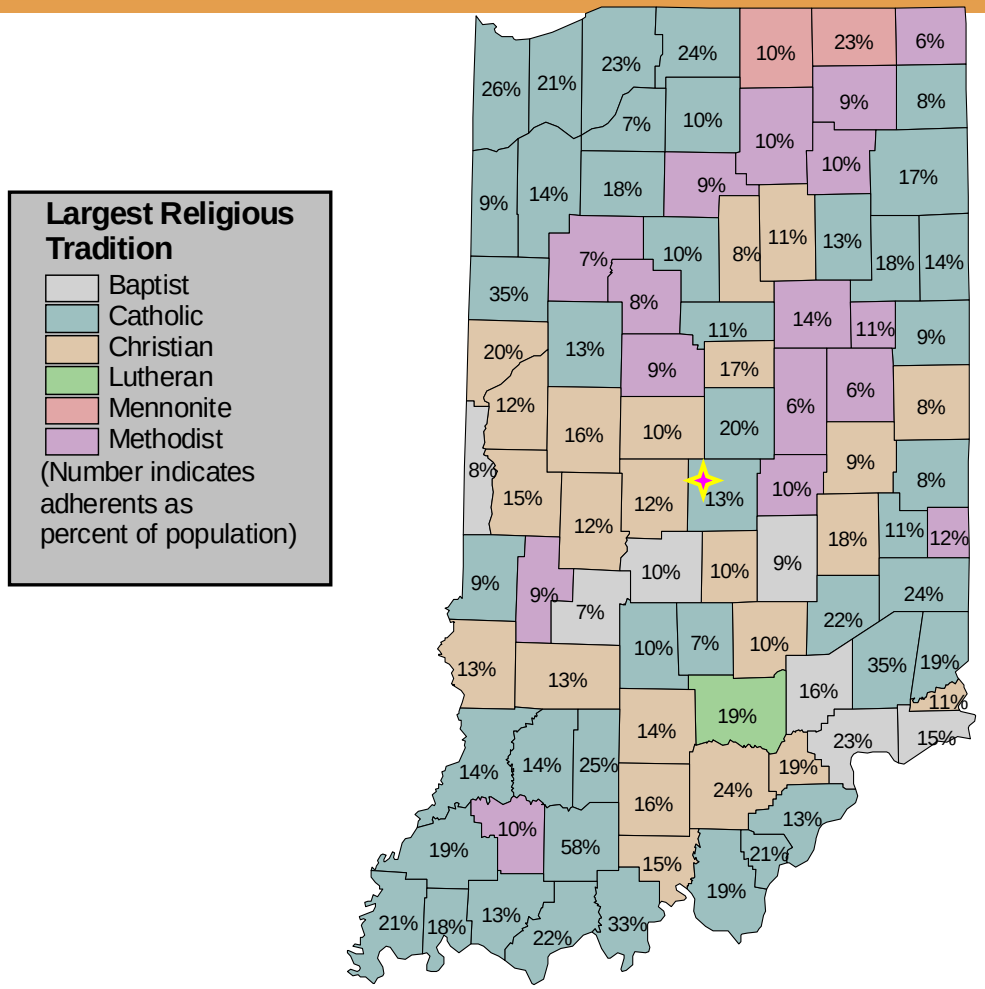
Indiana's Religious Membership



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User Requirements

Typology Construction

- Select from a list of pre-defined typologies
- Define new typologies on-the-fly
- Aggregate data to user-defined typologies

Data Additions and Manipulations

- User-supplied data
- Web services
- New fields and re-coding

User-Defined Geographies

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Visualization Requirements

View range and relative size of denominational types within the same geography or across geographies

Order the visualizations by user-defined measures of relative proximity and distance (e.g., theological proximity/distance, ecclesiastical proximity/distance, political proximity/distance, etc.

Compare multiple geographies

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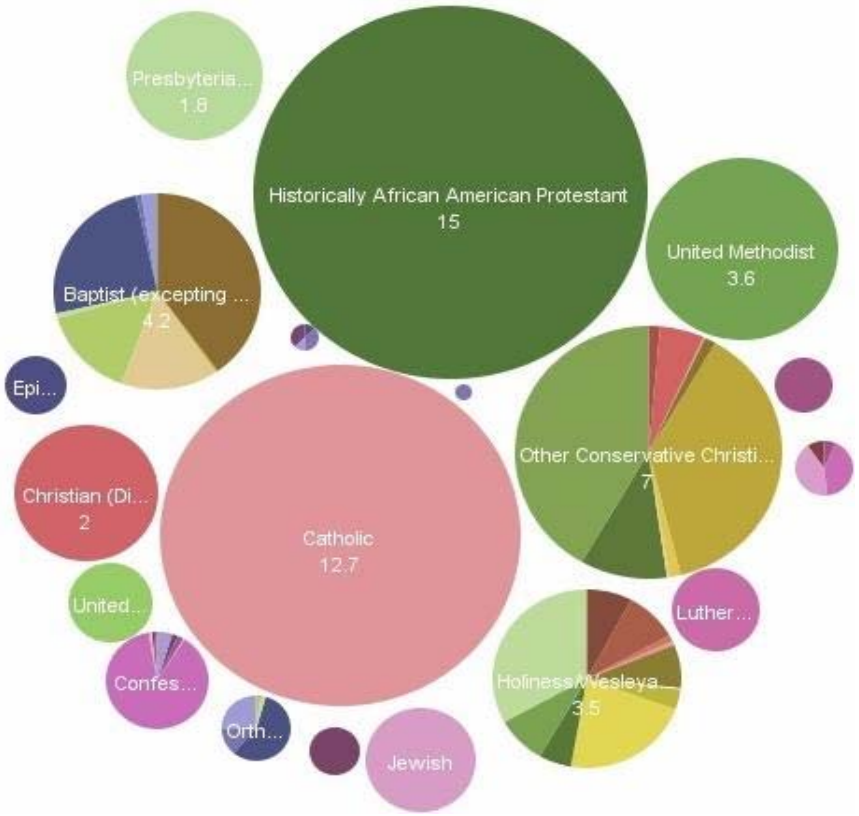
Bubble Chart



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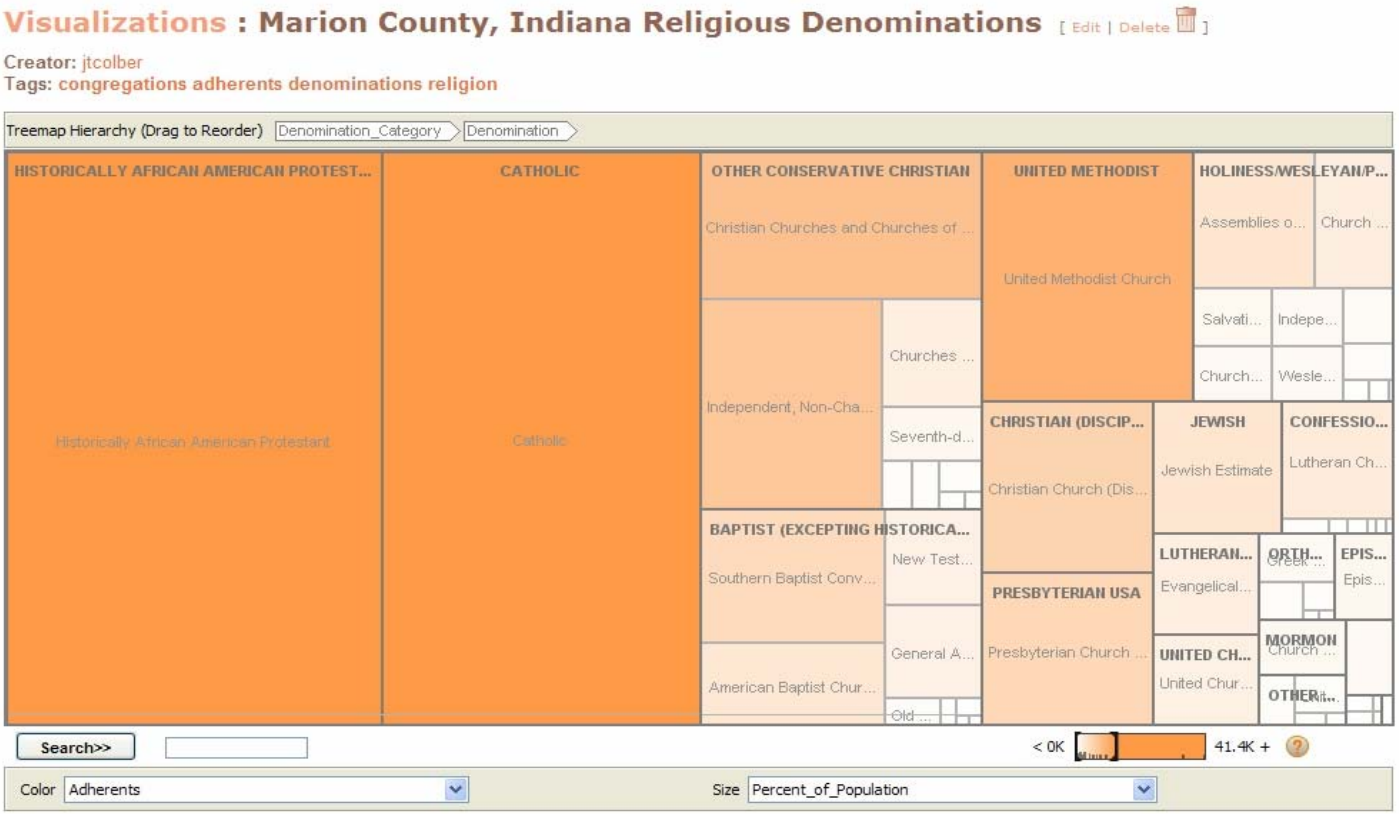
Tree Maps



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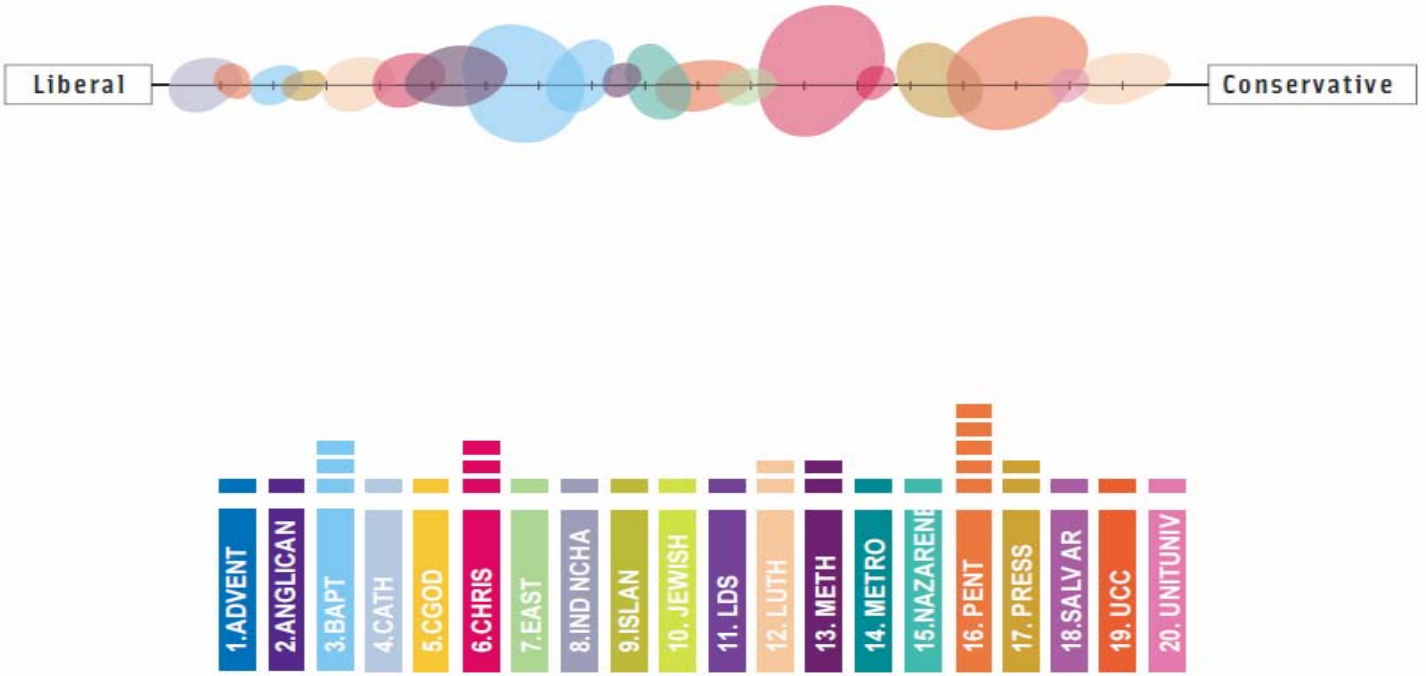
Proximity and Size



Denominations in Marion county plotted on a continuumm according to theology

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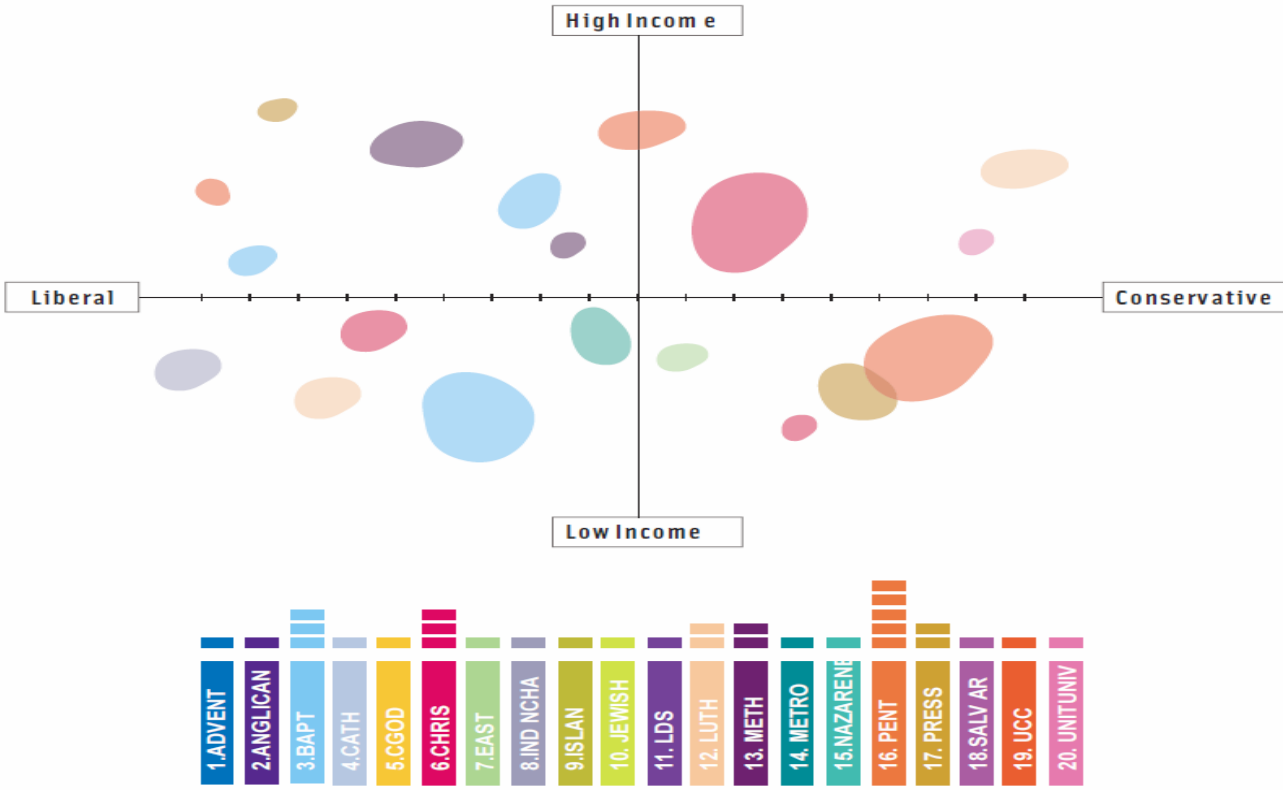
Multivariate Visualization



Denominations in Marion county plotted on a matrix according to theology on one axis and income on another

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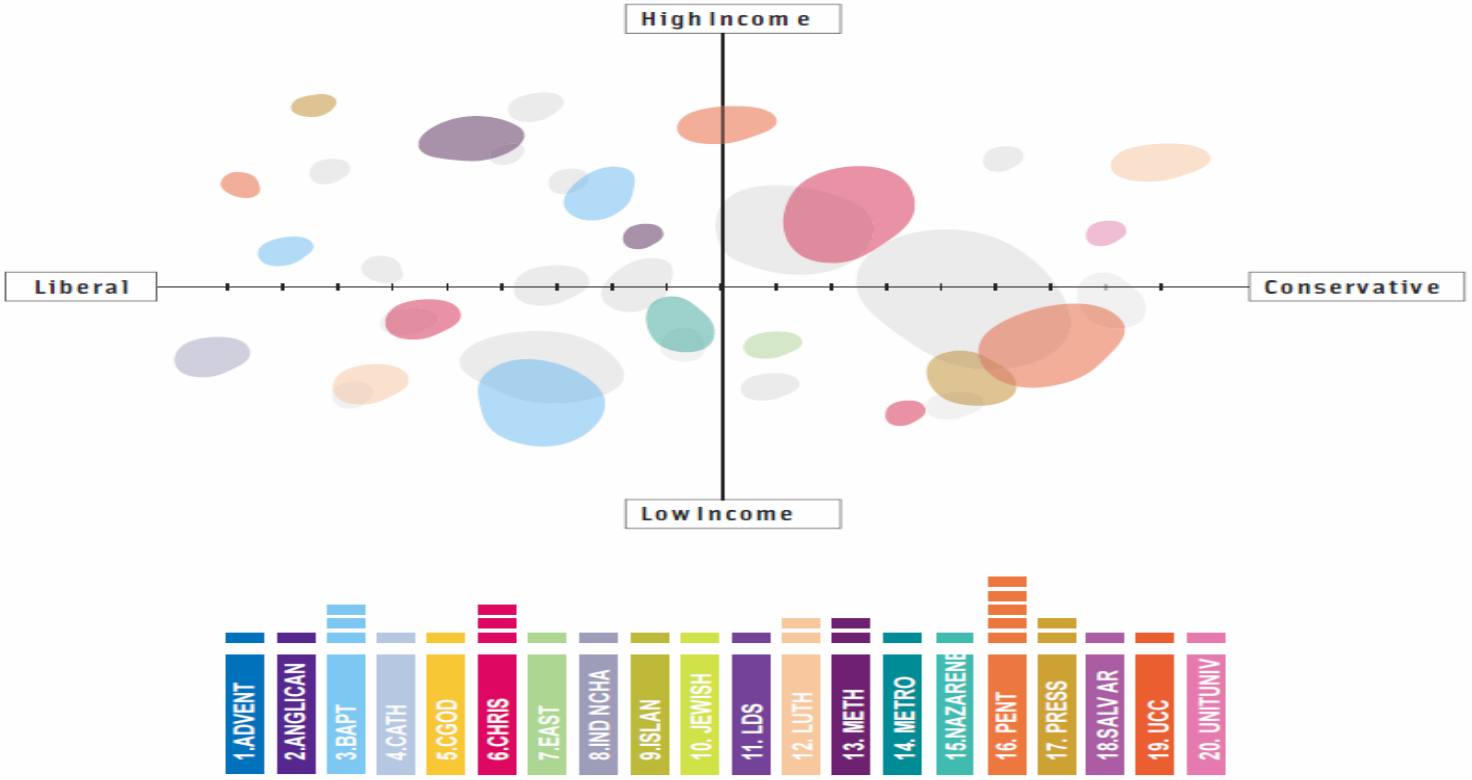
Geographically Comparative Multivariate Visualization



Denominations in Marion county plotted on a matrix
according to theology on one axis and income on another

an additional county is show in the background and all in grey for comparison

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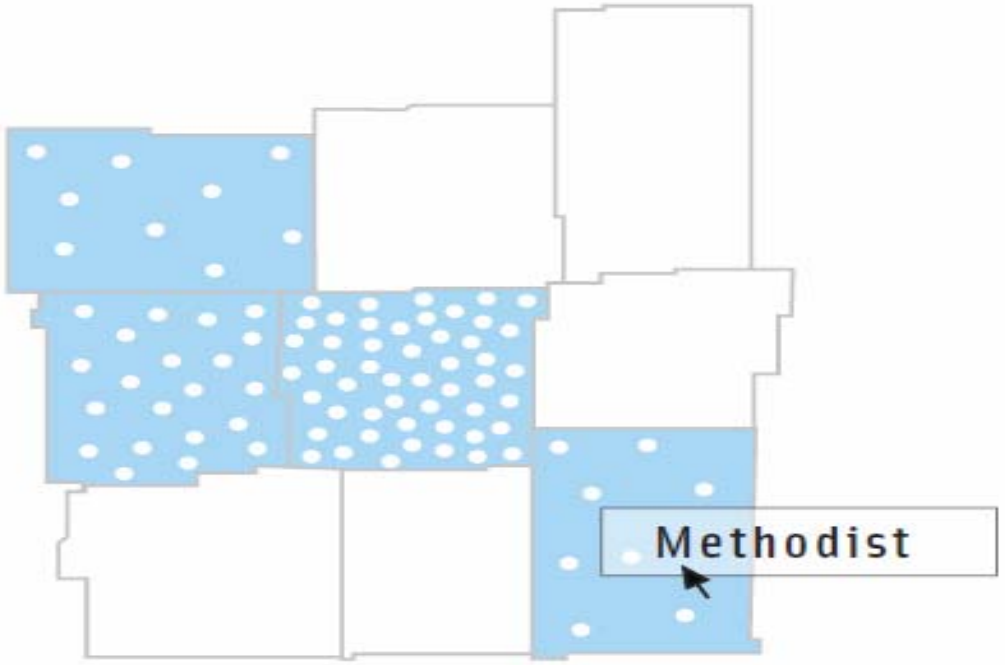
Zone of Dominance



Dots indicate other denominations present in each county within the Methodist "Zone of dominance"

Pareto GIS

- 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 9.3 to accomplish what humanists need

T.Harris, L.Rouse, and S.Bergeron, "The Geospatial Semantic Web, Pareto GIS, and the Humanities," in D.Bodenhamer, J.Corrigan, and T.Harris, eds., *The Spatial Humanities: GIS and the Future of Humanities Scholarship* (Indiana University Press, 2010), 124-43.

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Redefining GIS

- Moving beyond ESRI
- Making GIS truly multimodal
- Opening GIS to Web 2.0, VREs, and immersive environments
- Creating collaborative spaces
- Developing a new epistemology (nonlinear, fluid, reflexive)

Web 2.0 Tools/Platforms

- Wikis
- Mash-Ups
- Blogs
- Social networking sites
- Volunteered video
- VREs
- Games
- Mobile devices

Collective Intelligence

Harness the problem-solving capabilities of a networked and communicating group of participant-collaborators

Uses Web 2.0 and Grid technologies

Wiki is prime example: based on compromise and consensus (old tradition) but leading to new structures of knowledge

Levy, *Collective Intelligence* (1997)

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Participatory Learning

"Participatory Learning includes the ways in which new technologies enable learners (of any age) to contribute in diverse ways to individual and shared learning goals. Through games, wikis, blogs, virtual environments, social network sites, cell phones, mobile devices, and other digital platforms, learners can participate in virtual communities where they share ideas, comment upon one another's projects, and plan, design, advance, implement, or simply discuss their goals and ideas together. "

McArthur Foundation, 2008

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Spatial Humanities

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

Geospatial Web

- Neogeography
- Volunteered Geographic Information (VGI)
- Virtual globes, APIs, mash-ups, and social networking
- Geospatial semantic searching

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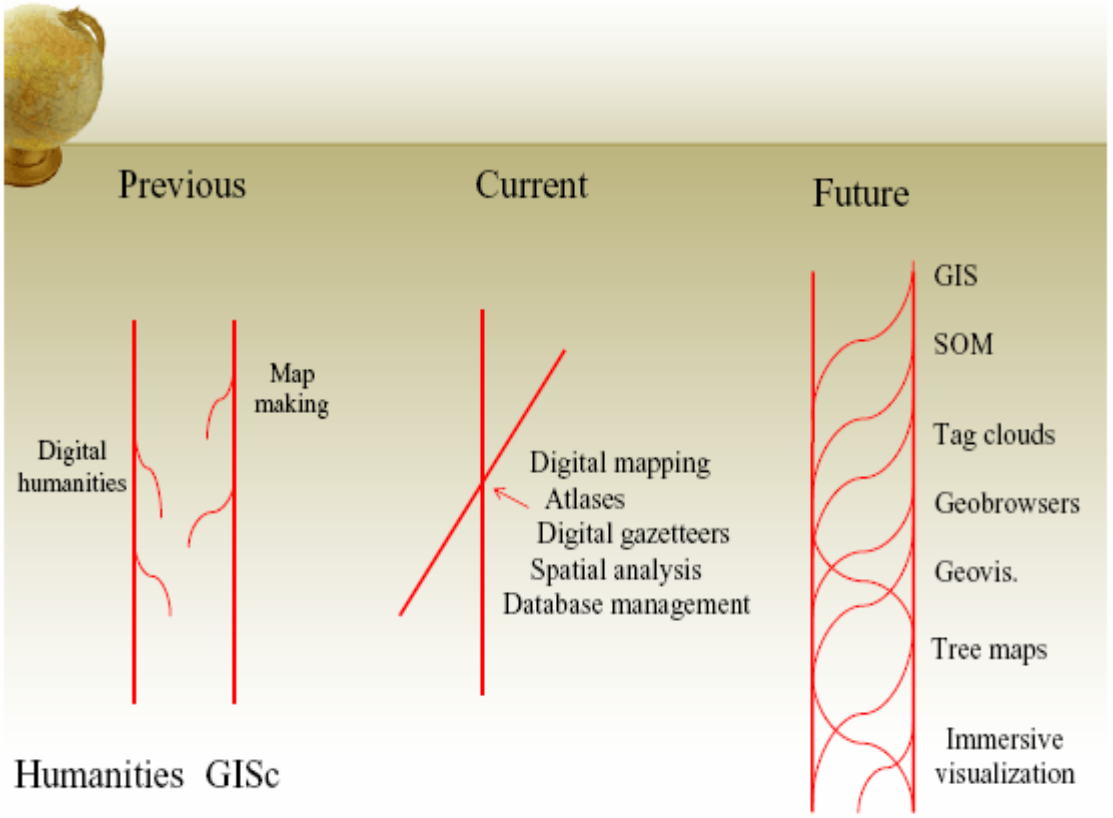
Past, Present, and Future



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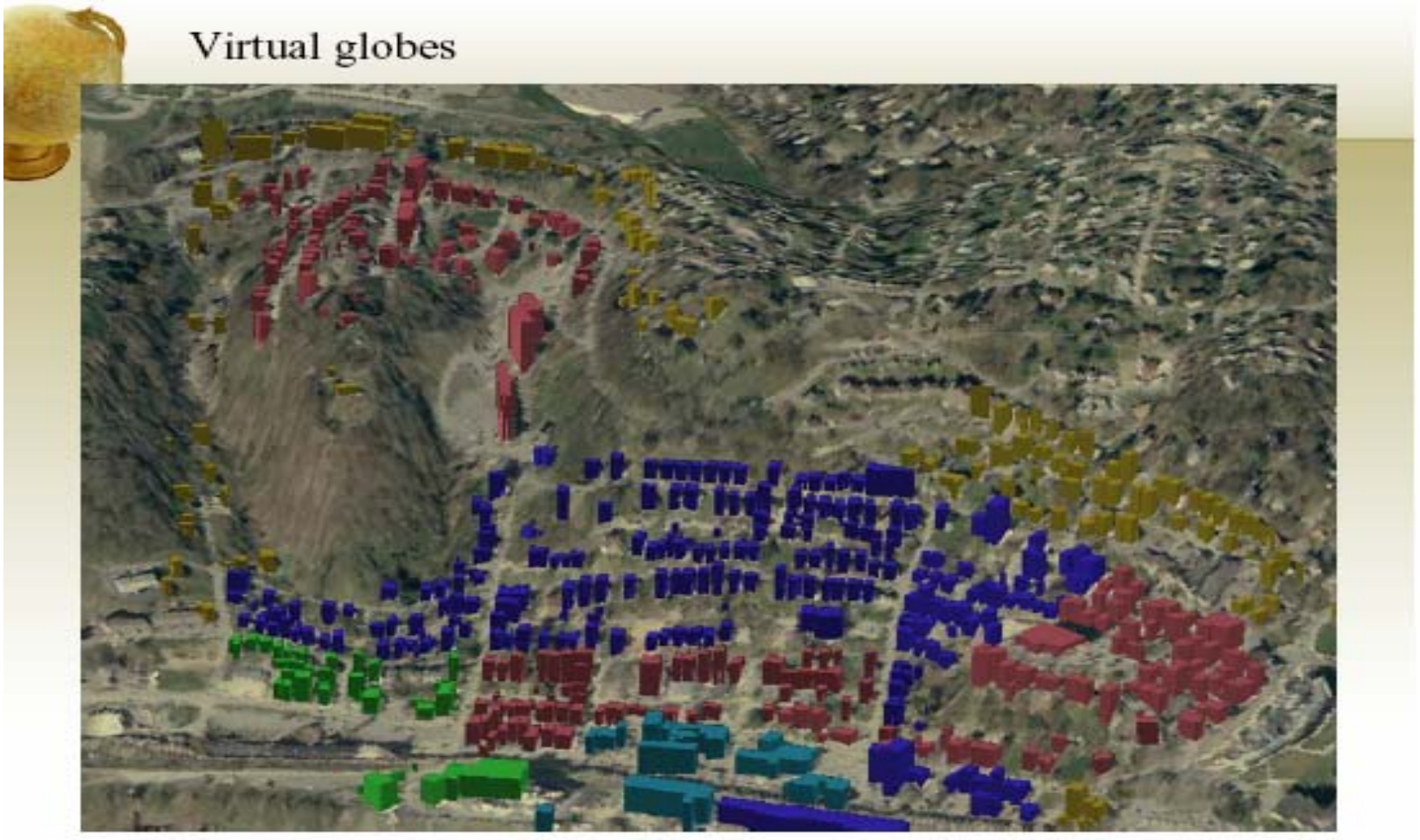
Virtual Globes



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Spatial 3D

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Wikimapia

www.wikimapia.org

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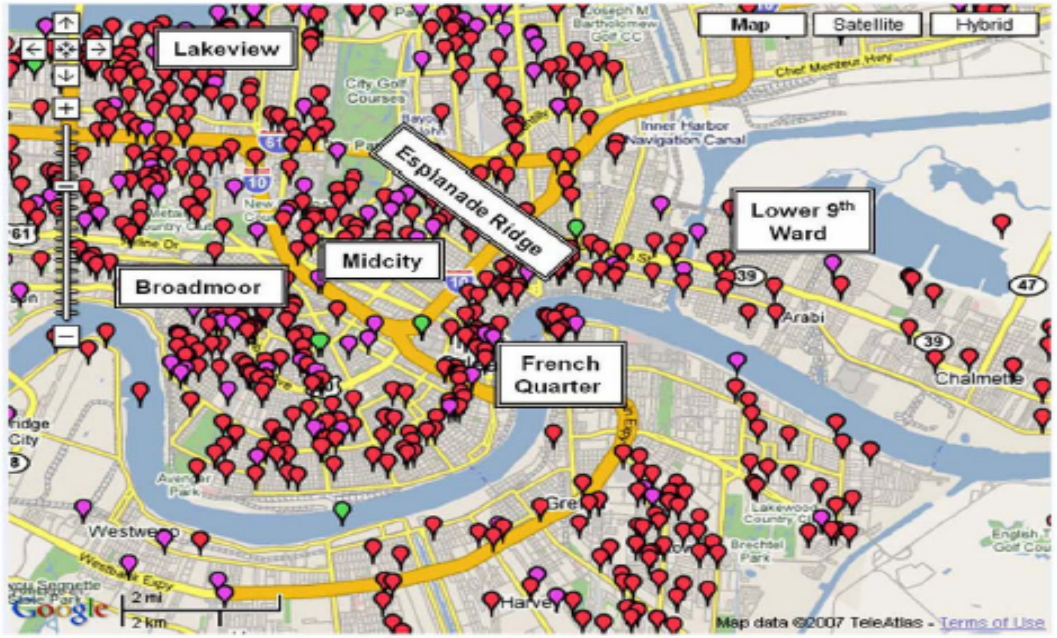
Flickr

www.flickr.com

VGI Mash-up

Cyberscape: Placemarks in post-Katrina New Orleans



Flooding Reports (via Scipionus) in New Orleans, Sept. 2005

Who was able to or interested in using this new technology?

Which places were they interested in?

Crutcher and Zook. 2009. *GeoForum*

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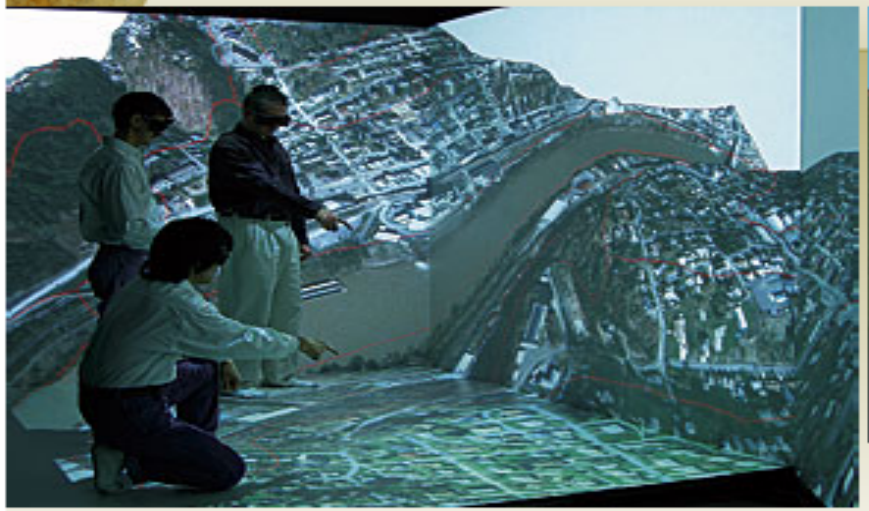
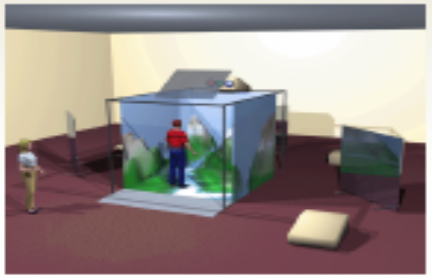
Immersive Visualization

Interactive, immersive, and experiential visualization





‘a sense of being there’

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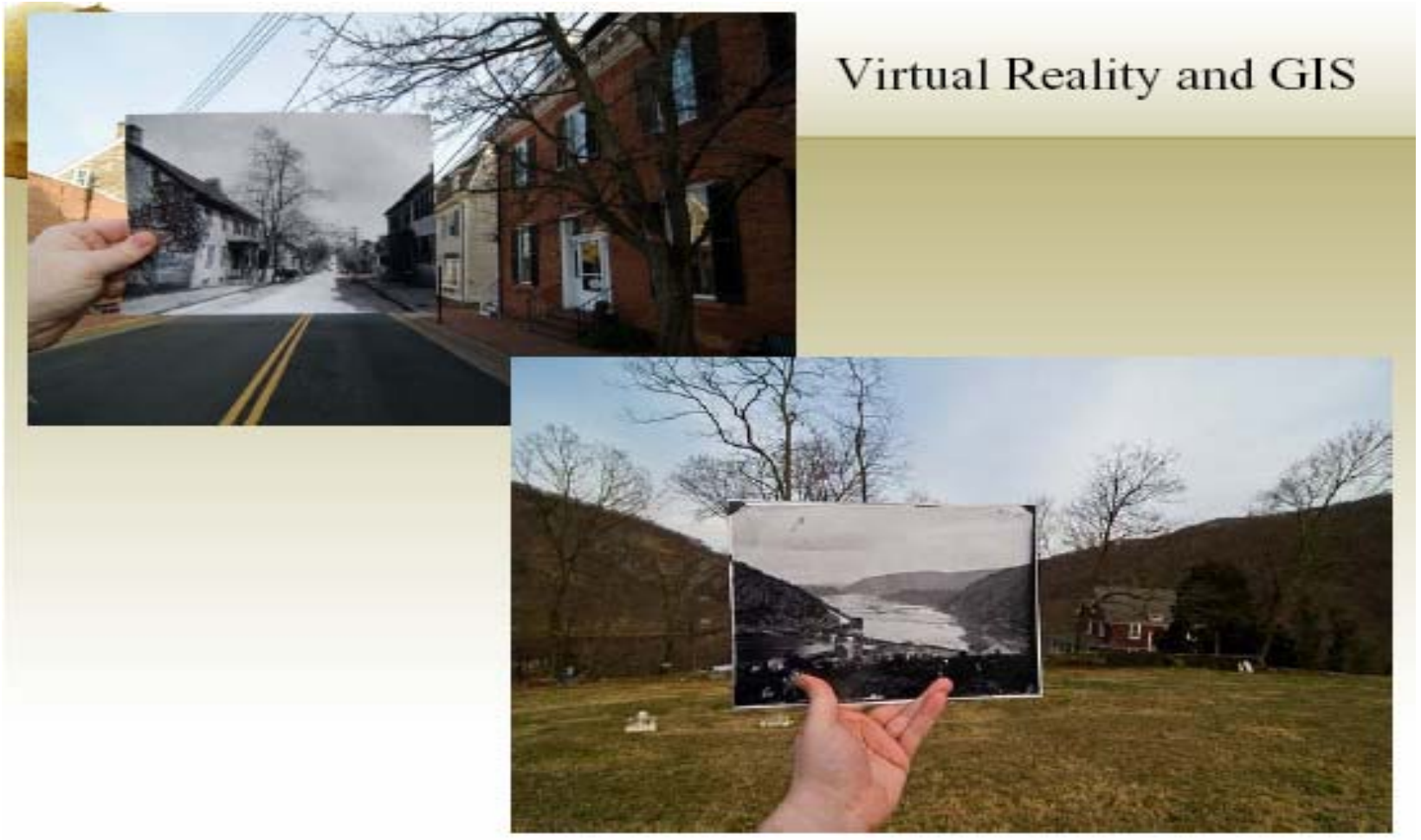
Spatial VR



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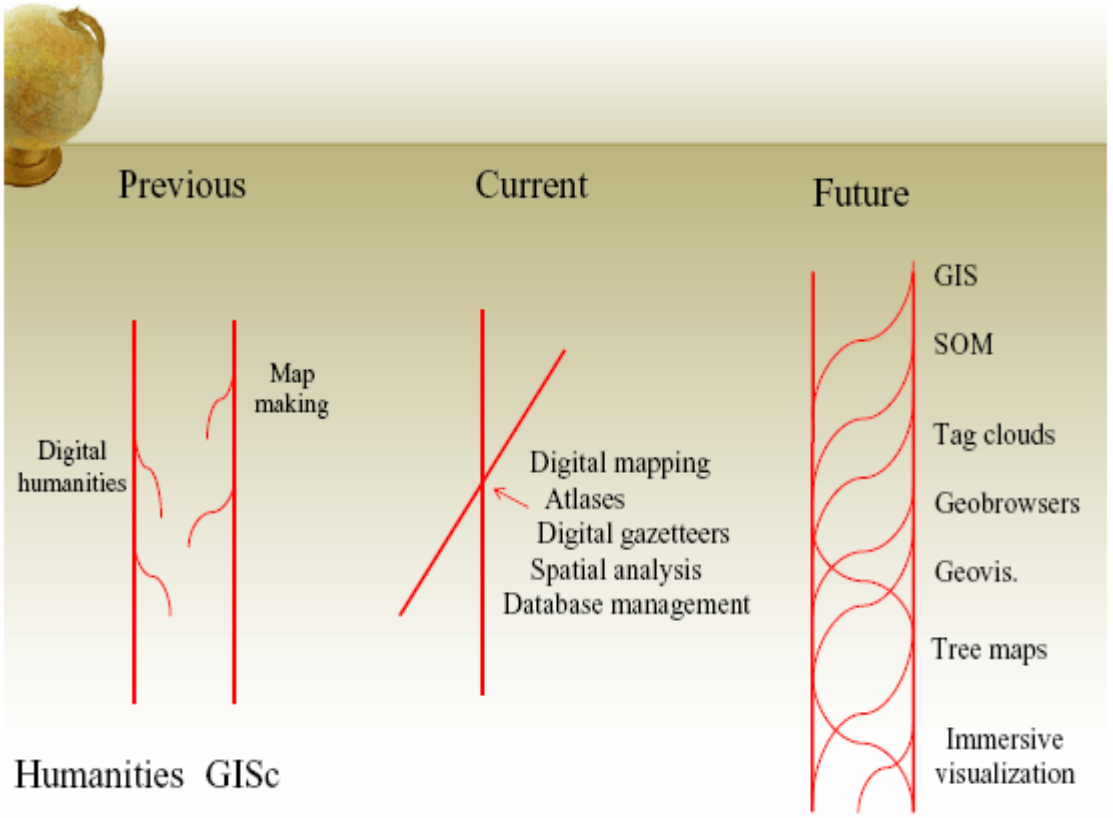
Past, Present, and Future



Opportunities

- Life paths and spatial narratives
- Socio-spatial networks
- Virtual reality/immersion
- Gaming and simulations
- Practice theory
- Deep mapping/deep contingency

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Deep Mapping

- Multi-media
- Multi-layered
- Open to negotiation
- Famed as conversation
- Visual and immersive

New Vision

- New spatial collaboratories that allow
  - Retrieval
  - Contextualization
  - Hypothesis building
  - Flexible narration
  - Integration into knowledge networks
- Virtual Research Laboratories(VRL)
  - GRID+Web 2.0+Spatial Technologies

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Future of Spatial Humanities

A unique post-modern scholarship with real and conceptual space as an integrating and animating framework :

- Visual and experiential
- Multiple perspectives
- Complex environments
- Simultaneous events

But how to prove the case?

Testing the Case

Religion and the Atlantic World

How does religion as a spatial actor shape the Atlantic World?

- What are its paths of transmission?
- What spaces does it occupy and traverse?
- What are the proximate others that contest religious spaces?

How does physical, relative, and conceptual space shape religion in the Atlantic World?

Other Questions

How does religion alter space?

What is its spatial logic?

How does religion affect the imaging (not imagining) of space?

What spatial processes accompany changing conceptualizations of religion?

What methods/technologies does the project invite/require?

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Religion and the Atlantic World

Project Criteria

- Make space explicit
- Address postmodern humanities
  - Agency
  - Fluidity
  - Simultaneity
  - Contingency
  - Uncertainty
  - Ambiguity
  - Multiple narratives
- Recognize problems with evidence, skills
- Reconcile epistemologies
- Make tools responsive to humanities
- Participatory platforms

Religion and Atlantic World as a Testbed

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Themes

- Competing spatial schemes (geographical/conceptual)
- Discontinuous space and time
- Imagined communities
- Negotiating space
- Movement/flux
- Scale (autonomous, discontinuous, intersecting, competing)
- Spatio-temporal networks
- Spatial and temporal fluidity
- Emergent realities
- De-territorialization/re-territorialization
- Recursivity/Process

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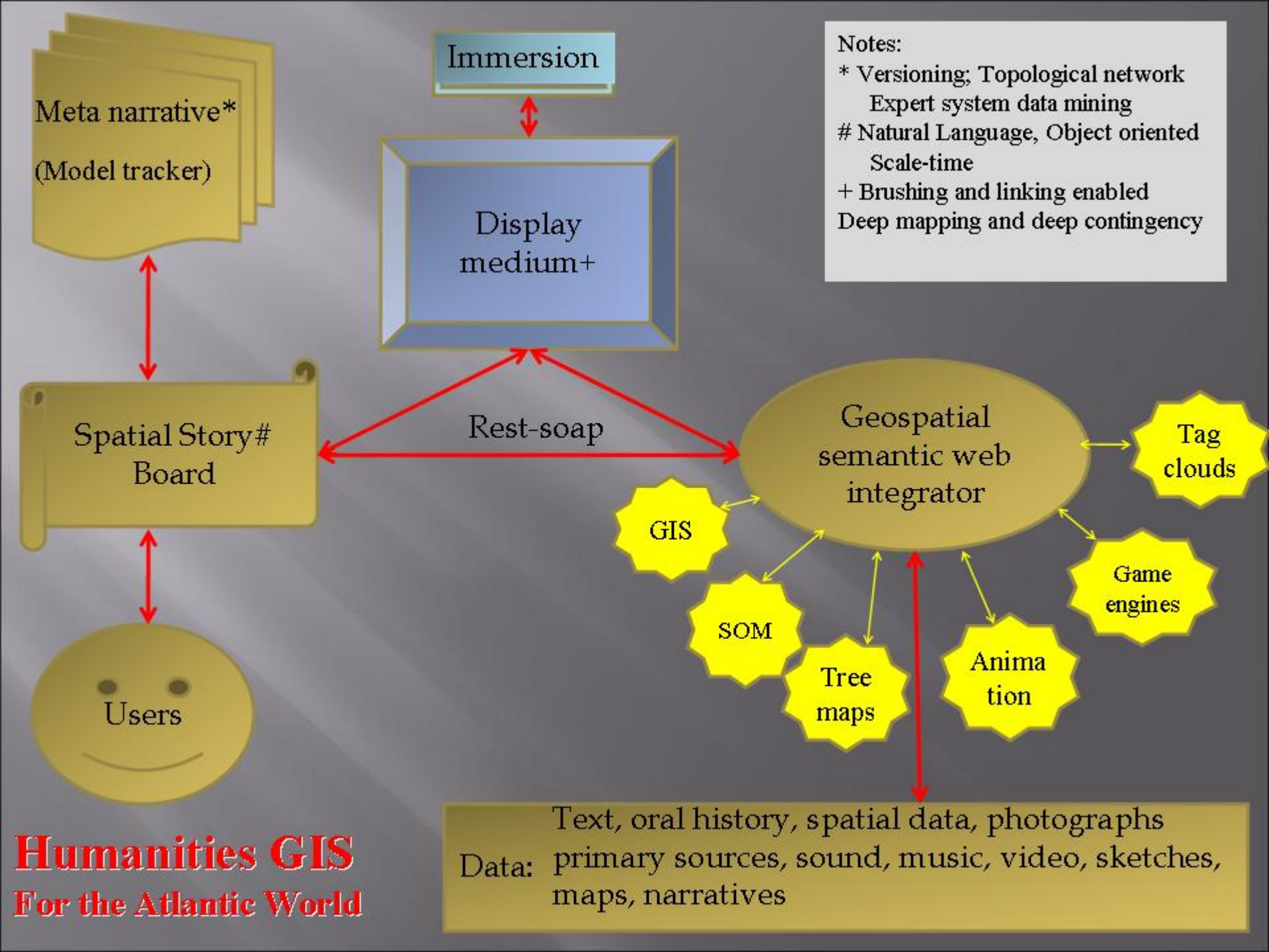
Deep Mapping Environment

Characteristics

- Alternate realities
- Fluid conceptions of space
- Simultaneity
- Multi-nodal/multi-perspective
- Multi-scalar
- Movement
- Alternate mapping schemes
- Linked space /time
- Discontinuous time/space/scale
- Robust visualizations


Meta narrative*
(Model tracker)
Immersion
Display medium+
Notes:
* Versioning; Topological network
Expert system data mining
Natural Language, Object oriented
Scale-time
+ Brushing and linking enabled
Deep mapping and deep contingency
Spatial Story# Board
Rest-soap
Geospatial semantic web integrator
Tag clouds
GIS
Game engines
SOM
Tree maps
Anima tion
Users
Humanities GIS
For the Atlantic World
Data: Text, oral history, spatial data, photographs primary sources, sound, music, video, sketches, maps, narratives