



## Panel Session: Center for Spatially Integrated Social Science

- **Helen Couclelis** - *Chair* - Introduction
- **Michael Goodchild** –What is Spatially Integrated Social Science?
- **Luc Anselin** – New tools for Spatial Analysis in the Social Sciences
- **Donald Janelle** – Web-based Infrastructure for Spatially Integrated Social Science
- **Stuart Sweeney** –Discipline Relationships and Market Penetration of CSISS Workshops
- **Helen Couclelis** –CSISS Specialist Meetings and the Diffusion of Spatial Thinking in the Social Sciences



Center for Spatially Integrated Social Science

# CSISS Specialist Meetings and the diffusion of spatial thinking in the social sciences

Helen Couclelis



## Specialist meetings 2000-2001

- **Equity and Inequality (12/2000)**
  - Richard Appelbaum (Sociology, UCSB)
  - John Logan (Sociology, SUNY Albany)
- **Spatial externalities (1/2001)**
  - Luc Anselin
  - Jan Bruekner  
(Agricultural & Consumer Economics, U. of Illinois, Urbana-Champaign)



# Who were the participants?

- Senior academics and professionals
- Recognized in their disciplines
- 'Space pioneers'
- Trend-setters?
- Position papers
- Very high acceptance rates!



## CSISS objectives

- Identification of
  - research questions with important spatial dimensions
  - needs for new theories, methods and techniques
  - needs for technical and infrastructure materials



## The 'demand' side: expectations?...

- Motives & needs in relation to CSISS's
  - Wholesale SA or specific elements?
  - Improve quantity or quality of research?
  - Additional professional benefits?
  - Improved research applicability?
- 'Before' and 'after' perspectives



## Exploring the demand side:

- 3 dimensions:
  - level of use of GIS & SA
  - type of use
  - scale of influence



# Exploring the demand side (1)

- Levels of use of GIS & SA
  - thematic mapping
  - visualization
  - GIS analysis
  - use of additional software
  - integration with independently developed techniques





## Exploring the demand side (2)

- Type of use
  - theoretical research
  - empirical research
  - applied policy-oriented research
  - communication of results



## Exploring the demand side (3)

- Scale of influence
  - spatial
    - from neighborhood to... globe
  - non-spatial
    - numerical strength of discipline
    - status in academic pecking order
    - involvement in policy making
    - charismatic individuals



## Participants: contrasts

- **Equity and Inequality**
  - diverse social science disciplines
  - academics and professionals
  - varying degrees of quantitative skills
- **Spatial externalities**
  - academic economists
  - advanced quantitative skills
  - basic research



**'Equity' meeting**

**'Externalities' meeting**

*Levels of use of GIS and associated methods*

Emphasis on mapping,  
visualization, data

Strong emphasis on more  
advanced, theoretical levels

*Type of use*

Mostly empirical and applied  
research

Mostly theoretical research,  
strongly analytical

*Scale of impacts  
spatial*

Community and county scales

Cross-scales

*non-spatial*

Several influential individuals

Influential discipline as well  
individuals

as



*"I see the study of spatial processes in resource economics as a 'new frontier' of sorts, and one that will transform the field in a way similar to the manner in which Pontryagin's optimal control theory ushered in the 'dynamics revolution' of the 1970s"*



# Issues in innovation diffusion

- Traditional view
  - innovation is generally 'good'
  - familiarity will likely lead to adoption
  - impediments need to be removed
- More recent view (Allen 2000)
  - innovation is *competitive* and *conflictual*
  - innovation is *under-determined*



# Challenges to CSISS agenda

- Multiple problem framings
  - *Communities of developers and potential adopters often view the problem to be solved in radically different ways*
  - 'Equity' meeting
    - from publishing maps
    - to data clearing house
    - to no need for space



## Challenges to CSISS agenda (2)

- **Social commitments**

- *Different communities of interest make commitments to particular practices and resources in ways difficult to reverse*

- 'Externalities' meeting

- penalties for deviating from orthodoxy
- difficulties of integrating spatial tools into current practices
  - analytical: too complex
  - computational: not respectable enough!





## Some conclusions from the meetings

- Increasing numbers of social scientists are finding their 'new frontier' in spatial analysis.

However,

- Adoption of GIS & SA depends on more than exposure to the innovation and removal of tangible impediments, because...



# GIS is more than a data-handling technology:

it is also:

- a commodity
- a human-machine system
- a community of researchers & developers
- a set of institutional & social practices
- a set of conventions for *representing* the world
- a way of *understanding* the world



## Where next for CSISS?...

- What definition of spatial analysis?
  - geostatistics
  - process modeling
- What community of users?
  - widely cross-disciplinary (LUCC)
  - web-based
- What other geographies?
  - GIS 2/too