

# Nanotechnology and Science Federalism

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March 15, 2007

# Collaborators

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# NIRT: Nanotechnology and its Publics

- Case study of nanotechnology policy development in Pennsylvania
- Series of regional and statewide initiatives developed over several years with little connectivity
- Policy initiatives driven by policy entrepreneurs based in research universities
- Virtually no relationship between Pennsylvania initiatives and the National Nanotechnology Initiative (NNI)

# NER: Nanotechnology and Science Federalism

- Sub-governments as “units of analysis” for understanding public policy making since 1960s
- Emergence of policy issue networks in lieu of “iron triangle” models since 1980
- Parallel emergence of IGM in lieu of centralized federalism in IGR
- Science domain retains centralized federalism despite state funding growth since 1980
- NSE provides a setting to explore factors that promote or inhibit transition to larger, more open, and collaborative policy subsystems

# First Phase Interviews

- White House Office of Science and Technology Policy (OSTP)
- National Academy of Sciences
- National Nanotechnology Coordinating Office
- Committee on Science and Technology, U.S. House of Representatives
- U.S. Senate Committee on Commerce, Science and Transportation.
- Federal science agencies participating in the National Nanotechnology Initiative
- States operating NSE initiatives
  - California, Connecticut, Georgia, Massachusetts, New York, Ohio, Oregon, Michigan, Illinois, Pennsylvania, South Carolina, and Texas.

# Findings to Date

- Interviews confirm that there is little intergovernmental cooperation or coordination on NSE policy making
- The NNCO and the NSF have sponsored workshops designed to increase understanding and promote collaboration.
- Most interview subjects rate the quality of intergovernmental relations in NSE policy making as poor
- Participants at the national level give slightly higher ratings compared to their state-level counterparts

# Status of Data Collection and Analysis Process

- Data from 20 interviews is being used to produce a case study of the development of NSE policy at national and state levels
- The interviews have identified approximately 90 NSE policy process participants who will be asked to participate in an opinion survey
- The final list of mail survey subjects is now being compiled from the interview notes, and the opinion survey instrument is being developed
- The opinion survey will be used to identify 5-8 depth interview subjects for the final data collection phase

# The Role of Bureaucratic Expertise

- Specialized knowledge possessed by public administrators is historically a key source of bureaucratic power and underpins "iron triangle" subsystems
- The power of public bureaucracy in policy making has significantly eroded over the past 30 years in parallel with the emergence of policy subsystems
- A key contributory factor has been the societal dispersion of knowledge, which has undermined expertise as a source of bureaucratic power.

# Research Questions

- What is the role of expertise as a source of bureaucratic power in the persistence of the centralized federalism model in science policy making?
- What are the consequences of the greater role of expertise and the persistence of the centralized federalism model in NSE policy making and in the science policy domain?