Lecture 26
Science Advice to the President and Congress

WW II through1950s

- ☛ Advice given directly to the President
- ☛ Science advisors:
  - ☑ Truman Oliver
    - *E. Buckley 1951 – 1952* ☐
    - *Lee A. DuBridge 1952 – 1953* ☐
  - ☑ Eisenhower
    - *Lee A. DuBridge 1953 – 1956* ☐
    - *Isidor I. Rabi 1956 – 1957* ☐
    - *James R. Killian, Jr. 1957 – 1959* ☐
    - *George B. Kistiakowsky 1959 – 1961*

1961 Office of Science and Technology

- ☛ Executive Office of the President
- ☛ Kennedy
  - ☑ Jerome B. Wiesner 1961 – 1963
- ☛ Johnson
  - ☑ Jerome B. Wiesner 1963 – 1964 ☐
  - ☑ Donald F. Hornig (Director, OST) 1964 – 1969
- ☛ Nixon
  - ☑ Lee A. Dubridge (Director, OST) 1969 – 1970 ☐
  - ☑ Edward E. David, Jr. (Director, OST) 1970 – 1973

1960s-70s, major science initiatives

- ☛ Moon Race
- ☛ AMB and other defense related
- ☛ slowly move into SSC
- ☛ Alaskan pipeline
- ☛ environmental crises

Congress lacking good science advice

- ☛ Sources of information on science
  - ☑ Congressional Research Service
  - ☑ Congressional Budget Office
  - ☑ General Accounting Office
- ☛ Leads to debate over need for science advice in Congress
  - ☑ House Committee on Science and Astronautics
  - ☑ Subcommittee on Science, Research and Development
  - ☑ chair, Emilio Daddario, Democrat, CN

Recognize that times have changed

☛For 150 years the United States could and did depend mainly on ingenuity, industry, independence and pioneering of its people...Then the situation...shifted radically...the new need was technology. But Congress...finds itself squarely faced with the many social, political, and economic side effects created by the current technological revolution...

No planning for science & technology

☛Congress has long promoted science [but]...inevitably serious problems have accompanied progress...Indeed there are those who contend that the galloping technical revolution is threatening to outrun the number of talented people necessary to nourish it, as well as the time needed to plan and direct its course with some degree of wisdom. (Daddario)

Major problem the environment

☛The most glaring example at the moment is environment....Until we learn really to understand technology ... how and when to apply it; how and when not to apply it ... we shall never overcome the many, complex difficulties that beset us. (Daddario)

Need for technology Assessment

☛...the evaluation of the impact of existing, new and developing technologies upon society...to assess both the desirable and the undesirable consequences of such technology...In other words...to give us better mechanisms for anticipating short- and long-range potentials of technology-good and bad. (Daddario)

No everyone agreed

☛...this is going to add one more boondoggling board to what we already have." Gross questioned whether it would be better to "turn over to the General Accounting Office this TA, and let them hire the few people that would be needed? Why create another board in Government? (Gross, Iowa)

Objections:

- ☛ Private sector saw as intrusion of government into business
- ☛ Could not agree, even if approved in principle, how to organize:
- ☛ Opponents of big government worried about cost

Response of the majority

- ☛ advisory, would not set policy
- ☛ Congress was at risk
- ☛ Let us face it Mr. Chairman, we in the Congress are constantly outmanned and outgunned by the expertise of the executive agencies. We desperately need a stronger source of professional advice and information, more immediately and entirely responsible to us and responsive to the demands of our own committees, in order to more nearly match those resources in the executive agencies. (Mosher, Ohio)

October 13, 1972, OTA created

- ☛ Technology Assessment Board
  - ☑ **12 members, six from each House, split 3/3**
  - ☑ **appoint Director**
  - ☑ **oversee budge**
  - ☑ **make decisions on issues to be addressed**
- ☛ Advised by TA Advisory Council
- ☛ Began work in 1974

OTA deliberation process

Reports - 1974

- ☛ Drug Bio-equivalence (July 1974)
- ☛ Requirements for Fulfilling a National Materials Policy (August 1974)
- ☛ Annual Report to the Congress by the Office of Technology Assessment: March 15, 1974

Auto & Energy - 1975

- ☛ Automobile Collision Data: An Assessment of Needs and Methods of Acquisition (February 1975)
- ☛ Analysis of the Feasibility of Separating Exploration From Production of Oil and Gas on the Outer Continental Shelf (May 1975)
- ☛ Oil Transportation by Tankers: An Analysis of Marine Pollution and Safety Measures (Jul 1975)
- ☛ Analysis of the Impacts of the Projected Natural Gas Curtailments for the Winter 1975-76 (November 1975)

1975 Mass transit

- ☛ Energy, the Economy, and Mass Transit (October 1975)
- ☛ A Review of National Railroad Issues (December 1975)
- ☛ Automated Guideway Transit: An Assessment of PRT and Other New Systems (June 1975)
- ☛ Financial Viability of Conrail: Review and Analysis (September 1975)
- ☛ A Review of Alternative Approaches to Federal Funding of Rail Rehabilitation (September 1975)

Developments in Executive

- ☛ Nixon, phase out science advice
- ☛ 1973 G. Ford restores
  - ☑ Office of Science and Technology Policy
  - ☑ Dr. H. Guyford Stever, 1973-1976

- Carter
  - ☑ Dr. Frank Press, 1977 – 1981

Republican years

- Reagan
  - ☑ Dr. George A. Keyworth , II Aug. 1981 – Dec. 1985
  - ☑ Dr. William R. Graham, Jr. Oct. 2, 1986 – June 1989
- Bush

  Dr. David Allan Bromley (Director, OSTP) Aug. 1989 – Jan. 20, 1993

Recent

- Clinton
  - ☑ John H. Gibbons. 1993 –1998
  - ☑ Dr. Neal F. Lane, 1998 – 2001
- Bush
  - ☑ Dr. John H. Marburger III, 2001 - Present

Office of Science and Technology

- Tasks:
  - ☑ Advise President & Eos
  - ☑ Direct inter-agency policy initiatives
  - ☑ Work with private sector to foster S&T
- Activities (Federal Register Notices)
  - ☑ NSTC Subcommittee on Research Business Models,
  - ☑ Proposed Federal Actions To Update Field Test Requirements for Biotechnology Derived Plants and To Establish Early Food Safety Assessments for New Proteins Produced by Such Plants August 2, 2002

PCAST

- Energy Efficiency, February 2003
- Broadband Report, December 2002
- Assessing U.S. R&D Investment,October 2002
- Maximizing the Contribution of Science and Technology within the new Department of Homeland Security September 2002

NSTC Reports

- National Nanotechnology Initiative, October 2003
- Advanced Foundations for American Innovation, October 2003
- Coordination of Programs on Domestic Animal Genomics, September 2003
- The U.S. Climate Change Science Program: Strategic Plan, July 2003
- The U.S. Climate Change Science Program: Vision and Highlights, July 2003
- Reducing Disaster Vulnerability Through Science and Technology, July 2003

- National Plant Genome Initiative: 2003 - 2008, January 2003
- Air Quality and Related Health Studies in the Vicinity of Ground Zero, December 2002
- Networking and Information Technology Research and Development, July 2002
- The Microbe Project May 2001