



U.S. Experience in Technology Assessment: Insights for Japan

Christopher T. Hill

George Mason University

Technology Policy International

March 9, 2010

Outline of Presentation

- ★ Origins of T.A. in the U.S.
- ★ Conceptual foundations of U.S. T.A.
- ★ U.S. Office of Technology Assessment
- ★ Role of T.A. in the U.S. governmental structure
- ★ Lessons for the U.S. from OTA
- ★ Insights for Japan

Origins of T.A. in the U.S. - I

- ★ Turbulent 1960s and tech skepticism, e.g.,
 - ★ Nuclear disarmament
 - ★ Vietnam War
 - ★ Environmental movement
- ★ Recognition of unanticipated, tragic consequences of new technologies, e.g.,
 - ★ Thalidomide
 - ★ DDT
 - ★ Cars, roads, sewers and urban sprawl
 - ★ Ozone and the Supersonic Transport
- ★ Public awareness of Earth from space

Origins of T.A. in the U.S. - II

- ★ Congress took many actions in the late 1960s and early 1970s to control technological applications
 - National Environmental Policy Act
 - Clean Air Act
 - Water Pollution Control Act
 - Toxic Substances Control Act
 - Resource Conservation and Recovery Act
 - Occupational Safety and Health Act
 - Safe Drinking Water Act
- ★ Power struggle for information broke out between Congress and President Nixon who was elected in 1968
- ★ Widespread enthusiasm for “futures studies”
- ★ **Technology Assessment Act of 1972**

Conceptual Foundations of T.A. in the U.S.

- ✦ Applications of new technology can have unintended consequences, some of which may be negative and large
- ✦ Advocates of new technology do not always look for negative consequences
- ✦ Creative multidisciplinary study can discover some negative consequences in advance
- ✦ Society, especially through government, can prevent or ameliorate these consequences
- ✦ It is important to study comprehensively

U.S. Office of Technology Assessment (OTA)

- ✦ Created by law passed in 1972
- ✦ Set up in 1974
- ✦ An arm of Congress, to serve Congress
- ✦ Staff of 140 plus contractors
- ✦ Bipartisan Board of 12 congresspersons
- ✦ Studies by request of committee chairs or top minority member
- ✦ Nearly 800 studies over 21 years
- ✦ Studies typically “book-length”
- ✦ Made no recommendations

OTA Studies

- ✱ Varied in purpose and organization
- ✱ Carried out by staff and contractors, with project advisory committees
- ✱ In U.S., many groups do studies
- ✱ OTA tried to reduce uncertainties and differences among studies
- ✱ Could not speculate about the future
- ✱ OTA studies extensively reviewed in draft by experts and interest groups
- ✱ Were often too late to help Congress
- ✱ Were used by public to inform choices and to influence policies

Role of T.A. in the U.S. Governmental Structure

- ★ In pre-OTA discussions, location and role of T.A. function was unsure
 - Executive branch (President)
 - Legislative branch (Congress)
 - Independent, non-profit
 - Academia
- ★ In the end, OTA served Congress
- ★ Helped not only to anticipate negative consequences of technology application, but also to reduce uncertainty about any issue in which technical knowledge was important

OTA-Congressional Relationship

- ★ OTA helped Congress understand emerging issues and decide on policies
- ★ Congress helped OTA
 - Tough, bipartisan client
 - Ensured interest group participation
 - Provided sustained funds
- ★ OTA had many competitors
- ★ Minority party and junior members doubted OTA's value

The End of OTA

- ✦ OTA was shut down in 1995 after it received no annual appropriated funds
- ✦ Authorizing legislation remains intact
- ✦ Why shut down?
 - ✦ Perception of partisanship
 - ✦ New majority party in the House of Rep.
 - ✦ Settling old scores
 - ✦ Getting control of information for Congress
- ✦ Old reports are accessible via web sites.

Reinstating OTA

- ✦ Societal issues involving technology are more important than ever, for example:
 - Climate change
 - Internet governance
 - Cyberwarfare
 - Personalized medicine
- ✦ Congress needs better info and understanding
- ✦ Experiments with T.A. have been done at the Government Accountability Office, another congressional agency
- ✦ Periodic efforts to get an OTA appropriation
- ✦ What would OTA do, and how, in the Internet age?
- ✦ Must be bi-partisan, and this is difficult now

U.S. Lessons from OTA

- ✦ Sustained funding is necessary
- ✦ Serving Congress helps with objectivity
- ✦ Speculating about the future is hard to sustain
- ✦ Doing OTA is an experts' job; public inputs are of limited value
- ✦ Studies should be organized to inform decision making on public policy
- ✦ OTA studies and reports are valuable to Congress and also to society in general

Insights for Japan

- ✱ Having OTA serve Congress turned out to be very important
- ✱ It is not so clear how independent sources of expertise fit in a parliamentary system where power to govern is not divided among branches
- ✱ An OTA needs to be large and protected from politics, yet be seen by interest groups as powerful and influential
- ✱ Doing T.A. well is a complex and difficult task that requires institutional learning
- ✱ T.A. does not belong only to scientists and engineers. They have a role, but so do economists, sociologists, etc

Conclusions

- ✦ OTA served the U.S. for 20+ years
- ✦ It ended in 1995, but is still needed
- ✦ U.S. OTA was appropriate for a government with separation of powers
- ✦ The U.S. OTA model may not be right for countries with other governance schemes
- ✦ Creating an OTA in Japan might encourage the U.S. to do that same thing