

Lecture 24 ~ 1980s

I Reagan Revolution

Overview

- reduce the size of the federal government
- turn power back to the states
- get government out of peoples lives
- stimulate economic growth through support of industry
- i.e. trickle-down economics

End of “Liberalism”

- New Deal
- New Society
- Nixon & Ford - moderate change
- Carter period mixed and relatively short
- Reagan Revolution - 180 degree turn

Impact on science and technology

- de-regulation
- shift to private support
- emphasis on military preparedness
- big-science projects

Executive Order 12292, February 17, 1981

- **By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to reduce the burdens of existing and future regulations, increase agency accountability for regulatory actions, provide for presidential oversight of the regulatory process, minimize duplication and conflict of regulations, and insure well-reasoned regulations, it is hereby ordered as follows**
 - **Objective, maximize “the aggregate net benefits to society...”**

II Technology Transfer

- **Ideal:** Francis Bacon, *New Atlantis* (1632)
- **Criticized:** Johnathan Swift, *Gulliver’s Travels* (1716)
- **First benefits:** 19th C.
- **20th C. TT takes off**
 - 1905, Frederick Cottrell, electrostatic precipitation
 - 1912, Research Corporation
 - 1918, National Research Council
 - 1920s, two developments:
 - first university patent policies
 - first university research foundations

Tech Trans pre-WW II

- patent policies
- institutional structures

Pre-War Attitudes toward Patenting and Tech Transfer largely positive

- Shall an invention be patented or donated to the public freely? I have known some well-meaning scientific men to look askance at the patenting of inventions, as if it were a rather selfish and ungracious act, essentially unworthy. The answer is very simple. Publish an invention freely, and it will most surely die from lack of interest in its development. It will not be developed, and the world will not be benefited. Patent it, and if valuable, it will be taken up and developed into a business. Thomas Elihu, Acting President, MIT (1920)

Support for patents and technology transfer common

- AAAS, Protection by Patents of Scientific Discoveries (1934)
- George Gray, "Science and Profits," Harpers Magazine (1936)
- exception: Abraham Flexner, *Science* (1933)

One exception, medical research

- No patents primarily concerned with therapeutics or public health may be taken out by any member of the University, except with the consent of the President and Fellows; nor will such patents be taken out by the University itself except for dedication to the public. (Harvard University, 1939)
- The President and Fellows will provide legal advice to any member of the University who desires steps to be taken to prevent the patenting by others of such discoveries or inventions. (Ibid.)

Post WW II

- technology transfer activities increased and widely accepted
- Palmer (1952):

1940s & 1950s

- peer vs. government control?
- private vs. public ownership?
- scientific merit vs. social need?
- single vs. multiple agencies
- civilian vs. military

Ultimate resolution fit the needs of the Cold War era

- agencies, especially DOD, retained control over agendas
- scientists won control on peer review and scientific merit
- social justice issues largely left unresolved and under the control of funding agencies
- accordingly ... no unified tech transfer policy

Impact of Bayh-Dole

- Cohen-Boyer, extreme example

- **modest technology transfer on most campuses**
- **biotechnology and computers most important**
- **current situation**