

(Perennial) Old Questions. New Answers!(?)

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Why We Are Here

- Ex Ante: Evidence Based Decision Making
- Ex Post: Accountability; Performance
- Search for Better Answers
(Theories; Models; Data; Techniques)

Why Are We Here?

“There are many interesting research problems. Some of them are important”

(Richard Bradfield)

Timeliness of Session

- National Bureau of Economic Research, Rate and Direction of Inventive Activity: Economic and Social Factors—1962
- Alvin Weinberg, “Criteria for Scientific Choice”, Minerva, 1963
- AAAS R&D Colloquium, 1976

AAAS R&D Colloquium: 1977

“How Should R&D Decisions
be Made?”

AAAS R&D Colloquium: 1979

- Impact of Federal Policies on Science and Technology
- R&D, Industry, and the Economy

AAAS R&D Colloquium Staples

- R&D and the Economy
- International Aspects of R&D Policy
- R&D and the Universities

What Do We Know

“There is a well developed body of social science knowledge that could be readily applied to the study of science and innovation”
(NSTC, The Science of Science Policy, p. 1)

What Do We Know

- Productivity change is a major contributor to long-term economic growth (Solow, Abramowitz)
- “Market Failure Paradigm”--Characteristics of R&D Lead to Less than Socially Optimal Levels of Private Sector Investment (Arrow, Nelson)
- Social Rates of Return to R&D Exceed Private Rates of Return (Mansfield, Griliches)
- Direction of Inventive Activity is Responsive to Demand Influences (Schmookler, Rosenberg)
- Diffusion Processes are Elongated, Circuitous, Path-dependent, and Multi-directional (David)

Question Sets

NSTC: The Science of Science Policy: A Federal Research Roadmap

- 10 Major Questions

Industry

- IRI “Research-on-Research”

NSF: Science of Science and Innovation Policy (SciSIP)

- Program Solicitations
- 2+ Rounds of Awards

International

- EU Framework Evaluations
- National Innovation Plans
- *PRIME* (Policies for Research and Innovation in the Move towards the ERA)

Science Policy Questions (To Feller): I

- What is the optimal level of funding for the National Science Foundation?
- What metrics should be used to evaluate the Department of Energy's Office of Science's research program?
- Which fields of (peer-reviewed) social and behavioral science research currently funded by the National Institute of Aging's Office of Social and Behavioral should be increased (or decreased)?
- How much "innovation" is occurring in the U.S. economy?
- What criteria exist to evaluate the scientific merit and importance of interdisciplinary research proposals and research publications?

Science Policy Questions: II

- What criteria should be used by Congress and NIH in establishing and evaluating external centers of research?
- Has the EU Framework 6 Programme Achieved its Objectives?
- Should Cost-Sharing be Required on Federal Research Awards to Universities?

“Its About More than Money”

What Do We Know about the Policy Aspects of the Science of Science and Innovation Policy?

- User Driven Questions—Answer Policy Makers' Questions; Help Them Shape More Constructive Questions
- How Does Existing and New Knowledge Enter into/Impact the Policy Process?
- What Type(s) of Evidence are Helpful/Convincing to Which Audiences on What Questions?
- What are the Policy Limits to a Science of Science and Innovation Policy?