

Science, Technology and Public Policy

A Proposed Freshman Seminar

Princeton University

Fall Semester 2017

The overall objective of this seminar is to understand and assess how American scientists and U.S. science policy have served the interests of the nation, the U.S. Government and the scientific community. Moreover where appropriate we will discuss the ethical issues that often arise in these contexts.

The seminar will begin with a lecture/discussion that identifies the interrelationship between science, technology, economic growth, and public policy. We will also identify the tools available to Federal and State governments to both invigorate and direct the national scientific enterprise. In this initial meeting we will also consider the specific example of the use of new science and technology to achieve particular political aims (i.e., victory) in World War II, its impact on the war and on science more broadly. Moreover this example will help us sketch out just how this formative experience in World War II reshaped post-war U.S. government attitudes both for the support of science and technology (“policy for the support of science and technology”) and the reliance of governments on science and technology to achieve particular public policy objectives (“science and technology in support of policy”).

All subsequent sessions of the seminar will revert to a more purely seminar format where students share the responsibility for both leading and participating in the discussions.

Once in this more purely seminar format (i.e., by our second meeting) the next three sessions will focus on three case studies of important national issues that involve the intersection of science, technology, and public policy. In particular we will discuss the legal, scientific and policy issues that emanated from the development of first, Assisted Reproductive Technologies (ART) along with human reproductive cloning and embryonic stem cell research; second, global warming; and third, our national energy policy. In all these cases the focus will be on the new technological options available and the respective role of science, scientists, public policy, ethics, and law in addressing the potential of: a) ART, human reproductive cloning and stem cell research; b) the domestic and international policy challenges surrounding global warming; and c) the nation’s energy challenges.

With this as background the seminar will consider more carefully the relationship of science and technology to economic growth and the manner by which Federal policies can influence these matters. In this context we will turn to a fuller discussion of the evolving role of the U.S. government in stimulating/directing the growth of science and technology as the government itself becomes more dependent on new achievements on the scientific frontier.

In subsequent meetings of the seminar we will focus on a series of areas in which developments on the scientific frontier raise important additional issues for U.S. public policy. We will consider such areas as: classical and contemporary eugenics; public health policies surrounding vaccines and contagious diseases; the use of human subjects in medical research, and the details of just how government decisions are made in the process of setting public policies in the U.S.

If time permits the seminar will conclude by considering a few additional issues on the frontiers of science and technology policy such as: globalization, developments in neurobiology, fusion energy, the environment, the science and technology workforce, etc.

Through the course of our discussions, we will come to see the many inherent and potential conflicts of interest that may arise when scientists serve as advocates and advisors in heated policy debates where egos, money, and power are at stake.

Harold T. Shapiro

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