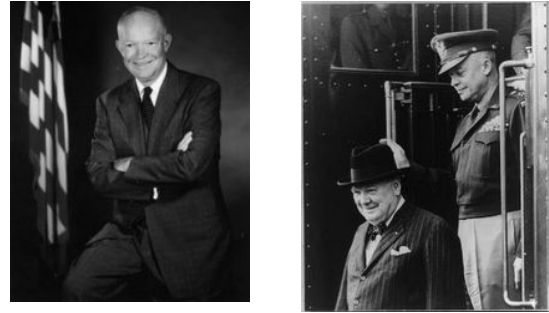


## ASTR 4800: Space Science - Practice & Policy

- Today's Topic: Eisenhower and the Endless Frontier
- Homework: McDougall, Part III and [Eisenhower's Farewell Address](#) (web article)

## Dwight Eisenhower (1890-1969)



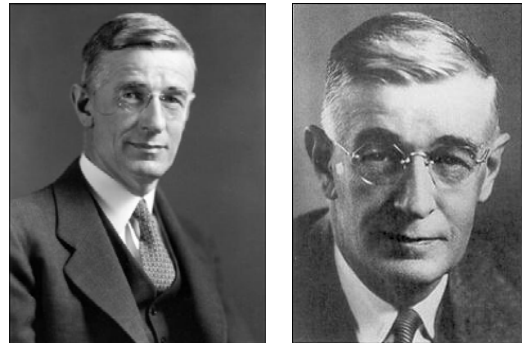
Investment in a vigorous economy

## Why did Truman & Eisenhower let rocket/ICBM technology lag?

- Assumption of U.S. superiority in bombers.
- Need to invest first in building a vigorous economy.
- Developing missile threat from USSR finally convinced Truman and then Eisenhower to invest in missile technology.



## Vannevar Bush (1890-1974)



Author of *Science: The Endless Frontier*

## Science: The Endless Frontier July 1945

"New frontiers of the mind are before us, and if they are pioneered with the same vision, boldness, and drive with which we have waged this war we can create a fuller and more fruitful employment and a fuller and more fruitful life."

*Franklin D. Roosevelt*  
November 17, 1944



## Components of the Endless Frontier

- Science can be effective in the national welfare only as a member of a team... without scientific progress... cannot insure our health, prosperity, & security.
- For our national security:
  - Importance of technology illustrated by radar & V-2.
  - Military research needed in peacetime.



## Components of the Endless Frontier

- Impact on Public Welfare
  - Create more jobs
  - Better and cheaper products
    - Technology Transfer to private sector
    - But, a simplistic linear model
  - Basic research is “scientific capital”
- How do we increase scientific capital?
  - More men and women trained in science
  - Strengthen the centers of *basic research* at universities & research institutes (note: industry does almost all *applied research*).



## Components of the Endless Frontier

- Must Renew our Scientific Talent
  - Deficit of scientists needed for research in U.S. was expected to be 17,000 by 1955.
  - “Government should accept new responsibilities for promoting the flow of new scientific knowledge and the development of scientific talent in our youth”.
- Recommendation of new federal agency to carry out this agenda (later to become the *National Science Foundation*).

