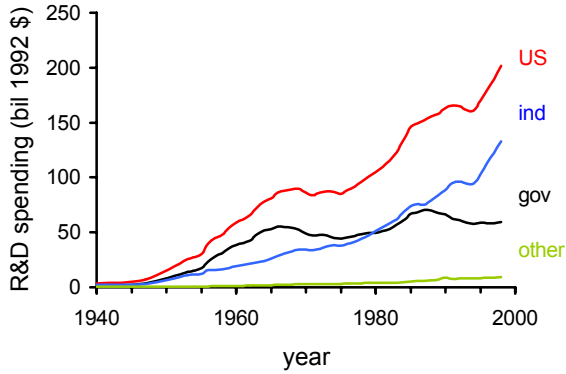
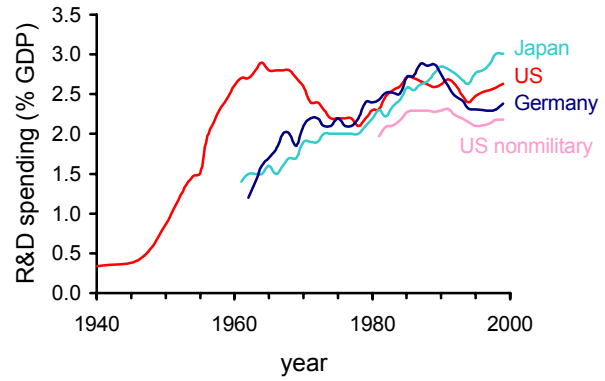


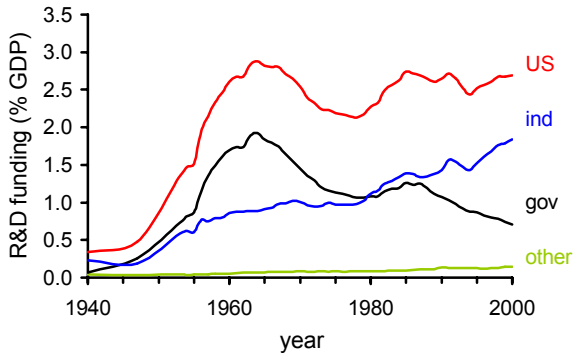
Research and Development Expenditures



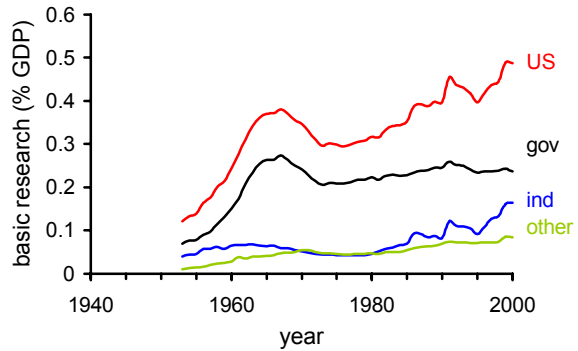
(a)



(b)



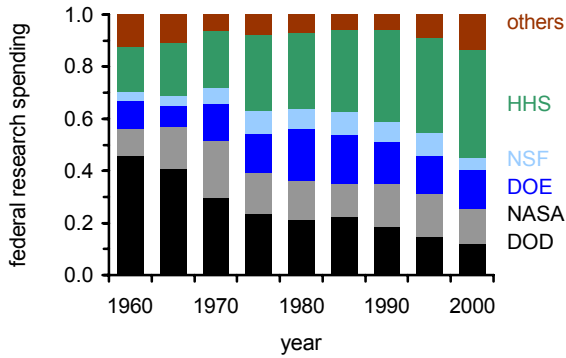
(c)



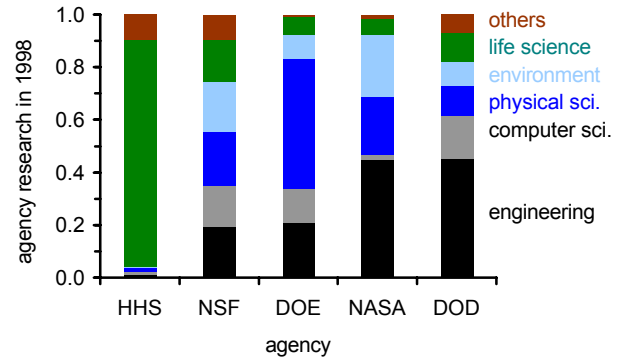
(d)

(a) U.S. Research and development expenditure in constant 1996 dollars. (b) Total R&D expenditure as percentage of gross domestic product for Japan and Germany; total and non-defense R&D expenditure as percentage of GDP for U.S. (c) R&D expenditure as percentage of GDP for U.S. total, industry, federal government, and nonprofit organization. (d) Basic research expenditure as percentage of GDP for U.S. total, federal government, industry, and nonprofit organization. Source: NSF: Science and Engineering Indicator 2002.

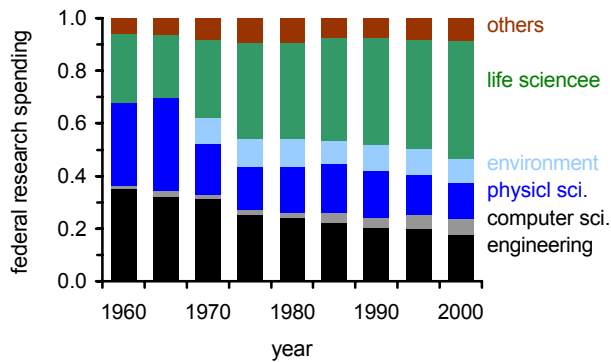
Distribution of U.S. Federal Research Spending



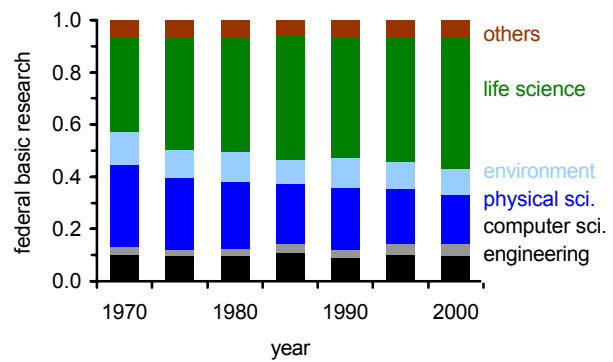
(a)



(b)



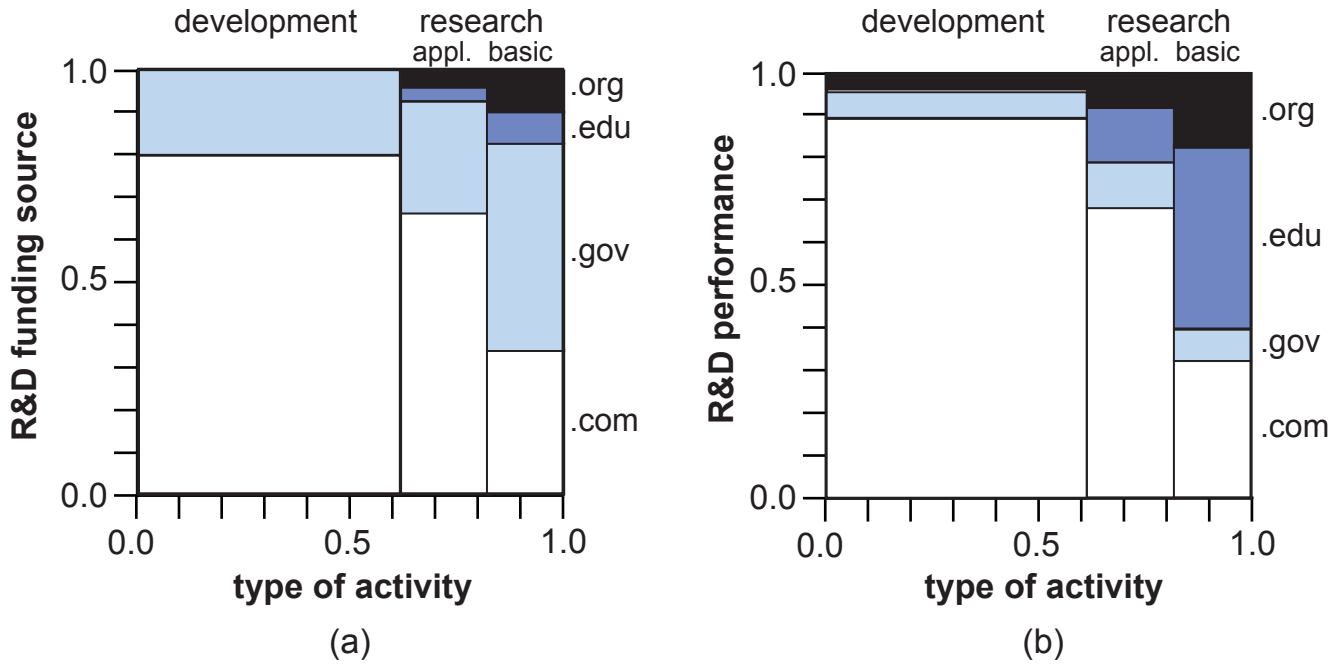
(c)



(d)

(a) Distribution of federal obligations for research among funding agencies: Department of Defense, National Aeronautics and Space Administration and its predecessor, Department of Energy and its predecessors, National Science Foundation, Health and Human Service and its predecessors, and others. (b) Distribution of obligations for research among science and engineering subjects for various funding agencies. (c) Distribution of federal obligations for research among subjects, (the division between environmental and physical science was not made before 1970). (d) Distribution of federal obligations for basic research among subjects.

WHO PAYS AND WHO DOES WHAT



Percentage of research and development (a) funded and (b) performed by various sectors (industry, government, universities, and organizations including federally funded R&D centers), divided according to the types of work (development, basic research, applied research). Source: *Science and Engineering Indicator 2002*, tables 4-6, 4-10.