

Human Spaceflight and American History

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Human Spaceflight's Dominant Frames

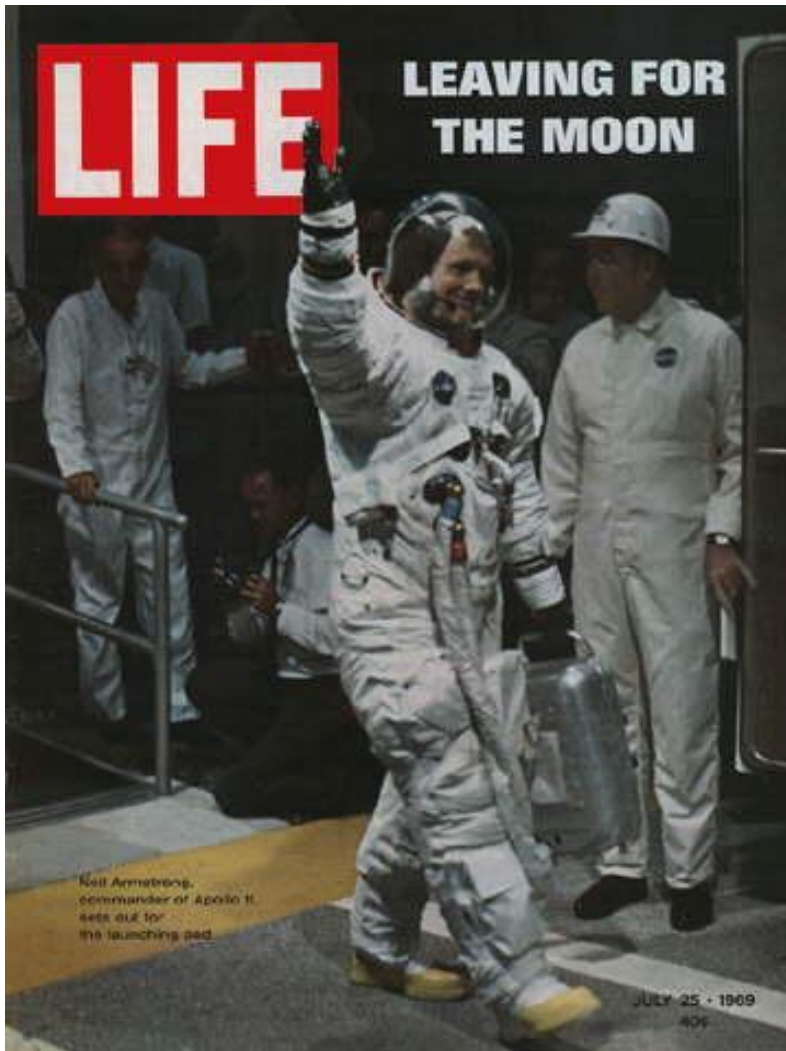
- Cold War Competition
 - U.S./USSR national security
 - Dominant in period between 1950s and 1980s
 - Combat by non-lethal means
 - Pride and prestige powerful drivers
- Cultural Conceptions
 - Historical perceptions of exploration
 - National narratives (frontier, progress, exceptionalism, etc.)
- Economics and Commerce
 - Dominated by movement of electrons (comsats, remote sensing, etc.)
 - Ground-based components central to commercial viability (GPS and ground-based uses worth billions)



Apollo

Its Place in the History of Human Spaceflight

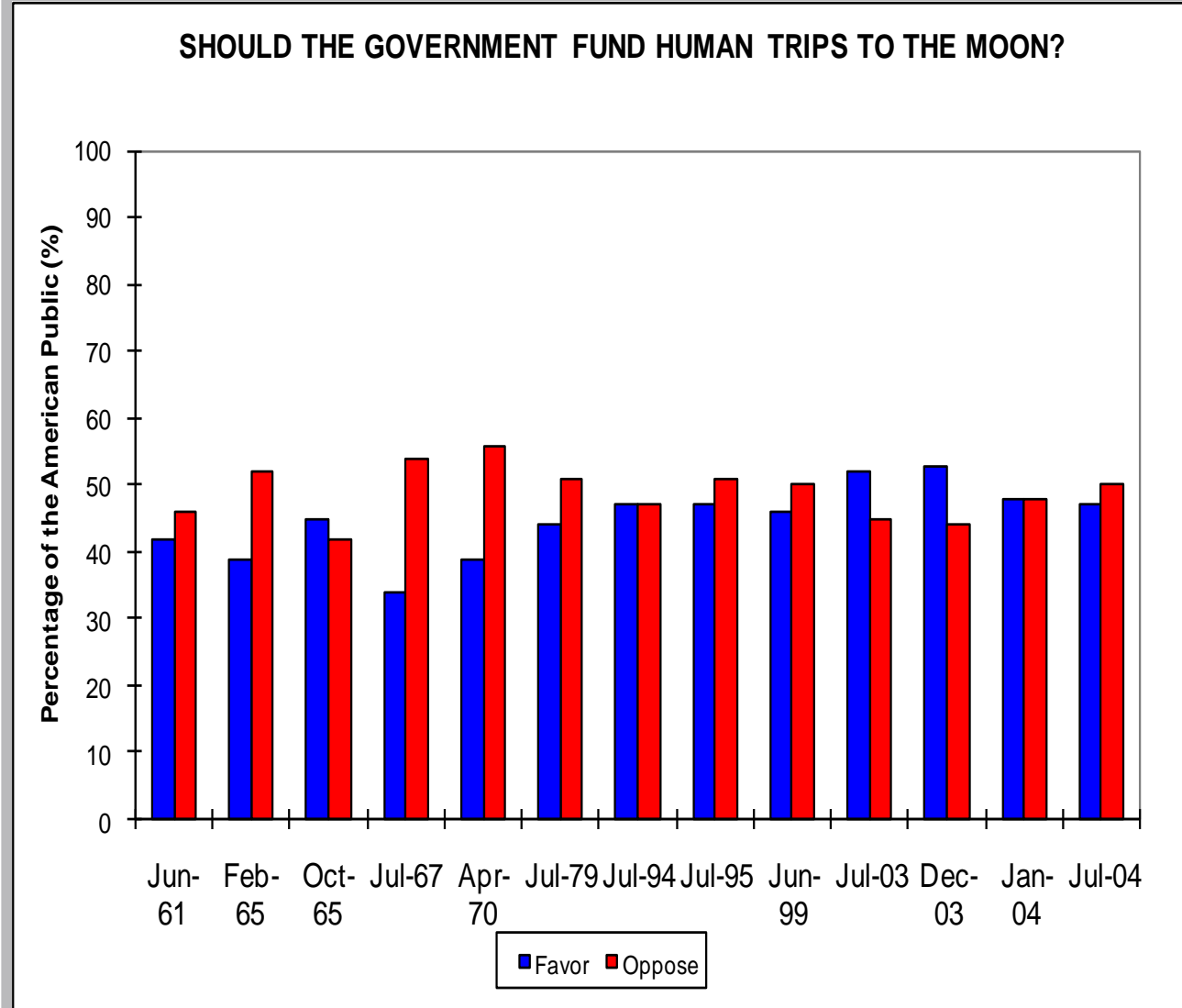
Apollo as Strategic Imperative



- Apollo may only be understood as response to Cold War rivalry:
 - JFK/Khrushchev personal relations
 - Gagarin flight
 - Bay of Pigs Fiasco
- Window was very short for decision—6 weeks in Apr-May 1961
- JFK sought variety of ways to get out of commitment
- After 1963, Apollo became critical to Kennedy legacy

Public Support for Apollo

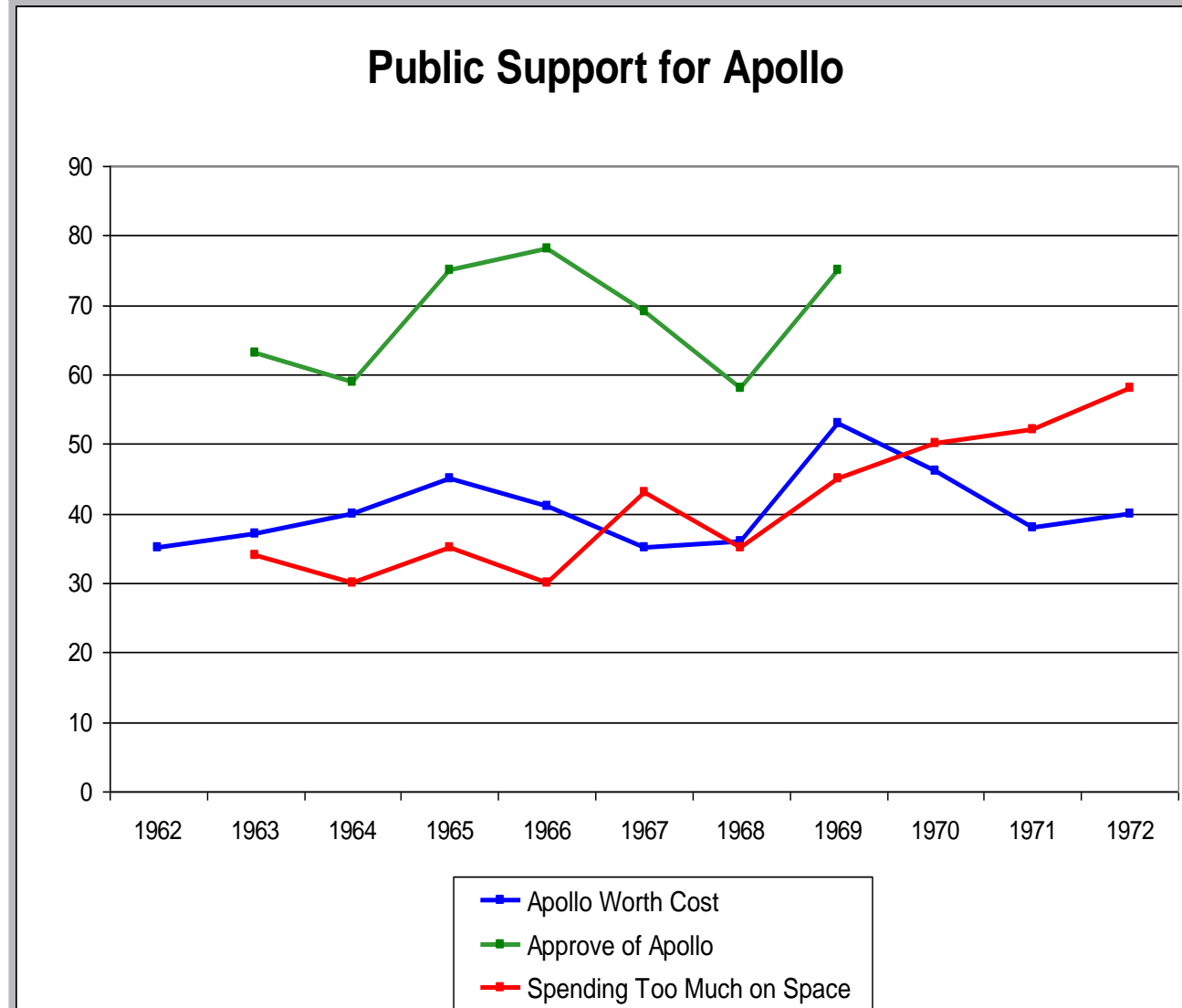
Americans did not send astronauts to the Moon with Project Apollo between 1969 and 1972 because everyone supported it.



Apollo, Budgets, and Public Support

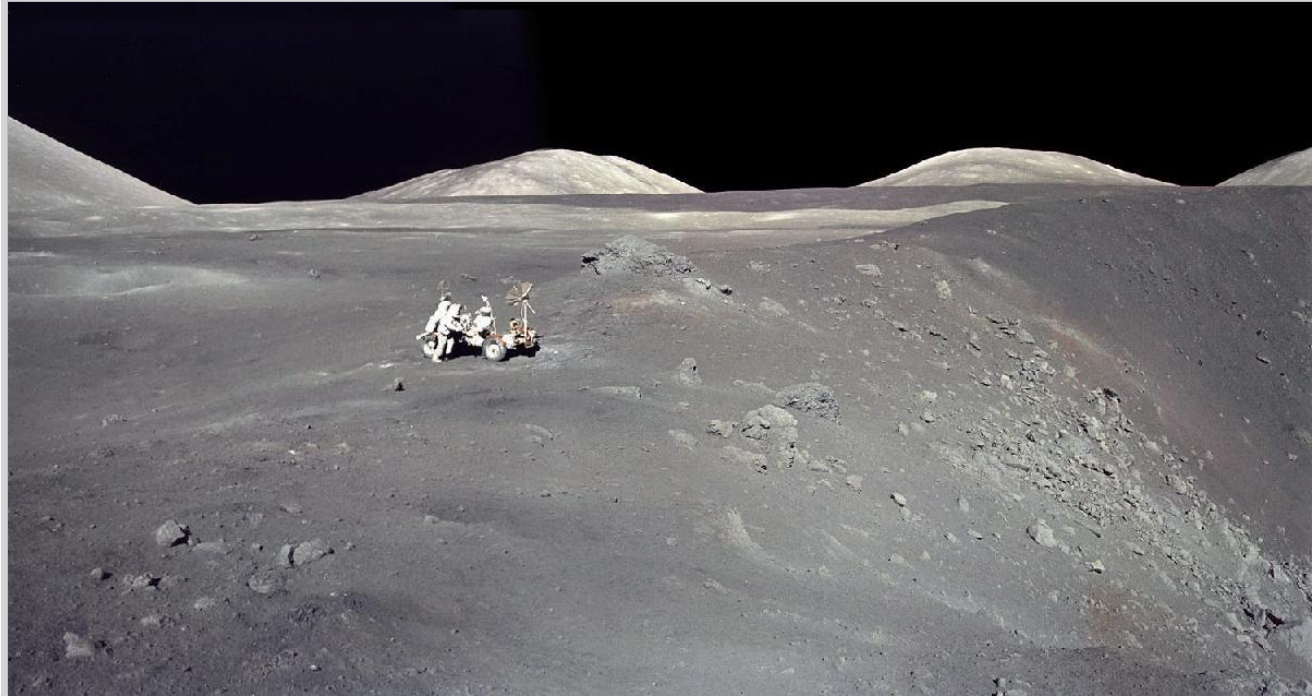
6

Whenever questions are asked about Apollo and its cost, the program received poor support. When divorced from costs, public quite supportive.



Apollo 17 Panorama

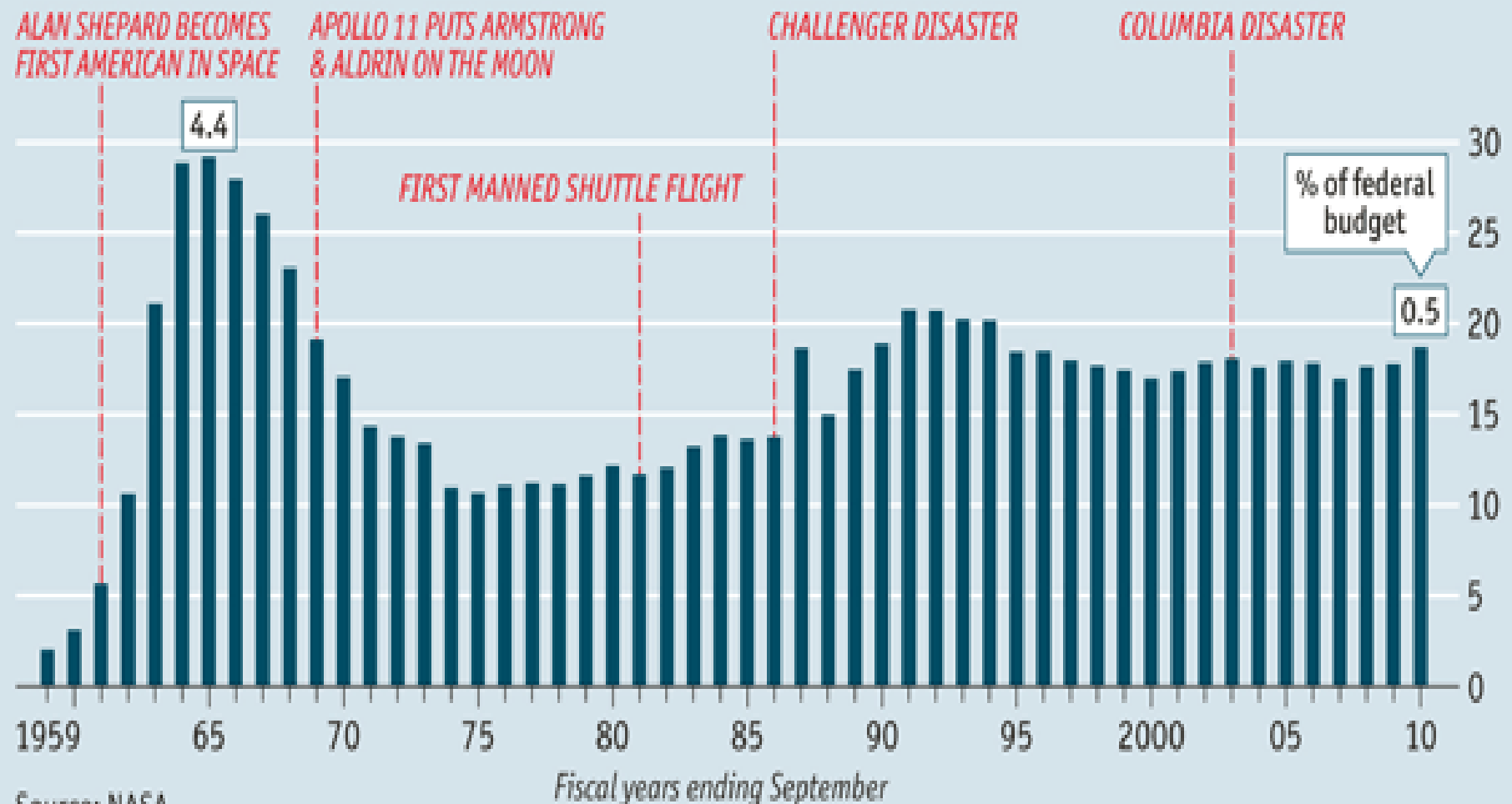
This image of Harrison Schmitt makes clear one reason Apollo was never followed with additional Moon landing programs. Humanity found nothing there of value that they wished to exploit, as had happen repeatedly in previous terrestrial explorations.



Budgets and Perceptions

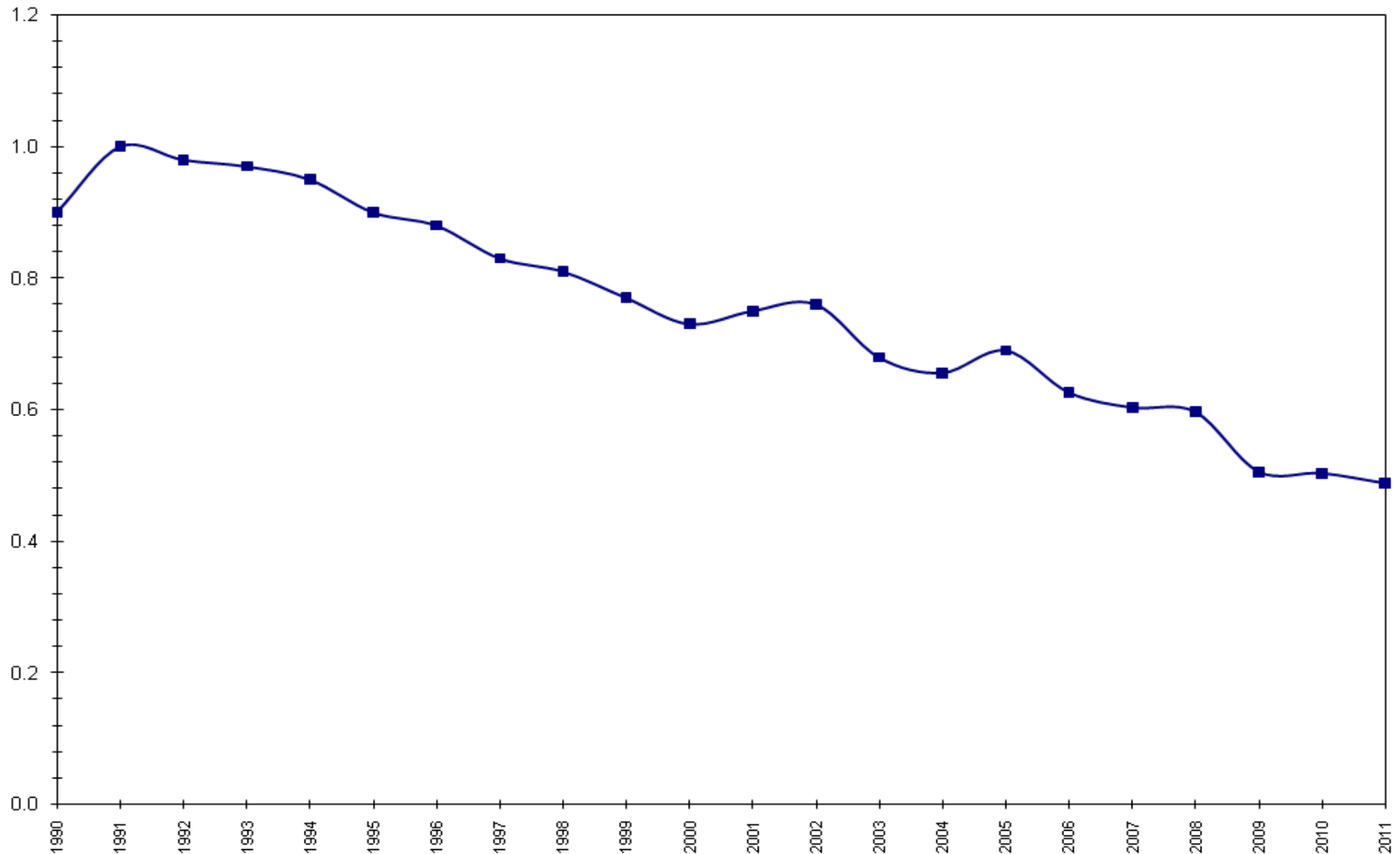
NASA Budget over Time

NASA budget, 2010\$, bn



Source: NASA

NASA Budget as Percentage of Federal Budget, 1990-2011

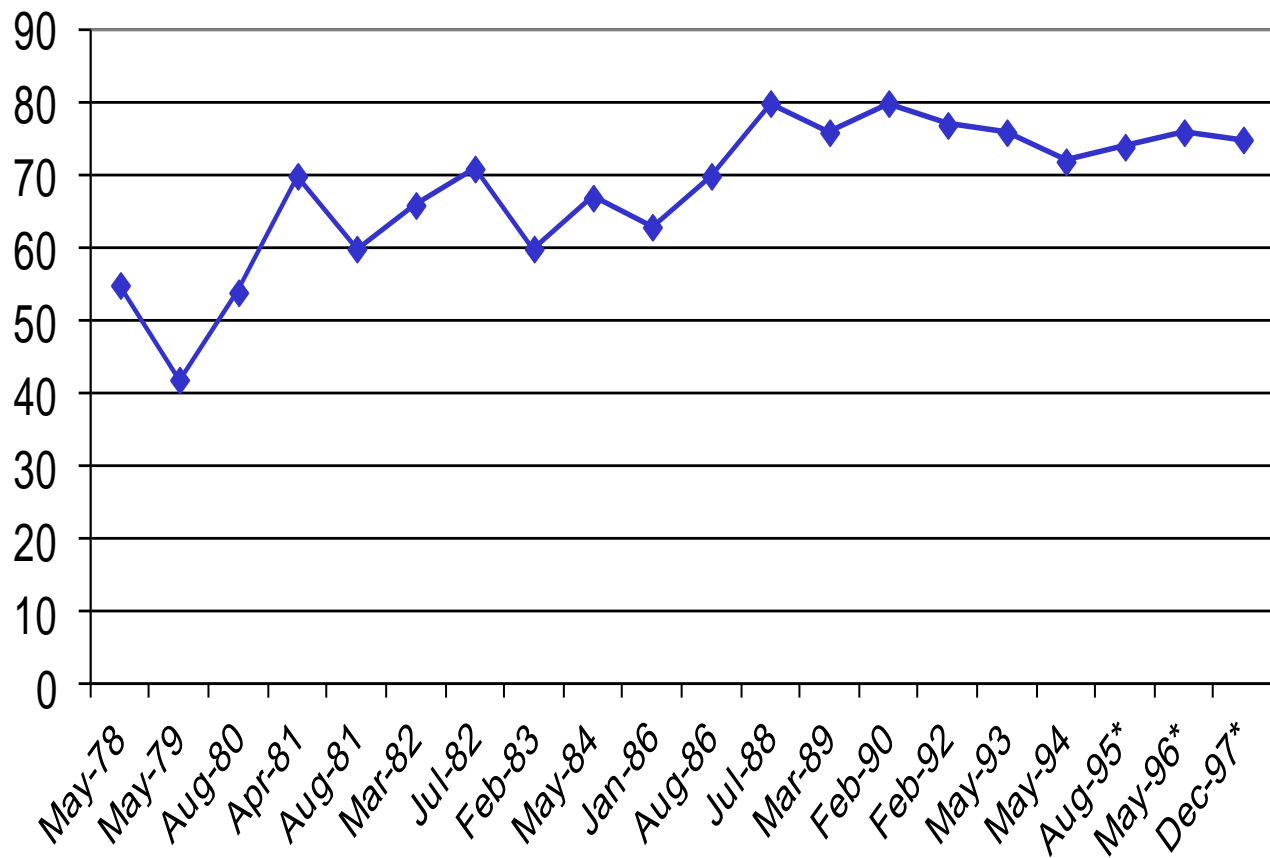


Some Good News

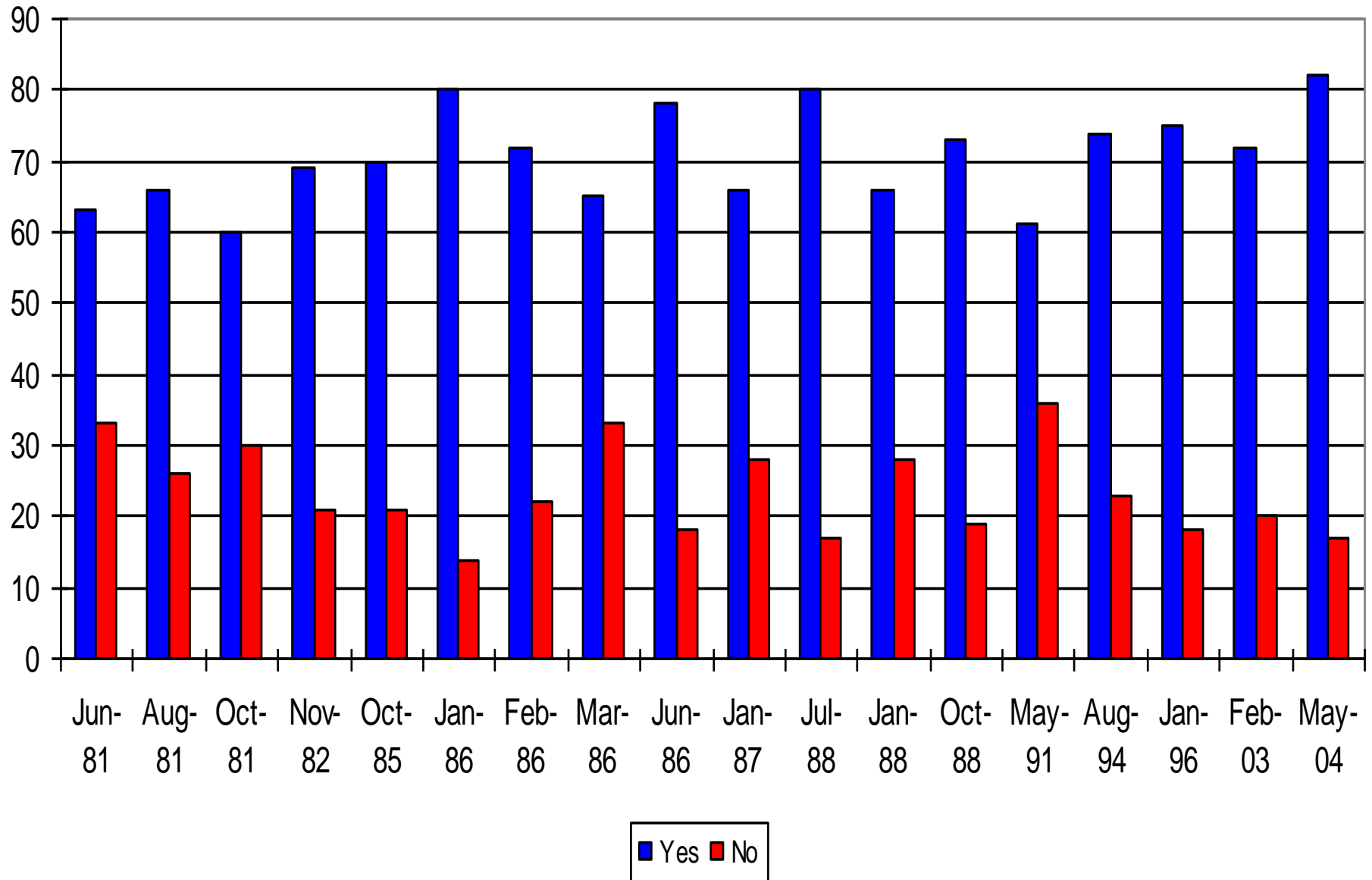
11

While Americans may not know that much about NASA's efforts in space, they generally have a positive opinion of it. Over 70 percent say they have a favorable impression, compared to less than 20% who hold an unfavorable impression. Polls conducted by Yankelovich.

I APPROVE OF AMERICA'S CURRENT CIVILIAN SPACE PROGRAM

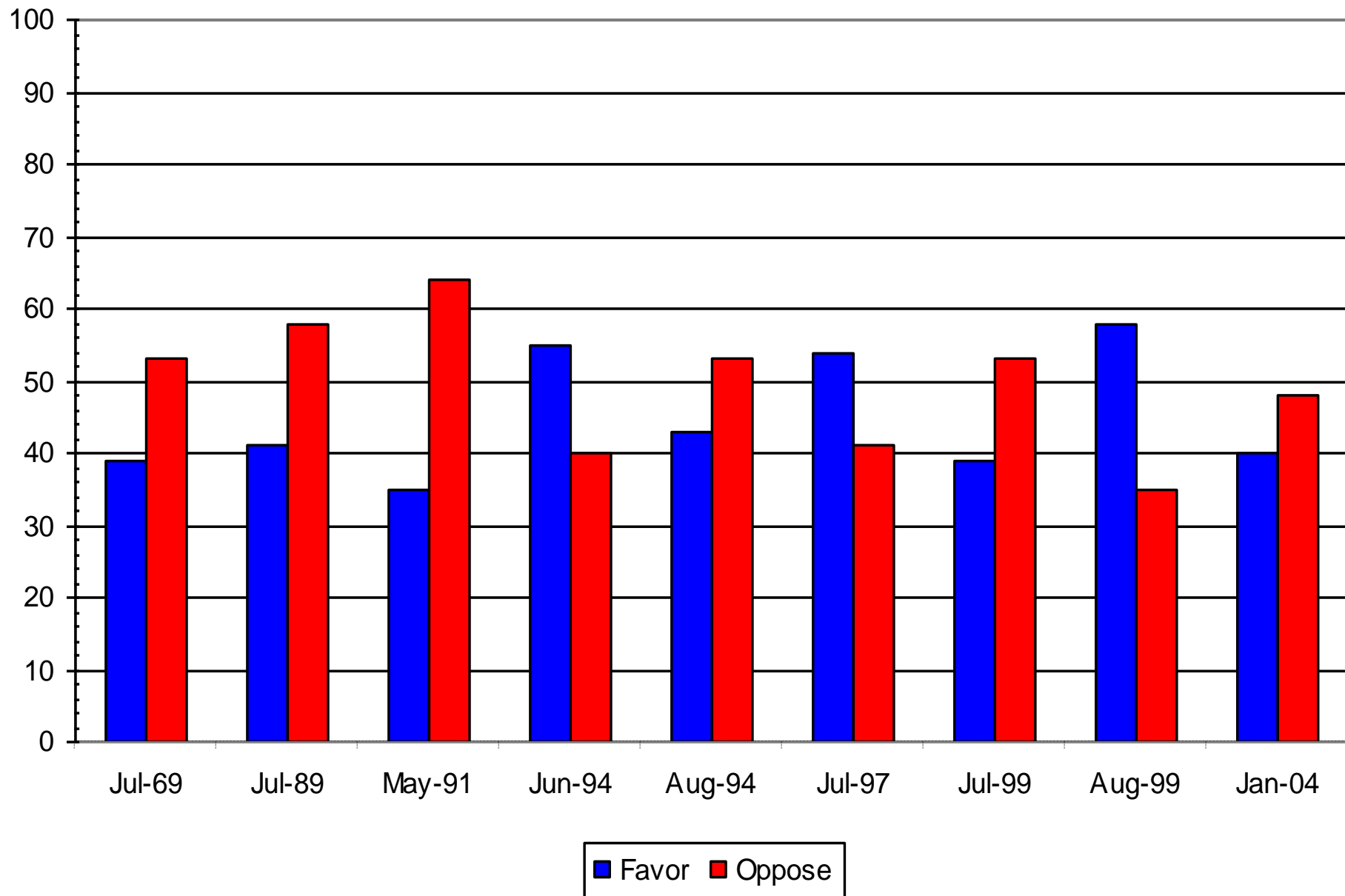


IS THE SPACE SHUTTLE A GOOD INVESTMENT?



Sobering Realities

SHOULD THE GOVERNMENT FUND HUMAN TRIPS TO MARS?



If spending had to be cut on federal programs, which two federal program(s) do you think the cuts should come from? (Harris Poll 4/10/2007)

Program	Total %	Republican %	Democrat %	Independent %
Space program	51	44	58	49
Welfare	28	43	18	29
Defense spending	28	8	45	28
Farm subsidies	24	29	25	22
Environmental programs	16	30	7	14
Homeland Security	12	3	14	21
Transportation	11	16	9	9
Medicaid	4	6	3	2
Education	3	4	1	2
Social Security	2	3	*	2
Medicare	1	2	*	1

Reconsidering Spaceflight Rationales

- Currently, no firm strategic imperative for human space exploration and development
- As primary rationales, human destiny, national prestige, technology spin-offs, science, and inspiration of youth appear insufficient
- Expansive views of economic development and survival might become primary rationales of future



“Someday I might travel to another planet, but I’m not sure why.”