

CBO TESTIMONY

Statement of
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before the
Committee on Science, Space, and
Technology
U.S. House of Representatives

January 31, 1991



CONGRESSIONAL BUDGET OFFICE
SECOND AND D STREETS, S.W.
WASHINGTON, D.C. 20515

Mr. Chairman, I appreciate this opportunity to discuss the budgetary issues raised by the Report of the Advisory Committee on the Future of the U.S. Space Program, or the Augustine Report, as it has come to be known. The report confronts the Congress and this Committee with a number of difficult questions. While these questions are not new, they are fundamental to the country's future in space.

THE ISSUES RAISED _____

Over the last several years the Congressional Budget Office (CBO) has worked to assist the Congress in making decisions about the National Aeronautics and Space Administration (NASA) and its program. A persistent theme in that effort has been the tension between NASA's programmatic aspirations, their cost, and the agency's budget.

The Augustine Report directly addresses these issues. Concerning the future, the report concludes that a "**strong** space program" could be bought, if the NASA budget were permitted to grow at a rate of 10 percent annually, adjusted for inflation, until it reached a level equal to 0.4 percent of gross national product (**GNP**). Concerning the current program and its budget, the report states that "NASA is currently over committed in terms of program obligations relative to resources **available--in** short, it is trying to do too much and allowing too little margin for the **unexpected.**"(p.2)

My testimony today addresses these areas.

BUDGETARY IMPLICATIONS OF THE RECOMMENDATION FOR 10 PERCENT GROWTH

If NASA's budget were permitted to grow at a real rate of 10 percent annually, as the Augustine Report recommends, NASA would increase its share of GNP, all discretionary spending, and domestic discretionary spending.

CBO's economic projections suggest that NASA's budget would have to grow at about 14 percent a year in nominal terms to meet the Augustine recommendation of a 10 percent real annual growth rate. As shown in the table, the share of projected GNP claimed by NASA in 1995 would climb to 0.33 percent, from the current level of 0.25 percent. If nominal GNP continued to grow at the rate used to project its value for 1993 through 1995, and NASA's budget continued to achieve 10 percent growth after inflation, the plateau of 0.4 percent of GNP recommended by the Augustine Report would be reached in 1998. For purposes of historical comparison, the NASA budget's share of GNP peaked at over 0.8 percent in 1966--in the midst of the Apollo program--and reached a low point of under 0.2 percent in 1979.

NASA's share of all discretionary spending and of domestic discretionary spending would also grow if the Augustine recommendations were accepted. NASA would account for 4.6 percent of total discretionary spending in 1995, up from the current level of 2.8 percent. NASA's share of domestic discretionary spending would increase from 7.6 percent to 9.1 percent by 1993. The Omnibus Budget Reconciliation Act (OBRA) established spending caps for all discretionary spending

for 1991 through 1995 and for domestic discretionary spending for 1991 through 1993. These caps may be adjusted to take account of changing economic circumstances, and new spending may be coupled with new offsetting receipts. Nevertheless, the data illustrate the increasing claim on discretionary resources required to accommodate the Augustine recommendation of 10 percent real growth.

The cost of the Augustine Report's recommendation can also be illustrated by comparing the dollar amounts necessary to support 10 percent real growth for NASA with the increase in dollar amounts permitted to all discretionary spending under **OBRA**. For example, for 1992, 10 percent real growth for NASA would require a \$1.9 billion increase in budget authority, or over 20 percent of the \$8.6 billion increase permitted for domestic discretionary spending, and over 15 percent of the \$11.7 billion for all discretionary spending. In 1994, the year when discretionary spending limits for domestic, defense, and international programs are to be combined, a \$700 million decrease is required for total discretionary spending. The Augustine recommendation would require NASA's budget to increase by \$2.5 billion in that year.

These comparisons make clear that under current law, real increases for NASA can only be gained at the cost of either real decreases for other federal programs or of increases in taxes. For example, within the area of concern to this Committee, other science and technology spending might have to be restricted. To take another area, that of the committee having jurisdiction over appropriations for the Department of Veterans Affairs, the Department of Housing and Urban

Development and independent agencies including NASA, real increases for NASA might require cuts in veterans' health benefits, housing programs, or outlays for the National Science Foundations.

THE CURRENT PROGRAM AND ITS BUDGET _____

Over the last three years, NASA has been granted roughly 10 percent real growth in its annual budget. The Augustine Committee interprets these developments as a shift in the trend of the last 20 years, during which time NASA achieved this rate of growth in only three years.

Perhaps it is in recognition of the longer trend that the Augustine Committee sought priorities among our objectives in space. Specifically, its report recognizes that the nation may not choose to pursue all of the missions space advocates deem important. The report is explicit in stating that it is better to achieve limited objectives than to aspire to the grand, while accomplishing little or nothing. In the event that sufficient resources cannot be found to fund the current NASA program, the Augustine Report provides a thoughtful beginning to the discussion of what should be funded and what should not.

CBO's 1988 study, *The NASA Program in the 1990s and Beyond*, reached conclusions similar to those of Augustine Report concerning NASA's program and its budget. The CBO study found that the basic, or core program, proposed by NASA would require real increases in the agency's budget during the 1990s, even

under optimistic assumptions about project costs and schedules. More ambitious efforts than the core **program--a** lunar base and a manned mission to Mars during the first 10 years of the next **century--were** estimated to require a tripling of NASA's budget from the 1988 level, even after adjustment for inflation.

The CBO study noted that, if the NASA budget remained constant at its 1988 level, or increased too slowly to fund the core program, the Congress and the Administration would have two alternatives. The program could be stretched out, allowing the space station, transportation investments, and major space science projects to be carried into the first decade of the new century. Alternatively, the program could be restructured by adopting a less ambitious set of goals that would **deemphasize** manned flight activities in favor of unmanned missions.

CBO's 1988 study saw each option as carrying a set of costs and benefits. The stretch-out option would keep the programmatic plate full and stay the course in developing the large assets deemed necessary to the manned program and, implicitly, to future human exploration of the solar system. The CBO study cautioned, however, that a stretch-out could diminish the productivity of all parts of the program by increasing project costs and delaying missions. In contrast, restructuring would scale back the program activities to fit the budget, under the banner of aspiring to less but accomplishing that to which we aspire. Invariably, this would require **decreasing--but** not **eliminating--** manned activities, and limiting the number of large expensive missions undertaken by the space science **program--for**

example, choosing to forgo major new projects in one of the big three areas of the program, physics and astronomy, planetary exploration, or Earth observation.

The Augustine Report advocates increases in NASA's budget to accomplish even more than the agency's current program. Nevertheless, it presents much the same picture that the 1988 CBO report did. It makes clear that the projections of the cost of NASA's program included in the CBO report were optimistic. Over the last three **years**, NASA has achieved the growth in its real budget projected by the 1988 report as necessary to cover the cost of its program. Yet, as already noted, the Augustine Report states that the NASA program is still "trying to do too much" , relative to available resources. Unless new resources are made available, the choices for 1992 will be the same as they were in 1989. We can accept the ever-increasing risk of getting less for what we spend, or accept restraints and restructure the program to aim for more modest, but achievable, goals.

THE SHARE OF ECONOMIC AND BUDGETARY AGGREGATES
CLAIMED BY NASA UNDER A 10 PERCENT REAL GROWTH
SCENARIO, 1991-1995 (In fiscal years)

Aggregate	1991	1992	1993	1994	1995
Gross National Product	0.25	0.26	0.28	0.30	0.33
Total Discretionary Spending^{a/}	2.8	3.1	3.5	4.0	4.6
Domestic Discretionary Spending^{a/}	7.6	8.3	9.1	n.a.	n.a.

SOURCE: Congressional Budget Office.

NOTE: n.a. = not applicable.

a. The Omnibus Budget Reconciliation Act of 1990 established spending caps for all discretionary spending in 1991 through 1995, and for domestic discretionary spending in 1991 through 1993.

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Prior to joining the CBO he was a project manager with the Center for International Technical Cooperation, and an analyst with The Analytic Sciences Corporation (TASC). Mr. Moore holds a master's degree in economics from the American University.