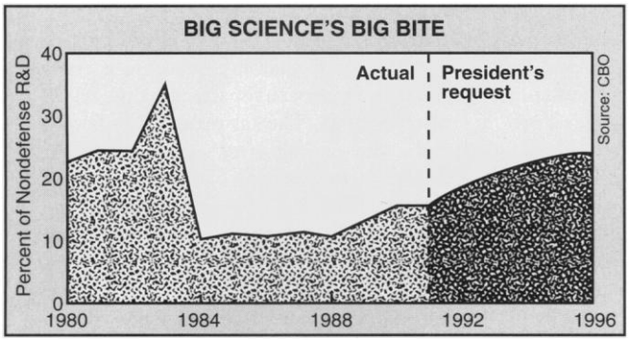
Tilting Toward Megaprojects

As you watch Congress approve billions of dollars for the space station, perhaps you get the impression that Big Science is taking a bigger and bigger bite out of the federal government's research budget. You're right. The 80 largest government science projects—those costing more than $25 million apiece—will consume 15% of nondefense R&D funds this year, up from 10% in the mid-1980s. And, if the Bush Administration's budget proposals were to be adopted, Big Science would eat up 22% of federal nondefense R&D by 1996 (see chart). But before you rail at the unprecedented gluttony of Big Science, look back to 1983. Big Science accounted for a whopping 35% of nondefense R&D spending, thanks in large part to the enormous appetite of the space shuttle in its final stages of development.



Back to the future. *The Big Science spike in the early 1980s was caused by the space shuttle; much of the rise in the 1990s reflects space station funding.*

The figures come from the Congressional Budget Office (CBO), which last week published perhaps the most comprehensive look yet at the balance between big and little science in the federal budget.* While not every trend line will confirm the worst fears of small science supporters, that group will see plenty in the report to worry about. For example, it won't take 80 projects to munch up 15% of all nondefense R&D by 1996. The three biggest projects—the space station, the Superconducting Super Collider, and the Earth Observing System—will manage that all by themselves.

Of course, the Bush Administration's budget projections assume that overall spending on nondefense R&D will climb fast enough over the decade to accommodate the growing cost of Big Science and still provide healthy increases for other R&D projects. Indeed, the CBO study points out that that has been the case for the past few years: Although Big Science has increased its share of the total, most other areas of science and technology have also experienced real growth.

The report warns, however, that overall growth in nondefense R&D cannot be counted on. One reason: Last year's budget agreement will hold down total domestic spending through 1995, so any expansion in total R&D budgets will be at the expense of other programs. Moreover, if the megaprojects experience cost overruns—a common feature of the genre—they will inevitably cut into some of the growth projected for little science. A combination of slow overall growth and cost overruns could be disastrous. In CBO's worst-case (though unlikely) scenario, the Administration's proposed funding for R&D other than big projects would be reduced by 45% by 1996.

CBO notes that some big projects—it cites the shuttle and the space station as examples—are not, strictly speaking, science projects, but they compete directly with other R&D projects. Says the report, the shuttle has been "the most dramatic instance of a large R&D project crowding out other R&D spending in the 1980s."

Would canceling one or more big projects help alleviate the pressure on other science budgets? Perhaps. The report notes that scrapping the space station would save $2 billion to $2.6 billion a year. But there's no guarantee that those savings would be applied to science rather than, say, housing, or a more costly bank bailout, or some yet undiscovered S&L-like scandal.

■ COLIN NORMAN

**Large Nondefense R&D Projects in the Budget: 1980-1996,* Congressional Budget Office, July 1991.

Communist Academics Refuse to Fade Away

Berlin—Communism may be dead and buried in eastern Germany but at least one of its legacies—the old boy network of communist-appointed university staff—appears to be alive and kicking. Earlier this month, the renowned Humboldt University in east Berlin succeeded in upsetting delicate arrangements made at the time of unification by winning an injunction against the Berlin government. The result: University staff appointed by the old regime can hold onto their tenured jobs, even if they had links to the STASI, the former regime's state security apparatus—indeed, even if they had helped dismiss free-thinking colleagues. A prolonged legal battle with widespread implications looks set to follow.

The case of *Humboldt* v. *Berlin* began when the new city-state government of Berlin inherited the university, which is public in the U.S. sense of the word and is situated on Unter den Linden right in the center of old Berlin. Closing it down altogether appeared out of the question, given that it was founded in 1810 by Wilhelm von Humboldt—the great statesman and philosopher to which Germany owes the idea of the university as an independent body combining research and teaching. But to the democrats running Berlin it seemed equally impossible to take over the university just as it was, with a large number of appointees adhering to the party line of the former communist government.


Bettman

Turning in his grave? *Wilhelm von Humboldt.*

Last December, the Berlin government opted for a middle way, closing all departments that appeared to be ideologically slanted and dismissing their staff. The Berlin government planned to reopen the departments and hire a new staff later. Some would be rehired from the previous staff—but only those proven to have no links to the STASI or to alleged human-rights cases involving abuse of subordinates.

The plan seemed perfect. By closing departments instead of dismissing individuals, strict West German laws that protect individual employment rights could be avoided. Without a way around these laws, some Germans joke that unification would have been canceled—each and every one of the 14,000 university research workers and 18,300 employees of the Academy of Science (to say nothing of 1.7 million civil