The PRESIDING OFFICER (Mr. THOMAS). The Senator from Maryland.

Ms. MIKULSKI. I thank the majority leader for his very kind words about the way we have tried to move the bill. We, too, urge our colleagues to come over, particularly those who now have an amendment that they wish to bring to the floor. We were open for business yesterday, did 4 hours of very good, yeoman work. I think both sides of the aisle want to move the bill. We would like to concentrate on the major amendments, space station and veterans health care, and if others would just come over and discuss them with us, we believe we can iron some of them out and move ahead.

I thank the leader.

RESERVATION OF LEADER TIME

The PRESIDING OFFICER. Under the previous order, leadership time is reserved.

DEPARTMENTS OF VETERANS AFFAIRS AND HOUSING AND URBAN DEVELOPMENT, AND INDEPENDENT AGENCIES APPROPRIATIONS ACT, 1997

The PRESIDING OFFICER. Under the previous order, the Senate will resume consideration of H.R. 3666, which the clerk will report.

The assistant legislative clerk read as follows:

A bill (H.R. 3666) making appropriations for the Departments of Veterans Affairs and Housing and Urban Development and for sundry independent agencies, boards, commissions, corporations, and offices for the fiscal year ending September 30, 1997, and for other purposes.

The Senate resumed consideration of the bill.

Pending:

Bond amendment No. 5167, to further amend certain provisions relating to housing.

Mr. LOTT. Mr. President, I observe the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BOND. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BOND. Mr. President, I think the parliamentary situation in which we find ourselves is this particular provision dealing with the Bion Program in NASA was included in the House bill. The committee amendment struck the House prohibition on those activities.

So, procedurally, the people who want to maintain the amendment will, after discussion, move to table the committee amendment, which is, I believe, the pending business. Is that correct?

The PRESIDING OFFICER. The Senator is correct.

Mr. BOND. Therefore, we can begin the discussion whenever the proponents wish. The tabling motion will come at the end of the discussion. We would like to make sure that everyone who wants to be heard on this issue has an opportunity. We do not yet have a time agreement. We talked about 2 hours last night. I would like to know from the proponents, and will be discussing with them, how much time we need. There are some on our side who wish to maintain the amendment.

I hope we can wrap up the debate in fairly short order this morning and then move to the tabling motion. But I reserve my comments on the issue until those who are proponents have an opportunity to present their views.

Ms. MIKULSKI. I think that is a very good way to proceed. Hopefully, we can conclude this before 11:30 and then be able to move to the Iraqi amendment, so when we come back after the conference we can dispose of both of those and be then ready to continue to move the bill. That is kind of the way I see it.

Mr. BOND. I thank the ranking member for her very helpful suggestions. My view is we are now open for business for the next hour or so. We could have a very spirited debate on this important issue, and I hope then we will be in a position to resolve it.

I ask my colleague from New Hampshire if he is ready to proceed. If so, I will yield the floor.

The PRESIDING OFFICER. The Senator from New Hampshire.

EXCEPTED COMMITTEE AMENDMENT ON PAGE 104, LINES 21–24

Mr. SMITH. Mr. President, the pending amendment is a committee amendment to strike the language in the bill, as the Senator from Missouri has just indicated, that prohibits funding from being used for the so-called Bion 11 and 12 missions. The amendment will prevent the waste of approximately $15.5 million on wasteful research involving sending Russian primates into space. Let me repeat that, because one may wonder why we are spending money to send Russian primates into space. I wonder that myself, but that is what we are talking about. What we are trying to do is prevent the waste of $15.5 million of taxpayer money involving research—and it is wasteful research—sending Russian primates into space.

I would also like the record to reflect that Senators FEINGOLD, HELMS, KERRY of Massachusetts, D'AMATO, and BUMPERS have joined me in opposition to funding for this Bion Program. It is a bipartisan group of Senators, as you can tell, crossing the whole political spectrum. I believe Senator FEINGOLD will be speaking on the issue, if not others.

Just so there is no confusion, the language before the Senate passed the House by an overwhelming vote of 244 to 171. It appears on page 104 of the Senate bill. It reads as follows:

None of the funds made available in this act for the National Aeronautics and Space Administration may be used to carry out or pay the salaries of personnel who carry out the Bion 11 and 12 projects.

The pending committee amendment strikes this language. This is what we object to. I want to say at the outset, it is very important, I spent almost 6 years on the Science and Technology Committee in the House of Representatives before I came to the Senate. On that committee I do not think there is anyone who was a stronger supporter of NASA or the space program. I continued that support in my time in the Senate. This is not, and I want to make it very clear, it is not a NASA-bashing amendment. I am not asking these funds be taken out of NASA. I am just asking they not be spent on this particular project, the Bion project.

So let me make it very clear. This Senator has offered a number of amendments in the past to cut spending, and I am proud of them, but that is not what this is. I am not trying to take the money from NASA. I am trying to stop NASA from wasting money that NASA probably could find good use for in some other way.

I had hoped the committee would retain the Bion language, given that it passed the House by a majority of 73 votes. I felt it was reasonable that that language be retained. Frankly, I am disappointed it was not. We had 147 Republicans and 96 Democrats on the House side who supported the amendment to eliminate that funding.

There has been a great deal of criticism of the program from a wide variety of groups: the science community—it is interesting—the science community; not all in the science community, but many; taxpayer groups, those who wish to save tax dollars; animal welfare organizations; and, as well, interestingly enough, from people who had the courage to speak up inside NASA. So when we have NASA people, people within the science community, animal rights organizations, and taxpayer groups all together on an issue, I think it is worth the Senate's time to look at it very carefully.

This letter is from Tom Schatz of Citizens Against Government Waste, which strongly supports this amendment. He says here, this vote will be considered for inclusion in their 1996 congressional ratings. This is a group I have come to deeply respect because they have the knack for finding the most egregious examples of waste in the Federal bureaucracy. It is a very good group. Most Senators here are aware of this group and the very good job they do.

Mr. Schatz is very specific in his letter. I ask unanimous consent this letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

DEAR SENATOR: On behalf of the 600,000 members of the Council for Citizens Against Government Waste (CCAW), I urge you to support the efforts by Sens. Smith (R-N.H.) and Feingold (D-Wis.) to eliminate funding

for two Bion missions in the FY 1997 Veterans' Affairs, Housing and Urban Development, and Independent Agencies Appropriations bill (H.R. 3666). By eliminating this unnecessary program, taxpayers could save as much as $15.5 million.

These missions, known as Bion 11 and 12, are joint U.S./Russian/French flights scheduled for September 1996 and July 1998. The Russians will send Rhesus monkeys into space for 14 days so that scientists can study the effects of microgravity on the body. According to the Congressional Research Service, Russia has been executing these missions since 1973, and NASA has participated in the last eight, beginning in 1975. A variety of experiments on rodents, insects, and primates have been performed for the U.S. in the 17 years between 1975 and 1992, the date of the last Bion mission.

Data from the seventy-five successful Space Shuttle flights or long-term stays by Russian cosmonauts, such as Valery Polyakov's 439 day flight, could more accurately and less expensively provide the information scientists need to study these effects. In fact, NASA has performed several of its own experiments on monkeys, including two shuttle missions. If NASA feels that it is necessary to do further study on the matter, they only need ask astronaut Shannon Lucid how she feels when she returns from the Mir Space Station. Tax dollars should not be spent on duplicative and wasteful programs.

During consideration of H.R. 3666, the House supported an amendment to eliminate funding by a solidly bipartisan vote of 244–171. The Senate must also reject this funding. We urge you to support Sens. Smith and Feingold and kill this program at once. Any vote on this program will be considered for inclusion in the CCAGW 1996 Congressional Ratings.

Sincerely,

THOMAS A. SCHATZ,
President.

Mr. SMITH. I will quote from the letter just a couple of lines:

On behalf of the 600,000 members of the Council for Citizens Against Government Waste, I urge you to support the efforts by Sens. Smith and Feingold to eliminate funding for two Bion missions in the FY 1997 Veterans' Affairs, Housing and Urban Development, and Independent Agencies Appropriations bill (H.R. 3666). By eliminating this unnecessary program, taxpayers could save as much as $15.5 million.

He goes on to say what these missions are.

These missions known as Bion 11 and 12 are joint U.S./Russian/French flights scheduled for September 1996 and July 1998. The Russians will send Rhesus monkeys into space for 14 days so that scientists can study the effects of microgravity on the body. According to the Congressional Research Service, Russia has been executing these missions since 1973, and NASA has participated in the last eight, beginning in 1975. A variety of experiments on rodents, insects, and primates have been performed for the U.S. in the 17 years between 1975 and 1992, the date of the last Bion mission.

In addition, Mr. Schatz goes on to say:

Data from the seventy-five successful Space Shuttle flights or long-term space by Russian cosmonauts . . . could more accurately and less expensively provide the information scientists need to study these effects. In fact, NASA has performed several of its own experiments on monkeys, including two shuttle missions. If NASA feels it is necessary to do further study on the matter, they only need to ask Shannon Lucid how she feels when she returns from the Mir Space Station. (She has been up there several months.) Tax dollars should not be spent on duplicative and wasteful programs.

That is the end of the information from that letter. It is amazing that NASA would ask the taxpayers of the United States, or this committee, bringing this bill to the floor, would ask the taxpayers of the United States to spend $15.5 million to put monkeys in flight for 14 days to find out what effect space has on those monkeys in 14 days when we put human beings in space for 469 days. If there is anyone listening to me or anyone, a Member of this body, who can tell me how that money is well spent, I would like to hear from them. Again, let me repeat, putting monkeys in space for research for 14 days to find out the effects on the body when we send human beings in space for 469 days—can somebody help me? I am sending out the alert here.

Mr. President, this is one of the best examples that I have seen in my entire congressional career of a case of a program that began with good intentions that has outlived itself, because you see, many, many years ago when we started this, astronauts were not the first in space, primates were. We were obviously trying to find out the effects of the future human beings who were going to be in space. Well, that is past; that is over. But, O my God, let's not cut a Government program. Whatever we do, let's keep it going, let's keep it funded, let's not get rid of any bureaucrats who might be doing research we do not need to do. My goodness, we certainly would not want to do that, but that is exactly what the situation is here, Mr. President. This is outrageous. It is outrageous. There is no need for it, and, yet, we are doing it.

I also have a letter cosigned by Mr. Schatz and Ralph De Gennaro of Taxpayers for Common Sense, another antiwaste group that has done excellent work on this issue.

Mr. President, I said it is estimated that this amendment would prevent the waste of 15.5 million taxpayers' dollars by prohibiting funding of these two projects, Bion 11 and Bion 12, which involves sending primates into space. The Bion 11 mission is scheduled for liftoff this month, with Bion 12 in 1998.

Russian-owned rhesus monkeys would be launched from Kazakhstan in Russian capsules loaded with Russian technology for 2 weeks to study the effects of weightlessness. I say to my friends, the Senator from Maryland and the Senator from Missouri, who I know care about wasting taxpayers' dollars, 14 days in space for rhesus monkeys to determine the effects of weightlessness on the human body when we have human beings in space for 469 days? Please, give me a break. Save $15.5 million. The House said so. Let's be reasonable.

I realize that some are going to suggest this is still important. I am waiting to hear how someone can tell me that it is. NASA has already conducted five similar missions using primates as test subjects, as well as two shuttle missions dedicated to studying the effects of gravity on humans. Shuttle mission spacelab life sciences 1 and 2 focused on the effect of microgravity on astronauts in 1991 and 1993. Five United States-Russian ventures in the eighties and early nineties sent primates into space to research the same subject. It is bad enough the Russians are doing it. Why do we have to do it? I know there are a lot of people in my State of New Hampshire who would love to have that $15.5 million, a lot of needy people, people who do not have enough money for fuel in the winter—that is coming on us—or perhaps helping some small business get started and create more jobs.

This is not an anti-NASA amendment. This is a commonsense amendment, and the taxpayers group says they are going to rate this one, and they should, they absolutely should. I am glad they are doing it, because this is an outrageous waste of taxpayers' money.

I know year after year, we do see anti-NASA amendments. We always have one from the Senator from Arkansas cutting the space station, and I oppose it every time because I support the space station. I oppose that amendment because I support the space station. I have always voted against these amendments to cut NASA or to cut the space station.

As I mentioned, I was a member of the Science, Space and Technology Committee in the House of Representatives for 6 years. I was a member of the Congressional Space Caucus and the Republican task force on space exploration. So I come at this not anti-NASA, and every person in the space agency who has worked there for any period of time knows this. They also know that this project is a waste of money.

I coauthored NASA authorization bills. In fact, I wrote language providing for the National Weather Service to conduct pH monitoring to provide the public with access to information about the acidity of rainfall. I cosponsored a resolution urging support for the space station budget and have consistently voted against efforts to cut the space station. I cosponsored legislation to promote space commercialization.

This is a pro-NASA amendment. That is what this is. This is a pro-NASA amendment because it is going to provide $15.5 million for something worthwhile. Taxpayers deserve to have their money spent wisely. They work hard to pay taxes to the Federal Government, and they deserve to have that money spent, not only wisely but reasonably.

(Mr. BROWN assumed the chair.)

Mr. SMITH. Mr. President, if you want to cast a NASA bashing vote, then this amendment is not the amendment for you, because that is not what

this is. This amendment, this $15 million comes right out of important NASA programs like the space station and the space shuttle. But if you are like me and you are excited about the advances we are making in space exploration, you ought to vote to eliminate this kind of waste and provide it in areas where the space program could use the money. Every nickel we spend on the Russian Bion program is money that would have been spent on important United States space priorities. Every nickel.

For example, we could divert this money to speed up the development of Lockheed Martin's Venture Star, the new X–33 single-stage reusable reorbit launch vehicle. The cost of this project will be about $1 billion through the year 2000. This is exciting, revolutionary technology, and it represents precisely the kind of innovation that I am talking about and precisely the kind of innovation that the American people expect out of their space program, which will create millions of jobs in the 21st century.

Furthermore, in the Venture Star Project, we will have a public-private partnership that helps ease the financial burden on the taxpayer. I am told that the estimated cost of sending payloads into space on the Venture Star will be approximately $1,000 per pound, compared with a $10,000 per pound cost on the space shuttle. A tremendous savings.

This $15 million could be used to accelerate the development of technology that will truly benefit our knowledge of space and enhance the competitiveness of the U.S. industry.

Mr. President, we all know how a program takes a life of its own. There has never been an example, as I said before, in all of my years in Congress that is a more egregious example of this exact fact: a program that went beyond what it was supposed to do and yet it continues because no one wants to pull the plug, because somebody is getting some research dollars to do this, somebody is tending the cages of the animals, somebody is making the money, getting a salary somewhere, so God forbid we should cut off a program.

I know that the current occupant of the chair, the Senator from Colorado, has joined me on many occasions in cutting spending. I say to the distinguished Senator that this is an example of the kinds of things that he has fought for for so many years in the House and in the Senate. Again, a program to find out the effects of weightlessness on human beings by putting primates in space for 14 days. We now have humans in space for over 400 days, and we still have the program. I repeat that because I know the distinguished occupant of the chair came in after my comments. I want to be sure he heard them because I need his vote on this issue.

The Bion Program is this kind of program. It has outlived itself. Let me give you a historical perspective. Let me read from a 1969 letter to Senator Peter Dominick, whose constituents at the time objected to NASA monkey experiments identical to Bion. NASA stated:

> The purpose of the biostat light mission is to determine the effects of prolonged exposure to the space environment, including weightlessness on the central nervous system, the cardiovascular system, metabolism and the behavior of a primate.

That was 1969. Thirty years later, almost, NASA still makes the same argument for the program even though humans have gone to the Moon and spent more than 400 days in space at one time. Shannon Lucid is there now, and has been there a lot longer than 14 days.

According to a July 11, 1995, article in the New York Times, more than 300 American and Russian astronauts have logged a total of 38 years in space since Yuri Gagarin in 1961 became the first person to ride a rocket into orbit. Think of that. More than 300 American and Russian astronauts have logged a total of 38 years in space since Gagarin in 1961 became the first person. Yet we still have to send primates into space for 14 days to determine the effects of weightlessness on the central nervous system? And 38 years of time in space by humans. But the project continues.

Why should we waste $15 million on a Russian project that is dedicated to an area of research that American scientists have already examined on seven previous missions? I do not know. Who knows? Nobody wants to pull the plug on the program. We do not want to offend the Russians? I do not know. We do not want to offend the French? I do not know, and I do not care. My responsibility is not to the French, it is not to the Russians. It is to the taxpayers. It just does not make sense. What are we going to learn?

Please, somebody, tell me what we are going to learn 15 million dollars' worth of new information on these two 14-day flights. The bill before us cuts NASA's budget for 1997 by almost $200 million below last year's funding level. When I say ''cut,'' I do not mean it in President Clinton's terms where we increase a program by billions of dollars and call it a cut. That is the President's language. We have been through that with Medicare and Medicaid where we increase a program by 25 to 42 percent and it is called a cut.

This is a real cut, Mr. President. In simple math in 1996 we spent $13.9 billion on the NASA budget. This year we spent $13.7 billion. So we are going down. And yet we still waste this kind of money. I am not arguing the need to cut the budget in light of our $5 trillion debt. But if there is anything I hear consistently from my constituents back home is they want us to start with waste, start with waste. Cut out the waste, the fraud, the mismanagement and then we can look at other programs that we may have to cut to get the job done but, for goodness sakes, start with the most outrageous, egregious waste of taxpayer dollars.

As one who is unabashedly a strong supporter for the NASA program, who is looking forward to the development of a new and exciting technology in the space program, who is looking forward to space exploration and the space station and all the positive spinoffs we will get, who is looking forward to the jobs that are being created, I would hate to see this money wasted on controversial and outdated research that reflects poorly on the agency. And it does. It reflects poorly on the agency.

Somebody in management somewhere did not have the courage to tell somebody they no longer had to attend those primate cages or whatever they do or get any more money. Somebody did not have the courage to tell them or to move them to some other position. So here we go. This is going to reflect poorly on NASA. It reflects poorly on NASA.

The Senate has an obligation to stop it just like the House did, Mr. President. I would like to share with my colleagues an article from the Washington Post on August 30, 1996, entitled, ''Reducing Force a Bad Idea, Space Center Director Says.'' Mr. President, I ask unanimous consent that article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Washington Post, Aug. 30, 1996]

REDUCING FORCE A BAD IDEA, SPACE CENTER DIRECTOR SAYS—MULTIPLE PROBLEMS PREDICTED FOR KENNEDY FACILITY

(By Seth Borenstein)

CAPE CANAVERAL.—Plans for a smaller work force at Kennedy Space Center will lead to hundreds of layoffs in two years and leave the center unable to do everything NASA expects of it, the center's director said in a letter to his bosses.

A dozen different types of work at Kennedy—including some safety inspections—can't be done if the center's civil service work force is cut to 1,445 as planned in October 1998, Director Jay Honeycutt said in an Aug. 7 letter. There are more than 2,100 federal workers at the space center.

A total of 547 people would have to be laid off as of Oct. 1, 1998, if the employment target doesn't change, Honeycutt wrote. In the past, Honeycutt had said layoffs might be avoided.

''The reduction predicted in . . . [the 1999 fiscal year] effectively removes all but direct mission operations support as of Oct. 1, 1998,'' Honeycutt wrote. ''I do not feel this is a prudent approach for the center . . . or the agency.''

In his letter, Honeycutt noted that the cuts would come just as the space center begins overseeing massive upgrades to the space shuttle and getting pieces of NASA's space station ready for launch.

Honeycutt said the 1,445-employee figure that NASA wants to impose on the center was based on it becoming a government-owned, contractor-run facility—an approach that has been heavily changed by NASA officials since it was announced in May 1995.

NASA plans to shrink the center's government work force even further by October 1999, though be less than originally planned. The agency had set a target of 1,135 workers for Oct. 1, 1999, but in late July NASA's deputy administrator wrote the General Accounting Office to say the revised target would probably be 1,360.

Honeycutt sent his letter to top space flight officials at NASA headquarters and Johnson Space Center.

The letter was part of a private, ongoing dialogue between the space center and Washington about staffing levels, but it became public Monday on an Internet computer site devoted to upcoming layoffs at the space agency, spokesman Hugh Harris said.

Harris confirmed the letter on the non-NASA World Wide Web site had been written by Honeycutt. He wrote that cutting the civil service work force to 1,445 would, among other things:

Leave NASA unable to monitor the safety and quality of contractors' work.

Make it impossible for the government to conduct safety inspections of certain facilities.

Force the center to discontinue independent safety studies called for by the federal commission that investigated the 1986 Challenger explosion.

Bring a halt to shuttle upgrade work beyond 1998.

Prevent the space center from making technological improvements that would cut shuttle launch costs and save NASA money in the long run.

If the current work force target for October 1998 isn't changed, ''KSC's core engineering skills, [and] technical expertise . . . are seriously eroded,'' Honeycutt wrote.

Outsiders said Honeycutt's letter was a serious action for a center director to take.

''After awhile you stop being overly polite,'' said Seymour Himmel, a member of the Aerospace Safety Advisory Panel who has studied morale and safety issues at the space center. ''It's trying to be realistic about what they're being asked to do with less, and what the consequences are.

''You are put in a position where you don't know what the hell to do,'' Himmel said of Honeycutt's situation. ''If you really have the programs of the agency at heart, you've got to stand up and be counted.''

A spokesman for Rep. David Joseph Weldon (R–Fla.), who is vice chairman of the House space subcommittee, said Honeycutt was justifiably upset. ''This is the doomiest and gloomiest letter you will see,'' said the spokesman, J.B. Kump, ''Hopefully, this will open some eyes at headquarters.''

Ed Campion, a spokesman at NASA headquarters, said the agency takes comments such as those in Honeycutt's letter very seriously. ''These are the kind of frank discussions that we have to have when we're in tight budget times and trying to make hard decisions,'' he said.

Mr. SMITH. The article is about a proposal where 547 people would have to be laid off as of October 1, 1998. For the $15.5 million we are spending on Bion we could afford to pay each of these people $28,000. I am not saying necessarily that I advocate that, but I just want to point out how much money $15 million is. Every one of those people are going to lose their job. They could be paid $28,000 a year just from this project. It is obvious they do not all make under $28,000, but the point is, we are laying off American workers at the Kennedy Space Center while we send $15.5 million to Russia to conduct redundant and wasteful research, not to mention the pain that you inflict on animals for no purpose, no purpose whatsoever—no purpose.

I am not an advocate of totally eliminating all research, but I think if you all remember the recent story about the gorilla who picked up a small child that had fallen into a gorilla cage, picked it up in its arms and gently carried it to the door of the zookeeper so that they could open the door and carry that child out to safety, it saved the child's life from other gorillas that may have hurt it when the child had fallen into the cage. These are animals. They have feelings. Why would you want to inflict this kind of pain for nothing? It is the same family. They are primates, gorillas and chimps or monkeys. Why would you want to inflict that pain for no reason—no reason? To find out what weightlessness is like in space on these animals for 14 days?

Let me go a little further on to why this research is so wasteful. I am going to cite a number of quotes from NASA experts, NASA documents, scientists, scholars, and medical experts that prove this point.

Let me start with a memo from February 9 of this year. It was written by Jack Gibbons who serves as both the Assistant to the President for Science and Technology and the Director of the Office of Science and Technology Policy. And it is written to Dan Goldin, the Administrator of NASA.

I ask unanimous consent that this be printed in the RECORD, Mr. President.

There being no objection, the memo was ordered to be printed in the RECORD, as follows:

THE WHITE HOUSE,
Washington, February 9, 1996.

Memorandum for Dan Goldin.
From Jack Gibbons.
Re Primates in Research.

I am following up on our conversation about the situation at NASA with respect to the use of primates in research. I sympathize with your concern that the era of need for primates in NASA's research is now behind us, and that it may be time to retire those animals. I would be pleased to talk with you about the situation and to discuss alternate options to consider.

I should point out that the Air Force is also interested in options concerning their primates, and that the National Institute of Medicine is planning to do a related study under NIH sponsorship.

Please let me know if you want to follow up. I look forward to hearing from you.

Mr. SMITH. This is on White House stationery, written on February 9, 1996, from Jack Gibbons. And it is to the Director of NASA. Let me quote it. It is very brief.

I am following up on our conversation about the situation at NASA with respect to the use of primates in research. I sympathize with your concern that the era of need for primates in NASA's research is now behind us, and that it may be time to retire those animals. I would be pleased to talk with you about the situation and to discuss alternate options to consider.

How could you possibly be any clearer than that? This is from Mr. Gibbons, who is involved with these programs at NASA, to the Director saying it is time to wrap it up, we do not need the money for this project. Yet, here it is, stricken by the House, to their credit overwhelmingly, by a bipartisan vote. But here we go again. Let us leave it in. Who is the lobbyist for this? Who is pushing this? Why is it still in here? Why are we fighting this battle on the Senate floor? Who is this? Where is this coming from?

NASA does not want it, apparently. Where is the lobby for this? I think it is a strong affirmation of my point that this research is unimportant and unnecessary. They do not want it. As this memo clearly states, our two top space officials did not think it was a priority in February, yet here we are in September, by golly, we will put it right in there. Let us spend that money. I do not know who called whom but somebody did, I guess.

In fact, they concluded without hesitation, these two officials, that there is no longer any need whatsoever for such research, and the House of Representatives agreed with them overwhelmingly in June. I give a lot of credit to my friends in the House for acting reasonably.

Since February is there any new startling information out there somewhere that provides some new development, some new revelation that now putting primates in space for 14 days is somehow going to prove, help us to understand weightlessness and the effects on the nervous system for humans who have been in space for 469 days?

I want to hear this tremendous revelation of information. I want to hear about it. It must be exciting, because it persuaded somebody to change their mind between June and now. Where is this information? Where are the documents? People say, ''Why do you go out and get so excited over $15.5 million, over a couple of rhesus monkeys?'' If enough people got excited over $15.5 million every time we wasted that kind of money, we would save money around here and get the budget balanced a lot quicker and we would spend money a lot wiser. We have an obligation to take care of the little things, and the big things will take care of themselves.

Proponents might talk about a recent commission that considered animal welfare. The commission was thrown together with the expectation that Congress might consider cutting the Bion Program. It is very interesting that we see a situation like this. It makes me wonder. I have been in Congress now 12 years. It really makes me wonder who is making the decisions in this Government? Who is really making the decisions? You have a situation where the top two officials in NASA, who deal with the project, do not want it. I don't know of any proponent in the White House that wants it. The House took it out. Yet, here we are on the Senate floor battling over it, wasting a couple of hours of time, perhaps, arguing about this $15.5 million spent on this primate research. Why? It really is amazing. Is somebody who works below these people going around them and somehow getting information here to this Senate? Yes, probably. I think the Senator from Colorado, who occupies the chair and who has had so many

amendments on this Senate floor and in the House regarding this kind of funding, knows that. That is exactly what happens. Frankly, whoever is doing this ought to be fired. They ought to be fired, and we would save a little more money.

There have been a number of these sham committees already that were set up to study something long before this memo was written. So the latest round has taught us nothing. There is a quote from Dr. Larry Young, a professor of astronautics at the Massachusetts Institute of Technology, MIT:

> We are about at the limit of what we can do on shuttle missions in terms of understanding the long play of weightlessness as it affects humans and animals.

I would certainly think so. Fourteen days for primates and 400-plus days for humans, and we are still putting primates in space to study weightlessness on the human nervous system.

This quote is from the final reports of the U.S. experiments flown of the Soviet biosatellite Cosmos 2044 Bion 9:

> The small number of animals studied after space flight preclude drawing any major conclusions for the present.

Now, I don't know if I can stand here and say, well, there is no circumstance at all, no chance that we might learn anything at all from these launches. I am sure we can probably figure something out. Who knows? Maybe monkeys' ears grow more in space. We can probably come up with something if we worked at it. But that is not the point. The point is that it is not cost effective, it is not humane, it is not an American priority, and it is not NASA's priority. That is the point. It is not NASA's priority, not humane, not cost effective, and not cost efficient. Yet, we are going to spend the money anyway.

Unless I can get 50 people plus myself to disagree with the committee, we will spend it and put these animals through suffering for nothing. It is bad enough we have to do it for something, but here we are going to do it for nothing and spend the money. Unless I can get 50 people to agree with me, that is exactly what will happen. I wonder how many Americans even realize that we are still sending primates into space. Frankly, until this amendment came to my attention, I didn't know it.

Our two highest science officials, in the memo I just read, agree that the area of need for primates in NASA's research is now behind us. We have had humans in space for over 400 days. We have learned that most of the problems associated with weightlessness occur after about 2 weeks in space, and the Bion flights are only 2 weeks long. Only in Washington, DC, really, only in Washington, only in the U.S. Government would you have a project as ridiculous as this. I'll repeat that. We have learned that most of the problems associated with weightlessness occur after 2 weeks in space. Yet, we put primates up for 2 weeks and then bring them down. They are not just sitting in the capsule; they are doing all kinds of pretty nasty things to these animals while they are in there.

Mr. President, I do have some more comments to make, but I have used up a good portion of the hour. I think at this point I am going to yield the floor and reserve the remainder of the time for other Senators who may wish to speak.

Mr. BOND addressed the Chair.

The PRESIDING OFFICER. The Senator from Missouri is recognized.

Mr. BOND. Mr. President, I thank the Chair, and I thank my friend from New Hampshire for giving me an opportunity to answer some of the very pertinent questions he has raised. The effect of this amendment would be to prohibit NASA from spending $6.8 million in fiscal year 1997 on an important, efficient, peer-reviewed, biomedical research program using rhesus monkeys flown on Russia's space vehicle. It doesn't change the total budget. It forces NASA to withdraw from a signed contract with Russia, override scientific peer review, and undermine the Animal Welfare Act, while at the same time handing animal rights extremists a victory.

Now, there is no one in this body who has any greater aversion to Government waste and unnecessary spending than I do. I think my record as a Governor and in the Senate is one of opposing Government waste. I have challenged duplication of effort. I have pointed out time and time again where the Federal Government wastes money duplicating efforts and where States and local governments have duplicating authorities. I have fought many battles to cut out unnecessary activities. I have fought these battles where I know, from my experience as an executive and as an administrator and as a legislator, where we can cut out waste.

But there is also another area where I think we have made a lot of mistakes in this body, and that is in the area of science. I had a few courses in science, just enough to know that I am not a scientist. So when it comes to scientific matters, I think we ought to rely on the scientific community and get the best judgments from the scientists. If I were going to give a seat-of-the-pants science response, I might say something very simple like, ''We ought to be testing monkeys rather than human beings.'' That is a nonscientific response. But good science is at issue here. Are we going to substitute the scientific judgment of this body for the peer-reviewed science of the experts who have been brought together to say that we need this research? There are perhaps one or two Members of this body who are really qualified to make scientific judgments, who have some background in this area. I would be interested to hear from them. But for the most part, we are going to have to rely on what the scientists have told us. There are some in the opposing-Government-waste category who think that maybe, on the face of it, this is a wasteful activity. But they are plain wrong when you compare the science.

Astronauts' bodies undergo major changes during long durations of space flight, changes which are debilitating on return to Earth.

Some people can survive over a year in space. But we still do not know how to prevent the changes, or even if these changes are reversible.

Let us see what science has said about it. Bion 11 and Bion 12 are outstanding values for the American taxpayer.

Who is lobbying for this? Mr. President, I have a letter here of July 31, 1996 signed by Cornelius Pings, president, Association of American Universities, C. Peter Magrath, president, National Association of State Universities and Land-Grant Colleges, and Jordan J. Cohen, president, Association of American Medical Colleges.

There you have it. That is a pretty tough lobbying group, the Association of American Universities, the National Association of State Universities and Land-Grant Colleges, and the Association of American Medical Colleges. What do they say?

> The Bion missions are designed to study the biological effects of low gravity and the space radiation environment on the structure and function of individual physiological systems and the body as a whole. Bion 11 and 12 will focus specifically on the musculoskeletal system. While the loss of muscle and bone mass during space flight is well documented, neither the rate nor the specific mechanisms involved are well understood. Research on human subjects in this area is difficult because human crew members regularly practice countermeasures designed to nullify some of the adaptive responses to microgravity. While these actions may enhance crew performance and comfort, they also alter or mask the physiological symptoms being studied. Since tissue loss in the musculoskeletal system may be one of the critical factors limiting human space exploration, it is essential that we understand how and why these changes occur and how we might prevent them.

Their conclusion is:

> We strongly support the use of merit review to determine how limited Federal funds may most productively be spent for scientific research. The Smith amendment would override scientific peer review . . .

Let me repeat that.

> The Smith amendment would override scientific peer review and force NASA to withdraw from a signed contract with international partners. We urge you to oppose the amendment.

Mr. President, that is who is lobbying for this provision.

I ask unanimous consent that this letter be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

> ASSOCIATION OF AMERICAN UNIVERSITIES, NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES; ASSOCIATION OF AMERICAN MEDICAL COLLEGES,
>
> *July 31, 1996.*

DEAR SENATOR: When the Senate turns to consideration of HR 3666, the VA–HUD-Independent Agencies Appropriations bills, we

understand that Senator Robert Smith plans to offer an amendment prohibiting NASA funding of the Bion 11 and 12 projects. We urge you to oppose this amendment.

We are concerned about the precedent this amendment sets in terminating research that has been reviewed and approved on the basis of scientific merit. The Bion missions have been peer-reviewed and approved by five independent panels over the past eight years. The most recent panel, which submitted its unanimous recommendations to NASA Administrator Dan Goldin only last week, found that the quality of science proposed is very high, that there are no known alternative means to achieve the objectives, and that the animal care and welfare proposals meet all requirements and U.S. legal standards.

The Bion missions are designed to study the biological effects of low gravity and the space radiation environment on the structure and function of individual physiological systems and the body as a whole. Bion 11 and 12 will focus specifically on the musculoskeletal system. While the loss of muscle and bone mass during space flight is well documented, neither the rate nor the specific mechanisms involved are well understood. Research on human subjects in this area is difficult because human crew members regularly practice countermeasures designed to nullify some of the adaptive responses to microgravity. While these actions may enhance crew performance and comfort, they also alter or mask the physiological symptoms being studied. Since tissue loss in the musculoskeletal system may be one of the critical factors limiting human space exploration, it is essential that we understand how and why these changes occur and how we might prevent them.

We strongly support the use of merit review to determine how limited federal funds may most productively be spent for scientific research. The Smith amendment would override scientific peer-review and force NASA to withdraw from a signed contract with international partners. We urge you to oppose the amendment.

Sincerely,

CORNELIUS J. PINGS,
President, Association of American Universities.

C. PETER MAGRATH,
President, National Association of State Universities and Land-Grant Colleges.

JORDAN J. COHEN,
President, Association of American Medical Colleges.

Mr. BOND. Mr. President, the Administrator took notice of the concerns of those who objected to the Bion effort. He convened a high-level independent review program which completed its work on the Bion Task Force on July 1 with the unanimous recommendation to the NASA Advisory Council that NASA proceed with Bion 11 and 12 missions.

He states in his letter of July 26:

. . . the NASA Advisory Council unanimously approved the findings and recommendations of the Task Force and forwarded them to me.

That is a letter of Daniel Goldin of July 26 of the NASA Advisory Council which is composed, among others, of professors at Stanford University, Cornell University, Massachusetts Institute of Technology, Florida A&M, DePaul University, California Institute of Technology, Harvard University, and a number of private sector organizations are involved. This NASA advisory council unanimously approved the recommendation of the Bion task force chaired by Ronald C. Merrell, Lampman professor and chairman, Department of Surgery of Yale University.

That letter of July 2 to the advisory council says:

We unanimously recommend that the Agency proceed with the Bion Project. In response to the three questions you asked us to address in reaching our recommendation we find the following:

1. The quality of the science proposed in the integrated protocol is excellent. It has been reviewed by peers in a very thorough and repeated manner and has withstood analysis for nearly a decade. The science has been thoughtfully integrated to accommodate an enormous matrix of material which is highly likely to yield meaningful results.

2. There are no known alternative means to achieve the objectives of the proposal. The data do not exist at present and there are no alternative species to test the hypotheses. Specifically, the use of Rhesus monkeys seems inevitable to achieve the objectives.

3. The animal care and welfare proposals meet all requirements and US legal standards.

Mr. President, I ask unanimous consent that the letter from Daniel C. Goldin and the attachments from the advisory council and the Bion task force be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, OFFICE OF THE ADMINISTRATOR,
Washington, DC, July 26, 1996.

Hon. CHRISTOPHER S. BOND,
Chairman, Subcommittee on VA-HUD-Independent Agencies, Committee on Appropriations, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: I wish to thank the Committee for rejecting the limitation included in the House-passed version of H.R. 3666, the FY 1997 VA-HUD-Independent Agencies appropriations bill, which would have precluded NASA's use of any appropriations in the bill for the conduct of the Bion 11 and 12 missions. The Bion Program is a cooperative space venture among the U.S., Russian and French space agencies for the conduct of international biomedical research using Russian-provided infrastructure, spacecraft, payload and primates. The House limitation effectively threatened the principle of rigorous peer review in biomedical research, and the Committee wisely chose to delete this limitation.

As I indicated to you in my letter of July 5, a high-level independent review of the program was completed by the Bion Task Force on July 1, with a unanimous recommendation to the NASA Advisory Council that NASA proceed with the Bion 11 and 12 missions. Yesterday, the NASA Advisory Council unanimously approved the findings and recommendation of the Task Force and forwarded them to me. I have accepted the recommendation of the Council and the Task Force (enclosures 1 and 2) that the Agency proceed with the Bion missions. I seek the Committee's continued support for NASA's participation in the Bion 11 and 12 missions as the Senate considers H.R. 3666, and rejection of any amendment to restrict NASA's participation in Bion.

Again, thank you for allowing NASA to pursue its open process of review for selecting the highest quality science by peer review in conformance with U.S. animal welfare laws and the highest ethical principles.

Sincerely,

DANIEL S. GOLDIN,
Administrator.

NASA ADVISORY COUNCIL, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
Washington, DC, July 25, 1996.

Mr. DANIEL S. GOLDIN,
Administrator, NASA Headquarters, Washington, DC.

DEAR MR. GOLDIN: As you requested, a task force of the NASA Advisory Council was formed to provide you with advice and recommendations on NASA participation in the U.S.-French-Russian Bion Program. The task force, led by Dr. Ronald Merrell, met on July 1. The membership was technically competent with broad expertise appropriate for addressing the task force's charter.

At our meeting on July 24, Dr. Merrell briefed us on the task force's activities and deliberations. We unanimously approved its three findings and its recommendation to proceed with the Bion project. We also support its strong advocacy for continued efforts to strengthen the bioethics review policy and process for animal experimentation to be implemented before Bion 12. These findings and recommendations are contained in the enclosed letter from Dr. Merrell.

The public was present and participated in both meetings. Members of the Bion Task Force are to be commended for the seriousness, care, and depth with which they carried out this sensitive task. If we can be of any further assistance, please do not hesitate to ask.

BRADFORD W. PARKINSON,
Chair.

YALE UNIVERSITY,
New Haven, CT, July 2, 1996.

Re Bion task force.

BRADFORD W. PARKINSON, MD,
Chairman, NASA Advisory Council, NASA Headquarters, Code Z, 300 E Street SW, Washington, DC.

DEAR DR. PARKINSON: The Bion Task Force, summoned by the NAC to consider the matter of Bion 11 and 12, met at NASA Headquarters on July 1, 1996. We responded to the attached charge and all members were in attendance except for Dr. Borer. Assignments and logistics had been discussed on a telephone conference call May 15. At our meeting we were ably supported by Dr. Frank Sulzman and aided by an extensive panel of NASA scientists as well as project participants from France and Russia. The public was present and participated in the presentations. The agenda for our meeting and the assignments are attached. Minutes of our activities will be ready shortly. However, I though it appropriate to report immediately our recommendation.

We unanimously recommend that the Agency proceed with the Bion Project. In response to the three questions you asked us to address in reaching our recommendation we find the following:

1. The quality of the science proposed in the integrated protocol is excellent. It has been reviewed by peers is a very thorough and repeated manner and has withstood analysis for nearly a decade. The science has been thoughtfully integrated to accommodate an enormous matrix of material which is highly likely to yield meaningful results.

2. There are no known alternative means to achieve the objectives of the proposal. The

data do not exist and there are no alternative species to test the hypotheses. Specifically, the use of Rhesus monkeys seems inevitable to achieve the objectives.

3. The animal care and welfare proposals meet all requirements and US legal standards.

However, we were sensitive to the concerns raised by the public and within our committee about divisive opinions over animal research. We were reminded that NASA has been a leader in bioethics and a driver for raising the standards of biomedical research. Therefore, we strongly urge NASA to devise and implement a bioethics review policy for animal experimentation to include participation of a professional bioethicist. This group should begin its activities before Bion 12 is activated. We believe it is not morally justified to proceed otherwise. We challenge NASA to raise existing standards by this new policy and thereby continue leadership in the realm of bioethics.

I thank you for the honor to chair this group and on their behalf I thank you for the opportunity to serve.

Sincerely,

RONALD C. MERRELL, MD,
Lampman Professor and Chairman,
Department of Surgery.

BION TASK FORCE CHARTER

The charter of the BTF is to provide advice and recommendations to the NASA Administrator on whether NASA should continue to participate in the joint U.S.-French-Russian Bion Program. Specific activities will include the following:

(1) Review the integrity of the science plan for the mission;

(2) Assure that there are no alternative means for obtaining the information provided by these experiments; and

(3) Review the Bion Program for ethical and humane animal treatment during all phases of the mission.

Membership is comprised of distinguished individuals with expertise in medicine, biomedical research, ethics and the humane care and treatment of animals.

The BTF will report to the NASA Advisory Council (NAC), and will be staffed by the Office of Life and Microgravity Sciences and Applications.

The BTF is expected to submit its report with recommendations to the NAC in July 1996.

Mr. BOND. Mr. President, I do not think we need to say more about this. It is very clear that the scientific community says we need it. We can find out things on monkeys operating under the legal and ethical standards that we cannot find out when we send humans into space, and we are far better testing on monkeys under the ethical standards that are imposed what the impacts of weightlessness is.

I cannot understand all of the scientific jargon in the letters. But I can read the headlines. And the headlines from these letters are from the scientific community supported by the Association of American Universities, the Land-Grant Colleges, and the Association of American Medical Colleges which say that we need this information. Are we to substitute our scientific judgment for theirs? I happen to think personally that would be the height of arrogance to say that we know more about science than the professionals, the great leading scientific minds and institutions of higher education around the country.

That is why I hope, Mr. President, that an overwhelming bipartisan majority of this body will join me in rejecting the motion to table.

I yield the floor.

Mr. FEINGOLD addressed the Chair.

The PRESIDING OFFICER. The Senator from Wisconsin is recognized.

Mr. FEINGOLD. Thank you, Mr. President.

Mr. President, I would like to continue this debate by first thanking the Senator from New Hampshire. I am very pleased to be working jointly with him and several other Senators on this matter. I believe that is important to pursue matters legislatively when there is unusual agreement on both sides of the aisle. And in this case there is that agreement between many of us on both sides of the aisle that this program needs to be reevaluated. I want to add a little bit to what the Senator from New Hampshire has said.

My colleague from New Hampshire and I are moving to table the committee amendment which would strike language that passed the House as an amendment to the VA–HUD appropriations bill on June 26, 1996 by a vote of 244 to 171. The amendment was sponsored by Representatives ROEMER and GANSKE. The Senate Appropriations Committee, in preparing the VA-HUD bill for the floor, has recommended that this language be struck from the bill. The language would explicitly prohibit the National Aeronautics and Space Administration [NASA] from expending any funds on the Bion 11 and Bion 12 missions. I believe that the committee's amendment to strike this language should not prevail.

That is why the Senator from New Hampshire, I, and others will move to table. As I said, Mr. President, this move to save this money passed on a bipartisan basis in the House and in this body. It has the support of not only the Senator from New Hampshire and myself but also the Senator from Massachusetts [Mr. KERRY], the Senator from North Carolina [Mr. HELMS], the Senator from Arkansas [Mr. BUMPERS], and the Senator from New York [Mr. D'AMATO].

As the Senator from New Hampshire indicated, it would be pretty hard to come up with a more diverse group of Senators from a political point of view than that combination.

So what is this all about?

Under this program, NASA transfers money to Russia to launch the Bion 11 and Bion 12 capsules, and also funds United States researchers to be involved in designing the experiments and interpreting the results. The Bion Program gets its name from the small crewless Russian Bion satellite it uses to launch biological experiments into near-Earth orbits to study the physiological effects of space flight. Since 1973, Russia has launched 10 Bion satellites. The last was done with NASA participation for space flights of between 5 and 22 days.

In fiscal year 1993, $35.1 billion was appropriated to support this whole program. At present, $15.5 million remains in the Bion account for the next two flights.

So when the Senator from Missouri correctly points out that a little over $6 million will be involved in terms of this fiscal year, there is still more to come—and still more in my view and in the view of the Senator from New Hampshire to be wasted if we do not take the steps that we recommend today.

Bion 11 and Bion 12 are the last of these flight missions, scheduled to fly in October 1996 and July 1998 respectively with United States, French, and Russian participation. Two Russian-owned rhesus monkeys will fly on each of the missions, scheduled to last 14 days, to study the effects of microgravity on bone loss, muscle deterioration, and balance.

I oppose the committee amendment to strike the Roemer-Ganske language because I believe that these funds could be allocated for higher priority science at NASA or preferably for deficit reduction. I am also concerned that the scientific justification for the program is questionable and the results redundant, given that NASA has both previous Bion experiment data and significant human data on the effects of space flight. Since the Apollo missions humans have stayed in space for months at a time, and on July 16, 1996, Shannon Lucid set the U.S. record for the longest space flight aboard the space station *Mir* at 115 days, and as of last Friday has now spent 5 months orbiting the Earth. There is substantial information and data with regard to the humans involved, which is obviously our ultimate concern. In addition, Mr. President, the last *Columbia* shuttle mission, which lasted 17 days, included an experiment similar to those proposed for Bion and in that case was done on actual human astronauts.

The termination of expenditures on the Bion Program is supported by a coalition of taxpayer and animal welfare groups, not simply animal welfare groups. It includes Citizens Against Government Waste and Taxpayers for Common Cause, who have found a common ground on this issue and believe that the money can be saved from these missions.

Mr. President, the Bion Program, to quote, according to the February 1996 Bion 11/12 Science Assessment, is ''very important for future long-term manned space flights and life on a space station.''

Let me emphasize this statement. It says the Bion Program, and arguably NASA's entire life sciences program, exists to support the continuation of the pursuit of long-term manned space flight and the development of the space station.

That is really the context in which we should be evaluating Bion and NASA's continued participation in it. It is not simply a crusade of animal rights activists, as proponents would have you believe and as the Senator

from Missouri at least suggested in his remarks. There is much more involved for those of us who are concerned about waste in Government, and I think that includes everyone in this body.

Of course, there may be issues pertaining to humane treatment and the future of the Bion protocol, but for the Members of this body who do not support the space station for fiscal reasons—and there are a number of Senators, including myself—Bion is really an outgrowth of space station development and for that reason, as well, ought to be terminated for fiscal reasons.

For those who support manned space flight, I believe that the research which will be conducted on Bion 11 and 12, despite the Bion Program having cleared a fourth reevaluation of the experiments, is arguably duplicative. So it may well be something that standing alone can be argued to have merit, but if it is already adequately being done, it is still duplicative and it is still wasteful.

I say this despite the fact that individuals from two very well-respected research institutions in my State of Wisconsin, Marquette University and the Medical College of Wisconsin, have participated in the Bion Program and one of the individuals actually will be directly involved in interpreting data from Bion 11.

I ask those in this body who support manned space flight to ask themselves this question: Despite the scientific merit of the study design, will the termination of the Bion 11 and 12 flights keep the United States from sending astronauts into space if we cannot find the mechanisms behind bone calcium loss and the deterioration of muscles that help humans fight gravity and stand upright? The answer is obvious. It is resounding. It is an empirical no. This will not make the difference.

So the proponents of this program then make four primary arguments in support of the continuation of Bion. Let me just mention what their arguments are and respond briefly. First, they say the scientific and humane concerns are overblown and have been addressed.

Second, they say the Bion Program results are important for manned space flight.

Third, they say we are likely to get useful domestic byproducts from Bion research for osteoporosis and other disease sufferers.

Finally, they say with regard to the fiscal issues that the savings figures are not savings at all. I will try to address all of these, and of course some of this has already been addressed by the Senator from New Hampshire, but I want to add to it.

I think the strongest argument against the Bion missions is the question of whether or not the experiments are redundant, which, of course, speaks to their importance to manned space flight. That is a distinct question from whether or not the scientific study methods and the experiment design will produce legitimate and scientifically valid results.

Let me say a bit about them. Four of the rookie astronauts from the July 7, 1996, shuttle *Columbia* mission, which had a total crew of seven, participated both prior, during, and after the flight as, in effect, human guinea pigs in the study on the effect of human space travel on the body.

Within an hour of touchdown, as reported on July 8, 1996, by the Chicago Tribune, ''The four astronauts who had endured medical poking and prodding in orbit were in a clinic at Kennedy Space Center undergoing painful muscle biopsies and other tests. NASA wanted to examine the men before their bodies had adjusted to gravity.''

The Houston Chronicle also provided additional detail on the mission on July 8, 1996. NASA ''billed the mission as a preview of its operations aboard the U.S.-led international space station.''

Following landing, the Chronicle continues, ''The crew were ushered into medical facilities at Kennedy for evaluation of their muscle, skeletal and respiratory and balance systems. The test included biopsies of their calf muscles with large gauge needles and full body scans with a magnetic resonance imaging device.''

So the contention of the supporters of Bion has been that the Bion tests are too invasive to be done on humans and thus should be done on rhesus monkeys. As Charles Brady, a physician and one of the rookie astronauts, stated about the test as reported in the Orlando Sentinal on July 7, 1996: ''Having had to subject many patients to things I wouldn't rather do at the time, I think it is appropriate that I have to go through with it.''

Now, why do I provide all this detail on the recent *Columbia* mission experiments on astronauts? It is because NASA's real justification for the Bion experiments is not that they are collecting data from the rhesus monkeys they are not collecting from astronauts. They are. It is that they feel that the monkey studies will help them better interpret the changes in humans from the biopsy studies and the studies in the noninvasive tests they conducted on the *Columbia* astronauts. The astronauts' biopsies are limited in size, and allegedly the Bion monkeys could provide more samples from more muscles. The Bion monkeys will provide bone biopsies, to which astronauts would not submit, and the Bion monkeys' results will be compared with the astronauts' results.

Why do this? Because those involved in the experiments want to confirm that, indeed, the same changes occur in immobile rhesus monkeys that occur in reasonably active astronauts. What does this say in response to those who argue that these tests are not really that invasive and should proceed on rhesus monkeys.

But to return to the main point, Mr. President, this is research designed to confirm that what we know about the body, that what we know about the effect of space flight on the body is indeed what we already know. We already know it. And this apparently is just an attempt to spend some of our tax dollars to confirm it.

I am concerned about this, given the amount that has already been spent to collect the astronaut data. The Rocky Mountain News reported on June 21, 1996, that the *Columbia* shuttle astronaut study on the effect of space travel on the human body cost $138 million. And this expenditure on the rhesus monkeys procedures will simply add to that figure, I think that is unnecessarily, and would be redundant.

Let me return to the second issue. The second issue I want to address is the issue of humane treatment, because Senators will likely hear that the Bion experiment animal treatment protocol has been reviewed several times—most recently in early July 1996.

In April 1996 NASA Administrator Dan Goldin set up an independent panel, chaired by the head of surgery at Yale, Dr. Ronald Merrell, to review the care and treatment of the Bion monkeys, the fourth such review. But, as the Bion launch is scheduled for October 1996, and the panel could not meet until July 1, the surgical procedures to implant monitoring wires and the steel cranial caps on the monkeys went ahead in Kazakhstan in June at the Institute for Biomedical Problems in Moscow. NASA was then in the awkward position of agreeing to allow the Russians to proceed with the surgery even though it had not yet decided to support the mission.

What happened in the interim? The House agreed overwhelmingly on a bipartisan vote to prohibit the continued spending of NASA funds on Bion.

The independent panel met on July 1, 1996 and issued a letter the day after the meeting. The letter does say that the proposed science will ''likely yield meaningful results,'' the animal welfare proposal meets ''U.S. legal standards,'' and that rhesus monkeys are appropriate surrogate human animal subject for these types of experiments.

I am concerned the previous argument by the Senator from Missouri did not include in his verbal statement, although he may have included it in the RECORD, the rest of the story, if you will, the rest of the letter.

I am concerned by how the Merrell panel letter concludes:

> However, we were sensitive to the concerns raised by the public and within our committee about divisive opinions over animal research. . . . Therefore, we strongly urge NASA to devise and implement a bioethics review policy for animal experimentation to include participation of a professional bioethicist. This group should begin its activities before Bion 12 is activated. We believe it is not morally justified to proceed otherwise.

The conclusion of the Merrell panel has led some to believe that the panel really met just for show, and that the

pressure of having already implanted wires in the monkeys made the recommendations what they were. As the associate director for Life Sciences at the Ames Research Center was reported as having said in a July 12, 1996, Science article announcing the Merrell panel decision and reporting the House vote ''we have to turn this [House vote] around in the Senate.''

On July 23, 1996 I received a letter in support of the Bion project from the Americans for Medical Progress Educational Foundation. The letter makes several arguments on the need for continuation of Bion, most which I have previously described, but adds an additional one that I would like to share with colleagues—''the animal subjects in Bion are treated well and, upon return, will be retired in Russia and idolized as space heroes.'' I am sure the monkeys are very excited about that, but I am not certain that the authors realized how concerning and bizarre that statement sounds, particularly as a justification for spending $15 million over the next 2 fiscal years. Odder still, is that the statement has some basis in fact. NASA staff, in meeting with my staff, described that the chairs in which the monkeys are restrained are actually lined with bear fur, the same as the seats of the Russian cosmonauts. This is done because the Russian cosmonauts believe such seat covering is thought to be more comfortable.

Finally, I believe that question about whether the Russians might be able to financially support these missions without United States involvement is unclear. On May 24, 1996, in a Science magazine article on the Bion project, the director of biomedical and life sciences at NASA is quoted as saying ''if NASA were to pull out, Russia could proceed on its own. If they can afford to do it, they will. It's their animals and their capsule.'' The July 12, 1996, Science paints a different picture. Quoting the head of the Bion Program at the Institute for Biomedical Problems in Moscow, Science reports that he is concerned about the fate of Bion 12. ''Given Russia's cash strapped space program,'' he says, ''if any partner pulled out it would pose a serious problem.''

In the end, either situation concerns me and I think it concerns the Senator from New Hampshire and the rest of us who are working on this. I believe it confirms why colleagues should oppose the committee amendment and table it. If Russia can afford this experiment, then Russia should conduct it. If Russia can't support it, and the United States is funding the lion's share of the program, then we should not proceed with a program about which there are serious lingering concerns about humane treatment of the animal subjects as well as the necessity for the program. The Merrell panel specifically calls for an additional ethicist to be added to the research team, and I believe casts doubt on Bion 11. I can assure Senators that if we ignore the action of the House, we will be asked to terminate Bion 12 next year. Instead, I think we should act now to end our involvement and to reinstate the House-passed language.

Everyone knows the Federal budget has constant pressure from numerous competing needs, and NASA itself is facing significant pressures. For example, last Friday's—August 30, 1996—Washington Post reported that there is an ongoing dialog among top officials at Kennedy Space Center about significant civil service cuts that may number as many as 1,445 people with 547 layoffs at that site which now employs approximately 2,100 Federal workers. Given those kind of pressures, this project makes little sense. It cannot be fiscally justified.

I thank the Senator from New Hampshire and urge my colleagues to support the motion to table, which will have the effect of supporting the committee amendment and opposing spending additional dollars on the Bion Program.

I yield the floor.

The PRESIDING OFFICER. The Senator from Ohio.

Mr. GLENN. Mr. President, I rise in opposition to the amendment offered by my friends from New Hampshire and Wisconsin, and I want to speak in support of the Bion mission.

We are singling out a particular area of animal research because it happens to be on a space flight, I guess, because it happens to be up there a little bit above the atmosphere, going around, where we have a unique opportunity to do some of this research in the microgravity environment of near-Earth space. We are not talking about doing away with all animal research, as I understand it. Yet, we have hundreds and hundreds and hundreds of thousands of animal research projects with animals involved in medical research right here on Earth.

My distinguished colleague from New Hampshire said a while ago, why do we need these monkeys up there because we have some 38 years of human experience in space? We do have that kind of experience. But I also submit we have hundreds of thousands of years of human experience right here on Earth and we still find the need to do medical research here on Earth and use animals to do that medical research.

So, if we are just against medical research using animals, that is one thing. But to say that because we happen to be up here a little distance off the Earth's surface, we are now going to prohibit it up there, or to say the money spent, the comparatively small amount of money being spent on this is going to be cut out, I just think flies in the face of what our experience has been with animal research.

What am I talking about? Here on Earth we now have open heart operations. I am a frustrated doctor at heart. I started out wanting to be a doctor years ago. I got sidetracked by World War II. But when I was in Houston with the astronaut program down there, Mike DeBakey was a good friend of ours. I used to go in and watch him operate. Do you know what all those operations were prefaced on? They prefaced them on animal experiments. The heart operation, the valve replacements and the operations of heart replacement, all were done with animal experiments ahead of time.

We could go on and on. For all the drug tests that we have in this country—I do not mean drug tests to see if people are using drugs, I mean drugs that are antibiotics and so on that we use—we preface our human use by making experiments on animals. I am sure the whole medical community would be up in arms if we tried to knock all of that out.

We try out vaccines on animals. We try out bone research on things that will make bones knit together better. We do that in animal research. We do that in eye research, we did corneal transplants on animals—I believe it was rabbits, as I recall —before we did it on human beings. We did that because it is safer for people to have that kind of experiment.

We were concerned these experiments be done humanely, so we passed the Animal Welfare Act. It is the law that sets the standards of how we permit animal research to be done in this country, so it is done humanely. Those rules are basically the rules that we follow and also, as I understand it, the Russians follow, or are following now. I am the first to say some of the things we heard early on about the Bion project, I questioned about whether it was being done properly or not. But those things are corrected if they ever were true. They are being corrected and they are being monitored very, very closely.

The point is, these Bion flights represent an effective approach to conducting very important biomedical research. To knock this out just because the laboratory happens to be up here weightless, going around in microgravity up a little bit off the Earth's surface here, to knock it out because it is part of the space program and ignore all of the other hundreds of thousands of animal research projects going on, I do not think makes much sense.

Bion research is fundamental, peer-reviewed research at the center of NASA's program for exploring how the body changes in microgravity, and there are a lot of changes. NASA and Russia have cooperated on Bion missions for 20 years now. This is not something just starting up. We have been at this for a long time. The fact is, we have used the Bion spacecraft to produce major findings on space flight and health.

Mr. President, the amendment's proponents argue that the Bion missions are not necessary because we have already sent people in orbit and, therefore, we can study the effects of microgravity directly on people who have already flown. Obviously, we know people have survived space flight, but this

does not mean we know what happens in our bodies. We are still trying to find out what the basic changes in the body are that occur in microgravity that give us some of the results that we get. Just as researchers on the ground sometimes need to use animal models by the hundreds of thousands all over the country, researchers in space must use animals as well.

The plain fact is that for some types of research, animals are better subjects than people. For one thing, human astronauts are not genetically uniform. Compared to lab animals, there is a lot more natural variability in the human population from both environmental and genetic factors. With the small sample sizes and brief time periods inherent in most space flight opportunities, more reliable baselines for certain measurements can be obtained using lab animals.

Another benefit is that a lab animal's diet can be more easily controlled than an astronaut's. Astronauts up there for 14 days, 17 days, as the STS–78 mission, get a little cranky when you tell them they have to eat the same pellets for 14 days, or whatever it is you want the animals to eat to control its diet and dietary intake.

Given the fact lab animals fulfill a vital role in microgravity research, it is imperative that these animals be treated in a humane way, and I agree with that 100 percent. All people involved with the Bion Program should be held accountable for the animals' welfare, and they are. The animals' care and well-being is maintained before and during flight. Following the flight, the animals are returned to the Russian breeding colony, or another suitable habitat, where they are maintained humanely for the remainder of their natural lives. This program has been reviewed—I point this out very specifically—this program has been reviewed by independent experts who have concluded that it is legitimate science performed in a humane manner.

Several months back, Dr. Jane Goodall, who is famous for her primate experiences in Africa along Lake Tanganyika in Africa—she is known all over the world, and I have known her a number of years—contacted me about her concerns in this regard, about the Bion Program specifically. I relayed these concerns both by telephone and letter to NASA Administrator Dan Goldin, who established an independent task force to review the Bion project. I want to quote from a letter the task force wrote to the chairman of the NASA advisory council dated July 2, 1996. I think the letter was entered into the RECORD a little while ago by Senator BOND. The task force unanimously recommended the Bion project proceed with the following findings:

(1) The quality of science proposed . . . is excellent. It has been reviewed by peers in a very thorough and repeated manner and has withstood analysis for nearly a decade.

(2) There are no known alternative means to achieve the objectives of the proposal.

(3) The animal care and welfare proposals meet all requirements and—

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and U.S. legal standards.

In other words, the Bion project is being conducted under our Animal Welfare Act, under the same guidelines we have for our own research laboratories in this country.

In addition, the task force recommended NASA devise and implement a bioethics review concerning their policies for animal experimentation and that this review include participation by a professional bioethicist. Not only did Mr. Goldin accept this recommendation, but such a task force review is getting underway with not one but four bioethicists, in addition to other veterinarians and researchers.

Mr. President, NASA has made the space environment seem almost commonplace. It has been an amazingly successful program. We see videos of astronauts floating in the space shuttle, and it looks like a lot of fun, and it is. But along with that goes an awful lot of research. It is a tremendous amount of research. That is the only reason we have the program, is to do basic research, not to see whether we can go up there and get back now, but to do basic research in orbit.

It is easy to forget just what a foreign and challenging environment space is. Zero gravity is unique, not just in the history of human experience, but in the history of life itself. Few of us have been able to experience weightlessness, and we are the first people to have done that in the some 4.5-billion-year history of life on Earth. Nothing in our evolutionary history prepares us for being weightless.

But here is what we find after people are up there weightless for a period of time:

The bones begin to lose some of their mass. Calcium content comes out of the bones;

Muscles atrophy, they get less capable;

The body's system for maintaining balance begins to change;

Coordination is reduced;

The immune system becomes less effective;

Sleep patterns and the body's natural clock are affected. And that is just for starters.

Some of my colleagues may find this list has a very, very familiar ring to it, and I talked about this in more detail on the floor yesterday. I know it has a familiar ring to me. It is not because I have been in orbit, but because reduced muscle mass, bones becoming more fragile, deteriorated balance and coordination, reduced immune efficiency and sleep disturbances are changes that occur with the normal aging process here on Earth, as well as what happens on a space flight.

What are the mechanisms for these changes? Are the same mechanisms in play among the aging on Earth and the astronauts in orbit? Would an older astronaut experience slower or faster deconditioning on orbit? Are these changes reversible in space by some artificial means or here on Earth for those of our elderly citizens, some 44 million, almost, above the age of 60, as I pointed out yesterday? If so, then how do we make these changes reversible for benefit right here on Earth?

We do not know the answers to these questions, and that is the challenge. But, Mr. President, that is also the opportunity and that is why the Bion missions are so important, because when we identify the underlying mechanisms by which the body adapts to space, we may also identify much, much more.

What if this research leads to new insights on how to treat osteoporosis? Not only would that make the lives of thousands of elderly people more enjoyable, it would save countless millions of dollars in health care costs.

A better understanding of balance and vestibular changes in the elderly could help prevent falls and avoid debilitating injuries for elderly people. That is another area.

The immune system changes. Think what happens if we can just figure out what the common ground is between what happens to people in space over a lengthy period of time as the immune system goes downhill, becomes less effective and in the elderly here on Earth whose immune systems normally with old age become less effective. If we could find out by comparing back and forth what causes that kind of a mechanism, can we trigger it off artificially, is this a new approach to AIDS, is it something we can learn here that is a new approach to cancer?

We do not know, but that is the purpose of research, to find out exactly some of those answers that are of benefit not only in space but will have direct application to people's lives right here on Earth.

I am not trying to say that the Bion missions are the key to the fountain of youth. Far from it. But it is basic research on processes analogous to aging that can only be performed on orbit, and we don't know where it will lead. But if there is one thing we know from our whole U.S. experience in supporting basic research throughout our history, it is that money spent in this area normally has a way of paying off beyond anything we normally see at the outset.

I think we owe it to our children and to our grandchildren to find the answers as best we can to some of these things and the opportunity we have to do that.

Mr. President, my colleagues have heard me speak in detail about the value of basic research and how we do not always know what benefits will come from such research. But let me just talk very briefly about some of the benefits and technology spinoffs that have come out of the Bion Program to date.

Doctors at the University of California at San Francisco are using the biosensors and telemetry technology developed for the Bion Program to monitor the condition of fetuses with life threatening conditions. For some congenital medical conditions, doctors can more safely and effectively operate on fetuses in the womb. Such surgery was much riskier before this sensor technology was available.

A computerized video system developed to test the behavioral performance of Bion monkeys is now being used to teach learning disabled children.

A device to noninvasively test bone strength was proven effective in Bion monkeys and is now commercially available to assess the condition of human patients suffering osteoporosis and other bone diseases.

While conducting ground-based research in preparation for a Bion mission, Dr. Danny Riley of the Medical College of Wisconsin discovered a staining technique that surgeons can use to more accurately reconnect the peripheral nerves in severed limbs. And this discovery did not involve any amputation of animals' limbs to do that research. In the past, the only markers surgeons have had for accurately rejoining the peripheral nerves have been the positions and size of the nerve axons. Dr. Riley discovered a staining technique that stains sensory axons but not motor axons. Not only is this a boost for neurological research, but it will improve the successful prospects for reattaching limbs that have been severed.

Mr. President, to conclude—I gave a more lengthy statement yesterday in detail of some of these areas—but to conclude, Bion research is important. It is thoroughly reviewed research. It is conducted humanely. It presents a real opportunity for new insights into the human body every bit as much as medical research right here on the surface of the Earth.

We have a new environment up here. It is the microgravity of space flight. It offers a whole new opportunity to do animal research ahead of the human beings perhaps doing the same thing later on. As I said, initially we do those same things right here on Earth with regard to all sorts of experiments that have led to heart operations, drug tests, new vaccines, bone research, eye research, and so on, that we do here on Earth. And I see no reason whatsoever why we should knock this out when it is a very, very valuable program.

So, Mr. President, I hope that we will defeat this amendment and I hope our colleagues will see the wisdom of going in that direction also. I yield the floor.

The PRESIDING OFFICER. Who seeks recognition?

Mr. BURNS addressed the Chair.

The PRESIDING OFFICER. The Senator from Montana.

Mr. BURNS. Mr. President, I rise today to oppose the Smith motion. A while ago, the chairman of this subcommittee on appropriations said that we run into a lot of things in this business, and especially here on the floor of the U.S. Senate, that we do not quite understand. I chair the Subcommittee on Science, Technology and, of course, Space, and NASA. That is the committee that provides the authorization for NASA.

So I state my support for the Bion Program and, of course, this appropriations here which rejects the House language that prohibits the funding of the Bion 11 and 12 missions. In science and technology we run into a lot of things that we do not quite understand because I do not think there are very many of us on this floor that are scientists.

The Bion Program is an important cooperative space venture between the United States, Russian, and French space agencies for international biomedical research using Russian-provided support systems, their spacecraft, payload and, of course, the rhesus monkeys. It is a cost-effective program. It is based on sound science. It has been peer-reviewed, I think, four times. I could be wrong, but I think four times. And every time they have come away with the recommendation that the research should move forward.

Some of the results are likely to provide insights into understanding complex physiological processes which occur during the normal aging process or are involved in Earth-based diseases such as anemia, osteoporosis, muscular atrophy and the immune system dysfunction.

In Billings, MT, the Deaconess Research Institute there has the largest data base on osteoporosis in women that there is in the country. Because of a stable population in my town of Billings, MT, they have been able to move forward on a lot of this research. But the research that is done in space becomes evermore important. Indeed, the first 10 missions of the Bion Program have already benefited our lives through technological spinoffs, such as the development of devices to monitor human fetuses following life-saving surgery and to noninvasively test bone strength in patients suffering from bone diseases. These benefits to our health and well-being are an addition to the knowledge gained to help NASA protect the health and safety of our space travelers.

Yes, there are those who would like to scrap the space program altogether. I am not one of those. I am saying that this society, this American society, in fact the unique American is a person that is always reaching out, going into the unknown, exploring the unknown. When we quit doing that, then we lose a part of ourselves.

Basically, I have a hunch that this amendment is not really about NASA. It is an anti-animal research amendment. The animal welfare groups have targeted the Bion project for elimination. They claim that research is not necessary and it is inhumane and it wastes the taxpayers' money. And all of that could not be further from the truth.

Animal welfare groups are waging an all-out campaign against the program simply because four Russian rhesus monkeys are scheduled to be used in the Bion 11 and 12 missions. Because of this continued pressure, the Bion Program has been continuously scrutinized and it has been continuously peer-reviewed. The experiments were peer-reviewed in 1988, 1992, and again in 1993.

In December 1995 the Administrator of NASA, Daniel Goldin, again requested an external panel of scientists to review the research. And the 12-person panel of independent experts strongly recommended that NASA proceed with the remaining Bion missions. As in the previous reviews, their findings reconfirmed the importance of the program and its scientific merit. The panel concluded that the science is excellent; rhesus monkeys are the appropriate species to address the scientific objectives; and there are no alternative means for obtaining the essential information that will be gained from this research.

So the Bion Program is being debated here because the most radical animal rights activists have elevated their own agenda above the interests of good science and, further, above the lives of human beings.

I think this amendment, if it is passed, will have very serious repercussions on other Federal agencies. I think these agencies include the National Science Foundation, the National Institutes of Health, the Department of Energy, the Department of Defense, and the Veterans' Administration. Their support for research in the biomedical and life sciences can also be jeopardized by the outcome of this vote today. There is a well-established scientific process leading to awards of Federal support. Being chairman of that committee, we deal with this every day. The proposed experiments undergo peer review by experts, and this includes the review of the use and care of animals that are used in research programs. So this is nothing new to the authorizing committee that I chair.

This amendment contradicts existing Federal policies, contradicts the procedures for scientific peer review and laboratory animal welfare that has already been put in place by Congress. It sends a message that Members of Congress, not scientists, are the best judge of the quality of the science projects. I, therefore, challenge any Members of this body, as certain projects come before us, especially in the area of research science and science development, that if everybody is an expert on everything that we talked about and allocated money to do research for, I would really be surprised. But we do have a peer review system, and, thus, if the passage of this amendment were successful, it would undermine the

whole foundation that has been assumed on scientific research.

Animal research plays an integral part in all of our lives. It has been said that without animal research, most, if not all, of the medical advances in the last century might never have occurred. For example, we could still have polio, and today nearly 38 million Americans would be at risk of death from a heart attack, stroke, kidney failure, for the lack of medication to control their high blood pressure. I could go on and on. I am getting more of an education in that field all the time. I happen to be a very proud father of a doctor who graduates medical school next spring. So I have a feeling that my education is going to continue until they put me in the ground, so to speak.

The antianimal research amendment forces NASA to withdraw from a signed contract with the other nations—Russia and France. It derails scientific peer review and thwarts the Animal Welfare Act. Is this the message, I ask this body, that we want to send? Allowing a single interest group that totally opposes animal research to dictate NASA's or other Government agencies' research goals cannot be tolerated. I have seen these groups work. Sometimes they have a less-than-candid view of what has to happen as far as science and technology is all about just to further their own cause.

So, Mr. President, the Bion Program is worthy. The amendment is not truly about the merits of research or the costs, because the costs are nothing. What it is about is the welfare of animals being used for research. I support appropriate procedures to protect the safety and well-being of animals, but this amendment is simply inappropriate.

Mr. President, I yield the floor.

The PRESIDING OFFICER. Who seeks recognition?

Mr. BENNETT addressed the Chair.

The PRESIDING OFFICER. The Senator from Utah is recognized.

Ms. MIKULSKI. Will the Senator withhold for a second?

Mr. BENNETT. Yes, I am pleased to.

Ms. MIKULSKI. Mr. President, I bring to the Presiding Officer's attention, and to my colleagues' in the Senate, I believe we are moving at a good pace in this debate. I see on the floor our colleague from Tennessee, Dr. FRIST, who wants to speak on this. I do, as well. I encourage anybody else who wishes to speak, to please come to the floor so we can move to concluding this debate before the respective caucus. I think this has been an outstanding discussion.

Mr. BOND. I thank my colleague from Maryland for pointing that out. I hope if there are others—particularly proponents of the motion to strike—they will come down by the time the Senator from Maryland is prepared to talk. I have asked her if she will conclude comments on this side. I think that the Senator from New Hampshire wants to close and then make the tabling motion. But I sincerely hope that we can wrap this up by noon. The Senator from South Carolina would like to speak for 3 minutes on this measure. I hope we can conclude this debate by noon, or at least by 12:30, and then have the tabling motion. We will discuss with the leadership when that vote will occur.

Ms. MIKULSKI. Yes, because, as I understand it, when the motion to table is made, isn't the vote immediate?

The PRESIDING OFFICER. We are in a nondebatable posture at that point, that is correct.

Ms. MIKULSKI. Must the vote occur immediately, or could it be delayed after the party conferences?

The PRESIDING OFFICER. Unless the Members would seek a unanimous consent agreement to schedule it for a different time.

Ms. MIKULSKI. While the Senator from Utah is speaking, perhaps we can talk with the leaders about how they wish to handle the vote. I believe the Democratic leader wishes it to be after the conference.

Mr. BOND. I thank the Senator from Maryland. I will defer to our leadership. I understand from the Senator from New Hampshire that there are no further speakers on his side. So we will hear from the speakers who are now lined up to speak in opposition to that tabling motion. Then we will, after they have spoken, ask the Senator from New Hampshire to proceed and make the tabling motion, perhaps, with a unanimous consent request that the vote be postponed until a time certain.

The PRESIDING OFFICER. The Senator from Utah is recognized.

Mr. BENNETT. Mr. President, I was particularly enlightened by the comments of the Senator from Ohio, who has a unique perspective on this particular issue. As I have noted here before, I come as the successor to Senator Jake Garn, who also has a unique perspective on this issue, and who, if he were still in the Senate, would be speaking out very strongly in favor of the committee position.

We are talking about America's space effort, America's interest in exploring in space, and we made the decision, as a country, to put humans into space for a prolonged period of time at some point in the future. It makes no sense to fund a program and put humans into space and not to do the research necessary to understand what will happen to humans when they get there. That is essentially what the motion to table would do. It would say, yes, we will go ahead and fund the programs to put humans in space, but we will not fund the research to find out what will happen to them.

We are told that we already know what will happen, that humans have stayed in space for 439 days. It is true that on the basis of that, we know what happens. They experience loss of bone mass and muscle deterioration, and brain and motor functioning is different. We know that space affects the spinal cord and bones, muscles and immune system, as well as the brain. But what we don't know is whether these effects are long-term, and whether the bone and muscle loss is permanent. We don't know that. Can the deterioration be counteracted in space? We don't know that. What else occurs that might not have occurred in 400 days that might occur for a longer period of time? We don't know that.

We have an opportunity to find out by using animal experiments in space. Science doesn't tell us where the answers are. As we look at the great breakthroughs in science, they have come, sometimes, with hard research. They have sometimes come by complete chance, as people are looking for one thing and stumble across something else. But we do know that they never come if the research is not conducted and if people do not make an attempt to find out these answers.

I won't repeat all of the arguments that have been made on the floor, because I think they have been very cogent. I do agree that the Senate is not the appropriate place to try to micromanage a scientific project when, in fact, it has been subjected to the amount of peer review and overall management guidance that this particular program has.

The Senator from Ohio has quoted Dr. Ronald Merrell, the chairman of surgery from Yale, who is the scientist who has written to the NASA advisory council. I urge my colleagues to refer to those quotes. I would like to add just a few more to those which we have already seen. From the American Physiological Society, I have a letter that says:

> The research is scientifically necessary, important to NASA's mission, and should be allowed to proceed.
>
> The Bion research is intended to expand what we know about how space flight affects muscles, bones, balance, and performance. While human beings have spent long periods of time in space, it has not been possible to fully document the changes to their bodies. In part that is because for their own comfort and protection, astronauts take medications to counteract space sickness and do intensive exercise to overcome the harmful wasting effects of prolonged weightlessness. These countermeasures make it hard to determine exactly what is happening to their bodies. The Bion 11 and 12 experiments are intended to fill gaps in our knowledge so that we can find better ways to counteract the effects of weightlessness on the body.

I found that interesting. I remember talking with our former colleague, Senator Garn, about the problems that he had both preparing for his space flight and some of the space sickness experiences he had while he was there. He took the countermeasures to which the letter that I quoted refers, and he was able to function properly. But that is something that had not occurred to me until this letter came in as a reason why we need to proceed with the animal research.

From the American Society for Gravitational and Space Biology, I offer the following:

To kill this program just as mankind embarks on permanent presence in space would be a serious mistake.

From the Association of American Universities, the National Association of State Universities and Land-Grant Colleges, and the Association of American Medical Colleges, I have this quote:

We are concerned about the precedent this amendment sets in terminating research that has been peer reviewed and approved on the basis of scientific merits.

That is another interesting thought where the Congress has authorized science to go forward. The science has been peer reviewed. It has been declared to be appropriate. Then for the Congress to come in and say, no, we do not like your peer reviews, we are not going to pay any attention to the scientists, we are going to override it, is, indeed, a bad precedent for us to set.

Finally, from the Americans for Medical Progress Educational Foundation, this quote:

Bion makes sense.

(1) Scientifically it will yield critical knowledge of the effects of space travel on human physiology. This knowledge is essential for the safety of current and future space travelers;

(2) Financially, $14 million of the total $33 million has already been spent. To halt in midstride would mean that all of that money was wasted. More to the point, Russia has funded the vast majority of the costs of all of these projects. If the United States was to attempt to garner this data on its own, the costs could exceed $.5 billion.

In summary then, Mr. President, I am a supporter of the space program. I believe we should move ahead with our attempt to discover and explore in this final frontier. I do not believe that we should prepare the space program to send humans up into space without doing all of the appropriate research that we possibly can on the impact on human physiology of space travel. This program is the most intelligent, the most carefully charted, and the most financially responsible way for us to gather that data.

For those reasons I support the committee's position.

I yield the floor.

The PRESIDING OFFICER. Who seeks recognition?

Mr. FRIST addressed the Chair.

The PRESIDING OFFICER. The Senator from Tennessee is recognized.

Mr. FRIST. Thank you, Mr. President.

Mr. President, I rise in opposition to the tabling motion and in support of the Bion research project.

My perspective is a bit different than many of the people that you have heard from today in that we have talked this morning and debated this morning about animal research, about the use of various animals, notably monkeys and primates in research.

I stand before you as one who has seen through my own picture window as a heart and lung transplant surgeon, as a heart specialist, as a lung specialist, as someone who spent the last 20 years of his life in the field of medicine, as one who has been a beneficiary of that research and seen the great benefits to mankind, to people throughout the world.

My perspective is one of a scientist who has written over 100 papers that have been peer reviewed. I would like to come through the peer-review process because I think it is not only critical to the way we address this fairly complex issue but one which I think the peer-review process and the importance it places on our review will go a long way to keep us, Members of Congress, from micromanaging the scientific process today.

About 2 months ago I was in Tennessee, and someone came up to me and handed me a picture of a young 6-year-old boy. I did not recognize the boy, to be honest. But the two proud grandparents, I found out later, handed me the picture and were a little surprised I did not recognize him. But I did not recognize him because I had not seen him in 6 years. He was 6 years old. At 3 weeks of age I had done a heart transplant on that young boy when he was, I think, 20 or 21 days of age. Now he is alive today playing baseball and in the first grade. I talked to his parents actually just a couple of weeks ago.

The research which allowed me to take the 5-week-old heart and put it in a 3-week-old individual that has allowed this little boy to be alive today came out of operations on monkeys, rhesus monkeys, and, yes, as a U.S. Senator I can tell you that I have operated on rhesus monkeys. I have done it in a humane way, and those were treated just like other patients—were given anesthesia and were protected. Safeguards were in place. But that little boy is alive today because I learned that procedure and helped to figure out that procedure based on operating on monkeys about 8 years ago.

I can't help but think of a 60-year-old man today who I did a heart transplant on about probably 6 years ago who was kept alive for about 32 days with an artificial heart. That artificial heart I had learned to implant and figured out the details of in animal research spending day after day operating and placing that device in animals before placing it into a human being who is alive today because of the technology and because of the scientific advances that were made because of animal research.

I can't help but think about 1986 when I was engaged very directly in primate research doing heart-hung transplants on monkeys. Just 12 months after doing those heart-lung transplants on monkeys in a humane way, I was able to transplant in a 21-year-old woman who had in-stage heart and lung disease, who underwent the first successful heart-lung transplant in the Southeast back in 1985.

So you can see that I stand before you as someone who has had very direct experience in the benefits of this type of research. I say all of that because a lot of the rhetoric that has sprung around today of monkeys in space and getting monkeys off the taxpayers' backs we really need to put aside and engage this in a very serious and scientific way because this scientific research, I think, can be critical to the safety of human beings both in space but also ultimately in this country.

Much has been said in terms of the peer-review process. Let me tell you as a scientist, as someone who has operated on monkeys, as someone who has taken that research to the human arena, I cannot stand before this body and before the American people and say that I, BILL FRIST, a physician with about 16 years of medical training, can evaluate this specific research. So what do I do? I turn to my peers who are experts, who five times in the past through a peer-review process have looked at these specific projects and said that this is sound research, that this is important research, important research that needs to be carried out in this environment and elsewhere.

We have to be very careful, I think, in this body before engaging in the micromanagement of the type of research that goes on in this country, or that will go on. The temptation is going to always be, I think, to rely upon what feels best to us as legislators, or to people who come before us. I think we have to be very careful, in setting national priorities, to rely upon the medical community, to rely upon the scientific community through that peer-review process.

In that regard, much has been made already this morning of the fact that the Bion experiments have been peer reviewed five times for scientific merit. We have already talked about that. In December 1995 an expert panel of scientists—the Bion Sience Assessment Panel—conducted a review of the science which encompasses the United States and French portions of the experiments. We know that the Bion assessment panel—this was mentioned by the Senator from Wisconsin—recommended certain procedural improvements in program management that overall the panel has commended since as meritorious and recommended that the Bion 11 and 12 missions proceed.

In addition to this 1995 review, we had reviews of outside committees in 1988 and 1992 and 1993. In 1988, a panel convened by the American Institute of Biological Sciences reviewed and determined the scientific merit of the experimental proposal submitted in response to a NASA research announcement.

In March 1992, a second independent review of the integrated United States-French set of flight experiments was conducted to assess continued relevance of rhesus experiments, and again they recommended that the rhesus project should continue. And in July 1993, an independent science critical design review gave the rhesus

project the authority to proceed with the transition to payload development.

I did receive a letter from the Association of American Medical Colleges which most people know represents over 120 accredited U.S. medical schools, represents some 400 major teaching hospitals, represents 74 Veterans' Administration medical centers, 86 academic and professional societies representing 87,000 faculty members and the Nation's 67,000 medical students and 102,000 medical and surgical and other medical specialty residents.

This letter basically says that ''the AAMC is deeply concerned about the precedent the House action sets in terminating research that has been reviewed and approved on the basis of scientific merit. The Bion Project has undergone repeated external expert review.''

They close by saying that the AAMC, that is, the Association of American Medical Colleges, ''strongly supports the use of merit review to determine how limited Federal funds may most productively be spent for scientific research.''

Again, a letter that has been quoted already this morning, from the president of the Association of American Universities, from the president of the National Association of State Universities and Land Grant Colleges, and from the president of the Association of American Medical Colleges reads: ''The Bion missions have been peer reviewed and approved by five independent panels over the past 8 years. The most recent panel found that the quality of science proposed is very high.''

And let me underline this following part, that ''there are no known alternative means to achieve the objectives'' and that ''the animal care and welfare proposals meet all requirements of United States legal standards.''

In closing, as I step back again as someone who has seen the benefits of science in primate research, as someone who has some experience with the peer review process, I would like to caution my fellow Members that we must be very careful in micromanaging biomedical research. That is why we have a peer review process, and that is why it works so well. So let us let that process work.

I do hope my colleagues will support the continuation of the Bion Program for these reasons and resist that temptation to micromanage research which has also met the criteria of numerous peer reviews.

I thank the Chair.

Mr. THURMOND addressed the Chair.

The PRESIDING OFFICER. The Senator from South Carolina is recognized.

Mr. THURMOND. Will the Senator yield me 3 minutes?

Ms. MIKULSKI. Absolutely.

Mr. THURMOND. I wish to thank the able Senator.

I rise today in support of H.R. 3666, the fiscal year 1997 appropriations bill for the Department of the Veterans Affairs, Housing and Urban Development, and independent agencies. This is a broad measure which provides appropriations for a variety of programs. It funds veterans, public and assisted housing, environmental protection, NASA, the Federal Emergency Management Agency, and other programs. I commend the managers of this bill for their balanced approach in funding the many Government functions contained in this bill.

Mr. President, let me note a few of the highlights of this bill. This bill reflects the intent of Congress of keeping Government costs under control. The total appropriation, $84.7 billion, is only a slight increase over last year's funding. However, it is $2.8 billion less than the President requested. Reductions to the President's request are primarily in administrative costs. In most program areas, for actual benefits, funding in this bill is above the President's request.

I particularly support the committee's funding proposal for veterans programs. This bill provides $39 billion for veterans, which is an increase over last year's funding and above the President's request. These funds will adequately provide for veterans' compensation and pensions, medical care, and construction projects related to outpatient care, medical research, and veterans' cemeteries.

As a member of the Committee on Veterans' Affairs and as chairman of the Committee on Armed Services, my commitment to the veterans of our armed services remains strong.

I have stated many times that the highest obligation of American citizenship is to defend this country in time of need. In return, this grateful Nation must care for those who are in any way disabled because of their patriotic duty in our Armed Forces. I believe the funding levels in this bill will provide the resources for the Government to meet its obligations to our Nation's veterans.

Again, I congratulate the managers of this bill for the support of our veterans. I yield the floor. I thank the Senator.

Ms. MIKULSKI. I thank the Senator.

The PRESIDING OFFICER. The Senator from Maryland is recognized.

Ms. MIKULSKI. I thank the Chair.

I think we are about to move to the conclusion of this debate, and I think it has been an excellent debate. I think proponents of terminating the Bion Project are, indeed, well-intentioned people in the Senate, the Senator from Wisconsin, and the Senator from New Hampshire, and I think their sensitivity and concern about the sanctity of life should be acknowledged. It is exactly because of our concern about human life that many of us who are proponents of science and technology support well-regulated, well-monitored, well-thought-through and necessary animal research.

The issue of animal research is not new to this Senator. As a Senator from Maryland, I not only have the honor of representing one of the primary space centers in the United States, Goddard, but I also represent the National Institutes of Health as well as Johns Hopkins University and the University of Maryland, all of which engage in very strong scientific research and, in many instances, do use animal testing in their protocols.

So as someone who believes that we need to have scientific breakthroughs to save lives, whether it is at NASA or NIH, I do believe we do need to have animal research in life science projects.

I am not alone in that view. We have heard from a Senator-astronaut, Senator GLENN, from Ohio, who, as we know, was the first astronaut-Senator to orbit the Earth, and I think Senator GLENN is alive today because the first lives to go into orbit were monkeys and we knew how to deal with gravity, how to deal with oxygen, how to make sure that we could launch him and bring him back safely. We heard from the distinguished Senator from Tennessee, Dr. BILL FRIST, a medical doctor, again talking about the compelling nature of doing animal research in order to be able to save human lives.

Much has been said about this project, and I would like to use this opportunity to engage in a factual conversation.

Just to go over some of the facts, I would like to bring to my colleagues' attention that Bion 11 and Bion 12 are two cooperative United States, Russian, and French space flights and they are scheduled to go up October 1996 and July 1998 using Russian Bion biosatellites. Now, Bion spacecraft are satellites that do not have crews on them, so this will be unmanned. They were developed by the Russians, and they fly biological experiments with, yes, primates—rodents, insects, and plants—in near Earth orbit.

In very general terms, the major objectives of these biosatellite investigations are to study the effects of low gravity and space radiation environment on the structure and function of individual physiological systems and the body as a whole.

Understand, this is not the space shuttle with monkeys on it or rodents or insects or plants. These are 8 feet in diameter. They carry a 2,000-pound payload. We have had about 10 of these since 1973. What we are talking about here are 10 monkeys that were on previous Bion missions that were recovered. In the Bion protocols the monkeys are actually recovered. Also, Bion protocols do not include the sacrifice of monkeys. So we are not talking about ghoulish, Kafka, grim practices here. We are talking about research, done on mammals, that has been adequately scrutinized for protecting the animals.

First, the experiments have been peer reviewed four times for their merit. So, no, these are not just idle experiments. They have been reviewed on many occasions for their scientific merit. The

whole point of their scientific merit was to ensure we were getting a dollar's worth of research for a dollar's worth of taxpayer dollars. And, was there another way to do this research on Earth? The answer came back resoundingly that this was valid scientific research and it was worth the money and it was worth the effort.

These protocols are evaluated and monitored for humane treatment of animals. Prior to the external peer review by a group called the AIBS, a scientific group, there was a prerequisite for funding in which the proposals needed to be reviewed by the sponsoring institution's internal animal care and use committee. This is in accordance with the Animal Welfare Act, that every institution that conducts research with Federal funds must have an animal care and use committee, it must include a veterinarian, a scientist, an ethicist, and so on. So, again, it was not ''let's put a bunch of monkeys or rodents in space and put electrodes on them and see what happens.'' All of the scientific protocols were used to ensure the Animal Welfare Act was honored and was practiced on this project.

I knew there would be reservation because this was done by the Russians. We are not in the cold war, so that is not the issue. But, frankly, one of the characteristics of the Russian space agency was the astronauts were known for their incredible bravery. It was an endurance contest. Often, their work focused on endurance test research.

What ours is, though, is more about how we can protect astronauts in space, but also learning from life science projects that would study these biological effects that would protect people here on Earth.

What I am told is that NASA is gathering data on bone mass, muscles, bone structure, healing in space, osteoporosis—something of tremendous interest to me—and so on. This research is leading to enormous medical advances. This benefits you and I and other Americans. We hope to save young children because of Bion research. We are helping to protect women from debilitating bone disease, particularly osteoporosis.

Let me share a few examples. The Bion Project has enabled scientists to study the cause, treatment, and prevention of spinal cord injuries in space by using this primate research. The Bion Project has also produced data on fluid and electrolyte balance. This has tremendous impact on research for people with kidney problems on kidney dialysis. Often, people get sick not only because their kidneys are in failure but because of the failure to maintain an electrolyte balance. It has also looked at the generation of new blood cells and the whole issue of immunology. It is related to cancer research.

We could give many examples of this. One of the things I think has also been very important is, because of the technology to monitor the primates, we have also been able to improve other monitoring systems—for example, on fetal health, which I know is of great interest to many of our colleagues. The 8 joint Bion missions to date have produced access to space for 100 U.S. experiments, 90 peer review journals, and has accounted for one-half of all the life science flight experiments accomplished with nonhumans. According to NASA, similar unmanned satellite programs developed by NASA alone, without Russian support, would cost 20 to 30 times as much.

It is not our job to review the project for scientific merit. In fact, that has been established. It has been reviewed four times for that merit. I believe we need to ensure the ongoing part in this.

Ames Research Center has an excellent animal care program, as demonstrated by its full accreditation by the Association for the Assessment and Accreditation of Laboratory Animal Care International. This is a nonprofit organization that reviews animal research around the facilities to make sure they are fit for duty and humane in their operation.

So I think this project is of merit. I think we should continue it. I do not think we should cancel it.

Earlier in the conversation, someone talked about the OSTP, the President's Office of Science and Technology. They also do support the project. I have a letter here from Dr. Gibbons stating that. I ask unanimous consent that be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

THE WHITE HOUSE,
Washington, DC, July 25, 1996.

Memorandum for Dan Goldin, Administrator, NASA.

From: John H. Gibbons, Assistant to the President for Science and Technology.

Subject: BION Task Force Recommendations.

Thank you for transmitting to me the recommendations from the BION Task Force of the NASA Advisory Council. I was pleased that you decided to form the Task Force to provide you with independent and expert advice on the program. Their recommendations are clear and confirm earlier findings by other groups charged to review BION missions 11 and 12. The scientific merit of the proposed research, as determined by rigorous peer review, was judged as excellent and important to the future of manned space flight. Furthermore, it is noteworthy that the review panel observed that there is no known alternative means to achieve the objectives of the program. I also was pleased to learn that the animal care and welfare proposals for the Rhesus monkeys meet U.S. legal standards. Finally, I am sympathetic with the Task Force's compliments to NASA for its leadership in bioethics and their encouragement for NASA to expeditiously implement a bioethics review policy, thereby continuing its leadership in this important arena.

Ms. MIKULSKI. It said:

I was . . . pleased to learn that animal care and welfare proposals . . . meet U.S. legal standards . . . and the [NASA] task force compliments . . . its leadership in bioethics [as well as its scientific merit].

So, when you hear from the Senator from Ohio, the Senator from Tennessee, the scientific community, I think the evidence speaks for itself.

I know the Senator from New Hampshire wishes to conclude the debate on this, and that is his right. We respect that. I just ask unanimous consent that, when the Senator makes his tabling motion, the vote occur at 2:15.

I will reel that right back in. Senator BOND and I were trying to expedite the vote. It is just a clarification of the time. Many of our colleagues on both sides of the aisle are flying back in. They may be delayed until afternoon, and I know they want to have their voices heard on this most important amendment.

The PRESIDING OFFICER. Who seeks recognition? The Senator from New Hampshire is recognized.

Mr. SMITH. Mr. President, this debate, on the part of those who are defending the project, I must say, has been very skillfully conducted. Frankly, someone who was paying maybe just a little attention to this and not to all of the detail would probably agree with them. It is unfortunate the debates and facts get twisted on the floor of the Senate as they do.

This basically now is coming down to being an anti-NASA vote, which it is not. I have made a very strong point earlier in my comments about my strong support for NASA.

It does not take one dime from NASA. It allows NASA to reprogram the money into areas that I believe and I think NASA would probably agree are more important.

It is also coming down as being total opposition to any and all research that has ever been done on animals in the name of helping human beings. That is not the issue either.

The issue is very simply this: Do you continue to do research after you have gotten the facts? Do you continue to do research over and over and over again for no reason?

No one has presented any good reason for this project. There have been some general statements made about research by some very sophisticated people who I certainly respect, such as the Senator from Tennessee. That is not the issue. Once you develop a vaccine or once you develop something that cures a disease, do you continue to do the same research on the same vaccine over and over and over again once you have found out what it does? If you vaccinate your child against smallpox, do you continue to vaccinate over and over and over and over and over again, or is there some limit? That is the issue. Do you want to continue to waste $15.5 million on research which is duplicative or don't you? That is the issue.

The Senator from Maryland said a few moments ago, ''It's not our job to review this project, or any project, for scientific merit,'' referring to this project. ''It's not our job to review this project for scientific merit.''

I ask my colleagues, if it is not our job, since this bill is before us, whose

job is it? Whose job is it? The White House said, ''We don't need this project.'' In essence, that was the conclusion they drew. The Administrator of NASA, in a memo that cites him, basically agrees that we do not need it. The House of Representatives has voted overwhelmingly, 244 to 170-something that we do not need it. So if it is not our job to review it, why is it here? Why is it in this bill? Whose job is it to review?

When we take that attitude, that is one of the reasons why we have a $5 trillion debt, Mr. President, because no one wants to take the time to review these projects, and the truth of the matter is, we have oversight responsibility in this body, and I take it very seriously. So we should review it. We should review everything. We do not review enough. If we reviewed more, we would find a lot more waste.

There has been a lot of testimony from people who are experts, and some who pretend to be experts, in this debate. Let me cite a couple, because I think it is important to get some balance here.

Sharon Vanderlipp is a veterinarian. She writes a letter to me in which she says:

As former chief of veterinary services for NASA Ames Research Center—

That is where this work is done; that is who supervises this project.

As former chief of veterinary services for NASA Ames Research Center, and as a veterinarian with more than 15 years experience in the specialty of laboratory animal medicine—

I hardly would consider her an animal rights activist, I think we could draw that conclusion fairly safely. She spent 15 years in laboratory animal medicine—

I am writing to request your support of Smith-Feingold regarding the Bion experiments. I support animal-related research when there are no other research alternatives and when the derived benefits justify the loss of animals lives and monetary expenditure.

This is not the case in the Bion project.

It is the charge of the U.S. Senate to represent the will of the constituency in determining how their tax dollars will best serve them. There is still time to salvage this $15 million.

During my service at NASA Ames Research Center, July 1993 until my resignation in March of 1994, a review of the medical records of the nonhuman primates indicated NASA's failure to provide appropriate surgical monitoring, pre- and post-operative care. Post-operative deaths were not uncommon. These records were reviewed indepth by myself and included animals involved in the Bion protocols.

She goes on to talk about some other violations.

NASA officials repeatedly ignored my request for assistance in resolving a variety of animal welfare related issues.

She also says:

Many of the individuals associated with the animal research components of Bion protocols are the same individuals who demonstrated a total lack of respect for animal welfare laws.

And on and on.

Mr. President, there are people who are very close to this project, highly respected people, who differ, as we heard differing opinions expressed here earlier. I respect those differences. It does not mean, though, that just because they have differences that they are correct.

I have a page here listing seven or eight physicians. Senator FRIST is a physician. I respect him. But here are physicians who disagree with him on this project. Let me just read a couple.

Dr. Roger White, board certified anesthesiologist, Mayo Clinic, Mr. President—Mayo Clinic:

Any assessment must be reviewed as one of the most invasive experimental procedures ever imposed on an animal, beginning with surgical procedures of implementation of multiple monitoring devices. It is particularly aggressive to the point of being macabre as well as cruel.

The Senator from Maryland said all this was done in the best interest of the animal, nothing macabre was done. I am not sure that was the term she used.

Let me read exactly what is done. I think we should know what is done. It is the subject of debate. I do not think this is the only issue, but I think we should say what is done.

Now remember, no matter how you feel about research, this is done because, and Senator GLENN brought this up, we want to determine the effects of weightlessness on these animals in space. Astronauts train and exercise vigorously in space to keep their muscles and their bones moving so that they don't atrophy, if you will. These monkeys are restrained. They cannot move. So I ask whether or not this kind of treatment is necessary now in this day and age after we have had astronauts in space over 400 days at a time to determine the effects of weightlessness on monkeys who are restrained, who cannot move.

I do not know what ''macabre'' means. I do not know what ''gruesome'' means or ''grotesque'' means. I thought I knew what it meant until I heard the statement from the Senator from Maryland. If this isn't, then I would like to know what it is.

This is in a letter to Daniel S. Goldin from Leslie Alexander of the Houston Rockets. They live in the Houston area, have business in the Houston area. They are very supportive of NASA and the space program, as I am. This is what is done to the animals in question:

The Bion space project causes unimaginable suffering to the young monkeys.

Again, thinking of the words ''macabre,'' ''cruel,'' whatever you want to call it. If you don't think it is, fine, then you should vote the other way.

The tops of the monkeys' skulls are opened, electrodes are wired to their brains, holes are cut in their eyelids and eyeballs, wires are run through the holes and stitched to their eyeballs. The wires are threaded under their scalps to reach the circuit boards cemented into the openings in their skulls. Eight holes are then drilled into each monkey's skull so a metal halo can be screwed into it for immobilizing the animal for up to 16 days. Fourteen electrode wires hooked up to seven muscles in the monkeys' arms and legs tunnel under the skin and exit from a hole in the animals' backs. A thermometer is surgically buried in each animal's stomach and it too exits their backs. Straight jackets are sown on to monkeys to keep them from ripping the wires out of their bodies.

He goes on to say that this project is cruel, pointless, wasteful, scandalous, shameful, and harmful to NASA's reputation.

Mr. President, if you assume—if you assume; I do not—but if some do, that this type of medical research is necessary, then why do it after you have the results? How does a monkey, restrained, that cannot even move, how does this experiment in space help anybody find out anything? And the truth of the matter is, Mr. President, it does not. And everybody in NASA knows it. Mr. Goldin knows it. The White House knows it. And 244 Members of the House know it. But somebody in this Government, some bureaucrat, somebody who is not in a leadership role on this, has decided otherwise.

So they send in this stuff. And they make it out to be an issue that somehow if you oppose this kind of treatment, that somehow you are opposed to all research, that you want to let heart doctors not have the opportunity to test and to do the things they have to do to determine how to operate on a human being. It is outrageous to make those kinds of statements on the floor of the U.S. Senate. This is a repetitious, unnecessary, experiment putting these monkeys through this for 14 days in space to find out the effect of weightlessness, when an astronaut moves around. He exercises. They give them, as the Senator from Ohio knows, prescribed exercises to do in space. They move around. A monkey in a straitjacket cannot move. And yet we still are doing it.

This is not 1960. This is 1996. We have had 40 years of humans in space. Why are we doing it? Because somebody, whom we cannot identify—no name has been given—in this bureaucracy has decided we have to have it. And it is being painted that this Senator is opposed to NASA. This Senator supports NASA. This Senator wants money to be spent in NASA for worthwhile projects, not wasted on this. We need to ask ourselves, is this the way the American people want us to spend their money?

Dr. David Wiebers of the Mayo Clinic, chairman of the neurology/epidemiology department:

I write this letter from the perspective of an academic and practicing neurologist who supports progress in medicine but who also has considerable concern about the well-being of animals who are utilized in experimental procedures, particularly when those procedures are not scientifically necessary . . .

That is the issue here, not sickness.

. . . and when they involve cruelty to animals . . . it is my opinion that the scientific

gains from these procedures will be insignificant. Moreover, these particular animal studies are extremely invasive and would be expected to cause major discomfort . . .

He is opposed to the project.

Mr. President, I ask unanimous consent that a sheet entitled ''Doctors say YES to the Smith-Feingold amendment to H.R. 3666'' be printed in the RECORD. It is a long list of physicians, very well-respected from Stanford, as well as the Mayo Clinic and others.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

DOCTORS SAY YES TO THE SMITH-FEINGOLD AMENDMENT TO H.R. 3666

(Excerpts from statements from physicians and scientists who reviewed NASA's Bion 11/12 protocols)

By any assessment this must be viewed as one of the most invasive experimental procedures ever imposed on an animal, beginning with the surgical procedures of implantation of multiple monitoring devices. ''Surgery #3'' is particularly aggressive, to the point of being macabre as well as cruel.—Roger D. White, M.D. Board-Certified Anesthesiologist, Mayo Clinic.

I write this letter from the perspective of an academic and practicing neurologist who supports progress in medicine but who also has considerable concern about the well-being of animals who are utilized in experimental procedures, particularly when those procedures are not scientifically necessary and when they involve cruelty to animals. . . . It is my opinion that the scientific gains from these procedures will be insignificant. Moreover, these particular animal studies are extremely invasive and would be expected to cause major discomfort. . . .—David O. Wiebers, M.D. Board-Certified Neurology/Epidemiology, Chair, Mayo Clinic.

This kind of animal experimentation might have proceeded only a few years ago with little or no comment or objection. Now it cannot and must not. If human alternatives cannot be identified, as the investigators assume, then this project should be abandoned or radically revised and reviewed again.—Jennifer Leaning, M.D., M.S. Hyg. Board-Certified Internal/Emergency Medicine, Harvard Medical School

During my service at NASA/Ames Research Center (July 1993 until my resignation in March 1994), a review of the medical records of the non-human primates indicated NASA's failure to provide appropriate surgical monitoring, pre- and post-operative care, and analgesia. Post-operative deaths were not uncommon. . . . NASA officials told me NASA had no control over the care of BION monkeys in Russia. Veterinarians participating in the project who had visited the Russian facility and observed the animals on location told me conditions were ''draconian'' and that the animals received food of little or no nutritional quality.—Sharon Vanderlip, D.V.M. former Chief of Veterinary Service, NASA/Ames Research Center.

The question is: [W]ill this project substantially contribute to [astronauts'] health in future space missions? . . . My answer is that it will not. The rationale for this project, as set forth in the protocols I reviewed, is completely insufficient to justify continuation of this work.—Robert Hoffman, M.D., Board-Certified Neurologist, Stanford University.

[H]uman data would be more valid and cost-effective than animal data. Many of the surgical procedures are minor for humans (anesthesia being necessary in animals for restraint.) A cooperative human subject would not require some procedures which are done for fixation. . . . I am not convinced that this project will provide meaningful information in a cost-effective manner.—Dr. Dudley H. Davis, M.D., Board-Certified Neurologist.

[T]here have been a vast number of . . . sophisticated studies of . . . vestibular function performed in humans, above and beyond [the huge number using] animals, without any appreciable gain. . . . [C]learly this same old type of stimulate/record study of . . . pathways which has been done exhaustively offers no probability of affording any significant advancement.—Carol Van Petten, M.D., Board-Certified Neurologist.

The only benefit ascertained in my estimation is the continual drain of dollars out of the taxpayer's pocket and into the pockets of ''researchers'' like the irresponsible scientist[s] . . . who [are] common denominator[s] in all of this quackery.—Jack M. Ebner, Ph.D., Physiologist.

Mr. BOND addressed the Chair.

The PRESIDING OFFICER (Mr. ASHCROFT). The Senator from Missouri.

Mr. BOND. Mr. President, if I might interrupt to propound a unanimous-consent request.

The PRESIDING OFFICER. Does the Senator from New Hampshire yield for the purposes of that unanimous-consent request?

Mr. SMITH. Yes.

Mr. BOND. Mr. President, I believe we have reached agreement on the unanimous-consent request that the vote on the tabling motion, which Senator SMITH is about to propound, occur at 2:15. After he makes that motion, then the pending amendment would be set aside, and Senator MCCAIN would be recognized to offer an amendment or amendments. And we would recess at 12:30 and come back in to vote at 2:15. And when that vote is concluded, Senator BUMPERS will be recognized to offer his amendment related to the space station. There is no time agreement on that. But debate will begin at 2:30 roughly, 2:30, 2:35, while the Iraqi briefing is going on. Would my colleague care to comment on it?

Ms. MIKULSKI. Mr. President, the Democratic leader has instructed me, on behalf of our side of the aisle, to, upon the completion of the Senator from New Hampshire's debate and his anticipated motion to table, that we agree to the unanimous consent that a vote occur at 2:15. We further agree that between now and the time we recess for party caucuses that Senator MCCAIN will be speaking on his veterans amendments. And the Democratic leader also agrees to the unanimous consent that upon the completion of the vote on the Feingold-Smith motion, that we move to the debate on the space station as proposed by Senator BUMPERS.

Mr. BOND. Mr. President, I, therefore, propound a unanimous-consent request that when Senator SMITH makes his tabling motion, that that will be set aside with a vote to occur on that amendment at 2:15, that when he completes the propounding of that motion, then Senator MCCAIN be recognized to offer his amendment or amendments, further, that upon the completion of the vote on the Smith-Feingold motion, Senator BUMPERS be recognized to offer his amendment on the space station.

The PRESIDING OFFICER. Is there objection? Without objection, it is so ordered.

Mr. BOND. Mr. President, I thank the Chair and I thank my colleague from New Hampshire.

The PRESIDING OFFICER. The Senator from New Hampshire is recognized.

Mr. SMITH. Thank you, Mr. President. Colleagues are here who wish to speak. I will be very brief. In another few moments I will be completing my remarks. I will then move to table.

Mr. President, I have cited a number of doctors who have indicated their opposition to this. Again, one other one I want to mention comes from Dr. Neal Barnard who wrote me a letter regarding whether or not this is research that is worthwhile or not.

Relevant studies have already been conducted on humans, the results of which are obviously more pertinent to human space flight. Extensive data is also available from previous human space missions, some which have exceeded 400 days. NASA's experiments using rhesus monkeys to study motion sickness, calcium loss and ''sea legs'' are not applicable to humans at all. The physiology of monkeys and humans differ drastically. A restrained monkeys with electrodes implanted in his legs cannot hope to offer insights into the largely neurological, short-lived and self-correcting problem of ''sea legs. ''* * * We already know of methods to limit calcium loss and treat the symptoms of the motion sickness and ''sea legs.''

Of course, in this case the monkey is restrained. So any benefits would be minimal.

Again, Mr. President, let me conclude on these few points. Sending a primate into orbit 30 years ago, 40 years ago, you could claim there would be some justification. But this is 1996. We have had, as I said, 38 to 40 years of humans in space. Even our two highest science officials in the memo I already cited have said that project is not necessary.

We have had humans in space for over 400 days at a time. Just about the time astronauts begin experiencing some of the problems associated with weightlessness the Bion trip with the monkeys end. Most of the weightlessness problems referred to by Senator GLENN happened after the 14th day in space. And these monkeys are brought out of space in 14 days. In the 2-week Bion missions the animals are being monitored by remote electronic instruments.

The February 1996 Bion science assessment report said a major weakness of the overall project is the limited data collection capability. Many of the experiments planned for Bion 11 are weakened by the lack of a digital data storage. There are any number of people who would indicate that this research is bad.

The second reason is even less of value, the bulk of research that would

deal with muscle loss and bone deterioration. Our astronauts are placed on rigorous exercise regimes, as the Senator from Ohio knows, while the animals are strapped in and remain immobile.

It is my understanding, Mr. President, that all of the members on the assessment panel that the proponents have all cited—they have all been cited here—admitted that the fact that the animals are restrained is a major flaw.

Let me just end on this point, Mr. President.

I don't know where the votes are going to fall on this. But, look, this is $15.5 million spent on a program that is supposed to look at the weightlessness of monkeys in space when, in fact, we have had humans in space for almost 40 years, and inflicting unbearable pain on these animals. To do that kind of thing for no reason, I think there is no validity to it. I think it says a lot about a society, a lot about the people in the Senate, frankly, who have the courage to stand up and say, you know, the Citizens Against Government Waste are correct that this is a waste of taxpayers' money. They are going to rip this vote, and they should. It is a waste of taxpayers' money, and whether you are an animal rights advocate or you want to save taxpayers' dollars, it doesn't matter.

I don't really particularly care which side you are on. I just need your vote. That is the point. The point is that it wastes Government money. If you want to stop wasting Government money, you ought to vote to table the committee amendment, and if you believe that you should not do duplicative research on animals—not eliminate all research—then you ought to vote for the amendment.

So I think that really says all that needs to be said.

Mr. President, at this time, I move to table the committee amendment and ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second?

There is a sufficient second.

The yeas and nays were ordered.

The PRESIDING OFFICER. The yeas and nays having been ordered, the question will be before the body at 2:15 this afternoon, consistent with a previous order.

Under the previous order, the Senator from Arizona is recognized.

AMENDMENT NO. 5176

(Purpose: To control the growth of Federal disaster costs)

Mr. MCCAIN. Mr. President, I send an amendment to the desk and ask for its immediate consideration.

The PRESIDING OFFICER. The clerk will report.

The assistant legislative clerk read as follows:

The Senator from Arizona [Mr. MCCAIN] proposes an amendment numbered 5176.

On page 75, line 10, after the word ''expended'' insert the following: ''*Provided,* That no money appropriated for the Federal Emergency Management Agency may be expended for the repair of marinas or golf courses except for debris removal: *Provided further,* That no money appropriated for the Federal Emergency Management Agency may be expended for tree or shrub replacement except in public parks: *Provided further,* That any funds used for repair of any recreational facilities shall be limited to debris removal and the repair of recreational buildings only.''

Mr. MCCAIN. Mr. President, my understanding is that this amendment is accepted by both sides of the aisle. That is my understanding. I would be glad to have a rollcall vote, but I believe it will be accepted.

Mr. President, this amendment would restrict the Federal Emergency Management Agency [FEMA] from spending funds on certain low priority items. Specifically, the amendment would prohibit FEMA from expending funds for the repair of marinas or golf courses except for debris removal, for tree or shrub replacement except in public parks, and limits what can be repaired at recreational facilities.

This amendment is based on recommendations made by the inspector general at FEMA. The inspector general's report concludes,

. . . that while grant funding appeared to be within the legal parameters of the program, policymakers may want to consider whether program eligibility should continue to include repairing such nonessential facilities as golf resorts, marinas for large boats, tennis courts, archery ranges, and equestrian trails, all of which serve a relatively small segment of the population.

This amendment gives us that opportunity.

According the IG's report, based on their inspection sample alone, had this amendment had been in effect, about $171 million could have been saved. That $171 million could have used to assist others more in need.

Some will argue that adoption of this amendment would place greater burdens on State and city governments. While that is partly true, it ignores the fact that the Federal Government does not have an automatic obligation to repair city and State facilities. For example, FEMA spent $5,687,002 to repair the Anaheim Stadium scoreboard.

While I am sure that the good people of Anaheim appreciate this Federal largess—and will undoubtedly enjoy watching their sporting events with a working scoreboard—such repair is not a Federal responsibility.

The Anaheim Stadium is an entity that charges admission. I would assume it strives to make a profit. Yet I have heard of no one offering to pay back the Federal Government for its investment. And I'm not sure that many would believe that scoreboard repair is something that would fall under the responsibilities of FEMA.

Mr. President, there are needs in my State of Arizona that FEMA has promised to address but has yet to fund. And this is only one of many examples from around the country. In Kearny, AZ, flooding washed out a bridge that allowed students to go to school. FEMA has agreed to fund the building of a new bridge, but has yet to produce the needed dollars.

Mr. President, I am not asking that Arizona be treated differently than any other State or that a problem in my State be given any preferential treatment. But I highlight this issue because allowing children to go to school is more important than the repair of a scoreboard or the fixing of a golf course.

Mr. President, the Disaster Relief Act of 1970, specifically excluded States and local facilities ''used exclusively for recreations purposes'' from receiving Federal funds. In subsequent disaster relief legislation, Public Law 93–288, the authorizing committee chairman stated ''such funds should not be spent on golf courses, football or baseball fields, tennis courts, parks or picnic areas * * *.'' Yet the law does not specifically prohibit such expenditures.

The inspector general's report states:

[A] community hit by a disaster needs to have its hospitals, schools, and police department functioning as soon as possible; it does not need to have its golf course repaired, or not at federal expense. However, as the Public Assistance program currently operates, a golf course is just as eligible to receive grant funding as a hospital, a marina is just as deserving as a school, and an equestrian trail is just as worthy as a police department.

Mr. President, I hope that the people at FEMA will be able to prioritize a little better than they have. Unfortunately, now we have to take legislative action. We must prioritize where Federal dollars are spent and golf courses, horse trails, and luxury boat marinas simply are not high priorities.

Mr. President, since its creation, FEMA has been the Federal Government's disaster response agency. In recent years, we have come to depend more and more upon FEMA. And although FEMA has been criticized at times for acting too slowly, it has done an admirable job. From the hurricane disasters on the east coast, to the California earthquake, to the flooding along the Mississippi River, FEMA has reacted to help those most in need.

FEMA deserves praise for all its good work. But it also appears that a change in the law that dictates how it spends tax dollars is clearly in order.

I recall being here on the Senate floor when the junior Senator from California made an impassioned plea to pass the California earthquake emergency appropriations bill. She showed the Senate pictures of the disaster and some of the unfortunate individuals affected by it. Those pictures were stirring, and the Senate quickly passed the bill. Well, I would like to share some pictures that tell a less compelling story.

This first picture is of the city of Indian Wells, CA, golf course—which is known as a vacation resort facility. Indian Wells has a population of about 2,600 people and one of the highest household incomes in the country: Approximately $100,000, which is almost triple the national average of $32,000.

The city has four private golf courses. This course, which is open to the public, charges a staggering $120 per person—including cart—for a round of golf. And because of the cost to golf at Indian Wells, the course runs a surplus of about $1 million a year.

Yet, Mr. President, when in 1993 the golf course sustained flood damage, FEMA gave the city of Indian Wells $871,977 to repair cart paths, sprinkler systems, and erosion. Mr. President, the general public does not—or cannot afford—to use a golf course in a resort vacation community that charges $120 per person. And spending the general public's money to restore this exclusive golf course is just wrong.

The next picture is that of the Links at Key Biscayne. This course received $300,000 for tree replacement.

The famous Vizcaya Mansion Museum and Gardens in Dade County, FL, received over $70,000 for uninsured tree and shrub damage. The IG report notes,

> . . . [that] since the county charges an admission fee to tour the museum and gardens, policymakers should determine whether the Federal Government should be responsible for restoring the opulent gardens of a tourist attraction.

The next picture is of the Dinner Key Marina in Miami, FL. This marina only allows boats to use its slips if such boats are 30 feet or more. Slip fees range from $230 to $850 per month, the equivalent of the monthly housing rent for most Americans.

Mr. President, I had my staff call some local boat stores there. They were informed that the cost of a 30-foot basic yacht starts at about $90,000. Not many middle and lower income individuals that I know of can afford a $90,000 yacht. Clearly, this facility is used only by the wealthiest of individuals, and not by the general public.

Simply said, FEMA should not be spending its money on these projects. Mr. President, FEMA did not have to spend money on these golf courses and marinas, but the Agency chose to. And the money was, indeed, spent. We can't afford to continue this practice.

I recognize that natural disasters do not discriminate. They affect the poor and the rich. The Federal Government's dollars are limited, and we cannot afford to spend them equally on the poor and the wealthy. We must prioritize how we spend the taxpayers' money. We only have a finite amount of money to spend. And as long as natural disasters continue to occur—and indeed they will—we cannot afford to continue to fund these kinds of repairs.

There are many examples of waste and abuse of FEMA funds in this manner, in the manner I have elaborated here, and this amendment would stop that waste. I hope that it will be adopted.

Mr. President, the inspector general made a report in May of 1996 entitled ''Intended Consequences—the High Cost of Disaster Assistance for Park and Recreational Facilities.'' I think it is a very worthwhile document.

Just to quote from a couple of findings on page 10, it says:

> Based on our sample, we found that FEMA has paid millions of dollars for tree replacement in golf courses, parks, and other recreational areas. Crandon Park in Key Biscayne, Florida, received almost $3.5 million for tree replacement as a result of Hurricane Andrew. Approximately $1.7 million, or almost half of this amount, was to replace trees in areas that were not used for recreational purposes. More than $1.6 million of the $1.7 million was to replace trees in a 3.5 mile stretch of a median strip and swale areas (side of the road) through the park that were damaged in the disaster and $100,000 was to replace trees in parking lots.

Ms. MUKULSKI. Will the Senator yield for a question?

Mr. MCCAIN. I am glad to yield.

Ms. MIKULSKI. For purposes of clarification, this Senator knows full well that the Senator from Arizona is a graduate from the Naval Academy, and knows essentially the issues around the Chesapeake Bay. I am very sympathetic to the Senator's desire to implement the report of the IG. I have another flashing light about the marina issue.

Let me ask a few questions because the Senator knows from his time on the bay that we have 2,300 miles of shoreline with many marinas, and they are the small businesses, kind of general stores along the water. Some are higher income persons, as the Senator said. But a lot of them are owned by people named Buck, and this is what keeps them going.

My question is about the consequences of the Senator's amendment. Is the prohibition limited only to publicly owned marinas, or does it include private sector marinas as well?

Mr. MCCAIN. I believe, according to the inspector general's report, that it would exclude marinas from receiving any Federal funds—this is their report—except for debris removal.

> Marinas in our inspection sample incurred over $22.3 million in disaster damage, not including debris removal costs. Most of these marinas are for recreational boaters and serve a small segment of the public. Some of the marinas . . . generated enough revenue to cover their operating expenses prior to the disaster, and a few of them produced excess revenue which was transferred to the local government's operating general fund accounts. Most of the damage to the marinas was to piers and docks rather than buildings, which were insured. The impact would be mitigated by purchasing insurance, which some of the marinas have already done for their buildings.
>
> Within our inspection sample we found that eliminating marinas would have resulted in Federal savings of at least $17 million.
>
> In commenting on a draft report of the associated direct response recovery directive, it was difficult to justify excluding marinas while allowing other types of like facilities which are also designed for recreation, such as swimming pools . . . tennis courts . . . because of the cost, marinas generally cater to a small segment of the population.

So in answer to the question, if there is a way to shape this legislation in either the report or in amendment language so that we could make sure that where there are low-income people and low-income boaters and not the minimum of 30-foot vessels, then I would be more than happy to work with the Senator from Maryland to clarify the intent of this language.

Ms. MIKULSKI. I appreciate the Senator's courtesy.

If I might comment, first I want to reiterate my support for the IG report and for the general thrust of the Senator's amendment. I thank him for the courtesy of acknowledging the cost and the very nature of the geography of the State of Maryland with its 2,300 miles of shoreline. When it says ''small impact,'' that might be true with all of the continent, but Maryland is unique.

I know the Senator from Missouri wishes to accept the amendment. I wish to cooperate. I wonder if our staff can see what we can do to ensure that the issue of marinas—that we get rid of waste, but yet I want to protect the small business guys that are named Buck and Harry. The Senator knows what I am talking about.

So if I could have the concurrence, I look forward to working with the Senator. Again, I thank him for his courtesy.

Mr. MCCAIN. Mr. President, I would like to thank the Senator from Maryland. She raises a very valid point. There are mom-and-pop operations at marinas. I would be happy to try to work with her in discriminating between those kind of facilities that are only available to a few. I think we can work that out.

I ask unanimous consent to modify my amendment.

The PRESIDING OFFICER. Is there objection?

Ms. MIKULSKI. We can't agree to a modification until we know what the modification is.

Mr. MCCAIN. I ask unanimous consent that my amendment be set aside until such time as we reach agreement for modification, and then we will bring it up at that time.

The PRESIDING OFFICER. Is there objection? Without objection, it is so ordered.

Mr. MCCAIN. Mr. President, could I also ask my friend from Missouri—as he knows, I have two other amendments. One, I believe, is in discussion stage with his staff, and the other, I believe, is acceptable to him. Would he like me to discuss either one or both of those amendments at this time or wait until a later time?

Mr. BOND. Mr. President, I would like to confer with my ranking member to determine whether one of those might be accepted now. I do have a couple of minutes. I would like to comment on this FEMA amendment because this is a very important and very complicated issue.

Ms. MIKULSKI. Is that the concern the Senator has about the population changes and so on? We have discussed this. I believe the Senator in his steadfast way has represented that he would like to offer an amendment on another

issue, and I think we could take it. Does the Senator from Missouri desire to acquiesce in that?

Mr. BOND. Mr. President, I think we can take that amendment. I have some further comments on that to accommodate my colleague. I will save those comments.

Mr. MCCAIN. Mr. President, I would be glad to put my statement in the RECORD because, as the distinguished managers of the bill know, this issue has been ventilated on numerous occasions. I point out that for 3 years this amendment has been accepted and then dropped in conference. So I feel compelled here in the fourth year to ask for a recorded vote to make sure that the Senate is completely on record on this issue, in all due respect to my two dear friends and colleagues. But 3 years in a row is enough. I would be glad to submit my statement for the RECORD.

On that amendment, I will be asking for a recorded vote at the appropriate time.

Mr. BOND addressed the Chair.

The PRESIDING OFFICER. The Senator from Missouri is recognized.

Mr. BOND. We have a unanimous-consent agreement to proceed to the space station amendment at 2:30. That will require a vote. I ask unanimous consent that a vote on Senator MCCAIN's amendment relating to the VA resource allocation be placed immediately after the vote on the space station amendment.

I ask unanimous consent that no second-degree amendments be in order on the McCain amendment on VA resource allocation and that that vote be 10 minutes in length.

The PRESIDING OFFICER. Is there objection?

AMENDMENT NO. 5177

(Purpose: To require a plan for the allocation of Department of Veterans Affairs health care resources)

Mr. MCCAIN. Mr. President, reserving the right object, I do not intend to object, but I think it would be necessary for me at this time to send the amendment to the desk. I ask indulgence of my colleagues to do so.

The PRESIDING OFFICER. The clerk will report the amendment.

The legislative clerk read as follows:

The Senator from Arizona [Mr. MCCAIN], for himself and Mr. GRAHAM, proposes an amendment numbered 5177.

Mr. McCAIN. Mr. President, I ask unanimous consent that reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment is as follows:

On page 104, below line 24, add the following:

SEC. 421. (a) PLAN.—(1) The Secretary of Veterans Affairs shall develop a plan for the allocation of health care resources (including personnel and funds) of the Department of Veterans Affairs among the health care facilities of the Department so as to ensure that veterans who have similar economic status, eligibility priority, or medical conditions and who are eligible for medical care in such facilities have similar access to such care in such facilities regardless of the region of the United States in which such veterans reside.

(2) The plan shall—

(1) reflect, to the maximum extent possible, the Veterans Integrated Service Network and the Resource Planning and Management System developed by the Department to account for forecasts in expected workload and to ensure fairness to facilities that provide cost-efficient health care; and

(2) include—

(A) procedures to identify reasons for variations in operating costs among similar facilities; and

(B) ways to improve the allocation of resources so as to promote efficient use of resources and provision of quality health care.

(3) The Secretary shall prepare the plan in consultation with the Under Secretary of Health of the Department of Veterans Affairs.

(b) PLAN ELEMENTS.—The plan under subsection (a) shall set forth—

(1) milestones for achieving the goal referred to in paragraph (1) of that subsection; and

(2) a means of evaluating the success of the Secretary in meeting the goal.

(c) SUBMITTAL TO CONGRESS.—The Secretary shall submit to Congress the plan developed under subsection (a) not later than 180 days after the date of the enactment of this Act.

(d) IMPLEMENTATION.—The Secretary shall implement the plan developed under subsection (a) not later than 60 days after submitting the plan to Congress under subsection (c), unless within that time the Secretary notifies Congress that the plan will not be implemented in that time and includes with the notification an explanation why the plan will not be implemented in that time.

The PRESIDING OFFICER. Is there objection to the request? Without objection, it is so ordered.

Mr. MCCAIN. Mr. President, this is the third year in a row that Senator GRAHAM of Florida and I have sponsored legislation to better allocate health care funding among the Veterans Department's health care facilities. Despite the fact that this amendment would enable veterans to receive equal access to quality health care, no matter where they live or what circumstances they face, this piece of legislation has never been made law.

Mr. President, in March 1994, I originally brought to Secretary Jesse Brown's attention the inequity in veterans access to health care. Despite their knowledge of the problems in the system that is currently being used, the Department of Veterans Affairs is still using an archaic and unresponsive formula to allocate health care resources. This system must be updated to account for population shifts. That is why Senator GRAHAM and I are continuing our efforts, for the third year in a row, to change the way health care is allocated among veterans health funding by eliminating funding disparities among VA health care facilities across the country.

The veterans population in three States, including Arizona, is growing at the same time that it is declining in other parts of the country. Unfortunately, health care allocations have not kept up with the changes. The impact of disparate funding has been very obvious to me during my visits to many VA Medical Centers throughout the country, and particularly in Arizona, and was confirmed by a formal survey of the Carl T. Hayden VA Medical Center in Phoenix, which was conducted by the Veterans of Foreign Wars [VFW] in April 1994.

The problem has been further verified by the General Accounting Office [GAO] in a report entitled ''Veterans Health Care: Facilities' Resource Allocations Could be More Equitable.'' The GAO found that the Department of Veterans Affairs continues to allocate funding based on past budgets rather than current needs, and has failed to implement the resource planning and management system [RPM] developed 2 years ago to help remedy funding inequity.

Mr. President, the GAO cities VA data that the workload of some facilities increased by as much as 15 percent between 1993 and 1995, while the workload of others declined by as much as 8 percent. However, in the two budget cycles studied, the VA made only minimal changes in funding allocations. The maximum loss to a facility was 1 percent of its past budget and the average gain was also about 1 percent.

This inadequate response to demographic change over the past decade is very disturbing, and, I believe, wrong. To illustrate the problem, I would point out that the Carl T. Hayden VA Medical Center experienced the third highest workload growth based on 17 hospitals of similar size and mission, yet was only funded at less than half the RPM process.

Mr. President, the GAO informs me that rather than implementing the RPM process to remedy funding inequities in access to veterans health care, the VA has resorted to rationing health care or eliminating health care to certain veterans in areas of high demand.

The GAO says:

Because of differences in facility rationing practices, veterans' access to care system wide is uneven. We found that higher income veterans received care at many facilities, while lower income veterans were turned away at other facilities. Differences in who was served occurred even within the same facility because of rationing.

The GAO also indicates that there is confusion among the Department's staff regarding the reasons for funding variations among the VA facilities and the purpose of the RPM system.

Mr. President, this problem must be addressed now. This amendment compels the VA to take expeditious action to remedy this serious problem and adequately address the changes in demand at VA facilities.

To conclude, I want to reiterate that I find it simply unconscionable that the VA could place the Carl T. Hayden VA Medical Center at the bottom of the funding ladder, when the three VA medical facilities in the State of Arizona must care for a growing number

of veterans, and are inundated every year by winter visitors, which places an additional burden on the facilities.

I ask unanimous consent that the VFW survey be printed in the RECORD following my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 2.)

Mr. MCCAIN. I also want to finish my time by emphasizing to this Senate that the problems that exist at the VA have occurred for years, and that it is about time that we change the system to give our veterans the better care they deserve.

EXHIBIT 2

VETERANS OF FOREIGN WARS
OF THE UNITED STATES,
Washington, DC, April 7, 1994.

In Reply Refer to: 94–24.

JOHN T. FARRAR, M.D.,
Acting Under Secretary for Health (10), Veterans Health Administration, Department of Veterans Affairs, Washington, DC.

DEAR DR. FARRAR: A member of my staff, Robert F. O'Toole. Senior Field Representative, conducted a survey of the Phoenix, Arizona, Department of Veterans Affairs Medical Center, on March 14–15, 1994. During his time at the medical center, he was able to talk with many patients, family members and staff. This enabled him to gather information concerning the quality of care being provided and the most pressing problems facing the facility.

While those receiving treatment in the clinics and wards felt that the quality was good, they almost all commented on the long waits in the clinics and the understaffing throughout the medical center. In discussing their problem with various staff members, it was noted that nurses were under extreme stress. More than one was observed by Mr. O'Toole in tears when completing their tour. The nursing staff on evening shifts must rush continually through their duties in an attempt to cover all their patients needs due to the shortage in staffing in both support and technical personnel.

In attempting to determine the reason for this problem, it became apparent that the station was grossly underfunded. Which means that the staff must either take unwanted shortcuts or continue to work beyond the point expected of staffs at the other medical centers. While it is well understood that the Veterans Health Administration is underfunded throughout the system, it is clear from the comparisons that this facility has not received a fair distribution of the available resources resulting in the deplorable situation now facing the health care team.

Another problem in Phoenix that must be addressed is the serious space deficiency, especially in the clinical areas. The ambulatory care area was designed to handle 60,000 annual visits. In fiscal year 1993, the station provided 218,000 annual visits, almost four times the design level. Many physicians are required to conduct exams and provide treatment from temporary cubicles set up inside the waiting rooms. This bandaid approach has added to the already overcrowding.

The other problem that we feel should be pointed out is that of the staffing ceiling assigned to the Carl T. Hayden Veterans Medical Center. Currently, the medical center has a FTEE of 1530 which is over the target staffing level. Based on available reports, the medical center would need an additional 61 registered nurses just to reach the average Resource Program Management (RPM) within their group. This facility operates with the lowest employee level in their group when comparing facility work loads, and 158th overall. To reach the average productivity level of the Veterans Health Administration medical centers, they would need an additional 348 full-time employees. While it is realized that this station will never be permitted to enjoy that level of staffing, it is felt that they, at the least, should have been given some consideration for their staffing problems during the latest White House ordered employee reductions.

To assist the medical center to meet their mandatory work load, and the great influx of winter residents, it is recommended that the $11.4 million which was reported to the Arizona congressional delegation to have been given Phoenix in addition to their FY 94 budget be provided. To enable the station to handle the ever increasing ambulatory work load, the Veterans Health Administration must approve the pending request for leased clinic space in northwest Phoenix and, the implementation plan for the use of the Williams Air Force Base hospital as a satellite outpatient clinic, along with the necessary funding to adequately operate the facility. In addition, VHA should approve and fund, at a minimum, the expansion of the medical centers clinical space onto the Indian School land which was acquired for that purpose.

Approval of the above recommendations would make it much easier for this medical center to meet the needs of the ever increasing veteran population in the Phoenix area. There is no indication that the increasing population trends will change prior to the year 2020. This hospital cannot be allowed to continue the downhill slide. The veterans of Arizona deserve a fair deal and the medical staff should be given the opportunity to provide top quality health care in a much less stressful setting.

I would appreciate receiving your comments on the Phoenix VA Medical Center at your earliest opportunity.

Sincerely,

FREDERICO JUARBE, Jr.,
Director,
National Veterans Service.

Mr. BOND. Mr. President, under the previous order, we were supposed to adjourn at 12:30. I ask unanimous consent that I may be permitted an additional 5 minutes to comment on the MCCAIN amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

AMENDMENT NO. 5176

Mr. BOND. I want to address the FEMA amendment because the Senator from Arizona has raised some excellent points, and I believe they are very important points this body ought to address.

In fact, the Senator's amendment stems from one of a series of reports I requested of the inspector general last year in an effort to reduce Federal disaster relief costs and improve FEMA operations. The IG has found a weak financial management system at FEMA as well as a number of questionable practices in terms of disaster expenditures. The most recent IG report found some very startling and troubling examples of what could be characterized as an abuse of taxpayer funds.

We have already seen the pictures of a golf course where fees as high as $120 per person were charged yet has received $872,000 in public assistance grants following flood damage.

Let me make it clear, because this area is very complicated, that the disaster relief that we are talking about is available only to publicly owned facilities. If they are privately owned, there are SBA loans that are available. But the FEMA disaster assistance goes generally with the cost share 25 percent local or State cost share with the Federal Government providing the other 75 percent.

We talked about marinas and golf courses, but we could talk about equestrian trails, archery ranges, and other facilities benefiting a very small segment of the population where they receive millions of dollars for tree and shrub replacement. I believe very strongly in trees and shrubs; I plant a lot of them myself, but I seriously question whether that is an essential use of our scarce taxpayer dollars. There is erosion repair, sprinkler systems, and the like. In examples of the facilities the IG looked at which received Federal funds between 1989 and 1995 totaling $286 million, the Federal cost share was between 75 percent and 100 percent.

While I strongly support the intentions of the Senator from Arizona, I am delighted that we are going to have an opportunity to work with him and other colleagues because we have asked of the FEMA Director, and he has promised, to report back to Congress by October 1 a comprehensive plan to reduce the amounts spent and to improve controls on disaster relief expenditures. He has promised to respond to the series of IG and GAO reports that I have requested. These reports do detail a number of what I would consider very questionable expenditures. There is a much larger issue, and we must pursue it comprehensively, not only in the position I serve on this subcommittee but I formerly cochaired a task force on disaster relief with the Senator from Ohio, Senator GLENN, and we have in that task force expressed our grave concerns about the escalating costs of FEMA disaster relief.

Last year, some of my colleagues may remember, in this subcommittee we had to cut $7 billion in other agency programs, primarily housing, housing programs, in order to pay for the Northridge earthquake, and in tight fiscal times we have to be far more prudent in the kinds of relief we provide for public facilities where they are essentially profitmaking though publicly owned facilities.

I can assure my colleague from Arizona that I intend to hold FEMA's feet to the fire in their commitment to submit a plan by October 1. It is essential not only that we but the authorizing committees address this issue.

I look forward to working with my colleague from Arizona and others, particularly my colleague from Maryland, who are very much concerned about this issue.

If there are no further Senators wishing to speak, I yield back my time.